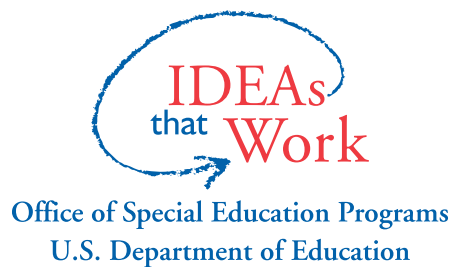

Conferences



NDC
National Deaf Center
on Postsecondary Outcomes

Summary

This booklet is a collection of Pepnet 2 conference proceedings from 2002 to 2008.



Portions of the enclosed content were developed during past cycles of Department of Education funding. In 1996, the Department of Education funded four regional centers collectively known as Postsecondary Educational Programs Network (PEPNet). In 2011, the Department of Education changed the model from the four regional centers to one national center known as pepnet2. Materials from either or both PEPNet and pepnet2 cycles may be included herein.

PEPNet 2002:
Diverse Voices, One Goal

April 10-13, 2002

Conference Proceedings

2002 PEPNet Conference Proceedings

PEPNet 2002: Diverse Voices, One Goal

*Proceedings from Biennial Conference on Postsecondary Education
for Persons who are Deaf or Hard of Hearing. April 10 - 13, 2002*

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Foreword and Acknowledgments

Marcia Kolvitz

PEPNet Conference Planning Committee Chairperson
Associate Director; Postsecondary Education
Consortium

Building on the strong response from the first two PEPNet conferences, the third PEPNet conference – *Diverse Voices, One Goal* – provided a distinctive opportunity for professionals to interact with colleagues to learn more about best practices, technological advances, and more effective strategies for meeting the needs of students at the postsecondary level who are deaf and hard of hearing. The conference offered participants the opportunity to identify and implement theories and practices of managing and delivering effective support services and access to students and clients. As one of the participants commented, “What a wealth of information in one place!”

While numerous conferences address issues related to disability services in postsecondary education, the PEPNet biennial conference is the only one that focuses solely on issues related to students who are deaf and hard of hearing. Educators and service providers across the nation have seen significant changes during recent years regarding the provision of services to students who are deaf and hard of hearing in postsecondary education and training programs. Disability support service offices have been affected by changes within the student population, within the institution itself, within the state system, and within the federal government. The development and use of technology to assist deaf and hard of hearing individuals is undergoing constant change as well, with the addition of remote access, video conferencing capabilities, speech-to-text recognition technology, and a host of developing communications innovations. We are challenged as never before to keep pace with change in order to provide quality services and access for our students.

The PEPNet biennial conferences provide an opportunity to bring together professionals from across the country who are interested in enhancing the quality of postsecondary educational opportunities for students who are deaf and hard of hearing. Once again, the response to the conference was phenomenal. More than 350 participants came from across the United States and Canada to learn new information, share their experiences with their colleagues, and establish linkages with other service providers. The PEPNet 2002 conference offered sessions that were of interest to disability support services

staff, administrators, counselors, interpreters, tutors, and faculty members from developmental studies as well as college-level courses. In addition, faculty and staff from secondary education programs and service providers from rehabilitation also participated. Students in related professional areas such as rehabilitation counseling and interpreting were welcomed at the conference. The conference featured sessions that offered practical, replicable strategies for providing services to students who are deaf or hard of hearing and attending postsecondary educational programs. Featured technology for this conference included remote captioning, live internet connections, wireless internet connections, CART, C-Print captioning, and C-Print captioning with automatic speech recognition. This publication offers the reader a sample of the information that was exchanged during the conference.

As a result of this conference, we may feel more prepared as we look toward the future and deal with the changes as they occur. Surely one of the effects of the conference has been to more firmly establish collaborative efforts between professionals sharing a common goal: the most effective educational programs for students who are deaf and hard of hearing. Instead of operating in isolation, we can create opportunities to share knowledge and experiences to do so.

This conference would not have been possible without the involvement of many individuals and the support of their sponsoring institutions. The confidence and support shown by the directors of the four PEPNet centers is greatly appreciated. All of the members of the conference planning committee worked hard during the past year: Dave Buchkoski, Pat Billies, Debra Wilcox Hsu, Denise Kavin, Kay Jursik, Sharaine Rawlinson, and Gary Sanderson. So much of the work behind the scenes would not have been successful without the hard work of the staff members Julie Danielson, Pam Francis, Loni Germaine, Charles Johnstone, April Kirby, Jorge Maldonado, Rick Rizzo, Michelle Swaney, Patricia Tate, Charley Tiggs, Heather Webb, Sue Wickstrom, and Paula Zack. Numerous volunteers from each of the four PEPNet centers, state sites, hubs, affiliate programs, and “friends of PEPNet” offered their services, making this truly a collaborative effort. Ongoing support from the U. S. Department of Education, Office of Special Education and Rehabilitative Services enabled us to continue outreach and technical assistance efforts and reach an even larger audience than in the past. Of course, the interest and enthusiasm of all of the presenters and participants

made this conference a very meaningful event. We appreciate the time and effort extended by many of the presenters to also submit an article for this volume of conference proceedings. To everyone involved, thank you very much.

PEPNet consists of the four Regional Postsecondary Education Centers for Individuals who are Deaf or Hard of Hearing: Midwest Center for Postsecondary Outreach, Northeast Technical Assistance Center, Postsecondary Education Consortium, and Western Region Outreach Center & Consortia. The mission of the Network is to promote opportunities to coordinate and collaborate in creating effective technical assistance to postsecondary educational institutions providing access and accommodation to individuals who are deaf or hard of hearing. The members of PEPNet promote quality educational activities and outreach services through nationwide collaboration and information exchange and serve as a clearinghouse for resources and referrals. The four centers are funded through an agreement with the U.S. Department of Education. This publication was developed under a grant from the U.S. Department of Education, Office of Special Education and Rehabilitative Services (OSERS) and produced through a cooperative agreement between The University of Tennessee and OSERS. The contents herein do not necessarily represent the Department of Education's policies nor are endorsed by the Federal Government.

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Information about all four PEPNet Centers is available on our web site at <<http://www.pepnet.org>>.

SECTION I
Plenary Sessions

Interagency Agreements in Higher Education: A Panel Discussion

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Abstract

The Rehabilitation Act Amendments of 1998 call for interagency agreements on “who will pay what with regard to interpreters and other auxiliary aids and services” to be forged between state VR agencies and public colleges and universities. Anecdotal evidence suggests that, to date, most states have not established such agreements. The law’s requirement itself is somewhat controversial, in part because it seems to give an incentive to the VR agency but not to the college/university, and in part because private colleges and universities need not participate in such agreements. This article reviews the legal mandate, review evidence on implementation, and explore ways to enhance cooperation so that deaf students receive the services they need, on a timely basis.

Comments from Frank Bowe

The question of who is responsible for paying for auxiliary aids and services is a critical issue for institutions of higher education and state vocational rehabilitation agencies. The development of interagency agree-

ments to address this can be quite a challenge for administrators and service providers. This panel includes representatives from the federal government, a state agency, and a college. They will present information and strategies that will give the audience a better understanding of what’s necessary and what’s possible. Are there any incentives to develop agreements? Should private colleges be included in the discussions?

Comments from Annette Reichman

There are two major points that cannot be overlooked in the 1998 amendments to the Rehabilitation Act: *informed choice* and *interagency agreements*.

Informed Choice

In the past, vocational rehabilitation counselors were considered the experts in vocational training and rehabilitation, job placement, and employment opportunities. As such, vocational rehabilitation counselors used their knowledge of occupations, education and skill requirements, and the local labor market demands to place individuals in jobs. The counselor acted on behalf of the person with a disability, and very few individuals were taught the skills needed to guide their own careers. The 1998 Amendment to the Rehabilitation Act provision for informed choice requires that eligible individuals seeking vocational rehabilitation services (consumers) be given (a) the opportunity to exercise informed choice in selecting an employment outcome, (b) the specific vocational rehabilitation services to be provided under the individualized plan for employment, (c) the entity that will provide the vocational rehabilitation services, and (d) the methods used to procure these services. Under informed choice, the consumer is considered the expert on his or her needs and the vocational rehabilitation counselor acts more as an information and referral resource pointing out the range of available options. Once an agreement is reached between the consumer and the vocational rehabilitation counselor, an individualized employment plan is developed and signed. The concept of informed choice is valuable in the decision making process when vocational rehabilitation consumers who are seeking higher education are deciding which postsecondary institution to attend.

Interagency Agreements

The 1998 Amendment to the Rehabilitation Act requires that an “interagency agreement” between the state vocational rehabilitation agencies, public institutions

of higher education, and other appropriate agencies be developed for the purpose of interagency collaboration. The interagency agreements are to detail each agency's responsibilities, including financial responsibilities, for the provision of services. This means that each individual state will determine how costs will be shared among the various agencies within the state. For example, the way in which costs for auxiliary aids and services, which would include interpreting, CART, note taking, and other non-exempted services, will vary from state to state depending upon the terms of the interagency agreements between the vocational rehabilitation agency and the public institution of higher education within each state.

When considering the amount of funding that was spent on vocational rehabilitation in general, combined state and federal funding in 1999 was approximately \$3 billion. With that funding, 1.2 million individuals were served and 235,000 individuals entered the work force. These individuals earned \$3.1 billion and paid \$905 million in taxes. These statistics are important for they are used to demonstrate what type of return there is on the vocational rehabilitation dollars spent. As such, these dollars represent an investment in human capital.

These figures can be broken down further. For example, the amount of money spent on higher education can be determined. In 1998, vocational rehabilitation paid \$259,526,999 for higher education for 174,285 consumers. In 1999, \$274,146,765 was spent for 176,455 consumers. This shows that a significant amount of money was invested in the provision of higher education to vocational rehabilitation consumers across all disability categories.

Because of the concepts of informed choice and interagency agreements, the question of who pays for auxiliary aids and services is paramount. This is especially true considering that the costs are increasing steadily. Also important is the question of how, through informed choice, consumers are making the decisions as to which colleges or universities they wish to attend. For deaf or hard of hearing consumers, this would most likely mean a local postsecondary institution, Gallaudet University, or the National Technical Institute for the Deaf. With respect to vocational rehabilitation dollars, the "last dollar" approach to funding for postsecondary education is used. Comparable benefits, such as Pell grants, stipends, and scholarships are explored and applied. Also, student loans and work-study earnings are included. The remaining costs are those paid by vocational rehabilitation.

Throughout the United States, the interagency agreements vary widely from state to state. According to the most recent information available, 18 states have interagency agreements in place and 13 states are in the process of developing them. The remaining states appear to be resistant to developing interagency agreements, and because there are no penalties outlined in the legislation, there are no ramifications for doing so.

Among those states with interagency agreements in place, four states (Alaska, Minnesota, New Hampshire, and Oklahoma) have agreements whereby the institution of higher education pays 100% of the costs of auxiliary aids and services, and vocational rehabilitation pays 0% of the cost. Further, in Minnesota the state budget includes a line item to appropriate monies for the provision of CART and interpreting services at various colleges and universities included within the agreement.

In Virginia, the agreement is such that the institution of higher education pays 60% of the costs of auxiliary aids and services, and vocational rehabilitation pays 40% of the cost. It is important to note that in Virginia the vocational rehabilitation agency sets aside monies for these services for all vocational rehabilitation offices to use. This makes it easier for vocational rehabilitation to determine the necessary services for the consumer. In addition, the 60/40 split helps the vocational rehabilitation to have some control in the quality of services being provided. In both New Jersey and Wyoming, the costs of auxiliary aids and services are split evenly between the institution of higher education and vocational rehabilitation. Finally, Puerto Rico has a verbal agreement reached whereby the institution of higher education pays 100% of the costs of auxiliary aids and services and services for evening classes and vocational rehabilitation pays 100% of the cost for daytime classes.

Other states also have interagency agreements that are unique. For example, the North Carolina agreement does not include interpreting services in it. In Hawaii there is no agreement but the vocational rehabilitation agency covers all the costs for auxiliary aids. Kentucky uses state-appropriated funds out of a line item in their budget to pay for auxiliary aids and services at institutions of higher education. West Virginia has an informal verbal agreement in which the institutions of higher education provide all the reasonable accommodations. Delaware also has an informal agreement, but under that agreement the institutions of higher education provide auxiliary aids in the classroom while vocational rehabilitation pays for auxiliary aids outside of the classroom.

In California, the agreement assigns primary responsibility to the institutions of higher education, but vocational rehabilitation will assist if there is a funding shortfall. To date, institutions of higher education in California have not requested assistance from vocational rehabilitation because they would be opening themselves up to scrutiny. They would be asked how they are paying for such things as sporting events when they are unable to pay for interpreting services, as an example. In Maryland, the Division of Rehabilitation Services is slowly developing individual interagency agreements with each institution of higher education. As of now there are no formal written agreements, but the negotiation process has begun. Other states, such as Alabama, Florida, Mississippi, Montana, New Mexico, and Oregon, are in the process of developing interagency agreements. States,

such as Arizona and Georgia, have no agreements in place at all.

It is important to note that the cost of auxiliary aids and services is significant. There is a fear that without making it a formal or expressed policy, institutions of higher education will cease to actively recruit deaf, hard-of-hearing, or any other disabled individuals. This is not the answer. Instead we need to look for alternate solutions to the provision of reasonably priced auxiliary aids and services. Perhaps the technological advances in the area of speech-to-text will provide one possible alternative.

Order of Selection

One additional issue that must be considered when discussing the provision of vocational rehabilitation services is that of *order of selection*. In the event that vocational rehabilitation funds are limited within a state and the state cannot provide services to all of the consumers, there is a federal requirement to establish an order of selection and to serve the most significantly disabled first. At this time, 37 of the 80 state vocational rehabilitation agencies are under an order of selection. Those individuals who are not in the category of most significantly disabled must wait for services until funds are available.

To determine the applicant's significance of the disability under the requirements of an order of selection, a functional capacity or limitations checklist is used to assess the impact that vocational rehabilitation services would have on employment. The functional limitations checklist includes the following categories: mobility, self-care, self-direction, work tolerance, work skills, interpersonal skills, and communication.

There is a direct relationship between an order of selection and interagency agreements. For example, New Jersey implemented an order of selection in 2001. One college, Camden County College, had 67 deaf students in attendance, but due to the implementation of an order of selection, only three of these were students sponsored by vocational rehabilitation. Thus, vocational rehabilitation paid 50% of the costs for auxiliary aids for the three students sponsored by them, as required by the interagency agreement in the state of New Jersey. Camden County College paid 100% of the costs for auxiliary aids for the remaining 64 students. It is likely that this type of scenario is also occurring in other states across the country.

Comments from Patty Conway History and Background

Kentucky has had state funding for support services to students who are deaf or hard of hearing, which was established by law, since 1986. This was brought about in part because one of the major Kentucky public universities that served the deaf students in the state experienced problems providing needed accommodations. These problems included not having enough funds to pay for interpreters and notetakers, and not having

enough qualified interpreters to meet the students' needs. The deaf students became organized and pursued quality accommodations; as a result, a state legislator who was affiliated with this university crafted the law that established this state funding.

The law passed in 1986 was prior to the Americans With Disabilities Act (ADA). The major points of this Kentucky legislation were:

- To increase the educational level of persons with hearing loss by providing equal opportunity to obtain education in institutions of higher education.
- Institutions of higher education would be accessible to students who are deaf and hard of hearing by providing necessary support services including, but not limited to, interpreters and notetakers.
- These services would be paid by the Kentucky Department of Vocational Rehabilitation (KDVR) for their clients and by state appropriations (administered by the Council on Higher Education) for non-VR clients.
- Provision of these support services would not be delayed because of any disagreement about who is responsible for payment. The institution would be responsible to provide the services and resolve the disagreement.
- The law also included the requirement for an interpreter training program (ITP) at one institution of higher education leading to at least an associate's degree. By 1987-88, the ITP would expand to other locations across the state.

At that time, the law required the state VR agency to continue paying for interpreters and notetakers for their clients in higher education, but a new central fund would be established for non-VR clients to be used to reimburse state universities as needed. The central fund started with about \$30,000 per year to be used for these services. Maybe the most significant part of the law was the requirement that Kentucky planned to establish interpreter training programs to address the severe shortage of qualified services.

Amendments to the Law and Other Changes

As previously mentioned, this system in Kentucky has been an evolving process and as a result, the law was amended in 1994. Several areas were addressed:

- Transferred administrative responsibilities for distribution of the state appropriated funds to the Kentucky Department of Vocational Rehabilitation (KDVR).
- Dropped the requirement for vocational rehabilitation funds to be used to pay for these services for students who were also KDVR clients.
- Clarified that reimbursements to institutions of higher education could be a "fee for service" or based on actual costs.

One of the major reasons for these changes was that the higher education entity responsible for distribution of

the funding did not have staff with the background and knowledge of deafness and interpreter services, etc., which resulted in some gaps in services and difficulties assisting institutions to develop quality services. This led to negotiations for KDVR to become the administrator of the state funding for these services with the expectation that assistance and support would be provided to local institutions as needed.

The Kentucky Department of Vocational Rehabilitation agreed to oversee and manage the distribution of the funding if the requirement that KDVR funds had to be used to pay for these services for their clients was dropped. However, KDVR realized that the exact yearly costs for these services were unpredictable and by accepting administrative responsibility, the agency would have to provide additional funding for these services for VR student/clients if there was not enough state funding.

Basically, this has been accomplished by setting up two accounts in KDVR: one for non-KDVR students and one for KDVR student/clients. The state-appropriated funds are always used for non-KDVR students first, to ensure that these needs are met. For state appropriations used for KDVR student/clients, this funding qualifies as state match money to draw down the federal funding for KDVR services. Thus, this aspect is one of the big win/wins for the Kentucky Department of Vocational Rehabilitation.

KDVR, with input from coordinators of services for students who are deaf at state institutions, developed guidelines concerning how the state funding is distributed for interpreter services, notetakers, and other needed support services. These guidelines also include information about state and federal legislation pertinent to these services, qualifications of service providers, and resources to locate qualified interpreters, etc.

In 1998, this Kentucky law was amended again to also provide funding to technical schools; thus the state appropriations were available for all public postsecondary institutions, not just for colleges and universities. This coincided with the state merger of universities, community colleges and technical schools as part of one entity for postsecondary education. KDVR continued to administer this funding to reimburse the postsecondary institutions for support services for students who are deaf and hard of hearing. However, a different reimbursement method had to be developed for the technical school programs.

Win/Win – Kentucky VR and Public Postsecondary Programs

This initiative has been a win/win situation for the Kentucky Department of Vocational Rehabilitation and Kentucky postsecondary education programs. Specific positive outcomes include:

- A centralized state fund has been established and increased as needed to address the support services

needs of students who are deaf or hard of hearing in public postsecondary institutions. This has been extremely helpful to programs that do not have established services for this population but do occasionally have students who need these accommodations.

- Accommodations and services to students who are deaf or hard of hearing are more consistent statewide, which allows for more choices for students.
- The issues about 'who pays' for interpreter and other accommodations are resolved; the state has basically had an interagency agreement since 1986.
- As previously stated, the state funding can be used by KDVR for federal matching funds. KDVR has also been able to track specific costs of accommodations to their student/clients and can use this information when requesting Social Security reimbursement.
- VR and postsecondary personnel have developed effective relationships allowing for collaboration to improve services to these students.

After the last amendment to the Kentucky law, the postsecondary programs and KDVR have used a lot of creative ideas to "get the most for the money" and improve services to these students. One of the ideas implemented has been to encourage programs with larger numbers of students who are deaf/hard of hearing to develop yearly program budgets including salaries for staff such as interpreters. This has been more cost effective and has improved the quality of services instead of only reimbursing the postsecondary programs for interpreters for each student after the services have occurred. Additional examples of improved programming were postsecondary institutions that hired tutors and teachers specifically for students who are deaf or hard of hearing and included these costs in their budgets for reimbursement.

Collaboration Between Kentucky VR and Eastern Kentucky Interpreter Training Program

The other part of the original law required the establishment of interpreter training programs in Kentucky. This program was established at Eastern Kentucky University (EKU), but the demand for qualified interpreters continued to exceed the availability of trained interpreters. Around 1994, when KDVR became the administrator of this state funding, the agency also decided to develop a separate agreement to provide funding for expansion of the EKU Interpreter Training Program (ITP). This agreement provided short-term funding that has helped the EKU-ITP to grow from a two-year to a four-year degree program and to add a training program at a satellite location.

The collaboration and subsequent relationships have been very successful, resulting in (a) an increased pool of qualified interpreters for VR and postsecondary institutions, (b) projects that improved services to persons who are deaf or hard of hearing, and recently, (c) the estab-

lishment of a Center on Deafness through Eastern Kentucky University. In addition to VR and EKV, several state agencies and other organizations have become partners in the Center on Deafness with the purpose of sharing available data and resources to conduct joint projects to improve existing and/or create new programs as needs are identified.

The Center on Deafness has employed a grant writer who works with all partners. Recently the Center on Deafness was successful in getting a federal Technology Opportunities Program (TOP) grant to establish remote video conferencing shared by several agencies to improve service delivery and provide accessibility for individuals who are deaf.

Future Plans and/or Needs

The state funding for support services is only for public postsecondary institutions. Private postsecondary institutions in Kentucky do not have access to this funding when students who are deaf or hard of hearing attend these programs. In the past, the state VR agency has negotiated, as needed, a shared arrangement for payment of interpreters or notetakers, but increased costs of these services have made this process more difficult. As always, there is the continued need for more qualified interpreters in postsecondary settings. Other parts of the state want to expand interpreter training programs to meet the needs in their areas.

Finally, there is always a concern about continuation and increase of funding as needed to meet the need for these services. Kentucky has been fortunate to receive increased funding for these services during each state budget cycle. This funding, which began around \$30,000 per year in 1986 is now over \$1 million per year. As more students utilize print access such as captioning, there is concern about the funding level meeting the demand for services.

However, the real key to success at the postsecondary level for many students who are deaf or hard of hearing may lie in the development of more comprehensive programs that address all of their transition needs, not only reasonable accommodations. This will require the collaboration and resources of KDVR, postsecondary institutions and many other programs.

Again, and in summary, this Kentucky legislation to fund support services for students who are deaf or hard of hearing appears to be working in this state and has resulted in many positive projects and activities between postsecondary programs and vocational rehabilitation. As other states grapple with how to meet the requirements of developing interagency agreements to decide who pays for these costs, legislation and/or requests for funding may be another option to explore at the state level.

Comments from Tom Thompson Developing a Strategy

In 2000, representatives from Illinois institutions of

higher education met with representatives from the Illinois Office of Rehabilitation Services (ORS), the Illinois Board of Higher Education, and the Illinois Community College Board. They set up two exploratory meetings to talk about how to meet this mandate and what benefit the interagency agreements could provide.

As a result of those meetings, there was an idea about an approach that sounds similar to what has happened in Maryland. The idea was to develop a design for agreements that all schools could implement, but on a one-to-one basis, rather than having something at the state level. A task force was developed to create a boilerplate form. This was a basic contract with a fill-in-the-blanks approach that could be used as a starting point to develop the agreements between the institution and the local ORS office

Implementing the Process

Several approaches were used to publicize these efforts. The institutions of higher education, Illinois Community College Board, and the Office of Rehabilitation Services (ORS) planned three meetings. These were held in the Chicago area, in the middle of the state, and in the southern part of the state. Each meeting provided the same training and utilized some of the same trainers. The intent was to provide a half-day meeting to share the boilerplate with people and motivate them to begin the process. This meeting also gave them ideas as to how other schools have approached this task, and shared information about ORS to help the participants better understand how this agency functions. They had the opportunity to discuss what was going on in some of the institutions of higher education, what kinds of services were needed, and what services were being provided.

There were many questions about beginning and conducting the process. There were concerns about what to do if it appeared there wasn't much interest within the institution or from the local ORS office. The meetings provided an opportunity to discuss these types of issues.

The Office of Rehabilitation Services had the goals of getting everyone to have an agreement written and developing a shared approach to paying for services. The actual range of agreements that they allowed in the first round of development were anywhere from a 70/30 share (with 70% as ORS' responsibility and 30% as the institution's responsibility) to a 50/50 share. They initially allowed a range in the cost share. Each school had to justify why they needed ORS to assume more than a 50% share and this had to be negotiated with the local ORS office.

In addition to the three meetings to initiate the process, those involved networked with several state organizations. The group worked with the Illinois Community College Board (ICCB) to get the Governor's Deputy Assistant of Higher Education to motivate some of the networks of people with whom they worked. The group facilitated getting the President/Chief Executive Officer

of the ICCB to write a letter to all the presidents of all the community colleges, urging them to get appropriate people at their institutions working on this. Representatives from ORS wrote to all the casework supervisors in the local offices and encouraged them to take the initiative by contacting local schools and start developing the agreements. Locally, the group worked through a few disability services networks in the state to provide informal technical assistance, give people ideas about what kinds of agreements were being developed, and show how they were working out.

Ongoing Support

Although the primary reason for the agreements was money, the agreements in Illinois involved other areas. They also were intended to involve issues of referral and communication between institutions of higher education and the Office of Rehabilitation Services. So the group expanded the training to get into those issues and also to talk about the possibility of mutual training. An idea emerged that there would be an annual meeting to follow up with the progress. This would provide an opportunity to meet at different places in the state, discuss how things were working out, and identify any problems. The participants could also identify any mutual training needs in order to help each other.

Initial meetings were planned for 2000 and the training meetings were held during 2001 in January and February. Institutions were urged to begin developing the agreements by June 30, 2001, the end of the fiscal year. The goal was to implement the agreements during the fall of 2001. Within Illinois, there are about 40 community colleges and about a dozen major state universities. Currently, there are approximately 31 public colleges that drafted agreements, and there are several more in progress. So it's been successful in terms of reaching the majority of public institutions.

Questions from the Audience

Question - Frank Bowe: Annette Reichman pointed out that more than half of the states do not have any agreement at all after more than three years. Why? Is it because the colleges don't have an incentive? Is there some other reason? But why do most states not have any agreement at all?

Annette Reichman: Why is a good question. I don't have an answer to that. What I hear is that there is no penalty for not being in compliance. So if you're not complying, there are no consequences. Institutions of higher education have been resistant to developing agreements with their state VR agencies because they don't want to assume any responsibilities...and vice versa. It gets more interesting each year to see what individual states are doing, how they are wording their inter-agency agreements, how they are charging and charging back for those services, and how it's affecting students. I

think there are about 15 or 16 states that are currently in the negotiation process and hopefully by the end of the year that will be done.

Patty Conway: I think we have an agreement in Kentucky, although it might not be the same type of agreement that is being worked out in other states. For me, if I had to do that in my state now, I think it would be very time consuming. It's an overwhelming task.

Tom Thompson: The schools in Illinois that have not done an agreement may have the perception, "Do we really want to get into this? Are we going to lose something?" The Office of Rehabilitation Services indicated in the training sessions that if they didn't enter into an agreement, they would continue to fund things on a client-by-client basis. This functioned as it had in the past, but there were no guarantees that it would continue. Another issue was the availability of money. Some schools may think things are going well without an agreement, and perhaps have adopted a "wait and see what happens" attitude.

Frank Bowe: The federal government is holding hearings around the country now, and information about upcoming meetings is on the NAD website at <www.nad.org>. Conference participants can email comments to Frank Bowe at the Government Affairs of the NAD website. The NAD is very interested in what is happening to consumers. There is concern that consumers are not receiving necessary services.

Question - Bobbi Cordano: I'm the Director of Disability Services at the University of Minnesota and I'd like to clarify something. The University of Minnesota has agreed to pay 100% of the costs, so does that reduce the amount that might be available to other colleges in the state university system? The State of Minnesota has a central fund for all disability access issues that includes deaf and hard-of-hearing services. The University of Minnesota accepts the entire responsibility. I know that that agreement was in place before I got on to the scene.

For the last two years I've been looking over that seemingly inequitable agreement. Our interpreter costs are rising to nearly \$1.5 million each year. If our costs continue to rise, as they have in the past, then by 2005 they could be as high as \$4.3 million a year for interpreting services. Now, that is if all things stay the same for the next ten years as they have for the last ten years. One thing is that we have an increasing number of graduate students who are deaf and hard of hearing. We have people who are becoming doctors and lawyers and veterinarians and dentists. I share NAD's concern about client access to public institutions of higher education. If a university or college sees these costs rising so astronomically, then they are going to start finding reasons to reject or refuse to accept deaf students.

I see another trend in the blind community. A new profession – certified Brailleur – is developing that may be very comparable to sign language interpreters for the deaf. Now our office is predicting that we are going to have to be paying for certified Brailleurs, just like we now pay for certified sign language interpreters. If deafness and blindness are low-incidence populations, how are we going to be able to make sure that our public schools are accessible in the long run for low-incidence populations, like deaf people and blind people?

Annette Reichman: I've heard this same concern from several individuals who are sitting in this room. It is a true concern about the rising costs that we are currently experiencing. Informally, I've heard some comments that colleges and universities have already made the decisions about not actively recruiting deaf and hard-of-hearing individuals because of the rising costs that they are facing. So this is already happening. They are not saying publicly, "Do not recruit any deaf and hard-of-hearing or any other disabled individuals," but it's subtle. We need to look for other ways or other alternative solutions for providing low-cost solutions. As an example, some people look at voice recognition technology for speech-to-text access. Will we be able to develop software that allows one to speak and then the text appears on a screen? This might be viable because this does not cost as much as interpreters.

So those kinds of things are currently being discussed as short-term and possibly even long-term solutions.

How we limit the need for those high costs for professional services is going to rely more on what technology is going to be available as a substitute.

Tom Thompson: I'll give you an example using Illinois in my response to that question. In preparation for the meetings, we had a group of representatives from about 20 institutions together for a meeting. I did an informal survey of the people that were there, asking them where their funding for disability services came from. The surprising, and perhaps appalling, thing is that one third to one half of the schools got no money from their institution for disability services. These were mostly representatives from community colleges. They got their money from federal flow-down grants, like Carl Perkins funding, Special Populations grants, and other sources, but there was no institutional investment.

To address Bobbi's question, part of my answer is that it's a shared responsibility. Institutions have to step to the plate and fund a lot of these services themselves. It's part of the mandate in higher education. We have to be creative looking at technology, and I think state and federal governments are going to have to take a role.

Patty Conway: I agree with what Tom said. Even in Kentucky where we have state funding of about \$1 mil-

lion a year right now, that's not all that is used. Colleges and universities still put money in their budgets to provide these services, too.

Question – Michael Canale: I'm from New York. Since we are located in Manhattan, there are students coming to my institution from Connecticut and New Jersey. What is the policy regarding students coming from out of state? Are VR-sponsored students being encouraged to go to an institution within another state, like New York? Are there regulations or policies, other than they don't pay for institutions outside of their own state?

Frank Bowe: Patty, do you have a policy if the person is outside of your state? Does that affect the agreement?

Patty Conway: It very much affects it. The law that I described is a Kentucky law, so that is for Kentucky residents. So if someone is from out of state, then all kinds of things can happen and do. The colleges usually go to the state VR office to see what money they can get from the other state VR to pay for that student.

Question – Bob Davila: This is one of the problems - VR is not an entitlement program. I think that Annette Reichman made that point very well. It's an investment, so naturally they expect a return on their investment. Between Gallaudet and NTID, they get about \$130 million each year from Congress to educate 2500 young men and women. That is certainly not charity, though; it is an investment. We can document the return to the public on that investment. As long as we can continue to do that, we can take any challenging questions. No doubt, Congress is working very carefully to limit resources. I think that we can show the rest of the country the data. And to speak for the students from NTID and RIT, we have great data about collaborative studies with the Social Security Administration. We can document, for example, that over the working life of the past 25 years of NTID graduates, they pay back to the public several times over the cost of his or her own education. That is very important information for Congress to have because they have got to pay the bills. If you add to that the cost of \$1 million to support a person with a disability who doesn't work throughout their lifetime, that is \$1 million that will not be paid back.

So, the investment in education and sending people to work is going to save the public that \$1 million, too. I think that's the approach that we should take as we begin a national program to develop a database related to the employment of disabled people because deaf people as well as blind people are among the most employable of those with disabilities. Therefore it is a great advantage.

Question – Frank Bowe: Any follow-up comments?

Patty Conway: I just wanted to add one thing that I feel I have to say related to my VR colleagues. I think

those of us in VR are very concerned that we are mandated to serve those with the most severe disabilities. Those often are not students who are in postsecondary education. These services take so much money, and many of us in VR are very concerned about having enough money to meet that need when there's often no one else to help us address those issues.

Frank Bowe: Bob Davila mentioned Social Security, and I want to add one point to this. The Social Security Administration told me a few months ago that there are 53,000 deaf adults who are getting SSI benefits. Most of those people are on SSI for much their lives. If you do the math, the benefits from SSI plus the Medicaid benefits, you will see the cost to us is enormous. My point is that there are an enormous number of deaf people who are not working.

Question – Cynthia Plue: I'm an Assistant Professor at Northern Illinois University. When I graduated from college, I had some great concerns about going out in the real world. I also had some dreams and aspirations. I'm very much interested in the quality of services that are being provided or the lack of quality of services that are not being provided. There are many non-certified interpreters who are not prepared to work at a university level. Some may not even be state-screened. Deaf professionals may encounter interpreters without even an associate's degree. How can they interpret effectively for someone like me? So clearly, it is a domino effect to all of us who are the recipients of those services. In my role as a professor, when I think about what's important, I think not only about monetary issues, but also quality issues.

Annette Reichman: Quality of service provision is also a concern at the federal level. In Virginia, cost sharing is helping to address quality control issues. I indicated that the cost share in Virginia is 60/40, so the VR agency is in a position to have a voice in the determining who can provide interpreting services. I'm not sure what other states are doing for quality control.

Patty Conway: In Kentucky, we are not necessarily dealing with it because we passed a state law for licensure of interpreters, and we hope that will help in the quality of interpreters in postsecondary settings.

Question – Suzette Dyer: I'm from the University of Oklahoma; I am a member of the Oklahoma Association on Higher Education and Disability and participate Oklahoma PEC activities. We have an interagency agreement in Oklahoma simply because we felt the need to minimize damages. The Oklahoma rehabilitation agency didn't enter that agreement in a spirit of collaboration or cooperation. They did so in a manner to opt out of the

more expensive services in Oklahoma. The public institutions in Oklahoma feel very strongly, as an advocacy group within OK-AHEAD, that we provide effective services to our students who are deaf and hard-of-hearing. Technology isn't always going to be the answer to providing effective services to those individuals. Some of them are going to prefer an interpreter and be more successful with an interpreter, and we choose to support that.

So we pick up 100% of the costs in Oklahoma.

Oklahoma VR approached the agreement from the "last dollar" standpoint, that the state dollars in higher education were comparable benefits. They decided that the ADA basically replaced Section 504, rather than the two pieces of legislation working in conjunction with one another. Their stance is that it is absolutely illegal for them to participate in those auxiliary services. What I'd like to know is if the Department of Education would assist states like Oklahoma by clarifying that issue for those VR agencies who are maintaining that position. My guess is that it may be why many states don't have an agreement right now.

Annette Reichman: Since I've been at the Department of Education, which has been just about 2 ½ years, I've heard similar statements again and again throughout the country about the U.S. Department of Education not providing leadership on certain issues. I am trying to work inside the network within the Department of Education to develop a written document to provide that kind of leadership and guidance that is so desperately needed.

We had several meetings to review this issue. In my role in RSA, we have met with the Office of Civil Rights and the Office of General Counsel. These three entities have been in a continuous dialog with one another in an effort to develop an agreement for the 1998 Amendment to the Rehabilitation Act, so that the states can decide how to make decisions to pay for services. That is actually what the agreement is intended to do. It's not necessarily the role of the federal government to dictate to the states how they should do that. It is our role, though, to make sure that they are functioning in a cooperative relationship. When you look at the ADA and Section 504, both of them apply. Section 504 has specific text that says institutions of higher education that are receiving federal dollars will do the following, and that VR will pay for certain services. Legally, Section 504 is reviewed first and the ADA secondary. If the ADA is not applicable, then they turn to Section 504. If Section 504 is not applicable, then they turn to the ADA. And there are times that they view them both cooperatively.

Frank Bowe: We will probably have to amend the Act next year, so we need advice on how to specify this language in the law.

Question – Louise Tripoli: If you had a wish list, what kind of law would you like to see passed?

Frank Bowe: The questions that we are asking for is exactly that. What should change in the law next year when it comes up again? For example, should there be language in there that offers a penalty? Should there be language in there that offers incentives for the colleges? Should there be language in there calling upon private colleges to take part in these agreements? These are all questions that we have. I don't have answers yet. But the NAD is very actively interested in your input. We are very interested to get your thoughts about what should happen with this law.

Taking Stock of our Present and Projecting the Future

Robert R. Davila

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Deaf at the Rochester Institute of Technology
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It is a great honor for me to be invited to address the 2002 PEPNet conference here in Kansas City. Throughout my professional career I have taught and managed at all program levels, from elementary school to graduate programs. I have especially enjoyed my work at the college level, but also deeply appreciate the heavy responsibility that we share to prepare young deaf and hard-of-hearing persons to meet the challenges of a world that is being transformed at warp speed. Last year in an address to the Conference of Educational Administrators of Schools and Programs for the Deaf (CEASD), Dr. Robert Frisina, the first director of NTID, quoted Darwin and said, "It is not the strongest of the species that survives over the most intelligent; it is the one that is most adaptable to change." I cannot think of a better way to describe our responsibility to the current and future generations of deaf and hard-of-hearing students.

Unfortunately, in the face of today's overwhelming challenges, education of the deaf, centuries after its recorded beginning in Europe, is still struggling to find answers to many of the problems and issues facing deaf persons. This same system of education which gave me the opportunities to learn English as a second language, acquire speech in English, obtain a quality education, and develop into a self-sufficient, productive, and independent adult has not been as successful with the larger majority of deaf persons. The question we have been investigating this week is, "How can we achieve successful transition from school to college and from there to the world of work and service in the community for the larger number of our students?"

For more than 165 years following the founding of the first school for the deaf and the subsequent development of a national network of residential schools, education of the deaf in the United States effectively functioned as a self-contained, free-standing system, relying neither on general education nor on any other special education system to discharge its responsibilities to deaf and hard-of-hearing children and youth. In fact, it was the only special education system with its own higher

education and teacher preparation systems, early childhood and parent support programs, vocational and career education components, and a professional workforce numbering approximately 15 thousand certified teachers, of whom about 20 percent were deaf. The emergence of revolutionary national policies that were fueled by the civil rights movement of the '60's, has created promising, but controversial, changes in the educational infrastructure serving deaf and hard-of-hearing children and youth.

Over the past 50 years, more significant changes have taken place in American schools, the workplace, and in society than during any comparable period of our nation's history. The same is true for the rest of the world. Two important developments took place in rural America following World War II: urbanization and the incredible speed of advances in technology. The development of a national highway system in the 1950's contributed to the rapid urbanization of America. Urbanization created the logistical possibility of educating deaf children closer to home. This materialized several years later in the form of national legislation aimed at inclusion and a diminution in the role of the traditional residential school system serving deaf children.

Second, to all intents and purposes, universal higher education was established through government support of the GI Bill of Rights for the returning 11 million World War II veterans. This, in turn, fueled scientific activity and its resulting technologies nationwide. These activities contributed to air transportation, telecommunication systems, computers, space travel, food production, and health care. At the same time, manufacturing was joined by service as primary employment opportunities. Hence, the need for literacy and technical training became paramount to the future lives of deaf children and youth. That is why the National Technical Institute for the Deaf was created in the 1960s: as a national model for access to higher education with the goal of inclusion in the economic sector in ways not previously attainable.

The monopoly of residential schools began to crumble when U.S. Public Law 94-142, the Education of All Handicapped Children Act of 1975, was enacted. The core requirement of this law was that, to the fullest extent possible, children with disabilities were to be educated in the least restrictive environment; that is, in inclusive settings with their non-disabled peers. Educators of the deaf, supported by the leadership of the deaf

communities of the nation, fought this mandate with a passion. Some saw this as a temporary pendulum shift that would swing back when it was recognized that deaf children could not be “mainstreamed.” Others saw more long-term threats to Deaf culture and the social fabric of the deaf community. Few saw any redeeming value in this public policy and feared it would result in the dismantling of the traditional residential school-based system.

Today, 27 years later, the good news is that the worst fears of many have not materialized. But neither have all the expectations of the framers of this landmark legislation been realized. This law basically was a civil rights law that guaranteed the right to an education in the least restrictive environment to every child with a disability. For the majority of these children, the goal of integration with non-disabled children largely has been fulfilled. However, if we accept the axiom that a person in society cannot be truly independent unless he or she is self-sufficient, then we need to realize that mere access to education is insufficient.

The ultimate goal of education is to provide individuals access to knowledge and to prepare them to express their creativity. We need to be concerned with the educational outcomes that derive from the total school experience including the years they spend in college; that is, a young person, regardless of his or her disability, should be able to leave school with independent living skills, employment readiness, and a set of “learning how to learn” skills (Norman, 1993). For many persons with disabilities, these goals remain the ultimate, but unrealized, dream. Many deaf children, especially those with additional severe disabilities, leave school unprepared to live and function independently. We are aware of the data reported in the most recent Americans with Disabilities Act report card which reveal that more people with disabilities are presently unemployed than before the ADA became law.

By contrast, evidence exists that deaf persons have made tremendous strides in upward mobility and in accessing heretofore closed employment fields. Some deaf children are thriving in mainstreamed programs; unfortunately, others are floundering. There is an abundance of quality support services in some programs and a dearth in others. Teacher and interpreter quality may vary from program to program. Communication philosophies and policies also may vary. In spite of issues and problems that persist, there is no evidence that deaf and hard-of-hearing children are worse off than before the inclusive movement became the law of the land. Seventy percent of all deaf and hard-of-hearing children are now being educated in inclusive settings (Moore, 1996). This is the complete reverse of the placement distribution that existed prior to 1975. We may have to wait another generation to determine the long-term effects and outcomes of the mainstreamed placement of deaf children.

There are three contentious trends in education of the deaf: the movement toward full inclusion; the continuing debate over communication philosophies; and the challenges presented by the world economy's demands for greater intellectual knowledge and capacity by workers of the future. However, educators of the deaf are a very resourceful group and have a history of responding well to such changing demands.

During the 1963-64 worldwide rubella epidemic, almost twice as many deaf children were born than in any previous two-year period. Many of these children were born with additional disabilities. Our profession responded admirably to the challenge posed by these so-called “rubella children.” We learned quickly how to cope with the issues of learning and accommodation that they presented. And we also learned that many of these children differed only slightly from other deaf children in terms of their educational, social, and cultural needs.

In a number of countries, including the United States, governments recognized the seriousness of the epidemic's impact and appropriated increased funds for new school construction, more teachers and support personnel, increased vocational training and career preparation, and expanded post-school and employment placement services. In the United States, increased federal support resulted in the expansion of Gallaudet College in Washington, DC, to university status and a four-fold increase in student enrollment. Coincident with this elevated interest was the establishment of the National Technical Institute for the Deaf, a college of Rochester Institute of Technology, in Rochester, New York, which notably has served as a model for similar institutions in other countries.

Additionally, national demonstration elementary and secondary schools were established to carry on programs of research and development and to disseminate the outcomes of their efforts throughout the country. Although the rubella epidemic was seen initially as a formidable challenge, if not a calamity, over time it proved to be a blessing in disguise. The epidemic revitalized the profession and gave it the “shot in the arm” it needed to move ahead with new energy and purpose. This successful experience is what fuels my confidence in the future of our profession.

Protest At Gallaudet Sets Off the Empowerment Movement

In the past 40-50 years, **empowerment** has become a precious word as well as the goal for people who yearn to determine their own destinies. The civil rights movement initially targeted ending the segregation of African-Americans, but also ignited the battle for equality among other minority groups, including women, people with alternative living styles, and persons with disabilities.

Persons with disabilities united in their efforts to ex-

pand their political base by forming coalitions to speak with a unified voice. And it paid off. The Americans with Disabilities Act (ADA) was enacted into law in 1990. It is considered to be the most sweeping civil rights law in history. Chapter IV of the ADA, along with provisions in other sections, mandates access to communication on the telephone and to public services for deaf people by requiring 24-hour telephone relay services and the provision of interpreters or captioning in public places.

If the battle for the ADA was the Armageddon for Americans with disabilities, the Deaf President Now protest at Gallaudet University in 1988 was a major turning point for deaf people throughout the world. It certainly was one of the most catalytic events in the history of deaf people's struggles to access improved economic opportunities through quality education and career preparation.

The question repeatedly has been asked over the years, "Did the Gallaudet protest open doors to opportunities for deaf people elsewhere?" Although it is difficult to trace the specifics of progress to this singular event, this question has to be considered in the context of expanded educational and career preparation opportunities that have been created in the United States and in an increasing number of countries throughout the world. Seventeen American schools for the deaf have appointed qualified deaf persons as chief executive officers in recent years. Advances made by deaf persons in business and industry also have been promoted by expanded study opportunities at programs like NTID/RIT, CSUN, and the PEPNET network. The Gallaudet protest signaled that deaf persons also had grievances in need of resolution, and legislative and professional entities took this as their cue to pay more attention to the needs of deaf and hard-of-hearing persons.

There is no question that change is taking place; it is being fueled by more positive and broader public awareness of deafness and higher educational attainment by deaf persons. A 1994 government survey of colleges and universities in the United States reported that close to 25,000 deaf and hard-of-hearing students attend regular postsecondary educational institutions and receive support services that include interpreters, both sign and oral; notetakers; tutors; and speech and hearing services (National Center for Education Statistics, 1994).

What makes education significantly different in the United States is that we have made secondary and postsecondary education practically universal for all deserving and qualified deaf and hard-of-hearing persons. To be sure, exceptional deaf persons always have been able to attend college. The 25,000 deaf and hard-of-hearing postsecondary students reported in the survey I mentioned previously are attending more than 2,000 American colleges and universities. And this total does not include students who are attending NTID or Gallaudet University.

For the American deaf community, which now includes doctors, lawyers, engineers, entrepreneurs, researchers, technicians, software designers, teachers, psychologists, social workers, counselors, and administrators, among many others, higher education is what has made the difference. A quality education leading to a good career choice levels the playing field and creates economic parity between deaf persons and their hearing peers.

We Are Still a Long Way from Reaching Our Goals

As encouraging as the increase in higher education opportunities for selected deaf persons may be, we must remember that deaf and hard-of-hearing students attending universities worldwide are a very select group and represent only a small percentage of our school populations. In fact, even in the USA, the overall picture remains murky and it is worrisome because the majority of deaf students are still not receiving adequate support and assistance. We are reminded at times like this that the 1988 Commission on Education of the Deaf reported that 79 percent of community college students did not receive their associate degrees. Furthermore, the COED also reported that only three out of ten bachelor's degree candidates actually received their degrees. These figures are astounding and there is no evidence that there has been significant improvement over the past 14 years. Even when we rationalize that not all college-enrolled deaf students are matriculated in pursuit of degrees or that there are redeeming benefits from the college experience even when a degree is not obtained, three out of ten is not very defensible, regardless of how we explain it.

Assessment and placement of deaf children and adults in appropriate programs, staffed by trained and caring professionals using effective communication, is a battle that has not been won. In spite of the progress I have described, communication issues remain unresolved.

In this new millennium, we can take pride in the accomplishments of our best and brightest students, but we must also temper the enthusiasm that derives from the success of a few to remind ourselves that much remains to be done. We must be mindful that the greater majority of our students are still facing a very uncertain future. I hope that during this Conference we will establish the networks of information and contacts that will enable us to share our knowledge and expertise with each other on a continuing basis. This is the only way that progress can be achieved for all.

Effective Transition to Postsecondary Pursuits Remains Elusive

In 1990, when I was serving as Assistant Secretary of the Office of Special Education and Rehabilitation Services (OSERS), the Individuals with Disabilities Education Act, P.L. 101-476 (IDEA), was reautho-

rized. The hallmark of this reauthorized IDEA was the inclusion of the requirement of Individualized Transition Plans (ITP) for students with disabilities who are at least 14 years old. The introduction and inclusion of a transition service did not change the appearance or structure of the Individualized Education Plan (IEP), but rather attempted to strengthen it. It stated that post-school activities would include postsecondary education, vocational training, integrated employment, continuing and adult education, and independent living or community participation.

We at NTID support those worthwhile goals through our nationally recognized Career Awareness Program, a self-exploration and career awareness program for high school students who are deaf or hard-of-hearing. To support students' transition to college, we have additional programs designed to enhance their First Year Experiences and to assist them in making adjustments to college life. A comprehensive orientation program and academic credit-bearing Freshman Seminar are modeled after the groundbreaking work of Dr. John Gardner and the Students In Transition Programs from the University of South Carolina. From the national research, we know that students who have weaker skills and/or are unsure about their career goals are at greater risk of dropping out of college before they complete a degree. Students who have strong communication skills, understand themselves, and have clear goals are most likely to be successful in college.

Dr. Michael Stinson, a researcher at NTID, has completed a significant body of work with Dr. Thomas N. Kluwin from Gallaudet and others related to social orientation toward deaf and hearing peers among deaf adolescents in local public high schools. The results indicate that the deaf adolescent who has a sense of himself or herself in both cultures is most likely to succeed. Hence, the student's confidence in his or her ability to communicate with others regardless of their hearing status is important. Students who are preparing for the world of work will need to be confident in their ability to read and write English, and also feel comfortable interacting with both deaf and hearing persons if they are to contribute their talents and fully participate in our society.

Utilizing Emerging Technologies to "Level the Playing Field"

Emerging technologies already affect the teaching and learning processes in classrooms throughout the country. It took 38 years for radio to achieve 50 million users; personal computers took 16 years, and television took 13 years. However, it took the World Wide Web only four years to reach 50 million surfers (Porter, 2000). Technology now permits us to bring the entire world into the classroom. Just about any conceivable concept can now be illustrated and taught using the World Wide Web.

Computer networks are natural media for people who are deaf and hard of hearing because vast reservoirs of data and information are accessible for viewing on monitor screens. Unlike sound motion pictures or radio or early television, which by virtue of their reliance on sound were not interactive for those who could not hear, the Internet is almost completely accessible. Of course, we hope this will not change as technology continues its rapid development. We recognize that automatic speech recognition is making rapid progress and fear we could face a future dominated by "talking computers." That could be quite a setback.

Notwithstanding the powerful dominance of telecommunications and Internet technologies, interpreter services are among the most direct and effective services that will always be in demand. There can never be enough interpreters to meet the needs of persons who need their support. No machine can duplicate the skills of an efficient interpreter. In fact, interpreter quality now is being harnessed through a developing technology called video relay interpreting (Bailey, 1997). This system employs a remotely located interpreter who can be accessed through a regular telephone line connected to video equipment. The equipment required to access this remote service becomes more cost effective when more than one consumer shares it. The system is already in place in a number of rural locations throughout the United States.

Many advances in science and technology have benefited the work of professionals in deafness. The invention of the vacuum tube in 1917, for example, led to the invention of radio, television, and hearing aids. The vacuum tube was replaced by the transistor in the 1940's and paved the way for miniaturization, resulting in smaller, wearable hearing aids and more precise measurement devices, such as audiometers. Early diagnosis of deafness resulted from such advances. With the advent of semi-conductors, or microchips, we have seen a revolutionary shift from electromechanical to electronic technology, which increased speed and reliability of computers. Hearing aids that fit entirely in the ear and cochlear implants are improving because of these developments.

The operating microscope in the 1950s revolutionized middle ear surgery and provided relief from otosclerosis for millions of people. The newer electronic microscopes have enabled studies of individual cells and their performance and have made possible advanced hearing research.

In the future, we can predict that genetic research will result in the prevention and cure of many diseases. Human genome research, now complete, will lead to development and testing of vaccines, therapeutic drugs, and diagnoses that will aid in the prevention of deafness. Advances in DNA analysis and gene therapy will lead to the identification and replacement of defective genes (Robert Frisina, personal communication, May

15, 2000). This could lead to ensuring in the distant future that every baby born will be a "perfect baby." Clearly, there will be some complex ethical issues that will need to be resolved.

Would this eradicate deafness completely? Not in the foreseeable future and not until the issues related to ethics are resolved. The greatest concern in the world today relates to the economic disparity between the developed and developing countries. Health, education, food, shelter, safety, employment, and protecting the environment continue to be among the world's most pressing problems. Terrorism has most recently been added to these lists as a high-priority concern.

Our proud profession has responded to a number of crises over the years. Developments over the past century that were intended to make life easier and work more efficient inadvertently created problems of accommodation for people who cannot hear. In the new millennium, we are challenged once again to refine the knowledge and skills that deaf people must possess if they are to function independently with confidence and ability. This Conference is an excellent starting point for a new beginning.

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Reaching Beyond the Requirements

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Abstract

Reaching beyond the requirements . . . President Bush has stated that there will be “No child left behind.” What will it take? Speaking from her experiences as a counselor, teacher, administrator, and consultant, Dr. Pressman shared some of her personal stories and triumphs in working with the deaf and hard of hearing community. In her words . . .

“We know that deaf and hard of hearing people have always worked. However, the bigger issue to grapple with is career advancement, promotions, and leadership opportunities. Teachers, counselors, and administrators — those of us who are the role models and hold the keys to influence the goals, attitudes, learning, and direction of our deaf and hard of hearing children, students, and workers — are challenged more than ever to instill the skills necessary to help our children, students, and workers not only survive but to also compete and lead in a global market.”

While we may not be entirely responsible for our client’s or student’s success or failure, we do have the ability to encourage continual performance management. Performance management takes us a step beyond. It is the key that opens chosen doors. Stepping beyond the requirements means reaching outside the box and going beyond our given title to serve as a partner and advocate in lifelong learning and career development. How do we accomplish this?

Through a multimedia presentation, Dr. Pressman shared with the audience first-hand information on programs and methods she is using with deaf and hard of hearing people and research-based data that is helping guide how she advises organizations in order to create inclusive environments so that no child is left behind, no student is left behind, no worker is left behind, and no *person* is left behind.

Reaching Beyond the Requirements

When Ramon Rodriguez of the U.S. Department of Education’s Office of Special Education and Rehabilitation Services asked to me to consider delivering the opening keynote for this conference, I immediately thought about this incredible opportunity to bring a message to you, the leaders in postsecondary education for deaf and hard of hearing students. I see postsecondary education programs as the cornerstone that leads to a satisfying career. For the next few minutes I will share with you a few of my experiences, research, observations, and perspectives of being a career counseling practitioner with people who are deaf and hard of hearing for almost 25 years. Please follow along with me for the next few minutes as we begin a learning journey by reviewing a bit of the past and bring to light the realities of required performance in order to succeed in today’s workplace.

My career, which is a combination of both work and leisure activities, has been a winding path just like many of yours — not without its bumps and challenges, though. At first, I had dreams of becoming a speech pathologist until I realized what was required. My focus then turned to Audiology until I realized what was required. I finally found Gallaudet and Rehab Counseling, and I realized what was required! Afterwards I found Gallaudet’s Counseling and Placement Center and realized that there was work to be done and I wanted to do it. By setting a goal and with just a little bit of experience and a lot of drive, doors opened, programs developed, and students were placed in jobs. There were summer placements, such as Yellowstone and Yosemite, and full-time placements, such as Marriott, IBM, and the federal government.

From the simplest perspective, my performance as a career and placement counselor early on was successful, because I met the organizational mission by placing students in jobs and helping them transition from school to work. Today success is still largely measured by helping the organization meet its mission. However, missions change over time and so does the work that needs to be done. In hindsight I now ask: Was placing students in jobs — even if they did have a say in where they went — enough? At the time, I thought it was. You see, success was measured in numbers. I placed 18 students in one national park and 23 in another. I was commended. According to the State Rehab system, the number “26” meant your client was

gainfully employed (was now no longer dependent on the State) and that the rehabilitation counselor had done his/her job well. As a matter of fact, I had a colleague – perhaps you did, too – that became the State “Counselor of the Year” because she had so many “26”s, meaning she had a good number of case closures.

At the university level we tracked our graduates through an annual placement survey. We paid close attention to those who were gainfully employed and measured our success by employment and unemployment numbers. Most of the graduates were gainfully employed; we career and placement counselors and faculty felt pretty successful. Were we truly successful? Yes and no. Yes, we filled or met the task at hand and transitioned students from school to work. No, we did not have the foresight to prepare students early on for a mainstreamed world.

History tells us that deaf and hard of hearing people have always worked. In 1899, James L. Smith, who taught for 50 years at the Minnesota School for the Deaf, informed the convention of the National Association of the Deaf that deaf people were engaged in as many as 300 different occupations. Virtually every employment or career-related study since the landmark survey of the deaf population by Schein and Delk in 1974 has drawn attention to the fact that deaf people are employed in all occupations from professional to domestic. History even tells us about deaf leadership and successful deaf professionals. Jack Gannon documents the success of many professionals who are deaf. Even though deaf people have representation in every profession including medicine, law, and engineering, the reality is that the numbers are few. Nonetheless, it has been clearly demonstrated that deaf and hard of hearing people do achieve. However, Crammattee showed in his 1987 study of deaf professionals that – more often than not – deaf workers lagged behind hearing people in their ability to convert their educational attainments into higher status occupations.

In 1995 a report published by the Equal Opportunity Commission revealed that 6.8% of the deaf federal employee population had reached professional levels. On one hand, that can be viewed as an achievement. However, let us look at the statistics a little deeper. When comparing that percentage to the rest of the federal population, we see that 23% of all federal employees are in professional positions. Indeed, it is encouraging that some deaf people have attained professional levels in the federal government; however, they still have not caught up with the mainstream.

I conducted a nationwide study of deaf entrepreneurs just a few years ago. I found that 86 deaf business owners across the country from 27 states and the District of Columbia were involved in virtually every type of business from private practice medicine to arts

and crafts to restaurant ownership. I learned that the motivations for many to start their own businesses were their desires for an opportunity to be the boss, their interests in earning more money, their desires to show that deaf people could succeed in private business, and opportunities for promotion or career advancement, something they did not have in the jobs they held. The struggle of business start-up was more promising and less painful than a dead-ended career.

In truth, history only briefly mentions what happens to the mainstreamed deaf and hard of hearing worker. However, I can tell you from first-hand experience that there is still much work to be done in this area.

As a career counselor, I can honestly tell you that the problem of underemployment and career advancement is real. Let me give you an example: For one of my clients with a college degree working in a Fortune 500 company, the problem has nothing to do with skills or competencies, because the talents of this individual would far surpass most others in the same field. The problem is not with this individual's knowledge of the laws that protect people with disabilities from discrimination. Simply stated, this individual's workplace problems are nothing new. They include:

1. A lack of assertion and a need for assertiveness skill development
2. Miscommunication with hearing co-workers and superiors
3. Poor marketing skills
4. A lack of awareness in how to apply legal rights in order to ask – without the fear of being fired – for interpreters or other reasonable accommodations
5. An inability to seek and identify role models or mentors in an organization
6. A lack of development in and not enough practice with leadership skills

Because these skills are problematic in this particular instance, the result is an extremely talented individual working for a company for 15 years without the *first* promotion, while hearing coworkers have come and gone and moved into management and supervisory positions. The good news is that this hard working, extremely competent individual transitioned from school to work easily. The bad news is . . . well, you all know what the bad news is. Is this an isolated case? I only wish it were.

Of course, we do have some success stories. Jack Gannon has shown us that repeatedly. However, let us look at success in terms of the federal government. Certainly one does not need to reach executive level to be considered successful. Success is a broad construct as well. However, if we – for the purposes of this discussion – define success to the highest degree in the

federal government, or reaching the Senior Executive Service (SES), we see that we have had *one* deaf individual politically appointed to an SES position in a former White House Administration. However, no deaf person has reached the SES through a career ladder or promotion. To be considered for a SES, it must be determined that an individual has developed the basic skills required of the position. For example, one must demonstrate skill in financial management, teaching at the higher education level, or in conducting research. There are five core competencies required of every career SES member. They are the demonstrated abilities to:

- Lead people
- Lead change
- Build coalitions
- Be results-driven
- Possess business acumen

Certainly, we have many deaf and hard of hearing people who possess these skills. The federal government serves us as the largest employer in our country and certainly the largest employer of those with disabilities, which includes deaf and hard of hearing people. Therefore, the fact that we do not have any representation from deaf and hard of hearing people is a wake up call to all of us. The positive side of this reality is that opportunity is knocking for those with the right “competencies.”

We know that deaf and hard of hearing people have always worked. However, I believe the bigger issues are career advancements, promotions, and leadership opportunities. Teachers, counselors, and administrators – those of us who are the role models and hold the keys to influence the goals, attitudes, learning, and direction of our deaf and hard of hearing children, students, and workers – are challenged more than ever to instill the skills necessary to help deaf and hard of hearing people compete and lead in a global market.

Before I move on, let me talk a bit about role models and mentors. In my national study of deaf entrepreneurs, we learned that the majority of respondents identified family members and teachers as their most important role models. For those between the ages of 14 and 19, teachers, indeed, serve this role. Later, friends replace both family and teachers as role models. The implication here is, simply stated, that we need to exercise our influence early. Career development – along with those workplace skills that are keeping people down today – needs to be instilled by our teachers throughout the educational process so that tomorrow these issues will be a thing of the past. As a result, no child, no student, no worker, and no person will be left behind.

As a learning partner and lifelong advocate, I can honestly say that in order to help our deaf and hard of

hearing children, students, and workers truly become a mainstreamed part of our workforce with equal career advancement, we need to – at an early age – start imparting the performance management skills that lead to career mobility. I suggest to you that in today’s world of work there are four interwoven requirements for success.

1. Adding value
2. Interacting with others effectively
3. Relating to mission and organizational goals
4. Self-management

As a career counselor, one of the first things I share with a new client is the advantage of thinking like an entrepreneur or a vendor who has a product to sell. To an organization or company, the employee is selling a set of skills. With that in mind, one of the first questions that must be answered is: What value do you add to the organization? Most people seriously underestimate their contributions to achieving the organization’s mission and, therefore, do not know how to express their accomplishments. This is certainly true for the majority of the deaf and hard of hearing people with which I have been privileged to work.

Let me give you an example: Through the Northern Virginia Resource Center for the Deaf and Hard of Hearing, I recently conducted a series of Saturday morning career workshops. Most of the people who attended the workshops were college graduates seeking job change or ways to advance in their careers. They attended the workshops with expectations of learning what they would need to do in order to change their current work situation. The reality was and is that, individually, they all held the keys to change; however, did not know how to unlock the doors. For those of you unfamiliar with KSAs, let me add that they are the Knowledge, Skills, and Abilities – or the competencies – that are minimally required to be considered for a particular position in the federal government. The majority of positions in the federal government not only requires a resume or federal application but also requires applicants to answer several questions (normally between three to six) in essay format that demonstrate that the applicant has the experience necessary to perform the required tasks. As you can imagine, this often produces anxiety on the part of the applicant. Furthermore, most deaf and hard of hearing applicants are doubly tasked: to demonstrate ability *and* to write in a grammatically correct manner in essay format. Then they must think about how they add value. Needless to say, the task is overwhelming, and – for most individuals who are deaf – opportunities are lost everyday.

As a trainer in these career workshops, I found that, by using Socratic methods, workshop participants began to realize their own value. In other words, it would have been easy for me to tell them how to answer a question, but the result would have been that I

would have taught them *nothing*. My teaching technique, then, became simply for my students to teach me. If they can teach me what they have done through communication or writing, then they can convey this information to an employer. The greatest reward as a trainer or teacher is to see the light bulb turn on, so to speak, when a deaf or hard of hearing adult realizes that they have added value to their organization as an instrumental member of a team that wrote an educational policy; photographed a building that became the picture selected for use on a telephone calling card; helped oversee a multimillion dollar contract; or saved their company money by discovering a new accounting tracking system. When these realizations happen, dreams start to become realities. Someone realizes they have added value to an organization.

In order to make sure no worker is left behind, let us look at how employees are valued today. Not so long ago, employees knew specifically what their job tasks were. Hard work, dedication, getting the job done, and loyalty were highly prized by managers and the whole organization. However, in today's workplace it is far less clear what will catch the attention of managers and prospective employers or what will lead to our recognition as effective workers and to new opportunities in the organization. Today job descriptions are broader, more generic, and involve a wide variety of tasks and expectations. In the federal government a new administration means new ways of doing business. In the private sector, partnerships, business alliances, and market share dictate change at a moment's notice. Tasks change and multiply as projects change and programs grow.

How do we prepare our children and students to enter a workforce that is wide open to diversity and abounds with limitless opportunity? After all, as counselors, teachers, and administrators, our students will not always be by our side. This brings us to the second requirement – interacting effectively with others.

Because work is not a set of isolated and independent tasks anymore and because everyone's work is increasingly interdependent on teams and others in work groups, one of the most critical components for today's organizations is the skill with which its employees interact with others. Interaction has become an absolutely essential area of competence for those who will be recognized for adding value to their workplaces. The question to all of us is: *how* do deaf and hard of hearing employees become competitive in this arena when most of the time they are at a clear disadvantage? Perhaps this is something for you all to ponder or discuss over lunch and dinner or at roundtables during this conference. Allow me, though, to start the thinking by recognizing that there are no clear-cut answers, for mainstream society business partnerships have become the norm. Just as work is not done in isolation anymore, businesses are teaming up to forge

strategic alliances. It would make sense that our goal is to raise the level of partnering between our deaf and hard of hearing workers and hearing workers. But how can we accomplish this when our deaf and hard of hearing workers are often isolated and are in a dead-ended communication cycle which, most of the time, leads to nowhere? In the federal government, Dr. Victor Galloway – along with a few other deaf federal employees from several different agencies – began to tackle this vicious cycle a few years ago. As a result, a non-profit organization – the Deaf and Hard of Hearing in Government (DHHIG), which is recognized by the Federal Office of Personnel Management – was established. This was not easy, and the creation of this organization certainly came with its share of administrative challenges. I know this from first-hand experience, because I was invited to play the role of facilitator during the initial brainstorming and start-up phases of the organization, which now boasts well over 1,000 members across government and the nation and is self-supporting.

Let me talk about this accomplishment for a moment: First, there was my personal accomplishment. Being asked by Dr. Galloway to help the group was an incredible honor to me; however, I would be lying to say it did not take some thick skin on my part. There were the normal deaf/hearing tests required of anyone working with this or any other culture outside of their own, and those, of course, were communication and commitment tests. Please understand that these were not formal or written tests or something that I could study for in advance. Beyond being able to communicate, the only real thing I could offer was keeping the group on task by understanding their passion and desires in staking a claim in equal access to career opportunities and advancement. As a career counselor who has seen the struggles of my clients, I shared their passion. That was really the key to working with the group.

Dr. Galloway's foresight for having the group partner with a hearing colleague who shared their passion helped to keep the group on task through the development of the vision and mission statements. As a result of partnering and bringing people together from different agencies, the determination to expand the group to the hard of hearing population became reality. It has grown, and today it includes and serves any State or County government deaf or hard of hearing worker. This is important, because there is now a vehicle for networking, mentoring, learning, and receiving support from one or any of the many committees the organization has established. More importantly, it is a vehicle for deaf and hard of hearing people working in government to obtain leadership skills through the many volunteer opportunities the organization makes available to its membership. It is also a model that can serve others when seeking to establish similar

groups. It demonstrates that deaf and hard of hearing people can and do interact effectively and successfully with others to reach organizational missions and goals. The work of DHHIG is not made up of independent and isolated tasks. Work is increasingly interdependent on teams, and interaction with others is essential. For more information, log onto <www.dhhig.org>.

This brings us to the next essential requirement for success in today's workplace. It is imperative that workers relate and understand their organization's mission and goals. Organizations exist to fulfill their missions and goals and strive to accomplish that in increasingly better and more efficient ways. Workers must identify with, commit to, and contribute specifically to mission attainment. Not only do workers need to know how to do that, but they also need to know how to be clear about what they have accomplished and how it affects the organization's success. Understanding the organization's mission leads to and allows for self-management.

Today, as roles become more complex and cross-functional, interaction with others inside and outside the organization becomes more critical. The demands on how we manage our own self-awareness and involvement in the organization and how we achieve the recognition we desire becomes more important and require continuous development. This is accomplished by teaching our children, students, and workers how to find their own empowerment through increased responsibility, commitment, and self-direction.

Over the next few days as you deliver and attend workshops on the latest educational strategies and techniques and career management issues and topics, I urge you to think about what I have chosen to bring to your attention today. As educators, counselors, and administrators, you are in the perfect position to affect long term change in the careers of our deaf and hard of hearing children, students, and workers so that, indeed, *no person is left behind*.

SECTION II
Professional Development

Evaluating Speech-to-Text Communication Access Providers: A Quality Assurance Issue

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Abstract

A hard of hearing student blames his low grade on inadequate CART services. A free-lance stenographer raises her rates because she feels she isn't making what she's worth. How can you objectively evaluate these complaints? More and more, deaf students are receiving real-time speech-to-text communication access services in their classes. These services are provided by real-time stenographers, trained transcribers/captionists, speech recognition devices, and traditional typists. How can you know if the information presented is correct and adequately complete? This quality assurance question is the incentive for the development of an objective method to evaluate these service providers and provides the basis for this paper.

What is Communication Access?

Speech-to-text communication access serves several purposes. Primarily, it provides the content of information given in a class, the lecture information, and all relevant information that the student needs. It also provides social information, such as banter between students or between the professor and a student. Providing this information makes the student using this service as much a part of the goings-on of the classroom as the hearing

students. This access is provided in the class, as it is happening, usually via text presented on a computer screen. This makes it possible for the deaf or hard-of-hearing student to participate as fully as anyone else in the class.

There are several options for providing speech-to-text services in the classroom. The first is stenographic, the service that is provided in courtrooms by a trained court reporter using a steno machine. Outside of the courtroom, this is usually called CART (Communication Access Real-time Translation). This service can be provided live, via telephone, or via web. In the courtroom, the output is a transcript of the spoken word of what has transpired; in educational settings, the output is the spoken word and environmental sounds as they are happening viewable on a television or computer monitor.

There are two summary transcription services that prevalently are used in the United States: TypeWell and C-Print. They do not strive for a word-for-word translation of what the speaker is saying, but rather provide a meaning-for-meaning translation. It is much like a sign language interpreter in concept. The transcriber listens to the content of what the instructor is saying and gets the meaning down and doesn't worry about getting every single word. TypeWell and C-Print provide a similar service, but they operate quite differently. Please see their websites (www.typewell.com and <http://cprint.rit.edu/>) for more information.

The next method is speech recognition. Speech recognition still needs some improvement before it will be easily used in the classroom. For instance, punctuation is generally not included, and so the user must make sense of a screen of words that are strung together. In addition, homonyms (words that sound the same but are spelled differently and mean different things, e.g., pare, pair, pear) are problematic, which can be confusing to students. Nonetheless, it has come far enough and is showing enough promise that several research projects and programs are under development. Examples of these include the I-Communicator (<http://www.isi-communicator.com/index.php3>) and the Signtel Interpreter (<http://signtelinc.com/main.htm>) which use both automatic speech recognition and video clips of signs to provide written English and signed (in English) presentations of the spoken word; the voice-recognition program that is currently being tested for use in conjunction with C-Print by National Technical Institute for the Deaf researchers; and the Liberated

Learning Project (www.liberatedlearning.com). Note, with some of these programs each instructor trains the program to her voice (requiring a different file for each instructor); for others, such as C-Print, a service provider trains the program to her voice. She goes from class to class, and repeats what the teacher says, adding spoken punctuation, into a steno mask. Using the steno mask reduces extraneous noise coming into the microphone and muffles the service provider's voice so that others in the room can't hear. That information comes up on the computer screen for the student to read.

The final method is one many have used simply due to lack of a better method, and that is using a regular software program, typing as fast as possible. Of course this is not the preferred method, since the rate of most speech is so much greater than the rate of typing that most typists possess.

Understand there is a difference between communication access and regular notetaking. Notetaking provides students with a reminder of what was discussed in class. Communication access is visual information provided in real-time, giving students the opportunity to participate in class.

Why Provide a Speech-to-Text Accommodation?

There are a variety of reasons why a speech-to-text accommodation would be appropriate for a student. For example, the student who has a severe or profound hearing loss and does not know sign language might not be able to follow a lecture via amplification alone. The student may also have depended upon print accommodations in high school. If the student is accustomed to getting information in this way, it will be very difficult for him or her to switch to another system in an environment that is even more challenging.

As students progress through their educational programs, the need for print accommodations increases. Students who have successfully used assistive listening devices in the past begin to request speech-to-text accommodations as more is expected of them academically and professionally. In programs that are competitive, it is important for students to be aware of the nuances in communication so that they are on an equal footing in competing with other students.

Be cautious about using level of hearing loss as the standard for when to provide a speech-to-text accommodation. The student may have less than a severe to profound hearing loss and still need speech-to-text support. For example, the instructor might have an accent or facial hair that makes accurate speechreading impossible; poor room acoustics or excessive background noise (e.g., noisy air conditioning and heating systems) may present conditions that cannot be overcome by assistive listening devices; or the student might not be able to get enough information using speechreading and residual hearing to understand what is being said. Finally, be aware that whenever a class is set up in a

group discussion format, a student who has a hearing loss will probably not be able to follow it and will need speech-to-text support in order to understand and to participate.

Rationale for Formal Evaluation

A quote from the Internet site of a well-known court reporter states, "all in all, hiring captioners is no different than hiring any other professional on contract. Check them out beforehand, pay them what they're worth, and all will work out well." This philosophy is well intentioned, but offers little to no guidance to the person who is hiring the speech-to-text provider. The hiring personnel may have no experience in this area and no idea what they should be "checking out" in terms of a competitive rate, expectations of the service provider or what skills are required for the job. As an example, some programs use and recommend that students in court reporting programs, or those who have purchased the equipment but never finished the training, should be used for classroom speech-to-text services. They argue that it saves money and gives the steno students much needed practice. However, the rate of speech, lecture format, and vocabulary-dense environment mean that the court reporting student working at a slower rate and with a smaller steno dictionary will more than likely not be able to keep up with the information flow in the classroom. Is this communication access?

Especially in college classrooms, the person who hired the communication access provider is not there to ensure that the service is being adequately provided. The deaf or hard of hearing consumer is not aware, necessarily, whether or not s/he is getting the entirety of the message.

In many ways, the situation with speech-to-text providers is comparable to interpreter certification, testing and quality assurance. Through many years of practical experience, the interpreting profession has learned that the theory of "things will work out well" is certainly not the case. Several tools of measurement have been put in place to ensure to the interpreter, employer and most importantly, the deaf or hard of hearing consumer that the person providing the service has the necessary skills to do so.

Certification for interpreters can be obtained from several entities. The National Association of the Deaf (NAD) rates interpreters on a scale from one to five. Levels one and two are *not* certification levels, but novice levels. Level three is a Generalist, four is an Advanced, and five is a Master level. The Registry of Interpreters for the Deaf (RID) carries a Certificate of Interpretation, a Certificate of Transliteration as well as specialized certifications in areas such as legal interpreting. There are also state certifications such as the Quality Assurance Screening Test (QAST) that provide skill ratings on a one through five level system (with five be-

ing the strongest and one being an entry or beginner level). The state of Texas, for example, has one such in-state certification for their interpreters in addition to national certifications. For employers who have little or no experience in interpreting, these levels provide guidelines for matching service providers with assignments that are commiserate with their skill level.

The interpreting profession has also realized that language skills were not the only criteria necessary for a good interpreter and, with this in mind, a code of ethics was developed. This provides some boundaries to interpreters in terms of professional recognition, message equivalency and appropriate decision-making. A code of ethics helps to guide and protect interpreters, consumers and employers.

As stated earlier, a code of ethics is a mainstay of the interpreting profession. NAD and RID both have a similar code of ethics and certified interpreters must prove their knowledge of the RID Code of Ethics in order to get their certification. The Code of Ethics tenets cover confidentiality, faithful rendering of message, not interjecting or biasing the person with personal opinions, accepting assignments that are commiserate to their skill level, requesting payment in a professional and judicious manner, working to further their knowledge and skills as well as membership or certification to RID/NAD and the compliance to the Code of Ethics. In the case of interpreters a serious breach of it can lead to the revocation of certification.

Another benefit of the certification process is maintenance of the certification. Once an interpreter has achieved certification, the interpreter must also provide proof of continuing education. By maintaining certification, the interpreter lets consumers and employers know that they have met or exceeded a minimally acceptable level of continuing education.

Even with the certification process in place, an ongoing struggle for interpreters has been the recognition and designation by policy makers of interpreting as a profession requiring specific skills. Even though many certifications are available, employers may not be aware of them and may hire someone who calls himself an interpreter but who has not had training and is not certified. Some of these people are skilled communicators, but many are not. The employer believes he has fulfilled his obligation by hiring an interpreter, when, in fact, the service provided is substandard. Several states are researching and establishing licensure laws, requiring that state and federal agencies hire only interpreters with the specified accreditation.

Current Evaluations and Certifications

To protect consumers, employers, and service providers, clearly certification and evaluation of speech-to-text services is appropriate. What can be learned from the efforts in the interpreting field to evaluate the quality

of transcribers and captionists?

One option is a formal certification. The National Court Reporter's Association (NCRA) has in place a well-developed system for evaluating legal court stenographers. Like RID and NAD, it references the message, what was actually said, and the accuracy of what the stenographer transcribed.

The basic certification level is Registered Professional Reporter (RPR). At this level a stenographer must capture speech in three legal settings at a minimum level of 95 percent verbatim accuracy at speeds of 180 to 225 words per minute. The three types of legal settings are evidentiary Q & A, jury instructions, and literary discourse (e.g., lawyers giving information and background information).

Even though it is the minimal skill level, passing the RPR test is very, very tough. The NCRA certification has five different levels, and each one presents progressively faster speech and has other technical skills the person has to demonstrate. About half of the people who go to court stenography school do not complete the program and do not achieve this minimal level of certification. It is certainly not always the case, then, that the stenographer working in a classroom is certified, or taking down information at a verbatim level. There are many very good CART providers and certified CART providers out there, but many sites don't realize until after students complain that they're not getting a verbatim transcriber who can take speech at fast rates.

The second method of evaluation can be referred to as the "look-see" method; i.e., a supervisor looks over the notes or sits in the class and reads the text to see if it makes sense and watches for glaring errors. It is very, very tough to truly evaluate the accuracy and completeness of a person's work with this look-see method. This process is extremely time-consuming for most supervisors, and they (and the service providers) need something more objective.

Alternatively (or in addition to the supervisory review) students are given questionnaires to fill out about the perceived quality of the service. Again, the deaf consumer may not be able to tell if information is missing. Getting an evaluation from the consumer is useful, but it should not be the only evaluation of the quality of the speech-to-text transcriber.

The third method was developed as part of the TypeWell Quality Assurance system. After working with captionists and transcribers in classrooms for several years, many people began to realize that there was a great difference among them in their ability to do the job, but there were very few ways to document that. Concern about the quality of that information made it clear an objective evaluation method was needed.

The system that was developed for TypeWell grew out of consultation with Rich Mayor, a qualitative re-

searcher, individuals in the San Diego city schools; Gary Sanderson at the National Center on Deafness, and other concerned individuals. The resulting system is not specific to TypeWell; it can be used to evaluate any speech-to-text service.

Evaluation Development

How does someone evaluate the quality of a service that is not verbatim? Deal with the message, the meaning-for-meaning aspect of it rather than the word-for-word aspect. The evaluation process began with tapes of a variety of high school and college lectures on different topics. Verbatim transcripts were produced for each one. The team evaluated the transcripts in terms of "idea units" a concept from the field of qualitative or narrative research. An Idea Unit is "any phrase or sentence with an active or state verb in it. Idea units can be major, minor and repeated points. Here are some examples of Idea Units – the verbs are highlighted:

Scientists **know** feathers **evolved** from scales, from the scales of reptiles. They **think** that the reason they **evolved** was, **was** for insulation. To **keep** these warm blooded type of animals warm.

Keep their heat inside, like a blanket **insulates** a person's body heat.

Two judges code each verbatim transcript. There are now a number of people now trained to do this. They work on a transcript until the inter-judge reliability reaches at least 87%.

Next, major, minor and repeated points were identified. The person who gave the lecture reviews the verbatim transcript and identifies which points are major, minor, or repetition. Major points are those that are necessary to the understanding of the topic or the flow of ideas; or those that might be on the test. A minor point is defined as information that supports main ideas, but is not absolutely required for understanding of the topic. Repetition is defined as information that is restated after the point has already been made or before major point has been fully elaborated.

The following are examples of major, minor and repeated ideas (major points are bolded; minor points are underlined, and the parts without formatting indicate repetition):

Scientists **know** feathers **evolved** from scales, from the scales of reptiles. They **think** that the reason they **evolved** was, **was** for insulation.

To **keep** these warm blooded type of animals warm.

Keep their heat inside, like a blanket insulates a person's body heat.

Besides the lecturer, a second professor of the same

level and the same department also codes the transcript. It is more difficult to obtain agreement among professors about what phrases are major, minor or repeated. Inter-rater reliabilities range from 80-95% for this part of the coding.

Initial Evaluation Results

Over the last two and a half years, there have been three phases of this evaluation development. The level 1 certification testing has been given to 26 people who had between five and eight months experience in the classroom (19 used TypeWell, 4 used C-Print, and 2 used CART; 11 worked in secondary settings, 15 worked in postsecondary settings). Findings show that after five to eight months in the classroom, most service providers were capturing between 80 – 85% of the information, with a range of 58 - 98%. Contrary to everyone's expectation, the person obtaining 98% was *not* a CART provider.

Some Interesting Trends

There was a real connection between quality of what the transcribers captured and a base typing speed. People who had a base typing speed below 55 words per minute could not capture as much information. Related to that, for both C-Print and TypeWell, the number of abbreviations that the individual transcriber or captionist used was related to how much information was captured. The abbreviations in both systems were developed help the person keep up with the speed of speech. The more the transcriber or captionist takes advantage of this, the better they are able to keep up with the speech.

Lag time is very important for a transcriber, just as it is for an interpreter. A transcriber or a captionist who begins to type immediately, tends to make more errors and capture less information. That's a very important observation for trainers to consider.

Finally, as far as characterizing speakers is concerned, the rate of speech (i.e., words spoken per minute) may not be as salient to the service provider as the density of information they provide. That is, the rate of occurrence of those major and minor points in a lecture is much more important to the service provider than words per minute.

Future Directions

To tie this back to the earlier discussion of the field of interpreting, our dream is to have an evaluation system for speech-to-text service providers based on nationally recognized standards. The certification process would include the verification that the individual passed a pre-specified level on a skills test, and would include requirements to adhere to a code of ethics and proof of continuing education toward skill development for recertification. A national organization would be able to provide in-service or ongoing continuing education

where attendees could obtain CEUs. PEPNet would be an ideal organization to consider the establishment of such a national standards organization.

Resources

Several resources are available with information about speech-to-text accommodations as well as other accommodations for individuals who are deaf or hard of hearing. These materials will be useful to service providers, instructors, and consumers alike.

The C-Print (<http://cprint.rit.edu>) and TypeWell (www.typewell.com) websites provide information about the programs, training schedules, and skill requirements for training, as well as information for administrators, parents, and students on the service.

CARTWheel (www.cartwheel.cc) is a website for court reporters using CART techniques in educational settings. This is a very specialized field and it is encouraging to see that there is an organization of CART reporters who are working together and sharing information. The National Court Reporters Association (www.ncraonline.org/pd/index.html) is the larger national organization.

The Postsecondary Education Programs Network (PEPNet www.pepnet.org) and the PEPNet Resource Center (<http://prc.csun.edu>) have many free, downloadable materials about providing accommodations to individuals who are hard of hearing or deaf developed by the various outreach sites that serve the country. For example, the two-page teacher tip sheets developed by NETAC (Northeast Technical Assistance Center) are overviews of more than 40 topics related to providing services to students with hearing loss. For more in-depth information, NETAC has also produced several papers from the National Taskforce on Providing Quality Services to Postsecondary Students who are Deaf or Hard-of-Hearing, including one on speech-to-text services. The WROCC (Western Region Outreach Center & Consortia) Outreach Site at Western Oregon University (www.wou.edu/wrocc) has posted several training modules on various accommodations, including assistive listening devices, alerting devices, and job accommodations. The Postsecondary Education Consortium's (PEC) Arkansas SOTAC website (www.ualr.edu/~sotac) links to their university's disability services manual, very useful when looking for policies around providing services, a code of ethics for service providers, as well as information to provide to students and instructors.

It is vital that service providers begin to move on developing an evaluation for speech-to-text service providers, no matter what the medium used. The field has

long struggled with simply finding individuals to fill the position when requests for the service were made. Now that a critical mass of service providers is available, the time has come to implement a system that can guarantee that quality services are provided.

“CONNECTIONS”: Vocational Rehabilitation and Higher Education Jointly Serving Consumers Who are Deaf or Hard of Hearing

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What is “Connections”?

“CONNECTIONS” is a half-day interactive workshop program that explains and nurtures team building between higher education staff members, vocational rehabilitation (VR) personnel, and college students who are deaf or hard of hearing.

“CONNECTIONS” is intended to be used by VR in conjunction with postsecondary education programs that already serve students with hearing loss, and who have some experience with issues related to communication accommodation- and those programs that are interested in beginning to serve such students.

“Connections” Workshop Objectives:

- To provide a clear understanding of VR philosophy, eligibility criteria, and services.
- To provide experience in using communication accommodations.
- To identify issues or problems in coordination of services for VR-sponsored students.
- To identify training needed by postsecondary education staff and VR staff.
- To develop a postsecondary education/VR cooperative working relationship that will result in optimal services for VR sponsored students who have hearing loss.

The “CONNECTIONS” training package includes:

- A detailed trainer’s manual;
- Transparency masters of key points that are made in the trainer notes;
- Masters of handouts for workshop participants;
- Masters of registration forms, sign-in sheets, pre-test, evaluation forms.

The Workshop content covers:

- VR’s history, philosophy, eligibility criteria, and services;
- How to make the right decisions regarding communication access;

- Issues and problems that arise in “dual service coordination” of VR sponsored students attending postsecondary education programs;
- Ways to improve working relationships between postsecondary education and VR.

An overview of the “CONNECTIONS” workshop package was presented. The overview included: explaining why it was developed, for whom it is appropriate, how the materials are intended to be used, and how to secure the workshop package from the NETAC Clearing House at no cost *.

Workshop materials, which include: an introduction to the training, workshop preparation, trainer’s notes, transparency masters, handout masters, and video tape, were displayed. The two-part “Connections” videotape was shown, and tips for its use were given. Part 1 covers the history of VR since its inception, through the Rehabilitation Act Amendments of 1992. Part 2 is presented in 5 segments in which students, VR staff and postsecondary staff who work in programs serving deaf and hard of hearing students were interviewed. Video Part 2 is designed to be stopped at key points at which time interactive discussion takes place on a variety of topics of concern to VR/Higher education staff, such as: economic needs tests; financial caps; financial aid; out of state sponsorship; paperwork coordination; communication access coordination and funding; confidentiality laws; student responsibilities in record sharing; informed choice; VR’s employment outcome focus.

Attendees were encouraged to secure the workshop materials and to use them to follow up with workshops on a local level in their individual states to develop a team approach to service coordination that ensures maximized student inclusion and optimal educational and employment outcomes.

**Request “Connections” Workshop Materials #1084 from the PEPNet Resource Center, National Center on Deafness, California State University, Northridge, 18111 Nordhoff Street, Northridge, CA 91330-8267 or <http://prc.csun.edu/> or (888)684-4695 (V/TTY; (818) 677-4899 (fax).*

A Closer Look: Creating Interactive CD-ROMs for Sign Language Vocabulary Development

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Abstract

The Arkansas State Outreach and Technical Assistance Center has developed an interactive CD-ROM entitled *A Closer Look: Signs for American National Government*. This and future CDs in this series will target sign vocabulary for specific courses in secondary and postsecondary settings. This series is being developed specifically to improve both interpreting services in educational settings and the Deaf students' comprehension of specialized English terminology in high school and college courses. For each term, a video clip will show the concept in sign. Along with the video, the user will also see the English definition and the concept used in the context of a sentence. The goals of this ongoing project: to improve both interpreting services in educational settings and deaf students' comprehension of specialized English terminology for better comprehension of course material and improved test scores.

Addressing a Need

The Arkansas State Outreach and Technical Assistance Center (SOTAC) has developed the first interactive, educational CD-ROM in a series. *A Closer Look: Signs for American National Government* was made available in early 2002 through the PEPNet Resource Center at <<http://prc.csun.edu>> for the target audiences of sign language interpreters in the educational setting, students who are deaf, interpreter education programs, and teachers of students who are deaf. This paper will provide the reader with an understanding of why this series is being developed as well as a basic description of the processes used to develop the first CD and the second CD, which is currently in production.

This product, *A Closer Look: Signs for American Na-*

tional Government, and future ones in this series will be produced to address several needs that have been observed in Arkansas, and that exist nationally. Over the years, an area that has needed continual improvement is interpreters' knowledge of specific sign vocabulary for college-level courses. Many times the student who is deaf does not have a familiarity with those signs either. Combining these two factors means that the interpreter and the student spend the first several class periods of a college course inventing what signs they are going to use for each new concept. Because their time is being used to establish sign choices, the student is not receiving course content along with the rest of the class. It also means that the signs they invent are haphazard, at best. And what if a substitute interpreter must be used? The substitute interpreter will have no idea what to sign for the new concepts. Thus, the substitute interpreter and the student have to start all over or resort to an abundant amount of fingerspelling – neither being an ideal situation.

The developers recognized the need for an interactive curriculum that would demonstrate course-specific sign vocabulary. Because of the benefits over standard VHS videotape, the interactive format of a CD-ROM was chosen. A user can view specific signs and terms in the sequence he/she chooses. Replaying a specific video clip is as simple as clicking the 'play' button as often as needed – there is no rewinding a videotape. On each CD-ROM in the series, the concepts are demonstrated in ASL, the English definition of each term is given, and the term is used in an English sentence. These three representations address the equally strong need for Deaf students to connect the English verbiage to what is being signed. Seeing the ASL rendition of the concept alongside the English definition and contextual use should improve the deaf students' command of course-specific terminology for better comprehension of course material and improved test scores.

Project Development

The making of the first CD, *A Closer Look: Signs for American National Government*, was a learning experience. It laid the groundwork for the future CD-ROMs that will be developed over the next five years in the *A Closer Look* series, including *Idioms*, *English Composition*, *Sports*, and *Math*.

Prior to beginning the project, the developers contacted local experts for recommendations on purchasing

necessary software, a digital video camera, and digital editing hardware. The decision was also made to develop the initial product in a manner that could be replicated in-house. This will require utilizing staff for all phases of developing future CDs. The benefits of doing all the work in-house are self-sufficiency and cost savings. After the initial expenses of equipment and training, only limited funds will be required for contracting with interpreting professionals to conduct research on appropriate signs in future topics and for duplication of the CDs.

To begin development of *A Closer Look: Signs for American National Government*, the developers contracted with a seasoned interpreter with recent experience in the education field, as well as with a Deaf individual with a degree in Political Science. The two collaborated with faculty from the interpreter education program at the University of Arkansas at Little Rock and with the Arkansas SOTAC staff to establish the concepts that would be covered. Once these two individuals researched the signed concepts, they provided the Arkansas SOTAC with a videotape that show how each concept was to be signed.

A student from the University of Arkansas at Little Rock contributed to the project by designing a CD cover and label which could be replicated for future CDs. Local interpreters and deaf people served as models for filming, using the signs from the videotape; and talent was brought in for the voice-overs. In-house activities (and software used) included filming, audio production, video editing (Adobe Premiere), developing an overall product design or 'skin' (Adobe Photoshop), as well as developing definitions and contextual information appropriate for the terms and signs (Microsoft Word). The final phase required contracting with a local professional to pull the pieces together and author the CD. After a great deal of testing and retesting, *A Closer Look: Signs for American National Government* was born. Through the use of Acrobat Reader and QuickTime Viewer, the user can easily navigate through a comprehensive list of terms and quickly choose which one he/she wishes to review via video clips. Both of these free programs are included on the CD.

Further Development

The professional who authored the first CD-ROM provided training to the staff, and continues to provide technical assistance as needed. The process to develop each of the future CDs will be very similar, but modifications occasionally will be needed. At the time of this writing, the second CD, *A Closer Look: Signs for Idioms*, is well underway. Since the production of this second CD is being done in-house by SOTAC staff, obviously there are several more steps to be completed. These were previously completed by the local professional who authored the first CD. Throughout the following description of this second CD production, software titles

are included which have been or will be used to accomplish the tasks.

Faculty from the interpreter education program at the University of Arkansas at Little Rock contracted to develop: 1) the list of concepts to be demonstrated, 2) sign demonstrations on video, 3) appropriate definitions and context examples. External talent is used to provide voice-overs.

The initial CD cover design, label design, and overall 'skin' of the program have been adapted to the appropriate color scheme (Adobe Photoshop) for the second CD. The SOTAC staff used a professional studio for videotaping, and the digital video editing is currently underway. This process will include replacing the background with a graphic to match the overall product design, adding the audio track for each video clip, and editing the length of each video clip (Adobe Premiere and QuickTime Pro).

The lists of concepts, definitions and context examples were initially set up in Microsoft Word. Several conversions have taken place to the original file and it has been authored into Adobe PageMaker to set up the 'pages' of the program. Once these pages are developed, the file will be saved as in PDF (Portable Document Format) format to be read in Adobe Acrobat. Adobe Acrobat will be used to establish the links for all buttons and video clips as well as developing the bookmark list available for easy navigation. Once completed, a user will be able to use Adobe Acrobat Reader and QuickTime Viewer to navigate through the program, choosing the concepts to learn or review. Both of these free programs will be included on the CD. An AutoPlay screen will also be developed. This screen is automatically displayed when a user inserts the CD into the computer.

Because the staff has acquired so much information about the technical aspects of digital video editing and CD-ROM layout and production, a 'how-to' manual will be available on the Arkansas SOTAC website <www.ualr.edu/~sotac>. This manual will include more in-depth information regarding the processes chosen as well as numerous graphics to help illustrate various steps. Anyone interested in tackling a similar project will be welcome to download the manual and use it to streamline his or her work. Of course, the software used in this project and the manner in which the developers chose to put the product together are just one of many strategies that can be used. The manual should be seen as a guide for one possible way to develop such a product, but not as the definitive process.

Utilizing the wealth of resources in deafness available in Arkansas and within the PEPNet family, the developers look forward to eventually having a series of 10 to 15 CD-ROMs to improve both interpreting services in educational settings and deaf students' comprehension of specialized English terminology for better comprehension of course material and improved test scores in high school and college courses.

A National Research Agenda for the Postsecondary Education of Deaf and Hard of Hearing Students:

A Public Forum for Service Professionals

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Abstract

This article describes converging nationwide trends and needs that stimulated institutional and professional activities that led to drafting a *National Research Agenda*. The purposes of this “blue print” are to develop, produce, and disseminate a consumer-friendly body of useful knowledge derived from well-integrated federally funded research projects. These studies will enhance better understanding of the complex interactions of diverse support services, learning-living environments, and student populations in a broad continuum of post-high school vocational and academic training and education programs. Consumer involvement was heavily emphasized by the networking among 30 experts who drafted the *Agenda* and by numerous comments made by participants attending this conference session. The conceptual framework as the centerpiece of the *Agenda* is explained, as are its goals, and proposed criteria for future research projects. The article interweaves the perspectives and roles of postsecondary and vocational rehabilitation professionals, federal officials, and researchers contributing to the preparation of the *Agenda* and its expected benefits and outcomes. Relevant national research studies are cited.

Postsecondary education and vocational rehabilitation (VR) service professionals and program coordinators recognize the value of research studies on persons

who are deaf and hard of hearing. The results of assessing on-campus programs assist administrators, faculty, and support staff in improving academic instruction, career training, and student services. Surveys of alumni are beneficial to both postsecondary and VR professionals to appraise the outcomes of college placements. Information on graduates' socio-economic attainments also boost fund raising from various donor groups.

Research on the postsecondary training of students who are deaf and hard of hearing during the past 30 years has a mixed legacy. On the downside, for example, national estimates of the number of these college students have widely ranged between 20,000 and 258,000 during the 1990s (see the article by Schroedel, Kelley, and Conway in this publication). Even more problematic is the severe shortage of studies evaluating the outcomes of this post-high school training and factors contributing to these outcomes. Fisher, Harlow, and Moores (1974) analyzed three regional training programs, which resulted in the relocation of one of these centers. The University of Arkansas Research and Training Center examined the management, staffing, student characteristics, their use of available support services, and alumni outcomes from a national sample of 46 colleges with programmatic specialized services (Schroedel & Watson, 1991). These authors noted major problems at these programs including: (a) a high rate of student attrition, (b) under-participation of students from ethnic minority backgrounds, (c) relative inattention to students who are hard of hearing, and (d) a lack of national standards on the quality of support services. Balancing this has been active on-going studies at specific campuses, particularly Gallaudet University and the National Technical Institute for the Deaf (NTID) at the Rochester Institute of Technology, assessing various support services, methods of classroom learning, and alumni outcomes.

Presently, Gallaudet, NTID, and the University of Arkansas are the nation's leading centers on research of students with hearing loss in a variety of post-high school vocational and academic career preparation settings. Each center has a sustained track record of such research. However, the scope and contents of studies at each center is shaped by factors such as changes in federal legislation, institutional missions, the availability of professional expertise, and funding.

Changes Prompt Research Needs

Research is needed in the postsecondary education

of students with hearing loss because of many major changes that have occurred in this field since the 1970s. There has been a decrease in the number of programs exclusively serving students who are deaf and a corresponding increase in programs serving students with hearing loss through generic on-campus offices serving students with various disabilities (Hopkins & Walter, 1999; Lewis & Farris, 1994; Schroedel & Watson, 1991). More specifically, the number of specially designated colleges serving students who are deaf (N=150) remained stable between 1987 and 1998 while the number of such students they served decreased from 7,000 in 1987 to 5,200 in 1998 (Rawlings, Karchmer, & DeCaro, 1988; Rawlings, Karchmer, DeCaro, & Allen, 1999). Furthermore, in 1996 the focus of the federally funded regional education programs shifted from directly serving students who are deaf to providing technical assistance and outreach services to area colleges and universities to enhance access and services to their students who are deaf and hard of hearing through the four regional PEPNet Technical Assistance Centers.

Watson and Schroedel (2000) noted that these trends reflected several underlying patterns: (a) the post-rubella bubble decrease in the number of students who are deaf eligible for college training since the late 1980s increased attention by college professionals to students who are hard of hearing and late-deafened and (b) the decline in specialized college programs for students who are deaf partially reflects the consequences of increased K-12 mainstreaming since the early 1970s. One significant result of these and other trends has been the emergence of a *continuum* of academic and non-academic postsecondary settings for students with hearing loss: (a) Gallaudet and NTID, (b) two-year and four-year colleges and universities, (c) community-based employment training centers, (d) for-profit business colleges and trade schools, and (e) other postsecondary vocational training programs in the 50 states.

Why is the *National Research Agenda* Needed?

Federal agencies are the primary funding sources for research on the postsecondary training of students who are deaf and hard of hearing. Passage of the 1993 Government Performance and Results Act mandated that federal agencies determine programmatic outcomes and information systems to adjust spending priorities to comply with agency goals. Ever since the founding of Gallaudet College in 1864, NTID in 1966, and four regional training programs in 1968, the federal government has had a long-standing role in funding postsecondary education for students who are deaf. However, the U.S. Department of Education has never developed a cohesive policy for supporting postsecondary education for these students.

The lack of a well-organized research program and other conditions have hampered developing national goals for the postsecondary education of students with

hearing loss. These conditions have created problems for the U.S. Department of Education in planning research, determining programmatic outcomes, and setting agency goals for federal initiatives in the postsecondary education of these students. Even though the Congressional reauthorization of the Education of the Deaf Act in 1998 mandated national studies on these students, no funding was allocated. Furthermore, federal agencies must form cooperative agreements to enhance national workforce development and reduce dependency on welfare. The Office of Special Education and Rehabilitative Services (OSERS) in the U.S. Department of Education lacks a strategy to meet these requirements that affect adults with hearing loss. Even though federal agencies must set programmatic outcomes and spending priorities that match agency objectives, OSERS has little information to develop a cohesive policy in the postsecondary training of these students. Subsequently OSERS needs an integrated research program to assess payoffs and benefits to society and the individual resulting from federal funding of postsecondary training programs.

How was the *National Research Agenda* Developed?

The above-mentioned trends and needs converged into a climate that gave birth to focused actions that produced the *National Research Agenda*. In short, widespread recognition of the value of research studies by postsecondary and vocational rehabilitation professionals was strengthened by numerous concurrent and rapid changes occurring in their fields. The sporadic efforts of prior research projects combined with an increased awareness within federal agencies that a "road map" was needed to better organize investments in future research. These projects had to yield a higher "pay-off" in results useful to not only sponsoring agencies but also by professionals active in the post-high school training of youth who are deaf or hard of hearing.

The *Agenda* originated in 1999 as a joint endeavor sponsored by the Directors of the four regional PEPNet Centers. The Postsecondary Education Consortium at the University of Tennessee coordinated its development in collaboration with administrators at Gallaudet, NTID, and the University of Arkansas Research and Training Center. A network of 30 federal officials, researchers, and program administrators from a large variety of postsecondary education and vocational rehabilitation settings developed and revised the *Agenda*. During 2000 most of these experts participated in meetings in Los Angeles (January) and Denver (April). Many of them also reviewed successive drafts of the document by e-mail. In conceptualizing the framework for the *Agenda*, its multiple authors also utilized the findings from significant national studies.

A Conceptual Framework

The centerpiece of the *Agenda* is a model hypothetical framework, or "blue print," to more effectively link

future research studies. Key unifying principles underlying this conceptual framework include: (a) a focus on outcomes, (b) common definitions of the target student populations, (c) linkages to established national goals for educating these students, (d) consistencies in data collection across different studies, and (e) integrating and coordinating these studies to ensure that their research objectives mutually reinforce each other. The primary overall desired outcome of this “blue print” is the wide dissemination of a consumer-friendly body of cost-effective research-based knowledge.

As specified in Figure 1, this conceptual framework comprises three primary inter-related research areas: (a) student populations, (b) on-campus support services and accommodations, and (c) postsecondary living and learning environments. Effects of each of these research areas are related to programmatic outcomes that mirror national objectives in the postsecondary training of students who are deaf and hard of hearing. Such objectives may include: (a) improving graduation rates, (b) diversifying enrollments, (c) enriching student language skills, and (d) strengthening graduates’ job readiness. This basic schemata reflects the complex interaction of differences in student characteristics, provision of services, and student living and learning environments found in the nationwide continuum of postsecondary programs for these students.

On the left side of Figure 1 are studies of access services, which support students’ academic and career

preparation needs. It is important to reach the people who are underserved by better understanding of what their needs are. Factors germane to on-campus learning and living environments are displayed on the right side of the figure. If students’ academic and social needs are not addressed, they will drop out: 3 of every 4 students who are deaf quit college before completing a degree (Stinson & Walter, 1997). Professionals must better comprehend and integrate the total on-campus environment – academic learning, psycho-social development, and career preparation – so that programs can enhance persistence of their students who are deaf and hard of hearing.

A possible example of one research approach to enhance career preparedness is illustrated in Figure 2. It is known that if a student who is deaf has a clear vocational goal, she or he will stay in college (Schroedel, 1991). Moreover, additional preparation is needed to improve attitudes and behaviors of faculty and staff. Inexperienced professors shocked when faced by a student with a hearing loss may deny him or her necessary accommodations. More fundamentally, understanding key factors in student learning of marketable career skills, for example, is crucial. The ways many students who are deaf learn differ from the ways that many students who hear, which, in turn, differ from the ways many students who are hard of hearing learn. Beyond these categories, we need to recognize and meet differences in *individual* student learning styles.

Figure 1.
Conceptual Framework

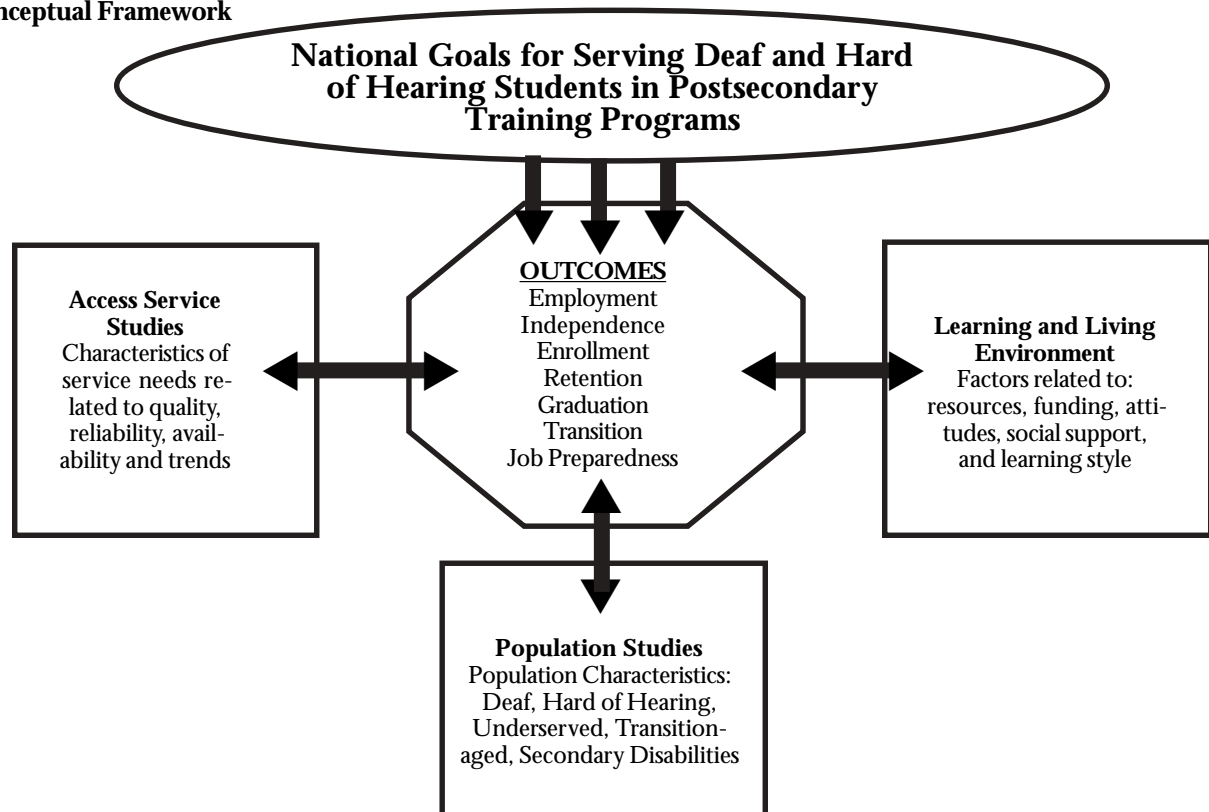
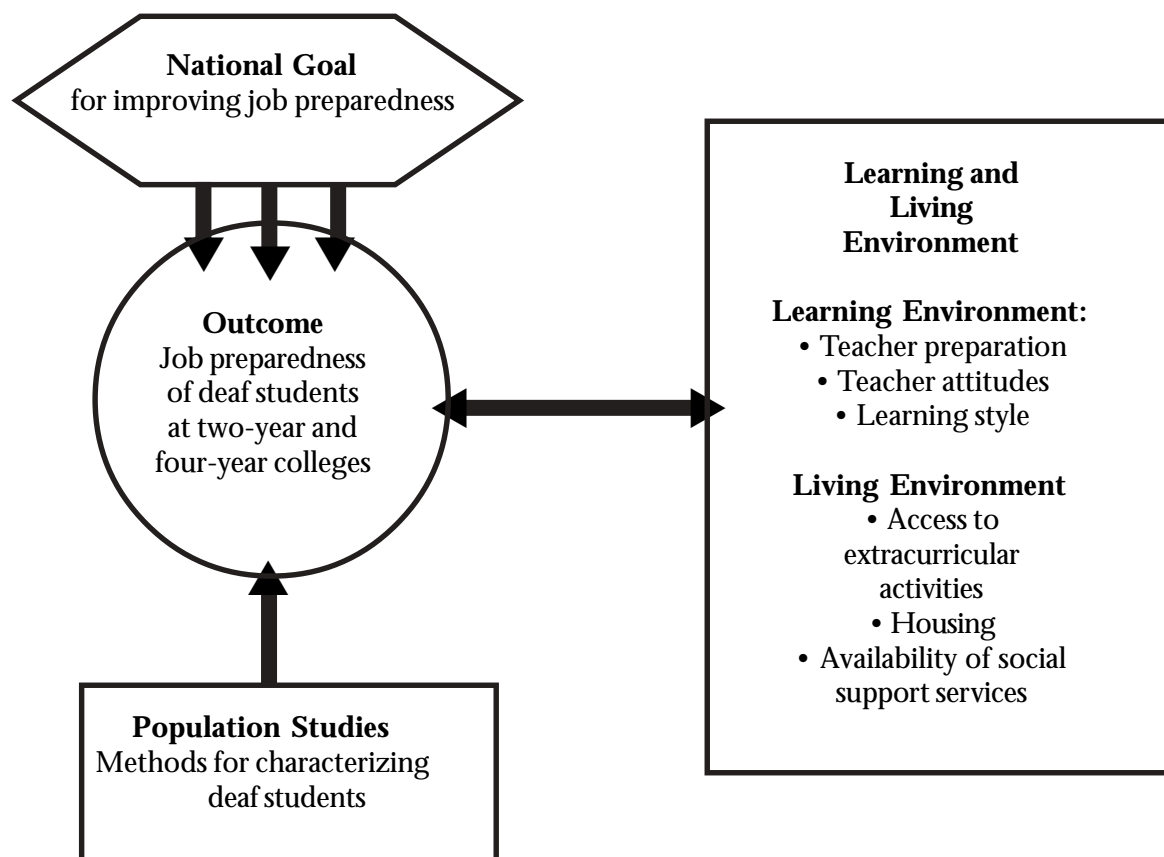


Figure 2. Example of Research on Learning and Living Environments



Other Key Ideas for the *Agenda's* Conceptual Framework

The *Agenda* report identified several other key precepts interwoven into its conceptual framework:

Future research studies must follow national goals for postsecondary training of students with hearing loss set by USDED, the U.S. Department of Labor, and the Social Security Administration. Recent federal legislation, such as the Workforce Investment Act of 1998 and the Ticket to Work Incentives Improvement Act of 1999, requires national inter-agency cooperation to enhance workforce development and reduce dependency on public assistance.

Researchers must draw upon completed studies in planning new projects. These include the PEPNet national needs assessment (Hopkins & Walter, 1999), the Gallaudet/NTID surveys for the *College and Career Programs for Deaf Students* (e.g., Rawlings, et al.,

1999), and the national forum on the education of youth with hearing loss (National Association of State Directors of Special Education, 1999).

Researchers must utilize existing national databases such as the Office of Special Education Programs (OSEP) Longitudinal Study on Transition, Integrated Postsecondary Education Data (IPED), and the Rehabilitation Services Administration RSA-911 data system

Seven Goals for the *National Research Agenda*

1. Unify federal officials, researchers, and program administrators on an *Agenda* with a conceptual framework to integrate future research projects.
2. Encourage organizations of consumers and professionals to coalesce and support the *Agenda*.
3. Present the *Agenda* to OSERS to develop guidelines for coordinating and funding research initiatives.
4. Seek funding from Congress for research projects.
5. Promote collaboration among researchers on applied research proposals to be reviewed by OSERS under the auspices of the *Agenda*.
6. Involve postsecondary, vocational rehabilitation,

and allied professionals as well as representatives from organizations of consumers who are deaf, late-deafened, and hard of hearing in the development, operation, and evaluation of research projects.

7. Expedite use of research findings to improve policies and practices in the postsecondary training of deaf and hard of hearing adults.

Criteria for *Agenda Sponsored Research Projects*

It is anticipated that both Requests for Proposals and peer review of submitted research applications will follow such criteria as:

- Focus on student outcomes from postsecondary programs.
- Use common definitions of targeted student populations in different research projects.

- Include students and research consumers with all types of hearing loss.
- Link projects to established national goals for postsecondary education of these students.
- Be consistent with common data collection methods across studies.
- Form project objectives that mutually reinforce objectives from other projects.
- Use existing databases in planning projects.

Conclusions

Professionals are aware that during the past 30 years research on the postsecondary training of students who are deaf and hard of hearing has been generally sporadic and fragmented. Studies have evaluated classroom instruction methods and support service programs at se-

Figure 3. Panel 1: The SERP Research Translation Model

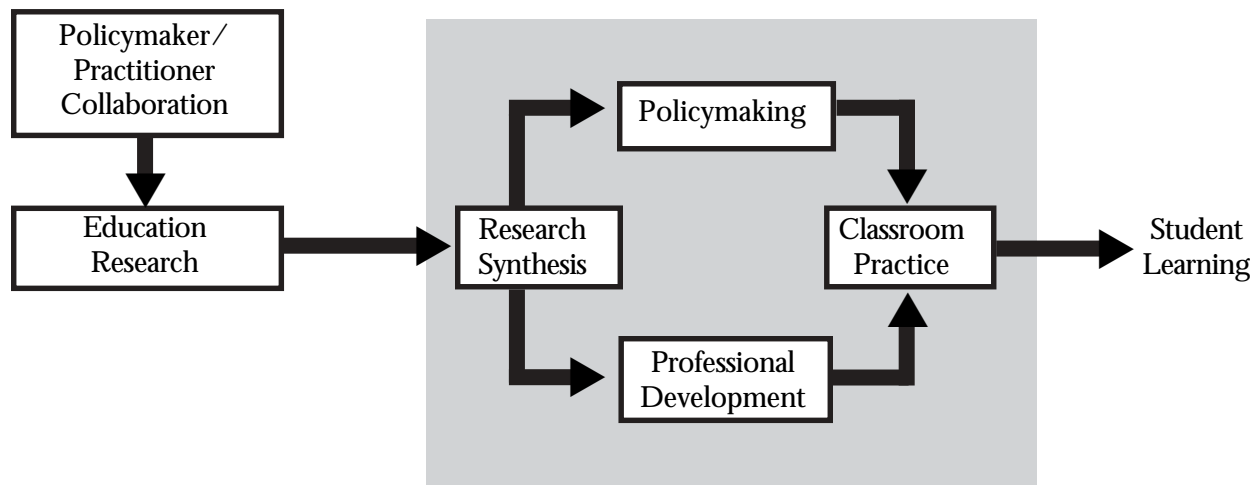
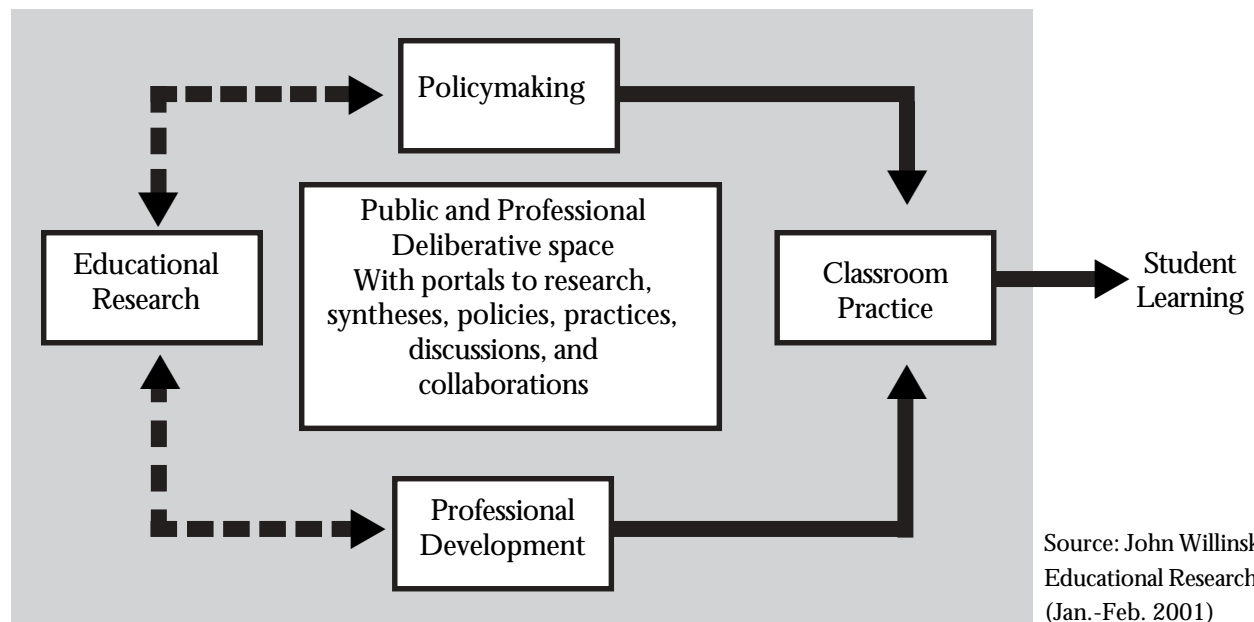


Figure 3. Panel 2: Proposed Deliberative Research Translation Model for SERP



Source: John Willinsky,
Educational Researcher,
(Jan.-Feb. 2001)

lected colleges and universities. Although these activities have been beneficial in disseminating knowledge of professional services and policies in postsecondary training, there has been little integration of this knowledge across research and demonstration projects.

The *National Research Agenda* is designed as a policy document to enhance planning, coordination, and funding of future research projects on postsecondary participants with hearing loss. These projects are anticipated to examine a wide range of significant issues on the interactions of variations in student characteristics, support services, and campus living and learning environments. It is also anticipated that federal research funds will be better invested and yield a higher impact on postsecondary training.

The ultimate objective of the *Agenda* is to use research-generated knowledge to improve practices and policies that will augment and expand opportunities and outcomes for postsecondary students who are deaf and hard of hearing. It is envisioned that this *Agenda* will lead to the creation of well-defined student populations, variables impacting the availability and use of support services or accommodations (including communicative technologies), as well as factors affecting classroom learning and on-campus social life. In addition, another desired product is the development of national standards on the quality of support services

Emphasizing Consumer Involvement

Research translation refers to the beginning-to-end process of designing and conducting a research project and disseminating its results. As shown in the top frame of Figure 3 is the Strategic Education Research Plan (SERP), which is the current research translation model, used by the U.S. Department of Education (Willinsky, 2001). Unfortunately, this model excludes significant consumers such as parents, teachers, and teacher trainers from the process of converting research results into educational practices and policies. The model in the lower frame of Figure 3 is better because consumers are full and active participants in the research translation process.

The University of Arkansas Research and Training Center, like other research programs, uses a participatory research action approach (Whyte, 1991) to develop research projects. Center faculty bring together service professionals and leaders of consumer organizations into focus groups to obtain synergetic expert input before designing projects, then later come back for continued input. A consumer who is involved in the development of a research project is more likely to use its results than an uninvolved prospective consumer. We get better applied research and more useful and practical research results for consumers. Along with other key sponsors, the research faculty has been taking the same approach with the development of the *National Research Agenda*, which is one reason why reactions to this presentation

are welcome. (*Note:* some post-session comments were received by e-mail).

Comments by Session Participants

Comment: As director of student services at the University of Minnesota, I am concerned about the lack of funding for postsecondary accommodations. I have three recommendations:

First, there is a need to provide high-quality interpreting services for the students in specialized graduate-level technical and professional development courses. We have difficulties in Minnesota in providing quality interpreting services that match students' needs. We have been unable to implement a wonderful services model. Our annual budget for interpreter services is about \$1.5 million and if we keep growing, in five years it will be \$4.5 million. If we are spending \$1.5 million on students who are deaf it is not going to programs such as ethnic/cultural groups or women's studies.

Second, the University now must follow the DVR focus on the medical/disability aspects of the student. If a student wants to go to college, they may not want to be identified with DVR. They are very independent. Our University is very creative in funding services, but this may change in the future. I think that other universities try to exclude us because of the costs. I want an innovative approach to shared resources from the federal government.

Third, your research is focused on the postsecondary training of students who are deaf and hard of hearing. But there are degree completers who are still on SSI because there are no opportunities for them in the workplace. We need to look beyond the school to the workplace.

Comment: I am on the rehabilitation faculty at Maryville University in St. Louis. We need to think about future funding sources that optimize the choices of students who are deaf for classroom accommodations that combine interpreters with C-Print, CART, or voice-activated note taking equipment.

Comment: I am from NTID and want to talk about college preparation. I have observed many deaf students who arrive at college without the necessary preparation. Also, we do not have good ways to evaluate a student's career maturity level and motivation.

Comment: I am from Gallaudet and wonder if you see postsecondary training as different from postsecondary education? I do not know the difference.

John Schroedel: Postsecondary training and education often used interchangeably. Keep in mind that the *Research Agenda* covers a wide range of career preparation programs in both vocational and academic settings.

Comment: Being from the University of Maine, which is a rural state, we lack the quality services that may exist in other states. We do have a very sophisticated distance learning system. I see a lack of using technology like Internet 2. There are 180 research universities that

have access to this service. I would like to see research on the use of broadband networks for educating deaf and hard of hearing students.

Comment: I have been involved with various businesses for 35 years. It is interesting as I look at your figures, I have seen all of these words in different boxes before. It is the same old story with the same old words. I would like to add a few ideas: the student environment no longer seems to include teachers. Now, they are called “facilitators of learners”, not “teachers of students.” You need to change your terminology. We need to train professionals who do not understand these new ideas. I look at the words that you have in the center circle of Figure 1: transition needs to happen first, not in the middle.

Douglas Watson: This particular activity is directed to enhancing transition from college to work.

Comment: The first transition happens from home to school. We need to train teachers how to facilitate the various transitional processes for students. We need to start early in helping them with transition, and it needs to be explained more clearly: first you do this, then this, then this. Furthermore, you need to remember the dissimilarities between residential and mainstream schools where different instructional needs must be addressed. Finally, you need to keep in mind that the majority of employers are not experienced with workers with hearing loss.

Comment: I work for a service agency in Illinois and have three questions. First, how will the *Agenda* relate to the activities of the Research and Training Center for the Study of Postsecondary Educational Supports at the University of Hawaii? Second, how do you plan to identify and reach students from ethnically and linguistically diverse groups so that they are not lost in the broader picture? Third, how will you study the “voices” of students, faculty, and staff members at various programs who have a say in the provision and impact of support services? Perhaps some kind of an interviewing study can be done using a cultural anthropological or ethnographic approach.

John Schroedel: We have been and will continue to communicate with the Research and Training Center at the University of Hawaii. We have also been in touch with researchers examining diversity issues in general higher education.

Comment: Many of the students who are deaf and enter colleges that have open-door policies never finish because they lack adequate English skills. The students are eager and motivated, but lack the support they need to succeed. I have looked for research on reading and writing skills, because this is a huge need. We have a high turnover rate for these students.

Douglas Watson: We do not want to promote or otherwise condone these “revolving door” programs where students come in and out repeatedly. Our Research and Training Center has been conducting research on stu-

dents and adults with minimal language skills. We estimate that 30% of the population of deaf persons fits this category. The Rehabilitation Services Administration (RSA) in the U.S. Department of Education came out with a quality report with much information on useful policies and practices to meet the needs of this group. This report (Dew, 1999) is available for electronic dissemination on our Center’s website <<http://www.uark.edu/depts/rehabres/publications.html>>.

Comment: I am from the Northeast Technical Assistance Center at NTID. When is the U.S. Department of Education going to take responsibility for these students?

Douglas Watson: We are trying to persuade the federal government to provide more funding for appropriate services to this underserved population. The RSA report on *Serving Individuals who are Low Functioning Deaf* provides key steps for building more effective service delivery programs for this long-neglected target population.

Comment: I am from Kansas where my agency is under VR. What kind of analyses are you using? You collect your data, but how are you analyzing it? Many of my students are in rural areas. There is a need for developing curricula for these students. We also need more long-term plans.

Comment: We need to look at the local examples. Often VR forces a consumer who is deaf to apply to SSI before they can get services and then they lose their incentive to do anything beyond that. I know parents often refuse to allow their children who are deaf to accept this aid as it prevents them from getting needed work experience.

Comment: I am from Oklahoma and our legislature recently passed a law requiring all interpreters to be certified at QAST III. We only have two big cities, Tulsa and Oklahoma City, whereas the rest of the state is rural. Our teachers of students who are deaf are not required to have any language fluency in ASL. Everyone is fighting the same battles. It would be nice to see what everyone else is doing and how they are succeeding.

Comment: I am from Tennessee. The ultimate outcome is employment, but there are issues that are crucial in helping people to get there. Many things are involved including the ability to effectively disclose the disability to the employer. Educating employers is very important.

Douglas Watson: We will bring all these comments to the attention of the Directors of the four PEPNet Centers so they can review them. We will put these together with session participant comments we collected from other conferences. In addition to presenting at this conference, we gave presentations on the *Agenda* to the American Educational Research Association (AERA) in Seattle and the Southeastern Regional Institute on Deafness (SERID) in Biloxi, Mississippi last year. The SERID attracts many professionals like those who attend PEPNet conferences. The AERA with 30,000 members

is the nation's leading professional association of educational researchers and includes a Special Interest Group with 125 research specialists on the education of youth with hearing loss.

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Collaborating to Make a Difference— Through Faculty Development

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Abstract:

Teaching college students with disabilities can be a unique challenge, especially for faculty who have little or no experience working with students who are deaf or hard of hearing, blind, or have learning disabilities. Through a collaborative effort between the Arkansas State Outreach and Technical Assistance Center and Project PACE, a series of three videos; *Make a Difference: Tips for Teaching Students who are Deaf or Hard of Hearing*, *Make a Difference: Tips for Teaching Students who are Blind or have Low Vision*, and *Make a Difference: Tips for Teaching Students who have Learning Disabilities*; has been developed as a strategy for training faculty efficiently and effectively. Video topics include information related to classroom setup, accommodations, technology, academics, communication, and specific teaching methods and strategies that other faculty have found successful. Accompanying handbooks have been developed for two of the three videos and the third is currently under development.

Teaching college students with disabilities can be a unique challenge, especially for faculty who have little or no experience working with students who are deaf or hard of hearing, blind, or have learning disabilities. Through a collaborative effort between the Arkansas State Outreach and Technical Assistance Center and Project PACE, a series of three videos has been developed as a strategy for training faculty efficiently and effectively. Three videos have currently been developed: *Make a Difference: Tips for Teaching Students who are Deaf or Hard of Hearing*, *Make a Difference: Tips for Teaching Students who are Blind or have Low Vision*, and *Make a Difference: Tips for Teaching Students who have Learning Disabilities*. Topics covered by the videos include information related to classroom setup, accommodations, technology, academics, communication, and specific teaching methods and strategies that other faculty have found successful. Accompanying handbooks have been developed for two of the three videos (*Make a Difference: Tips for Teaching Students who are Deaf or Hard of Hear-*

ing, Make a Difference: Tips for Teaching Students who are Blind or have Low Vision) and a third is currently under development for *Make a Difference: Tips for Teaching Students who have Learning Disabilities*. These videos have been developed as additional resources for faculty members and are not intended to replace consultation with local on-campus service providers.

Development and Content

In 1998, the video, *Make a Difference: Tips for Teaching Students who are Deaf or Hard of Hearing*, was developed by Project PEC (now called the Arkansas SOTAC) at the University of Arkansas at Little Rock (UALR). This video was published in January 1999 through the Postsecondary Education Consortium and is available through the PEPNet Resource Center (PRC) at <<http://prc.csun.edu>>. An accompanying handbook was developed in 2000 and is also available through the PRC.

Targeting secondary and postsecondary faculty, information and examples in the video and handbook include:

- classroom setting
- communication issues
- using interpreters
- assistive listening devices
- teaching strategies
- tips that have helped other faculty
- a glossary of terms

Also included in the handbook are instructions for in-service presenters on how to effectively use the video in training. A full script of the video is included in the back of the handbook.

In the fall of 1999, the Department of Education awarded funding to establish a demonstration project to ensure students with disabilities receive a quality higher education. Thus, Project PACE was established at UALR. The intent of Project PACE is to produce systems change at the University of Arkansas at Little Rock and other University of Arkansas (UA) campuses through a peer-teaching model and development of training materials that will teach faculty and administrators to meet the needs of students with disabilities. The UA campuses include four-year institutions, community colleges, and a medical sciences campus. Products are being developed to reach a broad group of faculty and administrators within the UA system as well as other interested postsecondary institutions in the state of Arkan-

sas. Because of the tremendous response to Project PEC's *Make a Difference* video, the Project PACE staff decided to develop two more videos using a similar format and title. With approval from the PEC Central Office to use the *Make a Difference* theme, Project PACE developed two additional videos, resulting in a three-video series.

Make a Difference: Tips for Teaching Students who are Blind or have Low Vision and an accompanying handbook were produced in 2000 by Project PACE at UALR. Targeting postsecondary faculty, the contents of this video and handbook include discussions regarding:

- an overview of blindness and low vision
- initial preparations for the semester
- considerations for instruction during the semester
- guidelines for preparing and administering exams
- an overview of assistive technology

Throughout the video, individuals who are blind or have low vision or have experience in working with individuals in this population provide insightful interviews.

Included in this handbook also are instructions for in-service presenters on how to effectively use the video in training. A full script of the video is included in the back of the handbook. This video and handbook are available for order from Project PACE at <www.ualr.edu/~pace>.

In 2001, *Make a Difference: Tips for Teaching Students who have Learning Disabilities* was published at UALR by Project PACE. A handbook is currently being developed to go with this video. Again targeting postsecondary faculty, the contents of this video include the following:

- An overview of learning disabilities
- The range of learning disabilities
- Myths related to learning disabilities
- Assistive technology for individuals who have learning disabilities
- Teaching strategies and tips
- Appropriate accommodations

Interviews with individuals who have learning disabilities, or have experience in working with individuals in this population provide insightful interviews. The accompanying handbook, which will, like the others, include instructions for in-service presenters as well as a full script of the video, will be available by late summer. These items will be available for order from Project PACE at <www.ualr.edu/~pace>.

In an additional collaborative effort, the Arkansas SOTAC and Project PACE are working together to publish all three videos in digital format on CDs! The accompanying handbooks will also be included on the CDs in HTML & PDF (portable document format) files. Two methods of dissemination are planned: the individual digitized video (and handbook) *Make a Difference: Tips for Teaching Students who are Deaf or Hard of Hear-*

ing will be distributed through the PEPNet Resource Center. Project PACE is developing a 4-CD package which will include: a CD of faculty development training materials (developed by Project PACE) for teaching students with disabilities, CDs of each of the three videos plus accompanying handbooks. Publication of these materials is planned for late summer, 2002. This package will be distributed by Project PACE.

Funding and Contact Information

Arkansas State Outreach and Technical Assistance Center

Funding for the *Make a Difference: Tips for Teaching Students who are Deaf or Hard of Hearing* video was possible through an agreement between The Postsecondary Education Consortium at The University of Tennessee, College of Education, Center on Deafness and the U. S. Department of Education, Office of Special Education Programs, Grant #DEGH078A60007. Current grant funding for the Arkansas SOTAC is through an agreement between The Postsecondary Education Consortium at The University of Tennessee, College of Education, Center on Deafness and the U. S. Department of Education, Office of Special Education Programs, Grant H078AG007-1.

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Funding for Project PACE and the videos *Make a Difference: Tips for Teaching Students who are Blind or have Low Vision* and *Make a Difference: Tips for Teaching Students who have Learning Disabilities* and digital conversion of all three videos is possible by a grant from the U. S. Department of Education, Office of Postsecondary Education, #CFDA 84.333.

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SECTION III
Access to Programs and Services

Excellence in Career Counseling: Improving Services to Students Who Are Deaf and Hard of Hearing – A Video Project from El Camino College

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Abstract

Postsecondary career counselors often are at a loss when it comes to interacting with and providing services to deaf and hard of hearing students. This is especially true for career counselors who have little or no previous contact with deaf and hard of hearing students. The lack of previous contact may be due to the low incidence of this population at respective campuses, geographic isolation, or no available independent living center services or Department of Rehabilitation services, as well as other factors. In order to address this serious issue, the Southern California Outreach Center at El Camino College, an affiliate program of the Western Region Outreach Center & Consortia (WROCC), developed and produced a short video targeting postsecondary career counselors to assist them with improving and providing their services. Funding was provided by WROCC.

Production of Video

Several staff members at El Camino College met to discuss the need for improving career counseling services and brainstorm how this could be accomplished by a short video with brief related resource materials. The staff decided that information on deaf awareness and deaf culture should not be included in the video since excellent information is available elsewhere. They determined that the video would provide examples of successful deaf professionals as well as career counselors with experience in serving the deaf and hard of hearing students.

The program coordinator gathered pertinent materials and resource information, and also arranged for the producer to meet with key career counseling ex-

perts from local postsecondary institutions. A list of questions was prepared in advance of the meetings in order to obtain valuable insights and suggestions. A producer was selected, who later met with deaf and hard of hearing students to obtain their input about career planning and services as well as to ask for volunteers to appear in the video.

The program coordinator provided an outline for the producer who then wrote a video script. The program coordinator, the career counselor for students with disabilities, and the program director reviewed the script. The program director is also the Director of the college's Special Resource Center. The program coordinator and several faculty and staff members recommended appropriate students and faculty/staff for the video. The producer coordinated the final casting.

The producer, with the assistance of the program coordinator, arranged for filming locations and times. There were a few problems with finding an employer willing to participate, but these were overcome by creative editing. The program coordinator developed a brief pamphlet of resource materials to accompany the video. A list of references for information on deaf awareness and culture is included.

Copies of the video were sent to all participants as well as to the WROCC grantees and posted on the PEPNet Resource Center's web site and on the WROCC web site. Also, information was sent to professional career counseling organizations and to California postsecondary career counseling centers.

Video Content

Introduction: Career counselors often have a modest amount of experience communicating, counseling, and providing resources to students who are deaf and hard of hearing. This is due to a variety of reasons, some of which are lack of exposure to this specific student population, inability to adequately communicate, lack of resources, and limited knowledge to basic cultural differences, which are an instrumental part of the success factor when working with deaf and hard of hearing students.

Career Exploration: A large percentage of deaf and hard of hearing students come to the postsecondary setting with minimal or no experience in career exploration. It is imperative that career counselors establish a relationship with the students and guide them to the vast opportunities and viable career choices that inter-

est them. Graphics depicting different careers and captioned occupational videos are often successful tools to introduce this concept. Deaf role models are also a positive influence for students. Often deaf or hard of hearing students have not yet worked with an advisor who has exposed them to these opportunities and resources.

Job Search, Interview and Placement Strategies.

Building a resume and completing the application process can pose challenges to many students. Lack of work experience, limited exposure to resume writing and the application process contribute to this. Career counselors working with deaf and hard of hearing students should be informed of potential difficulties with English comprehension and how this may contribute to challenges when trying to master writing a resume and filling out applications in proper English grammar format as opposed to the individual's native sign language.

Career centers should promote participation in resume writing workshops and mock interview groups. Working one-on-one or in group settings to prepare resumes, practice interview techniques and prepping the interpreter (if applicable) are contributors to student success. Encourage students who are deaf or hard of hearing to take advantage of the job placement center on campus to compare their resume with examples utilized there. On-campus interviews, job shadowing, and internships on- and off-campus should be incorporated into the student's career plan.

Employer Events. "Career Days" and "Job Fairs" are common occurrences on most campuses. Making these events accessible to deaf and hard of hearing students is essential, however it is not enough to merely provide sign language interpreters for communication access. Identify employers who have experience hiring deaf and hard of hearing employees and encourage them to participate in the event. Coordinate panel presentations consisting of employers, employees, and other key personnel; utilize student tours and internships at various companies and organizations that hire deaf and hard of hearing personnel.

Increasing student interest and ensuring attendance to these events can be a challenge. Often deaf students do not attend campus events because they are under the assumption that they will not be able to communicate with the vast majority of participants and perspective employers. Outreach and advertisement is crucial. Flyers and other forms of advertisements should be clear and visually stimulating in order to capture the deaf student's interest.

Communication: Communication is everybody's responsibility, and is the fundamental link that assures success. Ensuring not only acceptance of a person's differences, but a true understanding of those differences will stimulate a desire to learn how to work as an integral part of the process. Seek information from the student with the disability regarding their communication needs. Provide resources to facilitate effortless communication, including sign language interpreters, TTYs, additional time to compensate for written communication, etc.

Closing

The development team at El Camino College is very pleased with and proud of this video. They believe it will impact postsecondary career counselors and encourage them to work with their institution's disability service providers – a "win-win" outcome for all!! *Note:* The video is available at the PEPNet Resource Center at <www.pepnet.org>.

Those interested may contact the El Camino presenters at: 16007 Crenshaw Blvd, Torrance, CA 90506. Their phone numbers are (310) 660-3296 voice or (310) 660-3445 tty.

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Kentucky Funding of Support Services for Students with Hearing Loss

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Abstract

Kentucky has had state funding for support services for students with hearing loss in higher education mandated by law since 1986. In addition to having resolved the issues about “who pays” for these services, this arrangement has brought about a spirit of collaboration and development of key relationships that have been beneficial in the development of other activities. Also, this initiative has continued to evolve with changes in the law and procedures implementing the law, as needed, to meet the needs of both the postsecondary institutions and the state vocational rehabilitation agency. While this system is not perfect, this arrangement is a “Win/Win” situation for Kentucky, especially for students using these services. The Kentucky Department of Vocational Rehabilitation believes this process meets the requirements of the inter-agency agreement with higher education as mandated by the 1998 Rehabilitation Act Amendments.

History and Background

Kentucky has had state funding for support services to students who are deaf or hard of hearing, which was established by law, since 1986. This was brought about in part because one of the major Kentucky public universities that served the deaf students in the state experienced problems providing needed accommodations. These problems included not having enough funds to pay for interpreters and notetakers, and not having enough qualified interpreters to meet the students’ needs. The deaf students became organized and pursued quality accommodations; and as a result, a state legislator who was affiliated with this university crafted the law that established this state funding.

The law passed in 1986 was prior to the Americans With Disabilities Act (ADA). The major points of this Kentucky legislation were:

- To increase the educational level of persons with hearing loss by providing equal opportunity to obtain education in institutions of higher education.
- Institutions of higher education would be accessible to students who are deaf and hard of hearing by

providing necessary support services including, but not limited to, interpreters and notetakers.

- These services would be paid by the Kentucky Department of Vocational Rehabilitation (KDVR) for their clients and by state appropriations (administered by the state Council on Higher Education) for non-VR clients.

- Provision of these support services would not be delayed because of any disagreement about who is responsible for payment. The institution would be responsible to provide the services and resolve the disagreement.

- The law also included the requirement for an interpreter training program (ITP) at one (1) institution of higher education leading to at least an AA degree. And, by 1987-88, the ITP would expand to other locations across the state.

At that time, the law required the state VR agency to continue paying for interpreters and notetakers for their clients in higher education, but a new central fund would be established for non-VR clients to be used to reimburse state universities as needed. The central fund started with about \$30,000 per year to be used for these services. Maybe the most significant part of the law was the requirement that Kentucky planned to establish interpreter training programs to address the severe shortage of qualified services.

Amendments to the Law and Other Changes

As previously mentioned, this system in Kentucky has been an evolving process and as a result, the law was amended in 1994. Several areas were addressed:

- Transferred administrative responsibilities for distribution of the state appropriated funds to the Kentucky Department of Vocational Rehabilitation (KDVR).

- Dropped the requirement for vocational rehabilitation funds to be used to pay for these services for students who were also KDVR clients.

- Clarified that reimbursements to institutions of higher education could be a “fee for service” or based on actual costs.

One of the major reasons for these changes was that the higher education entity responsible for distribution of the funding did not have staff with the back-

ground and knowledge of deafness and interpreter services, etc., which resulted in some gaps in services and difficulties assisting institutions to develop quality services. This led to negotiations for KDVR to become the administrator of the state funding for these services with the expectation that assistance and support would be provided to local institutions as needed.

The Kentucky Department of Vocational Rehabilitation agreed to oversee and manage the distribution of the funding if the requirement that KDVR funds had to be used to pay for these services for their clients was dropped. However, KDVR realized that the exact yearly costs for these services were unpredictable and by accepting administrative responsibility, the agency would have to provide additional funding for these services for VR student/clients if there was not enough state funding.

Basically, this has been accomplished by setting up two accounts in KDVR: one for non-KDVR students and one for KDVR student/clients. The state-appropriated funds are always used for non-KDVR students first, to ensure that these needs are met. For state appropriations used for KDVR student/clients, this funding qualifies as state match money to draw down the federal funding for KDVR services. Thus, this aspect is one of the big win/wins for the Kentucky Department of Vocational Rehabilitation.

KDVR, with input from coordinators of services for students who are deaf at state institutions, developed guidelines concerning how the state funding is distributed for interpreter services, notetakers, and other needed support services. These guidelines also include information about state and federal legislation pertinent to these services, qualifications of service providers, and resources to locate qualified interpreters, etc.

In 1998, this Kentucky law was amended again to also provide funding to technical schools; thus the state appropriations were available for all public postsecondary institutions, not just for colleges and universities. This coincided with the state merger of universities, community colleges and technical schools as part of one entity for postsecondary education. KDVR continued to administer this funding to reimburse the postsecondary institutions for support services for students who are deaf and hard of hearing. However, a different reimbursement method had to be developed for the technical school programs.

Win/Win – Kentucky VR and Public Postsecondary Programs

Again, this initiative has been a win/win situation for the Kentucky Department of Vocational Rehabilitation and Kentucky postsecondary education programs. Specific positive outcomes include:

A centralized state fund has been established and increased as needed to address the support services needs of students who are deaf or hard of hearing in public postsecondary institutions. This has been ex-

tremely helpful to programs that do not have established services for this population but do occasionally have students who need these accommodations.

Accommodations and services to students who are deaf or hard of hearing are more consistent statewide, which allows for more choices for students.

The issues about 'who pays' for interpreter and other accommodations are resolved; the state has basically had an interagency agreement since 1986.

As previously stated, the state funding can be used by KDVR for federal matching funds. KDVR has also been able to track specific costs of accommodations to their student/clients and can use this information when requesting Social Security reimbursement.

VR and postsecondary personnel have developed effective relationships allowing for collaboration to improve services to these students.

After the last amendment to the Kentucky law, the postsecondary programs and KDVR have used a lot of creative ideas to "get the most for our money" and improve services to these students. One of the ideas implemented has been to encourage programs with larger numbers of students who are deaf/hard of hearing to develop yearly program budgets including salaries for staff such as interpreters. This has been more cost effective and has improved the quality of services instead of only reimbursing the postsecondary programs for interpreters for each student after the services have occurred. Additional examples of improved programming were postsecondary institutions that hired tutors and teachers specifically for students who are deaf or hard of hearing and included these costs in their budgets for reimbursement.

Collaboration Between Kentucky VR and Eastern Kentucky Interpreter Training Program

The other part of the original law required the establishment of interpreter training programs in Kentucky. This program was established at Eastern Kentucky University (EKU), but the demand for qualified interpreters continued to exceed the availability of trained interpreters. Around 1994, when KDVR became the administrator of this state funding, the agency also decided to develop a separate agreement to provide funding for expansion of the EKU Interpreter Training Program (ITP). This agreement provided short-term funding that has helped the EKU-ITP to grow from a two-year to a four-year degree program and to add a training program at a satellite location.

The collaboration and subsequent relationships have been very successful, resulting in (a) an increased pool of qualified interpreters for VR and postsecondary institutions, (b) projects that improved services to persons who are deaf or hard of hearing, and recently, (c) the establishment of a Center on Deafness through Eastern Kentucky University. In addition to VR and

EKU, several state agencies and other organizations have become partners in the Center on Deafness with the purpose of sharing available data and resources to conduct joint projects to improve existing and/or create new programs as needs are identified.

The Center on Deafness has employed a grant writer who works with all partners. Recently the Center on Deafness was successful in getting a federal Technology Opportunities Program (TOP) grant to establish remote video conferencing shared by several agencies to improve service delivery and provide accessibility for individuals who are deaf.

Future Plans and/or Needs

The state funding for support services is only for public postsecondary institutions. Private postsecondary institutions in Kentucky do not have access to this funding when students who are deaf or hard of hearing attend these programs. In the past, the state VR agency has negotiated, as needed, a shared arrangement for payment of interpreters or notetakers, but increased costs of these services have made this process more difficult. As always, there is the continued need for more qualified interpreters in postsecondary settings. Other parts of the state want to expand interpreter training programs to meet the needs in their areas.

Finally, there is always a concern about continuation and increase of funding as needed to meet the need for these services. Kentucky has been fortunate to receive increased funding for these services during each state budget cycle. This funding, which began around \$30,000 per year in 1986 is now over \$1,000,000 per year. As more students utilize print access such as captioning, there is concern about the funding level meeting the demand for services.

However, the real key to success at the postsecondary level for many students who are deaf or hard of hearing may lie in the development of more comprehensive programs that address all of their transition needs, not only reasonable accommodations. This will require the collaboration and resources of KDVR, postsecondary institutions and many other programs.

Again, and in summary, this Kentucky legislation to fund support services for students who are deaf or hard of hearing appears to be working in this state and has resulted in many positive projects and activities between postsecondary programs and vocational rehabilitation. As other states grapple with how to meet the requirements of developing interagency agreements to decide who pays for these costs, legislation and/or requests for funding may be another option to explore at the state level.

You Want Me to Interpret *What?* Making Extracurricular Activities Accessible for Students Who are Deaf in the Postsecondary Setting

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Abstract

A college education includes much more than merely fulfilling academic requirements; extracurricular activities offer students the opportunity to develop personal interests and share experiences with others. For students who are deaf or hard of hearing, communication access is critical to successful participation. This presentation adhered to a proactive perspective and provided postsecondary educational interpreters some tips on interpreting extracurricular activities in the postsecondary educational setting, offering strategies that go beyond just filling a request for services. Topics addressed in this presentation included regularly scheduled activities such as clubs, fraternities and sororities, and sports events, as well as campus cultural events such as concerts and theatrical performances. Planning, preparation, staffing, coordination, and budgeting were also discussed.

A college education includes much more than merely fulfilling academic requirements; extracurricular activities offer students not only the opportunity to develop personal interests and share experiences with others, but students are also faced with opportunities to

develop leadership roles during their college years. Hurwitz (1992) in *Deaf Students in Postsecondary Education* states:

Postsecondary education must be looked upon for providing students not only with the technical skills to acquire jobs, but with the skills necessary to become leaders in their communities. Too often we focus on those activities in the classroom, and seldom remember to provide support for those activities outside of the classroom. It may be that these are equally as important as what transpires in the classroom, and by paying more attention to the extracurricular world we will ensure that graduates will not only enhance the quality of their lives but the lives of all deaf and hard-of-hearing people (p. 177).

There are countless other reasons that extracurricular activities benefit students. First, a large postsecondary institution can sometimes be overwhelming to students, and students who are deaf or hard of hearing may also face communication barriers at such campuses with small deaf populations. Secondly, students can improve their skills – often in the specific subject areas of their interest. They will also – and this is arguable – get the most out of college; most people seem to agree that college is more than what transpires in the classroom. They may feel at home faster and manage stress better. They may meet professionals in their areas of interest, and this can help them after graduation when networking may be necessary in their occupational lives. Most importantly, they will have fun; this can prove to be very beneficial, due to the stressful nature of students' course loads (Bourgeois & Treubig, 2000).

Indeed, Stinson and Walter (1992) emphasize that when students – deaf or hearing – leave college before graduation, it is often due to the fact that they have failed to adjust in the postsecondary setting's social realm. Hurwitz (1992) also cites research stating that "interaction in extracurricular activities is an important part of life for successful college students" (p. 173). The case can be made, then, that extracurricular activi-

ties could perhaps aid in successful social adjustment for students who are deaf or hard of hearing and allow them to integrate themselves into the school community. Postsecondary programs typically provide many opportunities for students to become involved in activities outside of the classroom. Disability support services providers must ensure that these activities are accessible so that deaf students can take advantage of the many opportunities as well.

Research shows that “the size of the deaf population was the most important factor in attracting {deaf} students to postsecondary programs” (Stinson & Walter, 1992, p. 52). Schools with a large population of students that are deaf or hard of hearing – such as Gallaudet University and the National Technical Institute for the Deaf (NTID) – are naturally going to attract more deaf and hard of hearing students. Therefore, it is particularly vital that disability support services providers remain committed to making extracurricular activities accessible to deaf and hard of hearing students in postsecondary settings in which those students constitute a minority. If a deaf student is surrounded by students who do not share the same language with him/her, then that student may feel an even stronger need to get involved and make friends.

There is a dearth of statistics on the numbers of deaf students currently involved in extracurricular activities in postsecondary institutions in the United States. One way to measure the desire of students to get involved socially is to look at the numbers of students getting involved in those postsecondary institutions in which deaf students are not a minority. A phone call to NTID’s Department of Interpreting Services (DIS), inquiring about the number of hours of interpreting required for extracurricular activities, revealed that – at the time of the call – approximately 80% of the interpreting that occurred was for academic activities, and 20% was for non-academic – 600 to 700 hours a week of interpreting for nonacademic events (for a total of over 1,000 students) (NTID DIS Staff Interpreter, personal communication, July, 2001). It is important to remember that this is a campus in which communication is *not* an issue; this is the ideal communicative setting, if you will, for deaf students, a setting in which language barriers do not exist. We can be so bold, then, as to extrapolate this information to a campus in which a majority of the students are hearing and there is an extremely small population of deaf students. Then, disability support services providers can acknowledge students’ desires to get involved socially and ensure that those students can avail themselves of these activities on campus.

The completion of college by students – whether deaf, hard of hearing, or hearing – requires a certain level of persistence, and it is clear that students desire interpersonal integration into their postsecondary environments. “Deaf and hard of hearing students often face navigating the hidden rocks and sudden whirlpools of

college life without the necessary tools and/or a responsive and supportive campus environment” (Porter, Camerlengo, DePuye, & Sommer, 1999, p. 5). It is the responsibility of disability support services providers to establish that support and to engender an accommodating atmosphere at the postsecondary institutions that deaf students choose to attend.

Postsecondary Extracurricular Life: The Consumer’s Perspective

{This portion of the presentation was delivered as a personal account of extracurricular life as a deaf student; this individual attended a community college, Gallaudet University, and received her Master’s degree at a large university}.

Providing interpreting services is very necessary. It creates an inclusive environment and a sense of belonging. As a deaf student who participated in accessible extracurricular activities, I had the ability to get along with hearing participants as well. Making extracurricular activities accessible for deaf students results in the removal of communication barriers.

I believe firmly in equal access. It is also important to remember that the benefits of inclusion are for both deaf *and* hearing students. For example, if interpreters are needed in sororities and fraternities in order to make their meetings and events accessible to deaf students, then hearing students learn about the role of interpreters and – as a result of being exposed to interpreters – will understand their needs. At the same time, deaf students learn to work with hearing colleagues just as they will in their lives beyond graduation. Deaf students must also learn how to request accommodations, manage their communication needs, and work with support services providers and interpreters as a team. One way to accomplish those tasks is through getting involved in activities outside of the classroom. Again, both groups – deaf and hearing – benefit from such activities.

The provision of interpreters in such settings gives deaf students more choices as well. Prior to the passage of the Americans with Disabilities Act in 1990, deaf and hard of hearing students had limited choices. If an event was not interpreted, they would, most likely, not attend and would dismiss the activity from their minds. When I started college, access to these types of activities had just begun to be more commonplace. I had interpreters in class but no interpreters for extracurricular activities. I wanted to play sports, for instance, but did not do it because of the communication barrier. I simply was not willing to show up without an interpreter. In hindsight, I can see how beneficial it would have been to have accessibility to such activities.

When I arrived at The University of Tennessee, I was worry-free when it came to interpreters. At the same time, though, I learned a lot from that experience. I

quickly realized that I must have a sense of responsibility and independence. Sometimes deaf students are too dependent on hearing people. We must strive for deaf people making their needs known, and they must learn that it is their responsibility to get their needs met.

When accommodations are provided for deaf students in extracurricular settings, such as the provision of interpreting, deaf students also have opportunities to develop friendships. They are also able to take advantage of one benefit of getting involved in activities outside of the classroom – networking. This is great for future job contacts. As an undergraduate and graduate student, I met so many people and developed friendships with hearing students – friendships I still have. As you may know, it is not always common for a deaf person to have a long friendship with a hearing person. Again, feeling that camaraderie and commonality with other students is vital.

Involvement in extracurricular activities also assists students with self-confidence. Students learn about themselves; getting involved certainly helped further me along in forging my own identity. A student has the opportunity to learn his/her own, unique skills set and can become a leader. I discovered and honed my own leadership skills once activities outside of the classroom became accessible to me. As a result, my self-confidence increased. It may take years for some students, but providing the opportunity is vital. For example, for many years, I did not understand the point of knowing parliamentary procedure. Deaf students, too, can go on and on forever; sometimes there is no good way to stop them from talking! You must have an agenda and time limits, and parliamentary procedure can take care of this problem. Students can learn this in extracurricular student group meetings. This is something that deaf students will likely use in future organizations as well. I now see the benefits of deaf students being exposed to and learning parliamentary procedure. Knowledge of it also puts us on more equal footing for those times when we interact with hearing people in organizations and, therefore, gives deaf students a boost in self-confidence.

Budgets, Compliance, and Commitment: Creating Accessibility

There are two forces that shape a postsecondary institution's policy on accessibility: compliance and commitment. Compliance refers to following the proper legislation and merely avoiding a lawsuit. According to the Americans with Disabilities Act, universities must make their programs and activities accessible. That includes extracurricular activities that are university-sponsored. Title II of the Americans with Disabilities Act states:

No qualified individual with a disability shall, on the basis of a disability, be excluded from participation in or be

denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any public entity (Kinder, 2002).

The other influence, commitment, refers to a postsecondary institution's philosophy on inclusion and its desire to see students succeed. Postsecondary institutions certainly want to be accessible to students with disabilities who can participate in educational programs and become leaders in society. This perspective is less interested in only avoiding a complaint from the Office for Civil Rights, but rather its focus is the student and how the school can affect the success of students with disabilities by providing reasonable accommodations. When dealing with students at postsecondary institutions, some disability support services providers will tend to respond to the compliance perspective, and others will act more effectively out of the commitment perspective.

Paying for access to extracurricular activities is a crucial issue. Providing sign language or oral interpreters is costly, and there are many ways to approach the issue. When possible, using staff interpreters is advantageous; in that case, the postsecondary institution will not pay more to hire an outside interpreter for the activity.

At the University of Arkansas at Little Rock (UALR), the policy is the following: if an event is sponsored by ticket sales, that entity pays for the interpreter. For example, for theatre productions where patrons must pay to attend, interpreters are provided by the theatre. It plans this every fiscal year and provides for interpreters in its budget. Because the Disability Support Services (DSS) office has contact information for interpreters, they often work with them and assist, when possible, in contacting interpreters.

However, for activities outside the classroom that are not funded by ticket sales, DSS provides interpreters. They ask the students who use interpreters to notify the office as early as possible when they want to attend extracurricular events; DSS can then budget and schedule accordingly. Budgeting for extracurricular activities is difficult at best, because the level varies from semester to semester, depending on who the students are and how active they want to be outside the classroom. One way to project future expenses is to track expenses from each semester. Staff may notice trends when projecting needs for the coming year. This will not be exact, by any means, but it will result in a starting figure with which to work.

Creating accessibility to some activities in particular is not appropriate for a postsecondary institution. At UALR, this is best demonstrated by events sponsored by religious organizations. DSS does not provide interpreters for such organizations; one option DSS often considers is to aid in coordinating the service, yet have the organization pay the bill. If campuses offer religious

activities and/or services, coordinators should be aware of the possible conflict between church and state. It is best for them to discuss this with school administrations to ensure that they are aware of which activities require the provision of interpreters and which are not covered by the disability services office.

For some campus-wide events that are likely to attract deaf students, it is good practice to provide an interpreter even if one is not requested. This improves accessibility awareness on campus and avoids a last-minute rush to fill the need. One example would be a student government forum where the candidates answer questions from students. This is an event that deaf students could attend, and since the entire campus is encouraged to participate, having an interpreter already there avoids potential problems.

Some departments on campus may be tempted to claim undue hardship due to the high expense involved in making extracurricular activities accessible. However, the individual department's budget is not considered in such a claim; rather, the entire postsecondary institution's budget is assessed, so proving undue hardship is extremely difficult.

Some Issues in Interpreting Outside Classroom Walls: From the Interpreter Coordinator's Perspective

Interpreter coordinators often deal with out-of-class activities, and these requests are often last-minute ones. They can, however, be aware of these situations by knowing where these requests are most likely to occur. For example, if a student is taking a performing arts class, coordinators will know that the student, most likely, will have to see a theatre performance. If a student is in a law class, s/he will, most likely, have to observe a court proceeding. By being aware of student schedules, coordinators can be aware of which students will have interpreter requests outside of the classroom.

If a student who uses an interpreter is living in a dorm, coordinators can contact the dorm supervisor to find out what kinds of meetings are mandatory for the student and how often they are held. It is vital to remind the supervisor that they are required to provide interpreters and that a beginning ASL student who is living in the dorm is not acceptable in the interpreting role.

Quite often, venues are excited about providing communication services but have little to no experience in how to do so. This is the coordinator's opportunity to educate and to build bridges between his/her office, the deaf community, and the college or university. Disability support services offices may not be able to pay for the services for a particular venue, but they may be able to provide the names and phone numbers of interpreters or referral agencies. In some instances, coordinators may know about a venue that meets a student's

needs and already has interpreting services provided, so they can point the student in that direction.

If an assignment promises to be ongoing, coordinators are best advised to book the same interpreters. Support groups are assignments in which the consistency of the interpretation, training of the interpreter, and knowledge of the groups' cultures and vocabularies are extremely important. Due to privacy issues, it is also important to all of the participants that the face they see is a familiar one. If the dates have been provided in advance, coordinators can contact the interpreter and book him/her for the entirety of the group's sessions, if possible. Freelance interpreters often welcome the consistency of work, and the deaf person will welcome the consistency of the interpretation. Sometimes the interpreter for the support group may be paid for by rehabilitation services. It is important for coordinators to discover if this is the case for their institution's student(s). If not, they can try to negotiate with the person who is paying the bill and aim to be as flexible as the disability support services office's budget and manpower will allow.

Accessibility with regard to standardized testing is another important issue coordinators face. Some of the standardized tests have similar instructions. Some tests, such as the SAT, already have interpreter policies in place. It is vital that interpreter coordinators have some familiarity with these tests; the student and the test provider may look to them to provide information as to what type of interpretation is appropriate. UALR's DSS office has collected copies of all of the instructions and/or practice tests they could locate. They provide interpreters an opportunity to familiarize themselves with these tests and instruct them on what is the appropriate interpretation provision for any given test.

Law classes sometimes require court observations. Coordinators can call courts in advance and inform them that an interpreter or transcriber will be sent. Sometimes the court will provide the student with a free copy of the transcript or meet with them after the session.

Sometimes disability support services providers may coordinate services for students who are not from their campus. For example, a group of cheerleaders from the Arkansas School for the Deaf attended a cheerleading camp at UALR. DSS does not cover this type of activity, as the students were not from its campus. The coordinator contacted the cheerleaders; they were surprised and vexed to find out that they would have to pay for interpreting services. They stated that their activity was for fundraising and that they would cancel the camp, because they could not afford interpreting services. Rather than have not only deaf students but students from other schools lose out, the DSS office decided to negotiate with the school for the deaf. They agreed that they would search for and pay for one interpreter and

DSS would provide the other. All in all, this was not an ideal solution, but one that at least enabled the students to participate.

Under the ADA, interpreters are responsible for specialized vocabulary. This communication must be conveyed accurately and impartially through the use of any necessary specialized vocabulary. Thus, the preparation of interpreters is extremely important to the success of any assignment. The bulk of this responsibility falls upon the interpreter, but coordinators can make their jobs easier if they can put them in contact with the organization or the student or provide them with documents, texts, or Web sites that contain preparation materials. In some instances, the time for preparation may be greater than an average assignment; if so, coordinators must – in advance and with the interpreter – negotiate a set amount of preparation time for which they are willing to pay.

Sometimes assignments will occur during odd hours (such as, evenings and/or weekends). Some interpreters appreciate these hours, as they may be stay-at-home parents who can only accept assignments during those hours. If comp time is available to them, staff interpreters may also appreciate this opportunity. Providing comp time to staff interpreters can also help minimize costs for contract interpreters, which, in turn, can allow for the provision of more services.

Interpreter coordinators must also be aware of issues beyond the basics of the assignment (time, place, date, etc.). Issues such as gender, cultural issues, and sexuality are extremely important when matching the appropriate interpreter with a consumer and assignment. Interpreter organizations – such as, the National Alliance of Black Interpreters or *Mano a Mano* – can provide much-needed information and support for those coordinators or interpreters who are not familiar with providing services for culturally diverse consumers.

Interpreters are a rare and valuable commodity. Coordinators must be sure to keep them as safe as possible and be aware of such elemental issues as allergies (for instance, pollen during field trips), sunscreen for outdoor venues, wires, stage decorations, etc.

For any venue, the most important notes to keep in mind are the following: Develop a rapport with a contact person; make sure all parties are well-prepared; match the venue with an appropriate interpreter(s); and be flexible and negotiate well.

{Note: A significant portion of this presentation included a discussion about the coordination of performing arts interpreting on campuses – specifically, concert and theatrical interpreting, two components of extracurricular life for students. For information about these subjects and a copy of the presenter's informative hand-out, please contact Cheryl Thomas at <crthomas@ualr.edu>}.

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Defining Communication Access for Students with a Partial Hearing Loss*

(*Including students with Cochlear Implants)

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Abstract:

Service providers often question whether a student who is hard of hearing (as opposed to Deaf) would qualify for services in postsecondary settings. Specifically, many hard-of-hearing individuals request print accommodations and service providers are often at a loss as to how to evaluate if this is an appropriate accommodation for the individual. The goal of this paper is to help service providers develop an understanding of the strengths and weaknesses of various accommodations in the range of learning environments to help them better understand when print accommodations are appropriate. Note: In this paper, culturally Deaf individuals who use American Sign Language are referred to as Deaf. All others are referred to as hard of hearing, no matter what their degree of hearing loss. This group includes individuals with cochlear implants. Hard-of-hearing individuals generally do not know American Sign Language. As you will see, they use a variety of methods to access spoken language.

- Bill recently lost his hearing and receives no benefit from hearing aids. His speech is clear and easy to understand. He is a beginning sign language student. He is requesting realtime captioning for all of his classes.
- John received a cochlear implant a year ago. He wants realtime captioning for his classes. Interestingly, his parents do not. They want him to take advantage of the opportunity in the classroom to improve his speech discrimination skills.
- Mary has used assistive listening devices and notetakers for the past 3 years in her college program. As a senior, she has suddenly started to request realtime captioning.

Service providers are often stumped when presented with an individual who is hard of hearing. What degree of hearing loss justifies providing an accommodation? The decision-making process seems to be much easier if presented with a culturally Deaf individual who uses sign

language for communication. Obviously, an interpreter is required as an accommodation in a lecture class.

We often assume, though, that unless the loss is severe or profound, the individual can hear 'pretty good'. A partial hearing loss is especially confounding because the individual may be able to communicate well with some people and not others, hear in some situations, communicate exceptionally in the intake interview, or even talk on the phone. How does one justify providing services to someone who seems to do so well on his or her own?

Partial Hearing Losses

What might the student with a hearing loss hear?

Some speech sounds are soft and high pitched (/s/, /f/, /th/), others are louder and lower pitched (/n/, /g/). The most commonly occurring sounds in speech are soft and high pitched, and thus will be lost even for those with a moderate hearing loss. Some people's voices are higher and/or softer than this average, making them more difficult to hear.

Don't hearing aids and cochlear implants remedy the loss? Most hearing aids amplify a range of sounds specific to the individual's hearing loss. If a person has a loss in high frequencies but not the lower ones, most hearing aids will amplify only the high frequencies. Cochlear implants (CIs), on the other hand, are designed to by-pass cochlear hair cells which are non-functioning and provide direct stimulation to the auditory nerve. Now the brain must interpret the signals it is receiving. Some people gain the ability to differentiate among only environmental sounds. Others can recognize speech under some circumstances, and others are able to understand speech in most circumstances.

Unfortunately, neither hearing aids nor cochlear implants discriminate between speech and background noise. All sounds coming into the microphone of the hearing aid or the CI will be processed by the device for the individual to hear. The sounds that individuals with no hearing loss can ignore or filter out become noise that competes with speech sounds for hearing aid and cochlear implant users.

Individuals with hearing loss are using residual hearing, amplification, and speech reading to decode the spoken message. However, only 33% of English speech sounds are visible on the mouth. Thus, speech reading involves using residual hearing, watching body language and facial expressions, English language skill,

continuous visual access to the face, and knowledge of the topic to correctly fill in the blanks. While it is a skill that can be improved to some extent with training, not everyone will be able to accurately speech read in the language-dense postsecondary setting.

Expectations of Students

Now we have a better understanding of what a student who is hard of hearing might be hearing. Next, we need to understand the expectations of the educational setting: what the student is supposed to gain from being in the class (e.g., understanding new ideas/concepts, developing vocabulary and critical thinking skills), and the overall goals of getting a degree in general (independence and self management, developing job skills, handling challenges). We should remember that these tasks are challenging for all students, not just those with a hearing loss.

The instructional side is only one part of the interaction. The other component of the educational process involves the student's response to the information. Expectations will be placed on the student by the instructor, by other students, and of course, by the student himself. Thus, another component that must be evaluated to determine the appropriateness of an accommodation is this: Does the accommodation allow the student to respond in line with the expectations of that environment? In the typical educational environment, the student will need to ask and answer questions, and contribute ideas. Many courses require students to discuss the topic, which may involve defending an unpopular opinion, challenging an idea, or arguing a point.

There is also a social element to the classroom environment. Some instructors encourage that a class become a group, rather than a room of individuals, feeling that this is more conducive to learning. And of course, there is a social element among the students, outside of the course content. The feeling of fitting in with other students is recognized as a major contributor to retention in postsecondary institutions.

If you were able to eliminate the background noise problem and the student kept up with her reading, wouldn't she be able to keep up in the class? Why is hearing a lecture in a classroom so much more difficult than hearing in a conversation? Conversation is a two-way, interactive process. There is a give-and-take between individuals that keeps the flow of information going, whether it's nods and furrowed brows or actual questioning for clarification. This kind of constant monitoring between speaker and listener does not usually happen in a lecture situation. Pauses may be made so that questions can be asked, but there is little checking for understanding on an individual-by-individual basis. Paradoxically, individuals in classrooms are held responsible for the auditory information that is presented.

While learning the content may be the stated goal

of the class, the educational environment provides many other opportunities for individuals, such as developing leadership skills, establishing a reputation of competence, and building self esteem. Students may, for example, hear questions from other classmates and realize that they are not alone in being confused on the topic, or alternatively, may realize they are ahead of the game and have something to offer others. This happens only when the student can interact fully in both the content and the culture of the class.

On the other hand, if the student is not able to follow the communication in the classroom, the student may not only *not* experience the positive outcomes, but will instead experience negative outcomes which may culminate with the student dropping out of the program. Many courses are conducted around classroom participation or include it as a graded component. Others may misinterpret the behavior of the student who is not able to participate. Individuals who are hard of hearing often balance the value of asking for clarification with the risk of breaking the flow of the interaction. They have experienced others' frustration with them, and may choose to try to keep up in other ways rather than draw attention or ire upon themselves.

Students who are not given appropriate communication access for the situation may not be aware that they are not interacting appropriately. They may not know that they have missed cues to join in or respond. Others may misattribute their behavior to being stuck up, rude, or socially inept instead of realizing that they cannot respond with confidence to statements they are not sure they have heard correctly. The idea that 'communication is irreversible' (Wood, 1999, p. 32) is what will keep many students from joining in. Once that first impression is made, one must work hard to change others' attitudes.

Accommodation Options

The job now is to provide the accommodation that will present the student with the auditory information that he is missing in a way that will allow him to accomplish what is expected of him in the educational environment. No matter what accommodation is chosen, students who are hard of hearing generally need the support of a notetaker. Most hearing students are able to multitask, looking down to write while continuing to listen. When hard of hearing students look down to write, they are missing what is said during that time. Be aware, notetaking is *not* an adequate accommodation for communication access. Notes provide the 'Dagnet' version of the class (that's "Just the facts, Ma'am"). They do not provide the student with enough information in real time that would allow for interaction during the class.

Many students will be able to use assistive listening devices (ALDs) to gain access to lectures. With

ALDs, the instructor speaks directly into a microphone and the student is able to turn up the volume on the instructor's voice, reducing the background noise problem. Unfortunately, anything that is not said into the microphone will not be heard by the student (see <http://www.wou.edu/nwoc/demyst/index.html> *Demystifying Assistive Listening Devices* for more information). Thus, group discussions are generally not accommodated adequately with assistive listening devices.

Even though individuals who are hard of hearing typically do not know sign language, an oral interpreter (alone or in conjunction with an ALD) may be useful. An oral interpreter silently mouths what is spoken so that the skilled speechreader has constant access to the interpreter's face (even though he may not be able to see the speaker's face). The interpreter also indicates who is speaking. Speechreading is strenuous over long periods of time, though, and has limited use in classes with dense vocabulary requirements.

Other accommodations that will enhance the student's experience in the classroom are rooms with better acoustics, receiving class materials (overheads, handouts) in advance to review before class, and breaks in their schedules to help them combat the effects of visual and auditory fatigue. Auditory fatigue is a very real problem for students using amplification for several hours at a stretch. Students should try to schedule more difficult classes during the times they are most alert and avoid scheduling classes back-to-back.

Speech-to-Text Options

In some instances, the combination of circumstances will require a speech-to-text accommodation. It is not unusual for students who succeeded academically using hearing aids alone in high school to find themselves needing more support in college. Instructors generally speak about 170-220 words per minute. As mentioned earlier, notetaking, at 20-30 wpm, is adequate to "get the facts" but little else. Generally, even though the information is written down more quickly, computerized notetaking does not provide the information needed for interaction. Notes generally do not include who is speaking, comments or asides that are made, questions from other students, etc.

Automatic speech recognition (ASR), too, has limited use. Punctuation is included only if it is spoken, and errors must be corrected along the way or the dictionaries will become corrupted. However, assuming the individual has taken the time to train the program to her voice, ASR programs such as Dragon Dictate and Via Voice could be very useful in one-on-one meetings or tutoring sessions, where the pace can be much more controlled. Research is now being conducted on using ASR as an access tool with programs such as the Liberated Learning Project, the Telecommunications Relay Service, the I-Communicator, and in combination with C-Print (discussed next). (See links at the end of this paper.)

The key is providing information so that the student will be able to participate in real time. In order to truly gain communication access in print, summary transcription programs such as C-Print and TypeWell, or realtime transcription must be used. C-Print is a program that incorporates phonetics and summarization to reduce keystrokes and increase the typist's speed. TypeWell is a similar idea, but uses spelling abbreviations (e.g., in some longer words, vowels are left out) and summarization to achieve the same purpose. The transcriber uses a laptop computer. The student views the output on a second laptop or on a monitor. The computer program automatically expands the abbreviations the transcriber is using for the student to read. Depending on the speed of the summary service provider and the rate of the speaker, these transcripts will resemble the output of realtime transcripts. Summary transcribers do indicate change in speakers and environmental sounds. They strive to get meaning-for-meaning what is said (not necessarily word-for-word) in real time.

Realtime writers or stenographers, on the other hand, do strive to take down word-for-word what transpires in the class. The quality of the output depends on the speed of the transcriber, their accuracy level, the number of "words" they have built in their dictionaries, and having the appropriate vocabulary pre-entered into their dictionaries. They use the stenographic equipment of court reporters and display the output through the same options as the Summary transcription providers.

Students and service providers should consider the pros and cons of each option. Summary transcription services provide fewer pages, with the information written in complete sentences. Realtime transcription provides exactly what was spoken in the class, resulting in approximately three times the printed output. Depending on the speaker's skill, the resulting output may be difficult to read without the auditory cues to help interpret meaning. Obviously, students must be comfortable with written English to use these accommodations.

Realize that the student generally does not know what she did not hear. In evaluating speech-to-text accommodations, be sure to have the instructor evaluate transcripts throughout the term for accuracy and completeness. This will give the instructor a better idea of how the information is coming across to the student, and will let you know if a quality service is being provided.

With all of the options that are available, how do you determine which is the appropriate accommodation?

Each situation must be evaluated to determine which accommodation or combination of accommodations is called for. **Characteristics of the speaker** include the presence of facial hair or accents that may make the speaker more difficult to speechread; speaker skill, in-

cluding speech patterns and using organizers such as outlines or writing vocabulary on the board; and rate of speech. The **acoustics** in the room will play a major role in the student's ability to take advantage of using hearing aids and assistive listening devices. Generally, more bodies create a greater amount of noise. What **past accommodations** has the student received? Most find that the college environment is much more stringent than their high school environments. Changing modes may be difficult if not impossible for them, especially in an environment that is even more demanding.

Of course, there are also several considerations related to the individual course. **Unfamiliar vocabulary** will stump even skilled speechreaders. A student who may be able to use ALDs successfully in a lecture will find them completely inadequate when trying to follow a lively **class discussion**. Other course considerations relate to **increased expectations** that are placed on students in their major field, in graduate programs, or in programs where students are very **competitive**. These kinds of situations require a higher level of interaction from the student.

Notice that degree of hearing loss has not been mentioned in this discussion. Even students with milder hearing losses may be unable to understand a teacher with an accent, unable to function in a room with poor acoustics, or lost in group discussions. Combinations of these factors may cause a student who has never requested accommodations before to seek help.

Case Studies Revisited

As can be seen from this discussion, the proper fit between the student, the course, and effective accommodations requires an examination of a number of variables. All too often, we incorrectly focus solely on the characteristics of the student's hearing loss without realizing that the requirements of the educational setting and the characteristics of the communication environment can and do change and should be considered in the decision. Let's look at the consumer profiles that were introduced in the beginning of this presentation.

Bill recently lost his hearing and receives no benefit from hearing aids. His speech is clear and easy to understand. He is a beginning sign language student. He is requesting realtime captioning for all of his classes.

Bill's loss is so profound that hearing aids provide no benefit, so most likely ALDs will not help either. Popular beliefs aside, the clarity of his speech doesn't provide any information about what he can or cannot hear. Because he is newly deafened, his speech reading skills are likely to be weak. Even though he is learning sign language, the classroom is not the place to test these skills. In this case, one of the speech-to-text options would be appropriate for all of his classes.

John received a cochlear implant a year ago. He wants realtime captioning for his classes. Interestingly, his parents do not. They want him to take advantage of the opportunity in the classroom to improve his speech discrimination skills.

John's options may be more varied than Bill's. Depending on the characteristics of the different instructors and their teaching styles, John may find that using ALDs with his cochlear implant will provide him with the auditory information that he needs. In any classes where ALDs do not provide enough benefit (e.g., group discussion formats, instructor speaks at a fast pace), the various speech-to-text options should be considered. While individuals with cochlear implants do need auditory rehabilitation and practice while learning to hear with the device, communication-intensive settings, especially those where your success or failure depends upon getting the information correctly, are not the place for it.

Mary has used assistive listening devices and notetakers for the past 3 years in her college program. As a senior, she has suddenly started to request realtime captioning.

Mary is experiencing what many people experience as they become upper classmen in their programs: the program becomes more competitive, materials are more difficult, and expectations are higher. It is entirely appropriate for an individual to use ALDs in combination with a speech-to-text option. Not everyone is able to understand speech from the ALD, but they may still be able to pick up pacing, inflection, and other auditory cues to help them gauge the communication environment more accurately. Note that the accommodation does not have to be the same for each and every class. She may want to use a speech-to-text option in courses in her major area, but continue to use ALDs in lower level or elective courses where the competition is not so great.

Conclusion

There are many resources available to service providers about accommodations for individuals who are hard of hearing and deaf. The Postsecondary Education Programs Network (PEPNet) is an invaluable resource to educators, vocational rehabilitation counselors, and disability services providers. PEPNet is funded in part by the US Department of Education, Office of Special Education & Rehabilitative Services. PEPNet, The PEPNet Resource Center, and WROCC at WOU all post free training materials and information to their websites. The National Center on Deafness is home to several special projects that provide support to a variety of professionals who work with Deaf and Hard of Hearing students. Before you begin to create materials for instructors or students on your campus, check these resources to see if a prototype that fits your needs is already available.

The Office for Civil Rights is the organization that receives complaints concerning the provision of accommodations in postsecondary institutions. They can also be a resource *before* problems arise. If your program is unsure about the accommodations it wishes to provide in a specific situation, call the OCR division serving your area. They will be happy to provide you with information about whether or not you are complying with the law, and offer suggestions. They can be reached at 1-800-421-3481 (V), 202-205-5166 (TTY) or ocr@ed.gov.

Finally, the service provider should be especially aware of the individual's comfort level with letting others know that he or she has a hearing loss. Statements like 'I'll be fine,' or 'I can do it on my own' should be explored further with the student. The individual may not mean that he will be able to hear and understand what is happening in the classroom. He may, instead, really mean 'I can get through this without putting anyone out'...except, of course, himself. Explore these statements with individuals and find out what their fears are. Help them develop the coping skills for their worst case scenarios, such as responses to people who do become impatient, how to ask for clarification, and how to best set up a positive learning environment to avoid problems. Many support groups are available as a resource to help individuals cope with their hearing loss, such as SHHH (Self Help for Hard of Hearing People), ALDA (Association of Late-Deafened Adults), CIAI (Cochlear Implant Association, Inc.) or on-line support groups, such as Beyond Hearing, the Say What Club, or Cochlear Implant Forum (see <http://www.wou.edu/nwoc/ald.htm> for contact info).

References

- Blair, J.C. (1990). Front-row seating is not enough for classroom listening. In Flexer, C., Wray, D., & Leavitt, R. (Eds.) *How the student with hearing loss can succeed in college: A handbook for students, families, and professionals*. Washington, D.C., Alexander Graham Bell Association for the Deaf.
- Wood, J.T. (1999). *Interpersonal Communication: Everyday encounters*. Belmont, CA: Wadsworth.

Resources

- (See "Internet Resources Related to Hearing Loss" at <http://www.wou.edu/wrocc> under 'Training Materials' for updates.)
- C-Print <http://cprint.rit.edu>
- TypeWell <http://www.typewell.com>
- Realtime Writers (<http://cart.ncraonline.org/>)
- CARTWheel (Realtime Writers working in educational settings) www.cartwheel.cc
- Gary Robson www.robson.org/gary/writing/rthiring.html
- Liberated Learning Project www.liberatedlearning.com

Remote Realtime Captioning (many of the speech-to-text options can be provided via remote means when there are no transcribers in your area, through telephone lines or ISDN (internet) lines. Listed below are a few of the companies providing this service. Remember, everything must be said into the microphone or the transcriber will not be able to hear it.)

Viable Technologies

<http://www.viabletechnologies.com> (click on demo to see how this works)

Ultratec Instant Captioning

<http://www.ultratec.com>

Communication Services for the Deaf

<http://www.c-s-d.org>

Beyond Hearing Aids: Accommodations for Individuals Who are Hard of Hearing or Late Deafened

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Abstract

Many people give up their jobs, often after putting in years of service, because they feel they are no longer able to manage group meetings, supervise other workers, or communicate effectively over the phone due to their hearing loss. Others avoid, drop out, or fail in educational settings. This could be prevented if service providers and consumers were aware of the crucial role technology, beyond hearing aids, can play in restoring communication—even for persons with severe to profound losses. This paper provides a brief overview of the wide array of accommodation options available that will help individuals who are deaf, hard of hearing, and late deafened remain a productive and vital part of the work force and successfully continue their educational endeavors. Detailed information on the topics presented here can be found at <<http://www.wou.edu/wrocc>> under 'Training Materials'.

There's no doubt about it—hearing loss is a growing issue throughout American culture. Presently, approximately 10% of the U.S. population has a significant hearing loss. Of that group, more than half are still of "working age" and may not be aware of the toll their hearing loss is taking. For people 45 years and older, the rate of hearing loss is greater than any other major disabling condition. These are prime working years, when people are typically well settled in their professions and looking forward to advancement into leadership roles. Instead of advancing, people with a hearing loss tend to leave their jobs early, citing issues around phone use, participation in meetings, leading group meetings, social difficulties and isolation (Scherich, 1996). As communicating effectively becomes more stressful, people look to other options such as early retirement or changing jobs. Unfortunately, changing jobs entails retraining or returning to the postsecondary educational system, a daunting task to those who do not know that accommodations are available.

Surprisingly, rates of unemployment stay essentially constant regardless of whether the loss is in one or both ears. This has significant implications for Vocational Rehabilitation (VR) eligibility, selection of services and accommodation needs. It also indicates that people with unilateral hearing loss have been even more overlooked for specialized educational and vocational services than their peers with binaural losses. It is particularly important that postsecondary educators and service staff, VR staff and partners understand not only the prevalence of hearing loss but also its multiple effects. Mild or moderate hearing losses are often seen as a minor barrier to successful employment—to the point of frequently being considered so insignificant that without additional disability issues, the applicant is determined ineligible for services. This is not just a mistake—it is a disservice. This on-going problem was highlighted in a recent information memorandum from the Rehabilitation Services Administration, which revealed, "the number of 'successful employment outcomes' for deaf and hard of hearing individuals has declined over the past ten years (1989 to 1998)" (RSA, 3/21/00).

Effective Accommodation Often Starts with Hearing Aids

The most common VR service for a hard of hearing individual is the purchase of hearing aids, without any other rehabilitative services (Corthell & Yarman, 1992). Hearing aids are an important part of communication access for many individuals with hearing loss. A hearing aid system consists of a microphone that picks up sound waves and converts them into electrical signals; an amplifier that increases the strength of the electrical signals; a battery that provides electrical energy to operate the hearing aid; and a loudspeaker (receiver) that converts the amplified signals back into sound waves and directs them into the ear through a specially fitted mold. Hearing aids are designed to fit the individual's hearing loss. If the loss is in the high frequencies, those frequencies are amplified and others are left alone; if the loss is in the lower frequencies, it is those that are boosted. Similarly, less amplification is provided for a mild loss than for a profound loss. When an individual has a high frequency loss, he or she may have more problems hearing children's and women's voices, as these tend to be higher pitched. This is why someone with a hearing loss seems to be able to hear one person and not another.

Unfortunately, hearing aids cannot discriminate be-

tween background noise and the sounds the individual wants to hear. Any sounds in the targeted frequencies are amplified. Hearing aids are perfect for one on one interactions where there is little background noise. An individual may function very well in a job or intake interview with a service provider, because the meeting will likely be held in a quiet environment where people use eye contact and maintain full attention. This may lead to misunderstandings about functional ability. An employer may think that the individual either has no loss, or will do fine on the job without accommodations because he or she did so well in the interview. A VR counselor or support service provider may think the individual has no need of services. However, functional skill may look very different once the person is no longer in the quiet environment with the opportunity to supplement what he or she is hearing with speech reading. Blair (1990) illustrates the characteristics of sound waves and explains why some listening situations are more difficult than others:

- **Distance:** The further away from the sound one is, the softer the amount of pressure that is exerted on the eardrum, and thus the less intense (loud) the sound.

- **Signal-to-Noise Ratio (SNR):** This refers to how much louder speech is than the background noise. People with normal hearing need speech to be at least 6 dB louder than the background noise. To achieve the same level of speech discrimination for individuals with a hearing loss, speech must be 15 to 25 dB louder than the background noise. Hearing aids do not improve the Signal-to-Noise Ratio because they amplify all sounds. *Only ALDs will improve the SNR.*

- **Reverberation** is measured as the amount of time it takes for the intensity of a sound to drop 60 dB once it has stopped being produced. The longer the time, the more of an echo effect is produced. Research indicates that even small amounts of reverberation have a negative impact on ability to understand speech in individuals with hearing loss. Thus, poor room acoustics can make a setting inaccessible to individuals with hearing loss.

What can be done in these listening situations? An assistive listening device (ALD) consists of a transmitter and a microphone (worn by the speaker and about the size of a pager), and a receiver with some type of coupling device to transmit either the sound to the listener's ear or the signal to the listener's hearing aid. The voice of the person speaking into the microphone is the only sound that is amplified for the ALD user, not other noises in the room. The ALD amplifies all the sounds at the same level, much like turning up the volume on the TV. When hearing aids and ALDs are used together, only the targeted sounds and the targeted frequencies are amplified to fit the individual user. This is the incredible benefit of using ALDs. By reducing the level of background noise and increasing the level of the targeted

speech (i.e., improving the SNR), ALDs provide the clarity needed for interpretation and understanding.

Beyond hearing aids, there are a variety of ALDs and other accommodations available. These options are described briefly below. Information on catalogs and links to more in-depth information can be found at the end. It is important that vocational rehabilitation counselors and other disability services providers be aware of the assistive technology available to hard of hearing and deaf individuals. These may be the only other professionals (besides audiologists) the individual sees concerning his or her hearing loss. Unfortunately, many hard of hearing individuals are not aware of the variety of technology that can help them hear in groups and other noisy situations.

Assistive Listening Devices

There are the three basic ALD systems in use today. FM systems use radio waves to transmit sound directly from the speaker to the user. Infrared systems depend on light waves and induction loop systems transmit signals via magnetic waves emanating from a loop of wire. All types of ALD systems have volume control settings that can be adjusted by the individual user, help to minimize the effects of poor acoustic conditions in classrooms, and can be used with public address systems. The cost varies depending on whether you are purchasing a personal system or a larger system that uses a mixer and PA equipment. There are also single-unit ALDs (e.g., PockeTalker, Sound Wizard) that have the microphone and listening jack on the same unit. These are very handy for hearing in noisy restaurants or hearing over road noise in the car.

Interpreters

Interpreters are another example of an accommodation. In an employment setting, they may be used intensively while a deaf person is learning a job and then be phased out, returning only for training sessions or group meetings. Most hard of hearing individuals do not use sign language, but may benefit from an oral interpreter to assist with speech reading. All certified interpreters follow a code of ethics. They are not allowed to participate in the meeting other than to translate. They must keep information gained while on the job confidential. When hiring interpreters, ask about their certification level. The Registry of Interpreters for the Deaf (RID) and the National Association of the Deaf (NAD) provide nationally recognized certification indicating skill level. Many states also have quality assurance state screening exams for entry-level interpreters. Contact the Registry of Interpreters for the Deaf to locate local certified interpreters (<http://www.rid.org>).

Print Communication Access

There are several options for print accommodations. The appropriateness of the accommodation will depend

upon the situation and the needs of the individual. Speech-to-print accommodations are divided into several categories:

- **Captioning:** the printed text appearing (typically) at the bottom of a television or movie screen. This may be done concurrently with the broadcast (e.g., news reports) or be pre-recorded (e.g., television shows and movies). This is a word-for-word representation of what is said, in addition to indicating other sounds, such as music or horns. All training videos should be captioned. Caption decoders allow closed captions on videos and television broadcasts to be seen. Since 1993, the federal government has mandated inclusion of these decoder chips in new televisions with screens of 13" or more (Federal Communications Commission, 1990).

- **Communication access realtime translation (CART):** a service is provided by a trained stenographer, such as a court reporter, who can transcribe at up to 300 words per minute. All text is projected from his or her computer to a screen or TV monitor so it can be easily read.

- **Remote transcription services:** CART provided via a modem and phone line or Internet connection when local CART is not available. The remote transcriptionist will only be able to transcribe what he or she can hear. The presenter must repeat questions from the audience into the microphone so the transcriptionist can record the information.

- **Summary systems:** These systems use typists' summarization skills and a dictionary of abbreviations, to increase typing speed and take down meaning-for-meaning in real time what is happening in the class.

Notetaking, whether by hand or computer-based, only provides facts and is not considered communication access. Because a deaf or hard of hearing individual cannot look down to take notes and at the same time keep his or her eyes on the presenter or interpreter, it is generally appropriate to provide notes in addition to other accommodations.

Accommodations for Evaluation Settings

Formalized testing—interest, aptitude, achievement, personality inventories, etc.—can be an integral part of determining what services are needed or what training program is indicated. When working with a hard of hearing or deaf person, the service provider must consider communication, the physical environment and the impact of the individual's hearing loss on his or her academic achievement.

Prior to administering any test, the evaluator should ensure that communication issues are addressed:

- Consider the need for an interpreter or assistive listening device
- Use a special alerting device if using timed tests
- Check to be sure that hearing aids and eyeglasses are being used

- Minimize visual and auditory distractions in the testing area

- Ensure there is enough light in the testing area to see clearly, but don't err on the side of blinding light.

- Avoid placing the evaluator in front of a light source—this will ensure there are no shadows on the evaluator's face to prevent speech reading

If English comprehension is an issue, seek non-verbal evaluation tools or non-traditional methods of evaluation. If written testing is unavoidable, the individual may need additional time to complete the evaluation as a reasonable accommodation.

Telephone Accessibility

There are many issues around telephone use for individuals who are deaf or hard of hearing. Inability to effectively communicate over the telephone is one of the leading reasons given by hard of hearing individuals for early retirement or quitting a job.

For individuals with a hearing loss, comprehension is greatly improved with the use of both ears. Headphones or a neckloop may be plugged into phones with special jacks, so the individual can take advantage of hearing with both ears.

Amplification often helps comprehension on the telephone. Several types of telephone amplification devices are available.

- **A battery-powered amplifier** held over the earpiece with an elastic strap, and then removed in order to hang up the phone is especially useful for travelers, who may not know what type of phone access will be available to them on the road.

- **Amplified handsets with volume control** (available for some phones) can be adjusted by each user. These handsets replace the regular handset but only work with phones with the dialing mechanism in the base.

- **In-line amplifiers** are attached between the handset and the base. (For use with phones having the dialing mechanism in the base, not in the handset.) They usually include both a volume and a tone control.

- **Phones developed specifically for individuals with hearing loss** include a variety of combinations of the features described in this section.

Feedback will often occur if the hearing aid microphone is covered, as might happen when holding the phone over the ear. A piece of foam over the earpiece may help prevent this (one commercially available device is called Squeal Stop). Rather than depend upon the hearing aid microphone, the individual might choose to use their hearing aid telecoil. Telecoils pick up magnetic fields, not acoustic sound waves. Hearing aid compatible telephones give off a magnetic field that can be picked up by telecoils (not all phones will give off an adequate

magnetic field for all hearing aid users). Telecoil advantages include reduction or elimination of background noise, elimination of feedback and inability for others to overhear what the caller is saying. Many hearing aids can be retrofitted with the telecoil option for around \$70.

For those who cannot use amplification or telecoils to access the telephone, teletypewriters (TTYs, also known as TDDs) are available. TTYs come with and without printers; those with a printer are more convenient, as it is difficult to record information like phone numbers or addresses while watching the screen. TTYs are not universally compatible with computers. There are programs that can be used between computers to allow TTY-like communication. Newer TTYs can send in ASCII (computer) format. TTY payphones are installed in public places, as required by the ADA.

In order to use a TTY for direct communication, both parties must have one. If one party does not have a TTY, the ADA mandated, free nationwide network of relay services can be used instead. For example, the deaf TTY user can call the relay service and use a confidential operator (Communication Assistant or CA) to facilitate communication: the CA reads what the deaf person types to the hearing person and types what the hearing person says for the deaf person.

If an individual can speak independently, but cannot hear well enough to use the phone, a newer service called Voice Carry Over (VCO) is an ideal match. VCO calls are a little faster than TTY and relay calls, as the hard of hearing person speaks directly to the hearing party and the CA only types what the hearing person says.

Another option is 2-line VCO. This setup requires that the hard of hearing person have 2 phone lines, one of which must have a 3-way conference call option. The hard of hearing person connects with the relay service via TTY on one line and has the CA to call the other line. She answers and tells the CA that this is a 2-line VCO call, puts the CA on hold, and calls the hearing individual. With the hearing party on the line, the hard of hearing person brings the CA into the conference mode. The CA types what the hearing person says (this information comes in on the TTY on the other phone line). The hard of hearing individual speaks for herself, using her own hearing and/or the text coming in on the TTY to understand what is said to her. The CA is not allowed to speak or interrupt during the conversation. In this case alone, the hearing person may not be aware that the other party is hard of hearing, or that any assistance is being provided for the call.

There are also other relay service features, such as hearing carry over for people who can hear but cannot speak, telebraille for deaf-blind individuals, and foreign language relay services (i.e. Spanish to Spanish).

More recent additions are the IP Relay and Video Relay services. The user with hearing loss accesses IP Relay via the Internet (<http://www.ip-relay.com>) rather

than contacting the relay service by telephone/TTY. Video relay services allow ASL users to use their native language, not English, to communicate. Through the use of an inexpensive camera and a high-speed Internet connection, the caller connects to a video communication assistant—a certified interpreter—who voices for the ASL user and signs the responses given by the hearing person. Many states are establishing their own VRS component under their telecommunications relay service, allowing consumers the choice of a state-owned TTY or a camera and the required software to access VRS. Communication Services for the Deaf has recently announced nationwide VRS service (<http://www.csdvrs.org/VRSIndex.asp>). As DSL and other high-speed Internet connection formats become more available and affordable, the popularity of these services will only increase.

Using “High Tech” to Make “High Accessibility”

Communication with your client/student is not limited to in-person contact. Often communication must happen more quickly than an appointment can be scheduled. In these cases, use of readily available technology is an ideal solution.

Email and instant messaging programs (e.g., AOL Instant Messenger, MSN Messenger) have become incredibly popular and useful for the hard of hearing and deaf communities. Email allows the person to take as much time as needed to read and understand the sender's message. Instant messaging programs are much like a TTY conversation, but are conducted on the computer. Most messaging programs also allow for group discussions (similar to a conference call on the telephone) and for file transfers. Both email and instant messages can be saved and printed for review or reference at a later date.

Videoconferencing through NetMeeting or other PC software is also an increasingly attractive and effective accommodation. With a high-speed connection, it is now possible to clearly view ASL through this medium. Videoconferencing allows users with hearing loss to see the expressions and body language of the person with whom they are speaking, which helps add to their understanding of the conversation.

“High Tech” tools aren't limited to PCs! Many portable options are readily available as well:

- PDAs (e.g., Palm Pilots) have numerous applications as accommodation technology. With Internet access, users can utilize email, instant messaging and other applications. It's also possible to use a PDA to receive remote CART captioning.

- Pagers, especially with alpha/numeric displays, have long been used as accommodations. Two-way pagers allow users to reply to text messages via email, as well as use the device as a traditional numeric pager.

- Cellular phones have been able to send and receive text messages for several years now. The cost and availability of text messaging and two-way text messaging vary by service provider and calling plan. Hard of hearing people and Cochlear Implant users may also be able to benefit from neckloops or patch cords specifically designed to allow them to hear when using a cellular phone. This permits them to avoid reliance on others or the relay service to complete telephone calls.

- The Pocket Speak-and-Read VCO device has also enabled hard of hearing people to greatly increase their independence in using the telephone. To use this device, the individual calls the telephone relay service and asks to place a VCO call. The device is then attached to the earpiece of the telephone with an elastic and velcro strap. The TTY tones from the relay operator are picked up by the device, converted to text and shown on a small screen integrated into the face of the device. The individual reads what is being said and responds using his or her own voice, which the other party hears. The Pocket VCO is portable, works on a variety of telephone handsets, and operates on battery power.

Not the Usual Bells & Whistles: Using Sound, Light and Motion Alerts

A large number of systems are available to alert hard of hearing and deaf people to doorbells, ringing phones, alarms, etc. Some of these systems are based on sound; tones may be adjustable and volume can frequently be amplified. Some are based on tactile alerts, such as vibrating wristwatches, timers, pagers, and pillow/bedshakers. Others are based on visual alerts for household sounds such as the phone or doorbell, and can be paired with lamps or other light sources. Some systems can alert the user in any room in the house. They may be remote, wireless systems or hardwired into the house or office electrical system.

No discussion of alerting devices would be complete without including hearing dogs for the deaf. Like guide dogs used by blind individuals, these dogs have legal access to public places. They physically alert their owners to sounds and lead them to the source (e.g., doorbell, phone, kitchen timer, baby crib). They also respond when someone calls their owner's name or to noises in the environment that may pose a danger.

Conclusion

As can be seen from the above discussion, there are a number of possible options for accommodations for any given situation. Remember that there are also a number of resources available to you so that you don't have to be an expert on all of this technology! While space allowed us to only skim the surface of all of these accommodation options, more in-depth information can be found at <http://www.wou.edu/wrocc> under 'Training Materials' and at <http://2www.pepnet.org> under 'Resource Center' and 'PEPNet Products'. Don't forget

that there is a PEPNet resource center serving your area, no matter where you are in the US or its territories. Above all, share information about assistive technology and other accommodations with others. Remember, consumers often aren't aware of the options, either.

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Website Resources

<http://www.wou.edu/wrocc> and click on 'Training Materials':

Demystifying Assistive Listening Devices

You Don't Know what You've Been Missing (Alerting Devices)

Defining Communication Access: Speech-to-Print Options

For Whom the Bell Flashes (Telecommunications Options)

Beyond Hearing Aids (This training module)

Internet Resources Related to Hearing Loss: equipment companies

NETAC Tip Sheets: <http://netac.rit.edu/publication/tipsheet/>

CART: <http://cart.ncraonline.org/>

Cartwheel: <http://www.cartwheel.cc/>

C-Print: <http://cprint.rit.edu>

TypeWell: <http://www.typewell.com>

Test Equality website: <http://gri.gallaudet.edu/TestEquity/index.html>

Technology Access Program: <http://tap.gallaudet.edu>

Assisting Students with Progressive Hearing Loss

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Abstract

College students with progressive hearing loss encounter many changes in their lives. These changes are occurring during a time when they are developing their social and vocational goals. Research has identified adjustment themes that are experienced by persons with late onset or progressive hearing loss. Different theories on the grief process that describe the emotions that may be felt by a student with decreasing communication skills exist. This paper describes the adjustments experienced by a person with progressive hearing loss, information about the grieving process, and resources that may assist professionals working with this student population.

Assisting Students with Progressive Hearing Loss

Zeizula and Meadows (1992) identified five adjustment themes late-deafened individuals experience as they go through the process of losing their hearing. Understanding these themes may help disability support services providers better assist and support students experiencing a progressive hearing loss. As a deafened adult, I would like to share with you my experiences of progressive hearing loss while in college and relate those experiences to the noted adjustment themes.

The first adjustment theme is Emotional Responses. There are many emotions and feelings people experience while losing their hearing. I received my first hearing aid when I was fifteen. When I found out I had to wear a hearing aid, I was extremely upset. However, I was raised in a family where we did not cry, and my parents' philosophy was that things could be much worse. I now know that crying would have helped me deal with all those emotions at that time. Instead, I saved it for many years later.

I also felt a lot of fear. I was constantly worried that I would lose more hearing, despite assurances from ev-

eryone that I would not. Perhaps it was just intuition, as I did eventually lose all my hearing. Many students also feel guilty about their hearing loss. They feel they may have done something or not done something that contributed to the loss. Many people feel angry and go through the emotions of grief and loss, discussed below. These emotions also include denial and depression. Hearing loss affects self-esteem; often students will not feel good about themselves yet appear happy and adjusted. Regardless, the emotional roller coaster exists, and in a progressive loss it can appear time and time again after each successive or substantial loss.

The second theme identified is Secondary Losses. Communication is the primary loss, but – due to this – there are many secondary losses. In my case, hearing loss also caused me to have balance problems. As I was gradually losing my hearing, I would become very dizzy and have severe vertigo attacks. I was put on Antivert, which then caused me to feel somewhat confused and a bit depressed. As a student, I wanted to socialize, date, and have fun with other students. The hearing loss and the hearing aids made that quite a challenge. I joined a sorority at Ball State University, and I remember going to fraternity parties. I figured out how I could sit or stand next to the speakers at the party and be able to converse fairly well. I would turn down my hearing aids, and people speaking to me would turn up the volume of their voices and talk so they could hear themselves talk. This then enabled me to hear and understand them, and, if I could not, it was not a big deal, as the music was so loud anyway, which served as an appropriate excuse. I also remember a date I had in which a man proceeded to tell me how women enjoy fingers in their ears. He was absolutely shocked when he found out there were two hearing aids in mine! I never heard from him again, and the rejection for that reason was painful.

These experiences add up to a negative view of hearing loss and self. I would wear my hair very long so that no one could see my aids. I did not know of anyone who had them; actually, every so often – when the wind would blow my hair back – people would comment that their ancient relatives used to wear them shortly before they died at the age of 110! These were little secondary losses that added up. They were all considered losses for me, even though professionals who work with deaf students may not look at it that way. I remember not being able to hear the alarm clock during my senior year of college. I would wear the aid to bed in order to hear it.

I found I could not participate in class as well as I had been doing. One day the battery of my aid died; I refused to replace the battery in front of everyone, so I sat there in silence. The professor, who rarely called on me, happened to do so at that time. In the midst of all these losses, there was really no one to whom I could turn. I was unaware that there was a disability specialist on campus; furthermore, still ingrained in me was the philosophy I had grown up with that would not allow me to process these losses.

Confusion of Identity is the third theme Ziezula and Meadows (1992) identify. Looking back on my life, having experienced progressive hearing loss, I realize how important this identification process is in terms of finally accepting one's hearing loss. Not only was I having trouble identifying myself, but others around me would identify me a certain way, and I would question who I really was. I had grown up identifying myself as a person with a slight hearing loss. That is the way my family chose to identify me; therefore, I used it for myself until I became deaf. During my senior year of college, my hearing loss dropped from 45 db to 75 db in my good ear. I had no response in the other ear. At the urging of a professor, I finally went to the speech and language clinic at Ball State. At that time, they told me I was "legally deaf." I had no idea what that meant and was not told what to do with that information. I reverted to calling myself a person with a hearing loss. I struggled with this issue for many years. It was not until I finally lost all of my hearing fifteen years ago that I could finally call myself deaf and teach those close to me to identify me that way as well.

The fourth theme, Acceptance, is something a student with progressive hearing loss may have to do repeatedly. As I mentioned before, with progressive hearing loss, one needs to go through the loss process and finally accept that loss, and then it may happen all over again. I never dealt with the fact that I had this loss. A turning point for me was finding someone in college whom I could trust and to whom I could talk. I was majoring in Deaf Education and chose a very well-respected professor I felt I could trust. She was the only teacher I had in four years at Ball State with whom I shared my hearing loss. I decided I needed to talk to someone and asked if I could visit her. In her office, I honestly spoke about my fears, my sadness, and my concern about losing more hearing. She cancelled class (something she had never done) and took me to the speech and hearing clinic. Afterwards, I was distraught but still thinking that things could be worse. She sat me down and, for the first time, gave me permission not to like it. That was a defining moment for me and has helped carry me through my hearing loss journey. I felt so much freedom and experienced the opportunity to begin to heal from the internal struggling I was experiencing. I was finally able to explain my hearing loss to people in terms both others

and I could understand. I did not have to like it and did not plan on liking it anytime soon.

The last adjustment theme is the need for Competent Professional Assistance. There is a need for training professionals to understand late-deafness. As professionals, we often think if we can work with culturally deaf students, we can work with late-deafened students. We think if we give sign language classes to the late-deafened student or a hearing aid to the severely hard of hearing student, then everything is fixed. Frankly, these are myths. All staff should be trained, because there are students sitting in classrooms with hearing aids that do not know what to do and are not asking for support. There are students that do not know what support is available to them and that may not know there is a disability coordinator on staff.

There are many ways in which disability support services providers can help students with progressive hearing loss. The Northeast Technical Assistance Center (NETAC) has published a fact sheet called "Working With Students who are Late-Deafened." Self Help for Hard of Hearing People, Inc. (SHHH) has also published a list for hard of hearing students through NETAC.

Grieving

The literature on disability and grieving is sorely lacking, particularly around prevention and intervention or facilitation of the process. Relevant materials are noted in the reference section to assist readers who want to learn more about how to work with students who are dealing with issues of loss and grieving.

Our culture is not kind to those who are struggling with the forces and feelings of grieving:

In a culture that emphasizes the accomplishments of independence rather than connection and celebrates the myth of personal mastery over all adversity, the experience of grief, which exposes our deep attachments, our human interdependence, and our true vulnerability in the hands of fate, is as unwelcome as death itself (Shapiro, 1994, p. 4).

Learning about disability is learning about grieving and change. From that basis, a look at some of the concepts one can use in training rehabilitation counselors with an expertise in deafness and hearing loss follows.

Students who are deaf or progressively losing their hearing are losing their sense of self, ability to communicate, and dreams about their future. All people have dreams – more than simply the dreams about marriage, having children, and being successful in work. One

dream, for instance, may be to stay healthy and live a long and productive life. Another may attach people to their religious beliefs. These dreams give meaning to and direction in life.

People also attach to other individuals in their lives – real, profound connections to relationships. This also makes them vulnerable, however, since attaching to a person introduces the risk of loss through death, illness, divorce, or rejection.

When events in life, such as hearing loss or deafness, cause these dreams to be shattered, one's dreams are lost, and individuals feel disconnected and lost, as if they are wandering through a dark void. This is often a response to losses that change one's core identity. It is an experience of many powerful and confusing feelings – feelings that need to be shared with significant others in order to do the work needed in order to learn and grow from losses.

As a culture, we expect the grieving to last a set length of time. People want a quick fix, but this is not the case. President Bush's strong message right after the terrorist attacks of 9/11 was "get back to normal." There are good reasons for this directive, but it is also a cultural expectation. People who have gone through a loss know that there is no such thing as a quick fix; if they do believe it exists, they may think that there is something wrong with them, because they may have not been able to find it for themselves.

There is also an expectation that the people closest to an individual should be the best support, but this is not necessarily always true. There is a notion that the more that someone needs to be heard, the less likely s/he is able to hear about someone else's needs. There is no greater need to "fix" or "cure" than in the family when a member is hurting. Families and even professionals may tell the student, "Don't worry, it will be okay" or "It really could be worse." Families want to support, but they often simply do not know how.

People who experience a loss are often not aware of how it will affect them in the long run. People will hold on to things the way they used to be, such as sitting in a classroom without any assistance, something to which they are accustomed. Even though people may try to help them, they will find arguments that resist the help. At the same time, students with progressive hearing loss experience a need to find some way to "fill the void" of their hearing loss:

When change happens, something ends. Immediately, people want something else to begin. They want something to suddenly fill the void that the ending created. If we move too quickly to fill the void with new beginnings, underneath, the neglected transitions and

unresolved ends fester (Woodward & Bucholz, 1987).

This is an issue that may arise for disability support services providers when working with students. If they are losing their hearing, they want something to put in its place, and they want it fast.

People believe that there are steps and stages in the grief process. This is a misconception, and – in part – is another cultural expectation or "lens" through which to view the process. This perspective of grieving "pathologizes" the process by identifying the feelings of grieving as problems to be solved. It is, indeed, a medical model where people need to be "fixed" or "cured" of their grieving.

Transition Therapy is a model that views grieving as a *non-pathological*, growth-producing process. The painful feelings of grieving are not seen as problems to be solved, but instead they are opportunities to compel the individual to reassess oneself, one's dreams, one's sense of value and worth, and one's direction and purpose in the world. Each part of the process comes as a wave, and they come as they are needed. When each of these feelings wash over a person, they do not follow a pattern, and there can be a lot of confusion and discomfort.

While there may be no specific "order" to the feelings of grieving, there are forces that are preparatory to active grieving – denial and anxiety. People have little tolerance for denial as a coping strategy. Denial is not typically problematic, except to those around the person who has experienced the loss. It is a coping method that professionals think is pathological, but I think that it is a very positive and functional thing. It buys you time to find the external resources and the internal strengths to deal with the impacts and realities of the loss. Outside resources include a notetaker, counselor, fellow students, or a secretary who takes the time to ask you how you are doing. Internal strengths relate to your own recognition of how you have dealt with previous losses and challenges and connecting with those abilities and strengths that pulled you through.

Anxiety, while appearing to be a negative and unhealthy reaction to loss, provides the energy necessary to push one forward into self-exploration and new awareness. It is not necessary to try and calm people who are anxious, but it is helpful to let them know that their anxiety is a message to them that an important piece of knowledge or discovery is coming to the fore. These new bits of discovery come together in developing a new sense of self in light of the loss.

Once the denial and anxiety have fulfilled their function of easing one into this reality and energizing the student for further self-exploration, the work of active grieving begins. Within the realm of active grieving, one experiences four feelings states: anger, guilt, depression, and fear. Like denial and anxiety, each of these feeling

states provides the medium in which people examine specific beliefs and assumptions about themselves and their places in the universe.

When someone experiences anger, what they are questioning is: "Why me? Why not another person? Good things to happen to good people, and bad things happen to bad people, so why is this happening to me? What are the rules about fairness and justice in the world? Do these rules exist, or are there none? If there are no rules of fairness, I am in chaos and I am vulnerable." In anger, people examine issues of morality and ethical behavior. Does one choose to be a person of morals and ethical standards simply to ensure good things will return? In light of loss and through this search for meaning, it may be that we choose to be a person of morals and ethics regardless of whether or not good things will follow. This is one example of growth and maturity out of the struggle of grieving.

Depression expresses a concern about competency and self-worth. Each person develops standards for competency, personal worth, and potency. These standards are shaken or perhaps shattered in light of hearing loss. Questions asked in this feeling state may revolve around questions such as, "Can I be deaf and still be competent? Am I still a person of potency and value in the universe?" Often, we bring with us from childhood very unrealistic definitions of competency. These are typically shaded and modified over time in a gradual process. Acquired deafness and progressive hearing loss completely overturn this definition, leaving confusion and depression in their wake.

Guilt, which is often overlooked or dismissed as "irrational," is a very genuine feeling state based on one's sense of cause and effect and of one's power and control in the universe. The question "why" calls for an answer. When there is none, in pain and confusion one must assess the limits of his/her own power to control the hearing loss, as well as other difficulties and losses in life. Which is more unsettling – to find there is no rhyme or reason as to the "why" of losses or to accept some sense of responsibility for "causing" – or at least not doing whatever was necessary to avoid – the loss?

Finally, one's fear is a reminder of the vulnerability of attachment and loss. It compels the individual to examine the decision whether to remain alone, safe from the pain of losing, or to attach again and face the risk (perhaps the certainty) of loss.

What can disability support services providers do to help? Two things are of highest value in being a supportive companion for the student who is struggling with the empty void and the very painful and frightening feelings of grieving. First, it helps to become more informed about and comfortable with the process of loss and grieving as a growthful and necessary experience shared by all humanity. Once we are less afraid of being in the presence of someone's grieving, it becomes much more likely that forward movement toward new dreams will

occur. Secondly, take the time to listen to students' stories, to why the person feels angry, depressed, guilty, or afraid. These are not problems to be solved or fixed. They are natural feelings that need to be shared with a significant other. In this case, that significant other could quite possibly be a disability support services provider.

Resources

The Association of Late Deafened Adults (ALDA) has a Web page at www.alda.org, providing information that may be of assistance to students. These resources include membership information, information on ALDA groups and chapters in the United States, an email chat group, and publications that may be of interest.

The email chat group is not a live discussion forum but an email exchange group. People can discuss various concerns they may have related to hearing loss. Some concerns that have been discussed include coping with Meniere's disease, neurofibromatosis (NF), and other related illnesses. People exchange coping techniques and share therapies or medications that have been effective for them. This important chat group allows deafened individuals to meet and talk with other deafened people in a non-threatening environment.

The publications available from ALDA include the proceedings of past conferences and a book entitled *ALDABest*. This includes a selection of the best articles that were printed in the first ten years of *ALDA News*, the quarterly ALDA newsletter. The book contains articles that are humorous as well as articles that deal with serious situations, such as family holiday gatherings. Again, reading the book is non-threatening for the student and may assist them in developing coping skills or becoming assertive enough to become involved with social groups and organizations.

People interested in obtaining more information about ALDA may utilize the following contact information. E-mail addresses for ALDA board members are available on the Web page.

Association of Late Deafened Adults
1131 Lake Street, # 204
Oak Park, IL 60301
877-348-7537 V/FAX (United States only)
708-358-0135 TTY

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Project Inclusion: Development of a Cross-Cultural Course Comparing the Education and Inclusion of Persons Who are Deaf in the United States, Sweden, Greece and the Netherlands

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Abstract

This paper describes the genesis of Project Inclusion, the first-ever comparative cross-cultural course that examines the educational inclusion of deaf students in the United States, Sweden, Greece, and the Netherlands. A background for the project is provided as in a discussion of educational strategies, including the development of the course curriculum, delivery through web-based technology, and the format of a two-week capping experience. Initial outcome data are examined and future directions are explored.

Background

Project Inclusion is the first-ever comparative deaf education course offered on an international basis. The project is funded by the United States Department of Education and the European Union through a three-year grant from the Fund for Improvement of Postsecondary Education (FIPSE) program in the EC/USA Joint Consortium for Cooperation in Higher Educa-

tion and Vocational Education. Project Inclusion provides a forum for comparing the educational inclusion of persons who are deaf and hard of hearing from the perspective of individual countries. European Union partners include Örebro University in Sweden, the University of Patras in Greece and the Instituut voor Doven in the Netherlands. United States affiliates include the National Technical Institute for the Deaf at Rochester Institute of Technology, the University of Tennessee, and the American Society for Deaf Children, a parent organization. Northern Illinois University has also been involved with the project as has the country of Germany on the EU side. Project directors on the U.S. team include Professors Kenneth Nash and James DeCaro, both from the Rochester Institute of Technology and Professor Berth Danermark from Örebro University in Sweden.

The overall goal of Project Inclusion is to assist persons who are deaf to realize equality of opportunity in education and society. Project Inclusion was designed to identify "universal" design principles, effective strategies and practical programs related to the inclusion of deaf people in each partner country. The information has been organized into the first-ever course on the subject of comparative deaf education.

Approach

The instructional approach for this course includes a curriculum developed by the multi-national faculty team. The curriculum was developed by a multi-national design team composed of faculty from the project partners organizations. During an eighteen-month period from June, 1999-December, 2000, the project team worked closely together and grappled with the many issues involved in creating a cross-cultural course. The team met three times, twice in Europe and once in the U.S., to develop the course material. Numerous phone calls and e-mail exchanges also facilitated the development process.

Many discussions occurred in the course of developing these materials regarding cultural differences in values and understanding related to the education of deaf students. The focal issue, however, remained that of cross-cultural meanings of inclusion of deaf students as reflected in the participating country's model of education for these students. Inclusion was discovered to be a culturally relative term in that the definition of what is, indeed, inclusive varies greatly from one coun-

try to another. The faculty spent long hours exploring the meaning of *inclusion* within the context of the participating countries.

They even began to question whether or not a search for universal principles was possible or even desirable. It became clear that, even when educational outcomes were similar, the outcomes were grounded in the context of very different cultural perspectives and historical backgrounds. These discussions led to the beginning of an understanding of the nature of inclusion within different countries and the creation of the curricular materials for the course.

Curricular units include: Human rights, diversity, language, social history, politics, and the family. While the introductory, human rights, and diversity units apply to all countries, the remaining topics were addressed separately by each participating country. The course is delivered using web-based technology, specifically, BlackBoard. Students from all countries log on asynchronously and read the assigned materials. Discussion questions are provided at the end of each unit to further stimulate discussion and integration of learning. Discussion occurs between faculty and students from each country as the course proceeds. Discussion is also facilitated on-line through posts to BlackBoard and responses. Text readers containing the curricular materials placed on BlackBoard are also made available to all students.

Students who enroll in the course are preparing to work with deaf pupils in the participating countries. Most are traditional pre-professional students in deaf education although exceptions have included students majoring in deafness rehabilitation counseling and speech pathology or audiology. Students are selected by criteria developed by the university they attend. Differences in educational strategies across countries are evident in the selection of students to participate in the project. The United States schools, for example, tend to select traditional pre-professional students while other countries, like the Netherlands, employ more of a place-and-train model and, thus, select practicing professionals who are returning to school for further education.

Following the distance-learning segment of the course, students gather for a two-week capping experience during which they learn from each other and further their understanding of the inclusion of persons who are deaf into society in the host country. The first capping experience was held in Rochester, New York and the National Technical Institute for the Deaf. In addition to the individual country presentations, students learned about the inclusion of persons who are deaf in the U.S. by studying other issues of inclusion such as those related to civil rights, women's rights, and the rights of Native Americans. An array of speakers from the host area contributed to the stu-

dents' learning as did visits to a local school for the deaf and to places that highlighted the United States' struggles with issues of equality. These included sites important in the woman's suffrage movement (such as the birthplace of Susan B. Anthony), locations where the underground railway once flourished during the abolition of slavery, and a replica of Native American village.

The second capping experience is to be held in Örebro, Sweden in June-July, 2002. There, students will focus on inclusion of deaf persons in Sweden and on learning about the country's unique system of education for persons who are deaf. The Swedish National Association of the Deaf will be holding its annual conference in Örebro at the same time that the capping experience occurs, allowing the students to interact with many deaf people from different parts of the country.

Instruction for the on-line portion of the course is provided in English as is the book of readings which offers the material as text, rather than electronic format. Instruction during the capping experience is provided in English and in the signed languages of the participating countries. Countries with deaf participants provide their own cadre of interpreters at the expense of the project.

Expected Outcomes

Expected outcomes from the project include the expectation that each participating student will compare deaf education practices in the context of human rights, diversity, language, politics, social history and the family. Each multinational team is expected to compare, contrast, analyze and make recommendations regarding the policies and practices of each country. All efforts are directed toward answering the central question of study, "What are the implications of deaf education practice and policy for the inclusion of deaf individuals in society?"

Student learning goals include generating concrete ideas that can be applied to their home country toward the ultimate goal of improving deaf education and the inclusion of deaf persons in society. Learning outcomes include an understanding of the United Nations declaration of Human Rights as it applies specifically to deaf people, an understanding of the diversity of deaf people in each country, a knowledge of the educational system(s) of each country, and an understanding of influences that impact of the educational system as it relates to persons who are deaf. Students participate in country teams to develop comprehensive presentations on deaf education in their home country, which are given at the capping experience. Students are also expected to create individual papers comparing deaf educational practices among the participating countries and identifying principles of universal design gleaned from the course and the capping experience. The

overarching intent is to have positive impact on deaf education policies and practices in each of the participating countries.

Project Inclusion is now entering the third and final project year under the federal grant. The design team collected extensive evaluation data on the first year's offering of the course and will do so again for the second year. Data include an evaluation of the curriculum, an analysis of instructional methods (BlackBoard and reading text), evaluations of each individual speaker and/or learning activity offered during the capping experience, and an overall evaluation of the project. These data will be analyzed and presented in the form of a final comprehensive report containing recommendations regarding the conduct of future cross-cultural comparative courses.

Preliminary evaluations from the first project year suggest that students rated the course positively (5.3 on a 7-point scale with 7 as most positive). Individual curricular units and activities that constituted the capping experience were generally rated favorably as well. An evaluation of the use of BlackBoard as an educational tool during the first project year was somewhat mixed. Many students experienced technical difficulties while accessing BlackBoard during the first year. It is hoped that these problems have been reduced by moving to an upgraded version of the course delivery system and providing adequate technical support. Most students found most of the features of BlackBoard to be useful, including the announcement section, course documents, course material, discussion board, e-mail contact with other students and faculty and ability to group students. In evaluating the curricular content on BlackBoard, most students ranked the amount, organization and content as "about right", "organized" and "helpful."

Current discussions among the design team are centering on the future of this project and the feasibility of continuing it in some manner after the grant expires. Considerations include the possibility of a European Union conference on inclusion, perhaps to be held in Greece in 2003.

For further information, please visit the web site for Project Inclusion at <http://www.rit.edu/inclusion>.

Snail Tales: Cochlear Implants and Assistive Technology

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Abstract

Would an individual with a cochlear implant (CI) qualify for DSS services? Can a CI user benefit from an assistive listening device? Should CI users avoid realtime captioning so that they will learn to depend on what they are hearing? Many misconceptions exist about the benefits individuals receive from CIs. While many CI users seem to return to a state of “near normal” hearing, others may gain little more than being able to identify sounds in the environment. Additionally, group discussions and hearing in noisy settings can still be problematic even for those with the most dramatic gains. This presentation covered the basics of CI technology, the range of benefits recipients experience, and accommodations that bring success on the job and at school.

{In this document, the author will provide – by way of explanation – some information about her own hearing loss and her cochlear implant use. The reader is advised that the cochlear implant modeled in this document is the model that she uses. It is not intended as an endorsement of any particular model of implant}.

Cochlear Implants

More than 40,000 people across the world have received cochlear implants, and a cursory study of the statistics here in the United States indicates that perhaps as many as 90% of all deaf children born today are receiving cochlear implants. Given this information, postsecondary educational institutions must anticipate the arrival of these students at their doors.

Cochlear implants (CIs) are called auditory prostheses. They do not restore hearing to normal; rather, they provide electronic sound. It is important to understand that CIs do not make a deaf person hearing. I am not hearing; if I remove my CI processor, I cannot hear you. I have tactile response at 110db and 117db in my ears. Without my CI, I can sit on an airplane and hear absolutely nothing.

Cochlear implants assist a deaf person who cannot benefit from traditional hearing aids. Often, at postsecondary institutions there can be some controversy about CIs amongst students who are hard of hearing and

students who are deaf. CIs are a personal choice, and the decision to get an implant should be respected by others. Disability support service providers can help by educating students and instructors about the challenges that CI users still face in receiving auditory information.

Cochlear implants are designed to bypass the hair cells (cilia) that wave back and forth in the cochlea. The sound waves are sent to the auditory nerve, which – in turn – transmits them to the brain. When the cilia are damaged, they do not respond, and the process fails.

There are high and low frequency sections in the cochlea. When they start losing their hearing, many people lose the high frequencies first. Given that the high frequencies are at the base of the cochlea and closest to the outside of the cochlea, this makes sense. The base is more exposed than the inner point of the cochlea, the apex, where low pitches are created. {The image below is used with permission of Cochlear Corporation}.

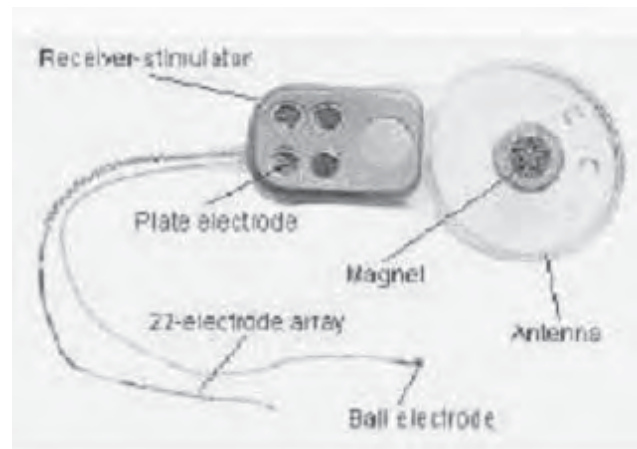


{www.earsurgery.org/cochlear.html}

I became deaf at the age of 14 from spinal meningitis. For 23 years, I only had tactile responses to very loud sounds. Many people who have had spinal meningitis cannot have a cochlear implant. Meningitis frequently

causes calcification, or a hardening, of the cochlea. I was one of the fortunate post-meningitis cochlear implant candidates that did not have any calcification or blockage in either of my cochleas.

This following illustration is of the CI's internal component:



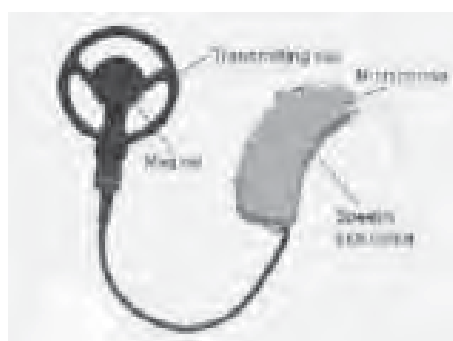
{Used with permission of Cochlear Corporation}

One wire goes through the cochlea, and the other serves as a ground wire. The longest wire has 22 electrodes, and the short one has two. Grounding helps to prevent shock from static electricity or other electrical sources.

Here is the external component in two different models {used with permission of Cochlear Corporation}:



SPrint Processor by Cochlear Corp.



ESprit Processor by Cochlear Corp.

The microphone is located on a piece that hooks over the ear. It picks up the sound and sends the sound to the processor. There the processor creates electrical stimulation that is sent to the transmitting coil, which is attached to the antennae by magnets. The transmitting coil then sends the signal to the antennae. From here, the information goes to the receiver/stimulator, which stimulates the implanted electrodes to send messages in the form of electronic signals to the brain.

The old cochlear implants of the 1800s required jacks surgically implanted in the user's head. Today's CIs stay connected by magnets, and no plug is necessary. After a 5-6 week recuperation period, a person is hooked up (implants cannot be connected until the incision is healed). Mapping, as it is called, takes hours while the implantee sits with an audiologist and s/he programs each electrode individually. The first day of mapping requires about eight hours and is very tedious. The implantee hears only one tone at a time – not a full sound spectrum –until the end of the day when the audiologist puts it all together.

Some people will choose speech and auditory rehabilitation/habilitation. Their brain must be taught how to hear again or, in some cases, for the first time. Babies hear in the womb. Once babies go home and monitor the world around them, they will start to mimic sound. This is how their brains learn to hear. Babies' first spoken sounds are their efforts to mimic what they hear. Deaf children do not have these auditory memories. In order to benefit at all from a cochlear implant, they must go through a lot of training.

While most people will be able to identify environmental noises with their implants, the ability to understand speech sounds with ease varies from person to person. As stated above, one important factor is the age of onset of deafness. Those who are postlingually deaf will likely gain the ability to hear a lot.

At the time I was hooked up, so to speak, to my implant, I recall another individual doing the same that day. We were both implanted at the Mayo Clinic in Rochester, Minnesota. When he was connected, his wife said, "Can you hear me?" He said, "Yes, please don't shout." Years of living with a man who had a severe hearing loss had trained the wife to speak much louder than normal when addressing her husband. The implant gave them both a mechanism by which less effort is needed for them to communicate with one another.

For me it was different, it took time to learn to hear again. I had lived in absolute silence for 23 years. It took me months of practicing before I could understand words without looking at the speaker. Even today, five years later, I learn new words and hear new sounds daily.

When disability support service providers are working with a student who has a cochlear implant, it is appropriate to ask if the student wants a sign language or oral interpreter. I still use sign language interpreters. However, a larger percentage of people with cochlear

implants may not know sign language. For them, other accommodations would be appropriate.

Even while sitting in the classroom with a clear view of the professor, the student will usually still need to use a notetaker. While the student may understand some or even much of what is being said via the use of their cochlear implant, listening is very hard work, and it can be exhausting.

The classroom lighting is also important. I have experienced meetings where the lighting was terrible. Even with phenomenal technology providing incredible access, the poor lighting resulted in eyestrains, headaches, and body aches. Lighting is important for a deaf student, but it can also be said that the lighting is important for everyone. Many accommodations that we supply for disabled students benefit non-disabled students as well.

Assistive Listening Devices

Many disability support service providers today will also deal with assistive listening devices (ALDs). There are many different types of ALDs available for use with phone, TV, or a live lecturer or speaker. These are very helpful to hearing aid users as well as CI users; both types of users will experience problems hearing due to background noise (the implant or hearing aid will pick up the background noise, making it very difficult to understand what is being said) or in rooms with poor acoustics. Typically, the listener plugs in headphones or some other listening device into a pager-size receiver. There is a volume control that can be used to provide the amplification required (similar to using headphones with a Walkman®). For the individual with a CI, instead of plugging in headphones, a patchcord (a cord with jacks on both ends) connects the ALD receiver to the CI processor. The electronic signal is sent to the processor, and the processor sends the signal to the implant. This process bypasses the implant microphone and sends electronic signals directly to the processor. In the picture below, a PockeTalker® is patched into the implant processor. In a noisy restaurant, for example, the user's dinner companion would speak into the PockeTalker® microphone. This affords direct communication with the processor, reducing the amount of background or ambient noise that is allowed to enter the processor and, thus, greatly improving the hearing spectrum of the implantee.



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PockeTalker® connected to processor with patch cord

The same thing can be done with a Walkman®. Again, using a patch cord instead of a headset, the Walkman® can be connected to the processor and send music or radio directly to the processor. When using the patch cord, the microphone is automatically blocked, and sound is entering the cochlear implant only via the patch cord connected to the ALD or Walkman®.

FM and infrared systems that are often used in classroom and other lecture situations provide the same benefit to CI users as hearing aid users. They allow the individual to receive direct information from the speaker in a classroom. Different styles of microphones that work with the ALDs, such as conference microphones, can also be used with CIs. (In fact, CIs come with an extra hand-held microphone that can be plugged into the processor, basically turning the CI into its own PockeTalker®-type ALD.)



©Cheryl Davis
2002 Telecoil Pick-up



©Cheryl Davis 2002
Telecoil Attachment

Hearing aid users often use the telecoil option (T-coil) on their aids to help them hear over the phone, to use in an area that has been specially looped for sound (via induction), or to use with ALDs instead of headphones. (For more information about T-coils and induction loop systems, see the training module *Demystifying Assistive Listening Devices* under "Training Materials" at <http://www.wou.edu/wrocc>.) CIs may also have T-coils

built in or have attachments that will allow the CI user to take advantage of induction technology and to hear better on the phone. The one pictured with the suction cup attaches to the hearing aid compatible (HAC) phone handset, and the jack is plugged into the processor. It picks up the magnetic field from the phone and sends the signal to the processor. The other one is a telecoil encased in plastic. It, too, would plug into the CI processor, and the coil end can be clipped to the user's clothing. If the room is looped, a hearing aid user would switch their hearing aid from "microphone" to "T-coil". The CI user would simply plug in the external T-coil.

No matter what the transmission mode of the ALD (infrared, FM, or induction) it can be plugged into the processor – as long as the appropriate patch cord is available, that is. Any time users plug the CI into a device that is AC powered (e.g., the TV, computer, stereo system), they must make sure that they are using a patch cord that has a built in attenuator. Some devices will send more power to the CI than it can handle. The attenuator restricts the power sent into the CI, thus preventing damage to it. Users can check with the CI manufacturer or dealers of assistive listening equipment to be sure that they are getting a patch cord with the right size jack, that the jacks match the plug-in (stereo or mono), and that it includes an attenuator if the equipment is running off of something other than battery power.

The difference for the CI user is phenomenal. I have been asked if I prefer to use the conference mike and an FM system or to listen on my own. I find that easy to answer: I, most assuredly, prefer the ALD connected to the conference microphone. It results in such clear speech; it is amazing!

Similarly, I visited an Effective Communication Solutions' booth and was able to try their stethoscope using my patch cord. I could hear my heart for the first time since 1974! These are the kinds of incredible technologies that are available to supplement and enhance the positive education experiences of today's postsecondary students.



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Processor with Telephone Link Connected

Captioned videotapes and/or programs are important in the classroom of a student with a cochlear implant as well. PEPNet provides a resource listing businesses that caption videotapes (pre- and post-production). Some states, such as Minnesota, now have a state law that requires all educational videotapes to be captioned.

For more information, please visit the WROCC and PEPNet websites at <http://wrocc.csun.edu> and <http://www.pepnet.org>; these organizations will be continually adding information on cochlear implants over the next four years.



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Processor with ALD Plug Inserted

Inclusion of Deaf and Hard of Hearing Students and Sign Language Interpreters in International Educational Exchange Programs

Michele Scheib, National Clearinghouse
on Disability and Exchange

Wendy Harbour, doctoral program
in education, Harvard University

Martha Smith, Oregon Health
Sciences University

Abstract

Mobility International USA's (MIUSA) interactive session focused on creating strategies for increased participation of deaf and hard of hearing students in the wide range of international exchange programs. Presenters described MIUSA's exchange programs as well as its National Clearinghouse on Disability and Exchange's (NCDE) information and referral services for university education abroad programs. Dialogue included answers to basic exchange questions, creative strategies for providing sign language interpreters abroad, and perspectives on legal and funding issues.

MIUSA and NCDE are deeply committed to increasing diversity through the inclusion of people with disabilities in international educational exchange programs. The resource center staff, university administrators, faculty, ASL interpreters, and service providers can empower students who are deaf and hard of hearing at the postsecondary level by providing information, encouragement, and unique opportunities for them to explore the world.

Organizational Overview of MIUSA

The mission of Mobility International USA (MIUSA) is to empower people with disabilities around the world through international exchange programs, promoting cross-cultural understanding, leadership development, and disability rights training. It also provides consultation, resources, and technical training to promote full participation of people with disabilities in these programs.

Located in Eugene, Oregon, MIUSA is a national organization. It has provided technical assistance in consultation with governmental and non-governmental agencies working towards more inclusive policies regarding people with disabilities. It facilitates national and interna-

tional partnerships between people with disabilities and those working in international exchange organizations.

MIUSA Exchange Programs

For 21 years, MIUSA has been actively committed to including deaf and hard of hearing people in their exchange programs, and there have been many changes in the history of the organization. When it started, participants primarily had physical disabilities. At the time, the most urgent concerns focused on physical access. As MIUSA grew, access issues for deaf and hard of hearing people came to the forefront.

One of MIUSA's favorite sayings is: "Everybody does everything." In other words, how does any MIUSA group going to an inaccessible place (e.g. having physical barriers or barriers to communication) think of ways around the barriers? When a MIUSA group does an activity, and there are stairs prohibiting wheelchair access, then no one in the group does the activity. The group must find a way through the barriers using creative strategies and teamwork to get everyone inside safely. The same is true if there is no communication access for a deaf individual. The question becomes: how does the group make this work for *everybody*? MIUSA sends interpreters if there are deaf participants in a group. For more information about current exchange programs and MIUSA's philosophy, please see their Web site at www.miusa.org.

MIUSA's exchange programs last from three to five weeks. Participants do not usually receive college credit, although it is possible to do so. Participants live with host families, and the programs usually have a theme (e.g. diversity awareness, leadership development, or the arts).

National Clearinghouse on Disability and Exchange (NCDE)

MIUSA has a variety of resources available to individuals and organizations. NCDE can help everyone from interpreters to disabled students from another country to disability services providers with questions about reasonable accommodations. NCDE is sponsored by the Bureau of Educational and Cultural Affairs of the United States Department of State. NCDE also assists colleges and universities in making their exchange programs more accessible to students with disabilities. These information and referral services are free.

Publications are also available through NCDE. The *A World Awaits You* journal is free and features stories by

and about deaf and hard of hearing participants (and people with other types of disabilities) who have gone on exchanges. It also contains resources and practical tips related to successful participation in international exchange. Another resource is *Rights and Responsibilities*, a free guide to the ADA as it relates to international exchange. Yet another resource is a manual called *Building Bridges*, which is especially helpful for disability service providers. Topics include information about insurance, interpreters, low cost accommodations, and more.

Building Bridges is an excellent general reference manual for university study abroad offices as well. It answers the questions study abroad coordinators ask most frequently, such as the following: How can universities make their study abroad programs inclusive? If students are vocational rehabilitation (VR) consumers, how can they work with their VR counselors to include study abroad as part of their vocational plan? This book costs \$20.00.

Another type of resource available through NCDE is its Peer-to-Peer Network. People with different types of disabilities who have already been on exchange programs are listed in NCDE's extensive resource database as peers. Students can then request a contact for a peer as a resource. For example, if a deaf person plans to go to Venezuela, s/he could request a contact to learn more about traveling in that country as a deaf person.

The NCDE also has a lot of free information sheets available upon request or at <http://www.miusa.org>. NCDE's e-mail address is clearinghouse@miusa.org.

MIUSA Exchanges and NCDE Working Together

Many college students with disabilities try a MIUSA exchange before going on an exchange through university study abroad programs. With MIUSA, students are able to participate in programs that are aware of access issues. They have a supportive group of peers for their first experience abroad. A student who has never been overseas may benefit from experimenting with MIUSA first. For deaf students, this experience can also give them some understanding about how interpreters work during an exchange. Some fears may be eased, because they will know how to travel in a foreign country, live in someone else's home, etc. MIUSA also has lists of other national and international exchange programs that provide interpreters for deaf and hard of hearing students.

Wendy Harbour shared how a student at the University of Minnesota went on MIUSA's Costa Rica program, and then signed up for the university's program in France. At this time, he is getting ready for a third exchange. Even if students' parents are very nervous about their children going abroad, knowing that it is a MIUSA exchange is often reassuring.

If a student wants to go on a university study abroad program, the Clearinghouse can refer him or her to a wide variety of academic and non-academic programs. Any college staff member or student can get in-

formation from NCDE. Even if it is an exchange through a university in another country, the resources are available from NCDE. College and university study abroad offices also make use of NCDE services, as they strive to make their programs accessible for students with disabilities. The number of deaf and hard of hearing students studying abroad is increasing as more students learn about the opportunities available to them. Programs such as NCDE have certainly contributed to this positive trend.

Providing Accommodations on Exchange Programs

This section of the paper contains questions and answers by participants in the PEPNET session.

Q: Does the university pay for the interpreter? Did the University of Minnesota pay for sign interpreters for a deaf student to go abroad?

WH: At the time I worked for the University of Minnesota, the campus decided to go ahead and fund accommodations for every trip that deaf or hard of hearing students wanted to take – unless it was not affiliated with their academic career in any way. One student decided to go to East Germany on her own, and the University would not pay for that. Although she did an independent paper for a class, the University did not sponsor the trip, so an interpreter was not sent. There were other situations where we did send an interpreter, because it was clearly related to that student's degree. One must make a judgment call about this. I think the question to ask is: "Is this affiliated in any way with our university?" If so, in my personal opinion, I think the postsecondary institution is responsible. Something else to consider is whether or not the trip will be made in conjunction with another organization that will pay. For example, MIUSA provides sign language interpreters on their own programs. Overall, though, deciding when to fund interpreters is a sticky issue.

Q: What is involved in sending interpreters abroad?

MS: I am going to talk about interpreters on exchange programs in two ways – in terms of MIUSA's programs and then in terms of university programs.

MIUSA's programs provide interpreters. There are always at least two interpreters for each outbound program. The exchange coordinator has to make some decisions about who to select. Interpreting for these types of exchange programs is very different from an academic setting. It is essentially an all-day, seven-day-a-week job. The entire exchange group is moving constantly, because the group is doing activities all the time. Interpreters need to understand that, and they need to understand that the dress code is going to be different (among other things). In a normal environment in the United States, an interpreter might not be assisting other students. While interpreters are overseas, they might be helping push a wheelchair up a steep hill, because everyone helps

out. Interpreters need to be aware of that, because there are different roles and responsibilities on an exchange program (compared to work in the United States).

Also, the exchange participants themselves learn to communicate with someone from a different culture and community while abroad. In the past, some deaf participants were with deaf host families in that country. In other countries, MIUSA has not been able to do that, because in other countries a lot of families who have people with disabilities in them are not financially able to host a visitor for several weeks. MIUSA has avoided that by giving host families some meal stipends, so the exchange can happen. This is really important.

It is not a requirement on MIUSA's programs (or on many other study abroad programs) to know the language of the country you are going to visit. However, on the MIUSA Mexico exchange, for example, there were specific times set aside for language development. The MIUSA group from the United States found local deaf people who came in and taught Mexican Sign Language, and anyone who wanted to do that as their language component could participate – whether hearing or deaf. This facilitates better intra-group communication, too. On each of the MIUSA exchanges for which I have interpreted, the involvement of the interpreters has been different, and it is always a very different experience from interpreting in the U.S.

WH: I went to Venezuela on a site visit for work. I am pretty confident and independent. I know how to work with interpreters. Then we get to Venezuela, and I suddenly wanted my interpreter there with me all the time. I would ask if the interpreter could go with me for something I would do at home with no problem, such as going to the store. The point is that there might have to be some preparation with students and the interpreters before they go. The interpreter cannot always – at every second – be with the students. They cannot make it easy for the students. Part of the fun is to experience an unfamiliar culture. Likewise, I think the interpreters have to be firm about saying, “No, I need a break,” “No, I am not going to do that,” or “Yes, I will go with you, but *you* have to communicate.” There was a lot of negotiation occurring about what we would do or how we would work out a situation. It can be extremely fun but challenging.

Q: Do organizations have coverage, such as health insurance, or emergency provisions?

MS: MIUSA does have insurance and contingency plans. I was on one exchange in which, only a couple of days into the exchange, someone needed to come home because of some health issues. Some people have particular systemic disabilities or conditions, and some have physical disabilities and use catheters; students have ready access to sanitary catheters in the United States, but it may become a huge issue in other countries. What is not an issue at home can be a huge issue if you are in a different country.

Many other study abroad programs either require students to get insurance before traveling abroad, or they provide group insurance or individual options through the university or exchange organization. It is important to inquire about this, especially since Medicaid and Medicare often do not transfer overseas.

Q: *Before a group goes on an exchange, do organizations generally provide orientation for things such as health and safety issues?*

MS: MIUSA does a pre-trip orientation on everything from safety issues and transportation to a preview of what is going to happen. One of the things they do is get the whole group together for at least a day. It might be in a hotel in the departure city where the orientation takes place before the flight. Also, all the participants learn basic or emergency signs if there is a deaf person in the group so they can communicate. Orientation sessions include the rules and guidelines for the participants in the program. They also talk about differences in the host culture. Lots of those issues are covered in the orientation before leaving.

Most exchange programs will provide an orientation handbook or session on the first day they arrive in the country. It is important to encourage students to read these materials and participate in these sessions – if they are available before they go, that is. If students are going on a university study abroad program, they can also contact NCDE for other useful information when pre-planning.

Q: *How can one address the upper level administration at a university who will not pay to send an interpreter on such a trip, since they are afraid of setting a precedent?*

WH: While Mobility International USA would not provide interpreters for a university program, they would provide free one-on-one consulting to help brainstorm creative options, or they would give referrals to help find interpreters in that country or negotiate through the law. In my personal opinion, especially given that your university counsel said no, you might be vulnerable for an OCR complaint. I believe study abroad is clearly a program under the university – any other student can go. If you are not making it accessible, you are vulnerable. Know that it is expensive, and I know that the institution would be setting a precedent, causing other students to want to go, too. At the same time, I encourage you to talk about the benefits and focus on the fact that this is a program available to every other student. It is tantamount to saying they will not provide interpreters for off-campus internships. This is one that just happens to be very far away.

I was a disability services director for seven years, so I have looked at it from the budgetary side. One basic issue is this: Is the person going to England where they speak English, or Spain where they speak Spanish (and every other student who is going to that program has a language requirement before they can go)? That supports the decision; if the deaf student wants to go, it

must be determined whether or not they have access to Spanish language classes on campus. Once they get there, if part of the responsibility and expectation is that students are taking classes in Spanish in Spain, is it appropriate to send an interpreter from the United States who knows Spanish and is giving the language in ASL? Or, do we have to give them access to Spanish Sign Language? That is one issue.

The issue of legal obligations is another, and there is a lot of disagreement here. It is unclear whether the ADA applies overseas or not. There are employment situations where it does apply overseas. Section 504 is very clear that all programs have to be accessible. Some campuses wonder if their institution has a campus overseas somewhere. Harvard, for example, has one overseas. That is a program access issue. Some universities are drawing the line with their international exchange programs, declaring that, for instance, they contract with another university in England and cannot force that university to become accessible. Here in the United States, we say our program is accessible and that students can apply and go, but I cannot promise you that they will provide interpreters in England.

Universities are splitting hairs over these issues, and it depends upon funding. If we send an interpreter, it will be expensive. What is the mission of the university? If part of the mission is cultural diversity, then there is really the encouragement for students to participate in a study abroad program. We are not supporting our mission if we do not allow students with disabilities to go. Try to talk to institutions in ways that tie into these “hot button” issues. Legally, there are some rulings that support my comments, and some that do not. But, as a university, I believe it is the right thing to do. You need to find those “hot buttons” that the administration will buy into to sell it to them.

The other thing you might want to do is make a contact list (with the help of NCDE) of other universities that have done exchanges. Contact universities that have sponsored an exchange, and even contact a couple of them that did not and discover what happened as a result of that response. Provide that information to the administration.

Audience member: In my opinion, at a liberal arts university, almost everything is optional, so it should not factor into the considerations. You have optional extracurricular activities and student organizations. Study abroad programs are one more optional thing. It is an attitude really, and money becomes a non-issue when you overcome that. I have worked with the administration at my university. For a while, they would ask what the cost is and how much each student costs in our program. I told them I would not do that. So, instead, I submitted GPAs of the students I served and documented their retention rate as compared to the university at large. I would go to the President and the Provost to ask if these students are the ones they did not want at the

university. Most of the students had 3.5 GPA or above. This was another angle I used to discuss the issue, instead of focusing on the cost. The point to make might also include the value of having cultural diversity experiences. I would bring it back to the mission of the university and turn it around on them. Take the “deafness” out of it and ask if this is not the kind of student they want at their university. Turning the angle, as opposed to just saying it’s the “right” thing to do, may work.

WH: If you need a pep talk, it is worth it to contact MIUSA’s Clearinghouse and ask questions – not only for the deaf students but also for the students with other disabilities. The National Clearinghouse on Disability and Exchange can help.

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Seventeen Voices, One Purpose: Providing Services for Students Who are Deaf or Hard of Hearing

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Abstract

For a variety of reasons, the population of students who are deaf or hard of hearing and attending mainstream postsecondary institutions has increased over the years. These students present access, administrative, and financial challenges to the institution serving them. A case study was conducted to examine Deaf and Hard of Hearing Services at William Harper College to understand how the services started and are maintained. The results of this study and a self-study questionnaire that is based on the results are presented.

Introduction

For a variety of reasons, including a societal effort to increase overall access, the population of students with disabilities attending postsecondary institutions has increased. Three key pieces of legislation – Section 504, the ADA and the IDEA – promote this growth of access. This growth is demonstrated by the increase from approximately 3% in 1978 to 19% in 1996 of all students with disabilities who attended a postsecondary institution (Blackorby & Wagner, 1996). There was also an increase in attendance of students who are deaf or hard of hearing. In the 1992-93 academic school year there were an estimated 20,400 students who were deaf or hard of hearing, attending a mainstream postsecondary education program (Lewis & Farris, 1994). By 1999 there was an increase to 23,860 students (Lewis & Farris, 1999) that resulted in the need for more services and a corresponding increase in the number of programs. In 1972 a national study identified twenty-six programs, including Gallaudet and NTID, that served this population (DeNio, 1972). In 1999 a repeat of this study showed 148 programs nationally (Rawlings, Karchmer, DeCaro & Allen, 1999).

Research into programs and services for students with disabilities has surveyed needs and service delivery practices. Within the area of deafness, there are numerous articles that offer information on ways to improve service delivery; the primary source of these articles is PEPNet conference proceedings. Other publications – such as, the National Task Force (Stuckless, Ashmore, Schroedel & Simon, 1997) – recommend a best prac-

tices approach to service delivery. There is scant information on how services were established, and there are no studies on how a program has actually maintained services after establishment. Gugerty & Knutsen (2000) studied effective practices of service delivery. They identified, evaluated, and described a program for students who are deaf and hard of hearing.

Methods and Procedures

A qualitative approach was employed in this case study with a purposeful sampling to select the site, 17 participants, 99 institutional documents, and 34 pictures. Instrumentation was developed that allowed for concurrent data collection using both audio and video recordings and a protocol for interviews, materials review, and 15 field observations. MS Word and NUD*IST NVivo software served as the data management and storage mediums. The overall strategy of analysis was descriptive in nature with an application of three different interpretive approaches – chronological, life history, and ethno methodology. During data collection, open and axial coding with constant comparison enabled the development and identification of saturated categories. Risks to the trustworthiness of the data were minimized by participant review of their interviews, triangulation of the data sources, three different types of peer debriefings, and member checks through out the project. Finally, ethical issues were found to be risks to the participants and Harper College and were handled by maintenance of confidentiality and member checks. In addition, the need to apply cross-culture research guidelines was identified with corresponding inclusion in the overall design.

Results

The overall conduct of the study was guided by the following question: How were support services for persons who are deaf or hard of hearing at Harper College developed and maintained? The question's answer is found within the results from four related research questions and is presented as a model.

Research Question 1

How do the people involved with Deaf and Hard of Hearing Services (DHHS) describe them?

Interview results indicated that the DHHS mission aligns with the mission of Harper College, particularly with an emphasis on community service. Services were described in terms of comprehensiveness and as design-

nated specifically for deaf students. The closer the participant was to the services, then the more the services were detailed. All participants were aware of and had contact with interpreting services.

Research Question 2

How are students who are deaf or hard of hearing viewed by the institution and by the program offering services?

The students were characterized first by their identification with deaf culture, communication preference (ASL or English), and educational background. Next, age and ethnicity were identified. Both the services description and student perceptions were influenced by the amount and type of contact the participant had with the services and students.

Research Question 3

How did the development of Deaf and Hard of Hearing Services unfold?

DHHS developed along three lines, e.g., administrative, programmatic, and a deaf presence. The rise, decline, and leveling in the number of students receiving DHHS shaped the administrative events. First, in 1972 a separate Hearing Impaired Program was established. In 1980 this was combined with two separate programs for other students with disabilities to form one administrative unit. Two key and ongoing sources, institutional funds and an external source, provided the funds during these formative years. In 1989 there was also a shift in the organizational structure when services were moved from academic to student services. Programmatically, the college saw an initial development of support services and – in 1985 – the establishment of English as a Second Language program (modified in 2000). A formal deaf presence at Harper has been maintained by a deafness organization, an annual celebration of deafness, and a peer-mentoring program.

Research Question 4

How and why are the services maintained?

Deaf and Hard of Hearing Services are maintained by five types of influence. First is the temporal influence, which is comprised of a legacy of service, reputation, and institutional supports, including administration and funding. This has developed over the last 28 years and places DHHS within the institutional memory. Only one of the participants knew a time when there was no DHHS.

Second is personal influence that was evidenced through the use of two metaphors – family and champion – and the qualities of the service providers. Many of the participants spoke about the service providers as if they were family. The metaphors included comparisons to family members or direct comments about the participant's own family. There were also champions along the way who advocated for the services and initiated changes. Participants external to DHHS made com-

ments about the professionalism and willingness to provide more than what was requested by the DHHS staff.

The third influence included learning with a stronger emphasis on informal rather than formal training events. The participants described informal ways they learned about services or how to use the service. Particular emphasis was placed on interpreters and how they have considerable influence to help faculty, staff, and administration learn about the students.

Fourth is a sense of a deaf culture that has developed, because deaf persons have been present throughout the history of DHHS. This culture has generated a dilemma in the provision of services to persons who are not culturally deaf. It is important that their needs and requests for services are met, too. The deaf presence has also generated a paradox as a separate culture surviving in a mainstream institution. The students are taught to function within the mainstream at the same time a familiar deaf environment is maintained.

A climate of acceptance serves as a broader influence, because not only does it encompass the other influences, but it is also one in its own right. A climate of acceptance evolved from a tolerance of services as a disability issue to an institution-wide response to a group of people. DHHS has evolved from a vehicle of compliance to one of service for students.

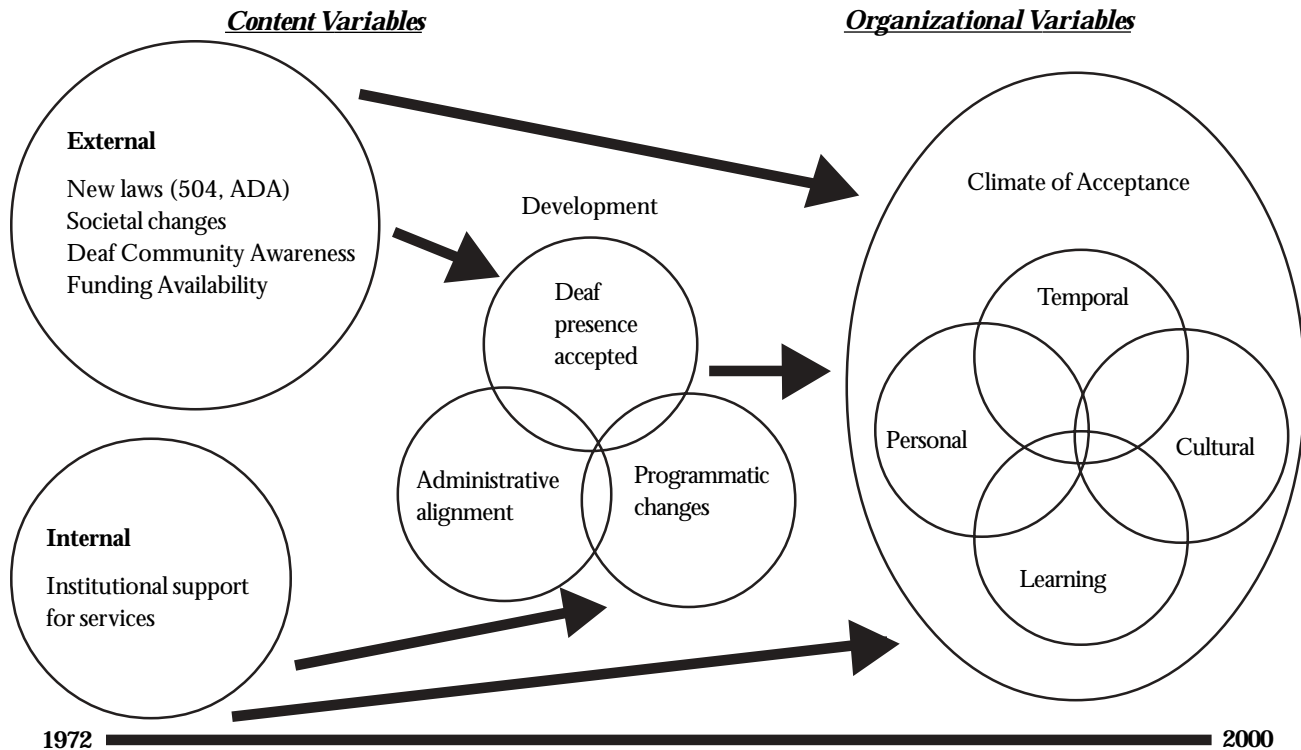
Model of Development and Maintenance

Two types of influences are used to explain the process of development and maintenance, and these are presented in Figure 1. First were content variables that served to influence the start of services; these are divided into two types – external and internal. Externally, legal precedents and requirements, societal changes, the presence of a deaf community, available funding, and inter-agency links combined with internal institutional support. These combined influences were the catalyst for the beginnings and initial development of the services. It is at this point where the organizational (second) variable came into play to develop and maintain services. Through a dynamic process of administrative and programmatic changes combined with a deaf presence, the services were initiated and able to remain within Harper College. Maintenance has occurred, because a climate of institutional acceptance developed over time with influences from the persons learning about the services and those served and because of an institutional respect for a deaf culture.

Limitations

A case study approach was selected, because it provided an in-depth way to study DHHS at Harper College. The uniqueness of the institution, participants, and circumstances that contributed to DHHS development and maintenance served to limit the generalizability of the results. Harper College is located in a predominately white, suburban community that is economically

Figure 1: Maintenance and Development Model of Deaf and Hard of Hearing Services



advantaged. The participants were mostly white females. The beginnings of the program could not be recreated in today's society because of the legal and attitudinal changes that have occurred since 1972.

Discussion

A discussion of the findings is based either on their relationship with the literature or uniqueness to Harper College.

Findings That Relate to the Literature

The findings that are related to three areas of literature – deafness, services and programs, and adult education – are discussed.

Deafness

Cultural identification as a deaf person is discussed with a primary indicator of inclusion or exclusion based upon the individual's use of ASL (Higgins, 1987; Padden, 1989). The first characteristic describing the students by the participants was the students' linguistic preference, which then categorized them as culturally deaf, deaf, or hard of hearing. Deafness is a culture that is horizontally transmitted (Padden, 1989), and the deaf participants described this process. They were able to relate to the students as communication and cultural peers and thereby foster the development of a sense of self as a deaf person. The formal recognition of deafness events by Harper College also served to reinforce the presence of a deaf culture.

Services and Programs

One specific link with description of services, three links with development, and four with maintenance were identified.

The comprehensiveness of DHHS parallels the suggestions for colleges and universities that serve students who are deaf or hard of hearing (Gardner, Barr & Lachs, 2001; Rawlings, et al., 1999; Stuckless, et al., 1997), including an emphasis on staff development (Kolvitz, Cederbaum, Clark & Durham, 2000; Schuck & Kroeger, 1993).

The beginnings of the Hearing Impaired Program were grounded in the medical model of disability with its focus on pathology and the divergence of a person with a disability from the norm. Over time a change to a more interactional perspective (Chelberg, Harbour & Juarez, 1998; Kroeger & Schuck, 1993) took place. Harper College's first response to students was to direct them to the clinic. In 1985, with the establishment of an ESL program for deaf students, there was a clear shift in perspective. The beginnings also included the establishment of programmatic and funding links with other agencies that continues to the present. Gugerty (1999) found interagency collaboration was one of the characteristics of an effective program. The continual expansion and evolution of DHHS that was demonstrated by the administrative and programmatic changes are indicative of a capacity for change (Gugerty, 1999; Vreeburg Izzo & Hertzfeld, n.d.).

DHHS maintenance is characterized by administra-

tive support and services for students, faculty, and staff. This is perceived to be effective and empowerment-oriented (Gugerty, 1999). Institutional commitment is proven by the level of services offered and through recognition of DHHS as an important part of the administration. One important aspect of recognition is that personnel have designated job descriptions, and only competent and qualified personnel are hired (Kolvitz et al., 2000). Another part of maintenance is that DHHS staff members constantly seek resources and a better way to provide services (Gugerty, 1999). A final component of maintenance is an accepting climate, which is also recognized in the literature as critical (Chelberg, et al. 1998; Getzel, Stodden & Briel, 2001; Gugerty & Knusten, 2000; NCSPEs, April 2000a; Ross, 1998).

Adult Education

Both the participants and institutional documentation are indicative of the significant amount of formal learning opportunities that are also found in the literature of adult education. A more discrete, though significant, link is with the literature on learning from experience (Candy, 1990; Miller, 2000). This is clear, as faculty members describe their experiences working with ADS staff, and it is these relationships and interaction with the students that cause a personal change in perspective about deafness.

Findings Unique to Harper College

The institutional recognition of deafness and the temporal and personal influences of maintenance are unique to this study.

Because a deaf culture is recognized and nourished, DHHS experiences an inadvertent dilemma in the delivery of services to persons who are not culturally deaf. These students represent the mainstream more than the minority and, as such, receive mandated services, but they are not specifically included nor are they intentionally excluded from the deaf activities or classes. Another influence is the paradox of maintenance of a separate minority (deaf) culture while at the same time promoting access and inclusion in the mainstream of campus. The solution to the dilemma does not appear to be problematic, because the necessary services are provided upon request. The paradox seems to be managed by following the cultural rules of the host, i.e., when in the mainstream, make modifications for access, and, when in the deaf world, change the environment to suit the needs of deaf people.

The influence of temporality has produced a legacy, which continues to provide a momentum for maintenance. The services are situated in the collective history of the institution and extend beyond the specific memories of any one participant. The legacy is strengthened by the positive reputation of the staff as a group, which, in turn, is founded in a belief that the services are unique.

The reputation was built on personal relationships that developed into inter- or intradepartmental relationships both on and off campus. Another unique influence is the personal one with its two metaphorical descriptions of champion and family.

Implications

The findings related to the literature support the surveys and prescriptive recommendations as described. In order for an institution to develop a level of services beyond legally mandated accommodations, a long-term commitment must exist to allow time for services to become positioned in the mainstream of the organization. Learning by experience needs to be included as a part of the professional development activities along with formal training. A deaf presence and culture are important influences on service delivery; therefore, deaf staff must be hired to provide or manage services.

The findings that are unique to Harper have programmatic implications too. These include an organizational need to:

- Plan to handle the potential service dilemma and cultural paradox;
- Look for and use a champion to advocate for services and bring in new ideas; and
- Understand the possibility of the development of close working relationships and manage them as part of the process.

An Application of the Findings

Using the variables of influence, a self-study questionnaire was developed and is included in Appendix A. The questionnaire is intended for use as an analytical and discussion tool to help determine if there are specific institutional strengths that will support or hinder service development. Characteristics to be considered include the following:

- Links with external agencies;
- A par level of institutional support when compared with similar departments and when the program administrator has access to college administrators who set policy and the budget;
- Program changes from year to year – a dynamic program;
- The presence and celebration of a deaf culture;
- Identification of the services as part of the institution and not as a one-person operation;
- Services and staff are described as high quality and known throughout the institution;
- Formal and informal learning are available and managed; and
- The recognition and management of service dilemmas or cultural paradoxes, if they exist.

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Appendix A: A Checklist for the Development & Maintenance of Support Services

What are the external agencies/groups with which you have formal/informal links?

- Community rehabilitation programs
- Deaf consumer groups
- Independent living centers
- Other postsecondary institutions
- Professional organizations (such as, AHEAD or ADARA)
- Rehabilitation services
- Residential service provider
- Other

What kind and level of institutional support do you have?
How are your requests for support (e.g. funds, space allocation, positions, personnel selection, student recruitment, etc.) met? When compared with other programs, do you routinely receive:

- Low priority
- Consideration the same as others
- Preferential treatment

Where are your services placed within the organization?

To whom does the supervisor of Disability Support Services report?

Are the college or university programs:

- The same from year to year or
- constantly changing and trying new things?

Is there a deaf presence? What specific events are hosted?

- A celebration of deafness, such as Deaf Awareness Week
- Formal deaf clubs?
- Do these receive institutional funds?

How long have the services been in existence?

How do the faculty and administration identify the services?

- By a person (champion)?
- By the name of the program?
- By the role of the staff, such as interpreter?

How do faculty and administration describe the service staff?

- Unknown by faculty and administration
- Known but only by function, such as captionist
- Known by a reputation for high quality service and professionalism

What type of training is available?

- Formal activities, such as disability awareness
- Informal activities, such as how to use an interpreter

Is there a deaf culture?

- How are deaf and hard of hearing people served and treated?
- How is a separate culture (deafness) recognized and helped to exist within the mainstream hearing culture?

What areas do you see that are your strengths?

What areas need to be developed?

What can you do on your return home to develop and maintain services?

For additional information or assistance, please contact: Steven R. Sligar at the Center for Sight & Hearing, an outreach site of the Midwest Center for Postsecondary Outreach at St. Paul Technical College
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SECTION IV

Best Practices

The Gallaudet Writer's Handbook:

Responding to Student Writing

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Abstract

Postsecondary teachers who teach English to deaf and hard-of-hearing students often find themselves with few applicable teaching tools. Likewise, deaf and hard-of-hearing students can't find reference texts that address the specific problems with written English that they deal with all the time. The *Gallaudet Writer's Handbook* was developed to address this deficiency. The *GWH*, like any college handbook, includes sections on English grammar and usage, common writer's errors and guides to punctuation and documentation. But the *GWH*, unlike other college handbooks, pays special attention to grammatical constructions and matters of English usage that plague deaf and hard-of-hearing writers. The *GWH* can be used as a reference or a teaching text. Its primary purpose is to enable students to become self-correcting writers. The *GWH* is available in hard copy online versions.

The 'Responding to Student Writing Workshop' introduced teachers of deaf and hard-of-hearing postsecondary students to the *Gallaudet Writer's Handbook*. The *Handbook* is a tool for integrating grammar into the writing process and for aiding students of all levels to become self-sufficient writers.

Designed as a usage and rhetoric guide for deaf and hard-of-hearing writers—including those from diverse ethnic and cultural backgrounds—the *GWH* provides a clear outline of English grammar and easy-to-access charts, tables, and dictionaries which enable students to correct their own writing. In addition, the *GWH* includes expanded sections on grammatical constructions that deaf writers find particularly troublesome such as active/passive voice, articles, and ed/ing. The *GWH* also provides teachers and students with a common grammar vocabulary and system of error identification and correction.

The principles underlying the *GWH* are:

- **Content can't be divorced from its grammar:**

Clear written communication requires organized ideas expressed in standard English.

- **Student writers need to become independent writers:** The responsibility for correct writing must shift from teachers to students.

- **Becoming an independent writer takes time:** When students take responsibility for correcting their own papers, the positive effects are cumulative.

- **No-Nos:** Ignoring grammatical errors gives students a false confidence in their writing. Correcting errors for students keeps them from learning from their mistakes.

- **There are many ways to mark errors on a student paper.** Different instructors with different approaches can use the *GWH* effectively.

The key to the *GWH* is its Correction Chart containing symbols for various grammatical constructions including ones not found in other symbol systems (ed/ing; it/there). Students need to learn to navigate this correction system. In an ideal world, students would simply check or click on the appropriate correction chart symbols and correct all their mistakes. In the real world, students need time to learn the system. The more familiar they become with the *GWH* the more useful they will find it. In the hard copy version the Correction Chart is keyed to page numbers in the book where students can find explanations and examples. In the online version, a student clicks on a particular symbol and links to explanations, examples, and, in some cases, concept exercises.

The *GWH* is available in hard-copy and online versions. The hard-copy version is sold by the Gallaudet Graduate Research Institute at cost. (Contact Russell Perkins, GRI, Gallaudet University, Washington DC 20002). The online version is free, accessible to all, and includes student and teacher tutorials as well as grammar exercises. It is available at <<http://academic.gallaudet.edu/handbook>>. Workshop participants received the hard-copy version.

Literature Comes Alive

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Abstract

“Literature Comes Alive” was a joint project involving deaf students and (hearing) interpreting students at a community college. The project involved the deaf students’ translations of classic literature into American Sign Language and the voicing of the stories by students in the Interpreter Education Program. An overall goal of the project was to empower deaf students to help them become independent, confident, and responsible. An academic goal was to teach classic literature. A major goal for the interpreter students was to experience the entire process of preparing for a voice-interpreted performance. The student response was overwhelmingly positive. Deaf and hearing students benefited, both personally and professionally. “Literature Comes Alive” is now an annual event at Camden County College.

In 1998, two employees of Camden County College (CCC), Dianne Falvo, Assistant Professor of English, and Maureen Brady, Support Services/Interpreter Coordinator, shared a common vision: to create a joint project involving deaf, hard of hearing, and hearing students at the Blackwood Campus in New Jersey. This collaboration came to fruition two years later in a performance known as “Literature Comes Alive.” In April 2000, the first group of students from the MidAtlantic Post-Secondary Center for the Deaf and Hard of Hearing (the Center) and students from the Interpreter Education Program participated in a wonderful learning experience as they worked together to present the works of famous authors. The deaf students signed classic literature in American Sign Language, and the interpreter students voiced these stories into spoken English.

Goals for Deaf Students

There were a number of goals for the deaf students. First, students would be given the opportunity to do something truly unique outside of class. This project aimed to help students become more independent and responsible as well as make them feel proud and successful.

Many deaf students were not familiar with literature when they started taking classes at CCC. One student asked who Edgar Allan Poe was. That student ended up signing a Poe story for the first performance in the year 2000. By participating in the performance, deaf students received an exciting introduction to classic literature.

Another goal for the deaf students was to help them compare and contrast English and ASL. Many deaf students are accustomed to reading and signing at the same time. This attempt to overlap the two languages gives the false impression that the two languages are similar in grammar and structure. The translation work involved in the production helped students realize some major differences between ASL and English.

One last objective for deaf students was to provide them with an opportunity to work closely with voice interpreters. Some of the deaf students had used interpreters prior to their arrival at CCC; others had not. Few, if any of the deaf students, had experience in rehearsing a story and working collaboratively with a voice interpreter.

Goals for the Interpreting Students

The initial goals for the interpreting students seemed obvious. The hearing students were to gain knowledge about theatrical interpreting, network with deaf and hard of hearing students and staff members on campus, and experience a sense of accomplishment. Students would learn that hard work and dedication were required in order to be successful.

Preparation of the Deaf Storytellers

For the first two performances, all work began in January for shows that took place in April. This turned out to be a great deal of work squeezed into the spring semesters. This past year, the storytellers began their work in the fall. They chose a story, book, or play (short stories were preferred, for the simple reason that they are short). Several of the students read a number of stories before making their selection; others were satisfied with the first story they read. On one occasion, a story was assigned to a student, because another had backed out. A student biographer had already begun working on that particular author, so the author and story were kept. Next, students wrote summaries of their stories, and revisions were made. By the time January rolled around, most of the summaries were finished.

An interesting group of stories and authors headlined

each performance. The authors whose stories were chosen for the first two performances included: Edgar Allan Poe, O'Henry, Sir Arthur Conan, Bram Stoker, Jane Austen, Louisa May Alcott, F. Scott Fitzgerald, and Langston Hughes. This year the stories and authors were:

"The Black Cat" by Edgar Allan Poe;
"The Ransom of Red Chief" by O'Henry;
The Count of Monte Cristo by Alexander Dumas;
Oliver Twist by Charles Dickens;
"All Summer in Day" by Ray Bradbury; and
"The Star Child" by Oscar Wilde.

The next step was to find ASL coaches who were comfortable translating stories into ASL. It is helpful to determine exactly how many hours each coach can devote to translation work. Some deaf students are fluent in ASL, so the translation assistance they needed was minimal. Others, who were not fluent, needed a great deal of help. One student needed a coach to gloss every line of his story into ASL. Coaches worked with each of the students, even those who knew the language. Coaches made sure that spatial relationships were clear, role shift and eye gaze were used effectively, appropriate classifiers were signed, and so forth.

Regular rehearsals came next. For the first two performances, group rehearsals were held. Too often, the rehearsal room was overcrowded, especially if only one coach was in the room. This past year, coaches worked with the students individually. This turned out to be less chaotic and more productive. Thus began the process of the deaf students memorizing their stories. By mid-February, students attended rehearsals from one to four times per week.

After the deaf students learned their stories, they signed the stories for another member of the Center. A fresh perspective was needed. If a deaf person had helped them translate, students went to a hearing staff member for feedback and vice versa. Staff members ensured that what was signed was accurate and clear. The time commitment for rehearsals was tremendous. The students knew that preparing for the performance required a great deal of time and effort.

Preparation of Biographers

The deaf biographers had an interesting task. They read about the authors' lives and decided what information to include in a short biography. If a biographer planned to include a minor facet of an author's life while overlooking a major contribution, he was steered in the right direction. Otherwise, the biographers selected information themselves. For the first two performances, students worked in groups of two for this portion of the preparation. This year each biographer worked independently. Just as the storytellers did, the biographers wrote English summaries, and revisions were made. The students wrote ten to twelve facts

about each author's life. Again, the students had to meet with ASL coaches. Some biographers translated their information on their own; others relied on the coaches for accurate translations into ASL. Deaf consultants assisted in the translations. Finally, the biographers were ready for rehearsals, which took place one to four times per week.

Preparation of Interpreting Students

Preparing the interpreter training students for the task of voice interpreting the performances involved many factors. All of the students were members of a voice interpreting class at the college taught by Ms. Janice Beyer. Weekly class lessons provided the students with general strategies for voicing a performance. Additional information sessions focused on the various aspects of the individual biographies and stories to prepare for voicing.

The hearing students selected a story or an author. Those who chose an author were assigned a second one as well. Each hearing student received the deaf student's written summary of the story or biography. In addition, interpreting students were encouraged to read the book or short story itself. If a movie version was available, they watched it. Research related to the author and setting enabled the interpreting student to gain a better understanding of the story and make appropriate vocabulary choices.

Several factors are necessary in order for voice interpreters to provide a dynamic equivalence of the text. They must understand the source text and its meaning and create an equivalent target text. Ensuring that all the members of the audience would have the same understanding of the storyteller's message, whether perceived through American Sign Language or English, the voicing students required a great deal of coaching. An interesting phenomenon was that the translations prepared by the deaf students became the source text for the interpreting students. The original piece of classic literature was summarized, translated into ASL, and re-interpreted into English (Cerney, 2000).

The task of the interpreting students was to convey the meaning of the original message while retaining the mood, tone, and overall affect of the storyteller. In order to maintain the integrity of the message, the student interpreters considered several factors that are outlined below (Cerney, 2000).

Feedback was provided on vocabulary choices. Students were discouraged from voicing the deaf student's summary as it was written. They were encouraged to select English vocabulary words, based on the time period of the story and specific geographic location, if indicated. Students examined the characters and settings to determine the appropriate language register. The hearing students videotaped the storytellers, studied the signed delivery, and became familiar with the storyteller's signing style. The various characters along

with the theme of the story were examined at length in order to ensure a smooth delivery. The intonation and emotional quality of the interpreter's voice had to match the source text.

It was necessary for the interpreting students to use proper English grammar. Information needed to flow in coherent phrases, clauses, and sentences. The pace was monitored so that words did not sound rushed or slow. This would have made the text sound over-simplified or disconnected. Students were encouraged to monitor transitions between clauses and sentences. They provided feedback for each other on the clarity of their speech. Were the words pronounced correctly? Discourse markers – such as, “well,” “okay,” “you know,” and “like” – were monitored. Did the student have a whispery voice? Cultural adjustments were made where appropriate. This enabled the concepts being voiced to make sense in English. Volume was noted. Was the student's voice too loud or too soft? Were the students too close to the microphone while they spoke? Could the backup interpreter be heard when feeding the primary interpreter? Could conversation between the two be heard? Students practiced voicing with confidence to instill audience trust in the interpreter (Cerney, 2000). Ms. Beyer attended rehearsals and gave both oral and written feedback to her students on these factors.

Each storyteller and biographer had one voice interpreter and one backup. Since the hearing students had limited experiences in interpreting, they were not familiar with the process of team interpreting. Instruction in this area included team protocol. Both students in a team had to be familiar with the primary and secondary material, i.e., their own story and the story of the person they were backing up. Students practiced feeding the working interpreter, receiving information from the backup, and signaling for help when needed.

Formal Rehearsals for Deaf Students

One important element of formal rehearsals involved the stage. Walking on and off stage with ease was crucial. Something as simple as a change in lighting could make normal walking difficult. Stage rehearsals were also helpful in observing students' posture, mannerisms, and overall movement. Signing had to be clear to people from a distance. Name signs had to be understood. Also, students were asked to stand in the center of the stage unless they were taking on the role of various characters in their story.

Once on stage, students learned to pace themselves and sign slowly enough for an audience to follow along. The first time one student signed her story she completed a four-and-a-half page story in only five minutes. Students were reminded that the audience would see each story only once. If audience members missed a sign or if they did not know which character was being portrayed, there was no going back. Sometimes the only reminder that a student needed to slow down was

to see a voice interpreter with a microphone in her hand. The student whose story initially ran for five minutes was able to stretch out her story to eleven minutes on the day of the performance.

Formal Rehearsals for Interpreting Students

Formal rehearsals enabled the interpreting students to become familiar with the logistics and equipment to be used on the day of the performance. They studied the setup of the room to establish their placement in the setting. The hearing students began to get a feel for the room so they could prepare themselves to voice for an audience. They noted the lighting and the lighting sequences to be used during the actual performance. Students needed time to adapt to the use of microphones so that they would not be distracted by the sound of their own voices over the microphone. They practiced changes in volume so that an appropriate volume level would be used in a crowded auditorium. The interpreting students also familiarized themselves with their storyteller's or biographer's stage entrance, placement, and exit.

Delegating Work

One important lesson learned about doing a performance such as “Literature Comes Alive” is to find energetic people and delegate work to them. Having dependable people assisting in the process helped to alleviate the amount of work for which each person was responsible.

One student, Modekhai Globman, made a PowerPoint presentation to introduce each biographer, storyteller, and interpreter, and this year he added pictures of each student to his PowerPoint presentation. Another addition to this year's computer presentation was a collage of pictures depicting the September 11th attacks. Modekhai developed the idea of honoring victims and their families in this manner.

Three staff people at the Center made invaluable contributions to the performance. The first was the Center's Program Assistant, Ms. Kathy Earp, who graciously agreed to create this year's program. She studied earlier programs and their format and then experimented with fonts, colors, and styles. The result was the best program we have had. The second life-saver within the Center was the secretary, Ms. Pat Stens. She made certificates for each storyteller, biographer, and interpreter. Last, but certainly not least, we are indebted to the Center's Program Director, Ms. Josie Durkow, for without her support, the shows would never have existed.

A signed performance cannot be done without having a videotape to keep for posterity. The coordinator of the Interpreter Training Program, Mr. Paul Klucsarits, and the husband of one of our storytellers, Mr. Victor Collazo, stood on opposite sides of the stage and taped the entire program. Many of the performers and interpreters had copies of the video made after the

performance. These tapes turned out to be a hot commodity at the Center.

CCC is fortunate to have "signing communities," groups of deaf and hearing people working together for a common goal. The president of one such community, Ms. Donna Keen, took responsibility for passing out programs and serving refreshments on the day of the performance. Ms. Keen's group arrived early, set up their snacks, and performed all-around last-minute tasks.

Rewards for Deaf Students

Saying that the goals were met is an understatement. The deaf students were extremely proud of themselves for their hard work and dedication and were excited about their contribution to the performance. The show ran smoothly, the students put on the *best* performance yet, and the audience was extremely impressed. At the end of the performance, students, their families, and friends shared in the excitement. One audience member stated that these stories truly came alive on stage. The sense of accomplishment that the students felt made every hour of work worthwhile.

The academic goals were also met. The deaf students learned about famous stories and their authors. They worked diligently to understand the differences between English and ASL. Deaf students became more responsible and independent. Hopefully, these skills will carry over into students' content course work.

Some of the performers have already begun discussing the type of story they will select next year. One wants to tell a sad story; another wants the audience to laugh. In this way, students feel connected to Camden County College and what the Center can offer them.

Rewards for Interpreting Students

On many levels, this was a wonderful educational experience for the hearing students. It helped prepare the interpreting students for future assignments as they acquired confidence through practical experience. The investment of their time and the comfortable environment resulted in a successful voicing job. It was an excellent cultural experience as well. The students learned a great deal by working with two languages. Students formed relationships with each other and with the deaf and hard of hearing students. Each hearing student gained an understanding of the complexity of voice interpreting a performance, as well as a greater appreciation for classic literature. The initial goals for completing this project were greatly surpassed.

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Self-Determination: Exploration and Procedures When Working with Postsecondary Students with Disabilities

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Abstract

Self-determination and self-advocacy skills are key for individuals with disabilities in order for them to maximize their potential and gain the accommodations needed to be successful in the workplace. This session provided participants access to *Self-Determination Training Modules*, which will enable them to develop and encourage these skills in the individuals with whom they work. The modules are useful for all individuals with disabilities, but are tailored specifically to postsecondary students who are deaf or hard of hearing. The presenter found a significant lack of training materials available to postsecondary students with disabilities focused on skills for self-determination. As a direct result of these findings, the presenter developed training modules, which address these critical needs. The presentation centered its focus on the three training modules:

- Module 1 - Self-Determination: Ownership and Responsibility,
- Module 2 – Self-Advocacy: Understood and Applied, and
- Module 3 – Self-Disclosure: Appropriate Choice.

These training modules attempt to ensure that postsecondary students with disabilities have the skills needed to make informed decisions and advocate for themselves with clarity and confidence. Successful training can lead to students with disabilities making better decisions related to career choices and increasing their own employability.

Statement of the Problem

In the United States, a country of such economic prosperity, one minority group continues to struggle with employment. The largest minority group, people with disabilities, experiences barriers to employment, both internal and external. In fact, “the vast majority - 67.9% - of those with work disabilities are not even in the labor force, meaning that they are neither working nor actively looking for work” (Kaye, 1998). In addition, only a portion of all individuals with disabilities

will attend a postsecondary institution. According to the U.S. Bureau of the Census, of those with college degrees, an unemployment rate of more than 49% exists for people with disabilities; in contrast, college graduates without disabilities have an unemployment rate of less than 11%. (See Table 1). This manuscript will focus on the population of individuals with disabilities who are attending postsecondary institutions. It is important that service providers train these students with the necessary skills needed for positive employment outcomes.

The Purpose

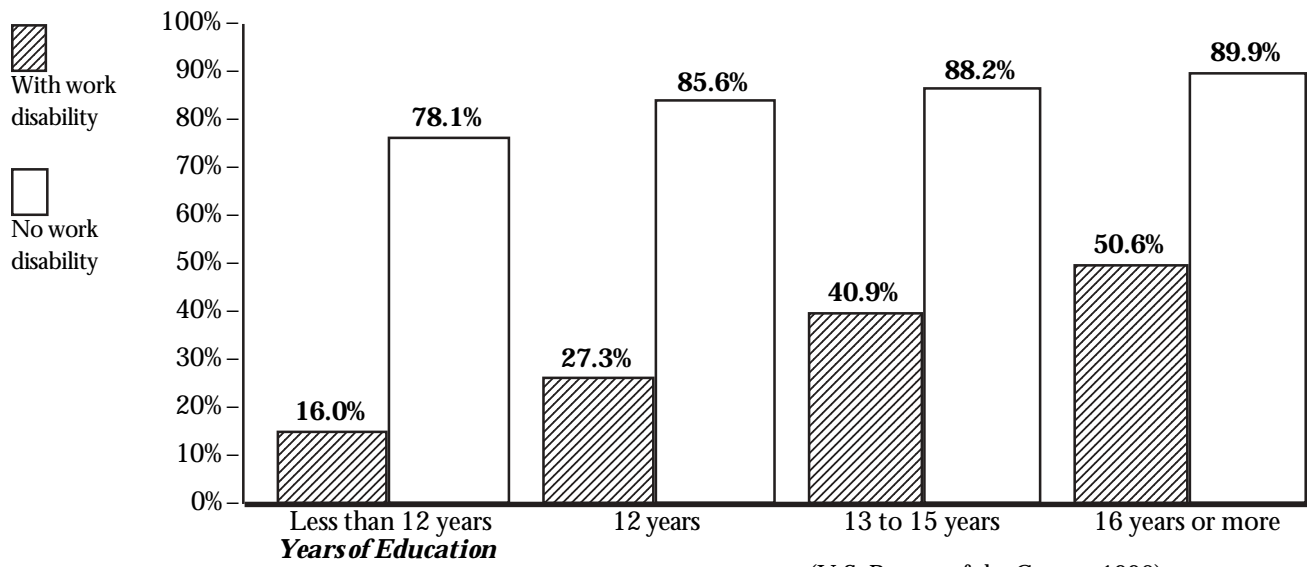
The purpose of this investigation was to examine current research and training materials dealing with self-determination, and to develop additional training materials for use with postsecondary students with disabilities and the service providers who work with this group of students. The training materials focus on issues of self-determination, defined as self-disclosure, self-advocacy, and informed choice. They will address the following research questions:

- What are the factors involved with self-determination?
- How can service providers address each of these factors?
- What specific methods can service providers implement with postsecondary students as they approach the work force?

Current research periodicals and other publications were examined. Information gathered was compiled into working training modules so they may be used in a practical setting serving postsecondary students with disabilities. Much of the current research focuses on all people with disabilities. However, the training modules presented in this research are to be used specifically with postsecondary students who are also individuals with disabilities.

A glossary has been included in *Appendix A*. The specific definitions were compiled from a variety of sources (Burgstahler & Smallman, 1999; Presidents Committee for the Employment of People with Disabilities, 2000; Skinner, 2000). For the purpose of this research, self-determination shall be defined as “the ability to identify and achieve goals based on a foundation of knowing and valuing oneself” (Field & Hoffman, 1994). In addition, self-advocacy “is about advocating – lawyering – for yourself; instead of some-

Table 1. Percentage in labor force, by work disability status and years of education, 25-64 years.



(U.S. Bureau of the Census, 1990)

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one else speaking for you” (Hall, 2000). Other important terms have been defined in the glossary for the benefit of the reader.

Training Modules

The manual is organized in three modules. These modules can be used as a complete series of training over a specific period of time, or each module can be used independently as the need arises. The modules are intended to be one hour in length and can be used in a one-on-one or group setting. Activities can be modified for use with individuals or groups, and instruction will be given when such modifications are possible. An agenda for each module is also included; however, the trainer can modify the agenda to suit his/her particular needs. In addition, each module includes optional materials, which can be used as handouts, overheads, etc. Finally, a resource list can be found along with a glossary of terms in order that the trainer and student(s) will have support information throughout training process.

After an extensive review of the available literature, several conclusions can be made. First, the literature has a strong focus on individuals with developmental disabilities (Agran, Martin, Mithaug, Palmer, & Wehmeyer, 2000; Alper, Jayne, & Schloss, 1993; “Principles of Self-Determination,” 1999; Field & Hoffman, 1998; Field, Martin, Miller, Ward, & Wehmeyer, 1998; Wehmeyer, 1999). There is little mention of individuals with disabilities as a population in relation to self-determination skills. In addition, there has been increased attention to the subject of self-determination in recent years (Agran, Martin, Mithaug, Palmer, & Wehmeyer, 2000; Algert &

Stough, 1998; Burgstahler & Smallman, 1999; Field & Hoffman, 1998; Field, Martin, Miller, Ward, & Wehmeyer, 1998; Fussell, 2000a; Fussell, 2000b; Hall, 2000; Kennedy & Lewin, 2000; Larocco & Roberts, 2000; “Principles of Self-Determination,” 1999; “Self-Determination Principles,” 2000; Wehmeyer, 1999). Much of the literature has been written within the last several years as interest and demand has grown. Finally, we can conclude that there are training materials available for students with disabilities in a postsecondary setting; however, the materials available are neither extensive nor comprehensive in the area of self-determination (Aase, Anis, Aune, & Johnson, 1994; Aase & Smith, 1989; Burgstahler & Smallman, 1999; Larocco & Roberts, 2000; Peterson & Sherman, 1997). The training materials reviewed were found to address other needs of postsecondary students with disabilities, particularly career planning.

Statement of Need

Due to the conclusions stated above, a statement of need can be clearly articulated. Because of the significant lack of training materials available to postsecondary students with disabilities focused on skills for self-determination, the need for comprehensive training modules has been identified. These training modules will attempt to ensure that postsecondary students with disabilities have the skills needed in order to make informed decisions and advocate for themselves with clarity and confidence. Successful training can lead to students with disabilities making better decisions related to career choices and increasing their own employability.

The available literature can be divided into three subsections: (a) self-determination (Agran, Martin, Mithaug, Palmer, & Wehmeyer, 2000; Field & Hoffman, 1998; Fussell, 2000a; Fussell, 2000b; Kennedy & Lewin, 2000; Wehmeyer, 1999), (b) self-advocacy (Alger & Stough, 1998; Drucker, 1999; Hall, 2000), and (c) training materials (Aase, Anis, Aune & Johnson, 1994; Aase & Smith, 1989; Burgstahler & Smallman, 1999; Larocco & Roberts, 2000; Peterson & Sherman, 1997). All materials reviewed are considered literature addressing the overall subject of self-determination. By far, there is more information available on self-determination than either of the other two sub-sections. However, the literature addressing self-determination has a heavy emphasis on people with developmental disabilities. The second sub-section has specific self-advocacy skills for anyone with a disability. It is important for all people with disabilities to acquire the needed self-advocacy skills in order that they may live productive lives while making decisions for themselves. These skills are especially important for those postsecondary students with disabilities. The current literature on self-advocacy skills will be adapted to meet the needs of students with disabilities. In addition, the training materials reviewed will be used to develop additional training modules. Additional modules are needed in order to address specific needs of postsecondary students with disabilities. Because of the current employment statistics, training materials designed for postsecondary students with disabilities are crucial to future success.

This is a working model to be used with students with disabilities at various postsecondary institutions. It is the author's intent that these materials be used with an individual student or a group of students. Because minimal resources were found, it is evident that additional research is needed in the area of self-determination skills specifically for postsecondary students with disabilities. Discussion is welcomed and the training modules are available by contacting the author.

Appendix A: Glossary

Accessible: Easy to approach, enter, operate, participate in, or use safely, independently, and with dignity by a person with a disability (i.e., site, facility, work environment, service, or program).

Americans with Disabilities Act (ADA): A comprehensive civil rights law enacted in July 1990 that makes it unlawful to discriminate in private employment sector against a qualified individual with a disability. The ADA also outlaws discrimination against individuals with disabilities in state and local government services, employment, public accommodations, transportation, and telecommunications. The private sector employment provisions (Title I) became effective for employers with 25 or more employees on July

26, 1992, and on July 26, 1994, for employers of 15 or more employees. The public sector employment provisions (Title II) became effective on January 26, 1992.

Disability: A form of inability or limitation in performing roles or tasks expected of an individual in a social environment; a medical or mental diagnosis.

Essential job functions: The fundamental job duties of the employment position that the individual with a disability holds or desires. The term "essential functions" does not include marginal functions of the position.

Functional limitation: The level of function at which the disability is manifested (what a person cannot do functionally).

Handicap: The ultimate effects of the disability on the ability to work; often sociological/geographical and can be accommodated.

Impairment: A physiological, anatomical, or mental loss of function, other abnormality, or both.

Individual with a disability: A person who has a physical or mental impairment that substantially limits one or more of that person's major life activities, has a record of such impairment, or who is regarded as having such an impairment.

Major life activity: Basic activities that the average person in the general population can perform with little or no difficulty, such as caring for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working.

Qualified individual with a disability: An individual with a disability who satisfies the requisite skill, experience, education, and other job-related requirements of the employment position such individual holds or desires, and who, with or without reasonable accommodation, can perform the essential functions of such position.

Reasonable accommodation: (1) Modifications or adjustments to a job application process that enables a qualified applicant with a disability to be considered for the positions such qualified applicant desires; (2) modifications or adjustments to the work environment, or to the manner or circumstances under which the position held or desired is customarily performed, that enables qualified individuals with disabilities to perform the essential functions of that position; or (3) modifications or adjustments that enable a covered entity's employee with a disability to enjoy equal benefits and privileges of employment as are enjoyed by its other similarly situated employees without disabilities.

Undue hardship: With respect to the provision of an accommodation, significant difficulty or expense incurred by a covered entity, when considered in light of certain factors. These factors include the nature and cost of the accommodation in relationship to the size, resources, nature, and structure of the employer's operation. Where the facility making the accommodation

is part of a larger entity, the structure and overall resources of the larger organization would be considered, as well as the financial and administrative relationship of the employing facility to the larger organization.

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Does No-Show = No Win?

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Abstract

This proposal addressed the need to implement a policy which targets deaf and hard of hearing students who continuously miss class and do not notify the office or service coordinator, specifically regarding sign language interpreters and computer transcription services. The National Center on Deafness modeled its “No-Show” policy and compared and contrasted it with policies of other college institutions. The goal was to identify and implement a working policy that benefits all those involved – students wanting the same freedom as hearing peers and service coordinators trying to utilize limited resources, both fiscal and personnel. Additionally, exercises were provided that proactively sensitized both students and service coordinators to the challenges faced daily with services at the postsecondary education level.

California State University, Northridge (CSUN) is the largest mainstream, liberal arts university in America. The National Center on Deafness (NCOD) at California State University, Northridge has approximately 230 to 250 deaf and hard of hearing students each semester. NCOD is also home to approximately 120 interpreters, 60 notetakers, and 20 captionists. Many disability support services providers also come from institutions with a smaller program for deaf and hard of hearing students. With teamwork and creativity, no-show policies can be implemented at schools with smaller programs.

“No-Show = No Win?” was written and presented to educate professionals about the various no-show policies developed among postsecondary institutions in the United States and the rising controversy from deaf students regarding what they feel are their rights as college students. Many colleges have their own perceptions concerning rules of the school versus students’ rights. The presenters conducted a survey, taking into consideration students’ concerns, and asked service coordinators at postsecondary institutions to provide them with copies of their policies along with what they feel are their programs’ strengths and weaknesses.

Why does NCOD have a No-Show Policy?

NCOD did not impose rules to single out or punish deaf students. Instead, they face limited resources – personnel and financial. Indeed, rules are not set up on a whim to hurt the students; they are designed to maximize use of services. NCOD’s no-show policy enables the administration to provide better services. They enforced a procedure for deaf and hard of hearing students to follow in order to meet everyone’s needs. The Americans with Disabilities Act encourages rules to be applied, as long as the policy has reasonable requirements and consequences.

Staff, under the scrutiny of administrators above them, take caution when providing services to deaf and hard of hearing students and tend to focus on limited resources and a strict budget. Attention to students, their rights, and the services they request are sometimes overlooked, and occasionally disability support services providers lack sensitivity. It is vital that service coordinators and the institutions for whom they work understand the importance of implementing a no-show policy with regard to students’ needs.

Empowerment

Administrators or counselors at postsecondary institutions have the responsibility of providing services to all deaf students on campus and of making sure all deaf students’ needs are met in a reasonable manner. It is perfectly reasonable to have an effective no-show policy, regardless of complaints from students. Minimization of complaints from students is possible, and they can be encouraged to help take responsibility for meeting the needs of all deaf students on campus. No-show policies exist for various reasons, and establishing one should largely benefit all those involved.

Students should feel empowered to take responsibility and successfully advocate for their own educational rights and subsequent workforce settings. Service coordinators should also be sensitive to administrators and their concerns, ensuring that the implemented policy provides fair services to all parties involved while utilizing limited resources. The questions are where to draw the line between advocating for students who want the same rights as hearing students and assisting administrators in distributing service providers fairly amongst many deaf students on campus.

Listed below are some common responses from students in regard to NCOD’s no-show policy.

- “We should have the same privilege as hearing students; they do not have to call the University if they plan to miss class.”
- “It’s my *right* to miss class and to have services. I am deaf, and that’s what the ADA says.”
- “I have to sit down with the counselor and tell them what I did yesterday, but they are not my parents nor my boss. I can do what I want, and if I am late or absent, that is my choice!”

The first approach to implementing a no-show policy is to try and understand what deaf students want. Students at NCOD say the ideal situation would be:

- An educational setting that does not challenge them daily or give them additional responsibilities;
- Meetings with their counselor prior to the beginning of a semester in which the counselor gives them their class schedule;
- No more meetings with a counselor until the following semester or quarter begins (unless special requests are needed or concerns arise);
- No expectations from students after the initial meeting with the counselor;
- Top-level interpreters assigned to all classes;
- Interpreters who stay in class regardless of attendance, late arrivals, or early departures;
- A substitute service provider when one is sick;
- No questions asked of students pertaining to their attendance.

Then, reality kicks in! As much as service coordinators wish the previous conditions for all deaf students, they are not feasible. There are often simply not enough warm bodies. Additionally, there are various levels of skills among interpreters, or an interpreter may not be compatible with a particular student. By implementing a working policy, effective distribution of service providers can occur. Cancellation of services means services for other deaf students. There are rights that come with responsibilities.

NCOD ends up being the training ground for teaching and learning about responsibilities to oneself and others. The self-centered deaf student will naturally assume that the cancellation of her services two hours before class pertains to her deafness and is, therefore, discrimination. Understandably, many deaf students faced ongoing challenges growing up and will expect a modeled center like NCOD to sympathize and structure their policies around nondiscrimination and equal rights. However, what are equal rights when it pertains to responsibilities that involve others? Do deaf students realize that if service providers do not cancel services ahead of time, several other deaf students with sick interpreters are without services? Is this only a “deaf issue,” or is it universal? Consider as an example the hearing woman who schedules an appointment at the dentist’s office and

finds out one week later that she is unable to attend. Unfortunately, she forgets to call to cancel and reschedule. The result is that she is still accountable for the time reserved and legally has to pay, if requested. Another client who needed a root canal could have been scheduled had the woman called. What happens if a person does not show up for jury duty? Again, rights come with responsibilities. Individuals have the right to vote yet the responsibility of educating themselves with reading manuals. They must also go to the poll and vote. Individuals have the right to begin driving at age sixteen, but it comes with responsibilities. The bottom line is that responsibilities play an enormous part in every individual’s life. For a deaf person this is no different.

Students at NCOD often insinuate that – because service coordinators cannot provide enough warm bodies in the interpreting field – NCOD is to blame, not them. They say that NCOD just needs to make sure their rights are met. The challenge is: Whose rights need to be met – the rights of students to always have an interpreter in the classroom, whether or not they attend class, or the rights of students whose interpreters called in sick and are waiting for a substitute? NCOD’s way of solving this challenge is by implementing a working policy that allows them to effectively distribute service providers in a thorough manner.

When asked if requiring deaf students to tell administrators that they will miss class is unequal treatment, since the law requires equal access, Kincaid and Rawlinson (1999) state:

... {S}trictly speaking, when a college imposes a condition on deaf/hard of hearing students, such as class notification, which it does not impose upon nondisabled students, the college is not being “equal.” However, the ADA and Section 504 permit institutions to impose “eligibility” criteria if necessary. As mentioned above, OCR has upheld such a condition in recognition of the importance of balancing the needs of the institution to provide cost effective services while attempting to meet the needs of all students with disabilities (p. 45).

No-Show Policy

When service providers develop a no-show policy, many issues should be considered:

- *Time Restraints/Limitations* – How many hours of advance notice are required for service cancellation? From the survey NCOD conducted, the presenters learned that many institutions require a 48-hour advance notice. Service providers should ask themselves if they remember how many times as a student in college they

knew 48 hours ahead of time that they would miss class? Students should have some rights with limitations imposed; therefore, disability staff should pick a time limitation that is reasonable. • How long should the service providers wait in the classroom? The longer they wait for the student, the less likely it is that they can be reassigned to another class. Sending an interpreter to substitute a class 20 or more minutes past the start of class is disruptive to the professor and the class.

- *How many chances are given before action and/or consequences are imposed?* Again, this is a question of limitations and what is appropriate or reasonable. A majority of NCOD's survey responders allow three consecutive absences. This is a luxury for deaf and hard of hearing students. There would be concerns regarding retention of service providers after three no-shows, because service providers lose the hours, and therefore, pay. Postsecondary institutions need to find alternate ways to retain service providers — team them with other service providers, have them complete projects, or keep them on standby as a “floater.” This no-show policy applies to students, not service providers. Once the policy is enforced, students begin to realize they will lose their services, and they will learn to be more responsible.

- *Consequences* – Students insinuated that meeting with counselors after a no-show is juvenile and not necessary. Service coordinators must determine if having the student meet with a counselor, service provider representative, or DSPS/DSS chair would be effective. If required, what kind of information should be given to students regarding their absence and their reason for not canceling services? What is expected from the students at this point?

- *Service coordinators should get everything in writing and obtain signatures.* Without their signature, students who are considered no-shows can simply say they were not made aware of the policy or did not understand the policy. • When registering students for classes, service coordinators should take time to thoroughly explain the policy and require the students to sign it. Counselors should also sign somewhere, indicating that they have explained the no-show policy to the student. It is recommended that this occur every semester. Kincaid and Rawlinson (1999) state:

The college may {legally deny services to a student if the student refuses to sign a written service agreement}. Again, the conditions imposed within the agreement must be reasonable and fully explained to the student. Some colleges have moved to such a requirement, especially with respect to the provision of paid services, such as interpreting services, due to cost considerations and to assist students in responsibly accessing services. If the

agreement is read and signed by the student, it better protects the college in the event it decides to suspend services should the student not abide by its terms (p. 45).

Communication Access

The disability support services office should be accessible. Service coordinators must ensure that students have flexibility in contacting the office in several ways and that messages are properly handled by office personnel:

- Phone (TTY and Voice) that works properly;
- Email – One suggestion is to select one computer to take all incoming emails from students;
- Fax;
- In person – One area where students should report cancelled classes can be targeted.

Allowing students flexibility when contacting the office will encourage a positive atmosphere. Students will be less intimidated and more willing to work with the policy and the staff.

It is crucial that service coordinators be as specific as possible when creating or modifying a no-show policy. Some words have multiple meanings and can be perceived differently between a college student and a staff member. Here are some words that the presenters pulled from no-show policies sent to them from several colleges:

- “Consecutive”: If a student has class once a week, does this mean they miss three weeks worth before services are suspended? Is this the same for a student who has class everyday and misses three days in a row?
- “Cancelled” vs. “suspended”: Cancelled – One time? Permanently? For the day and/or all classes? For the week? Suspended can sometimes mean permanently for staff, but students may interpret this as for one day only.
- “Waive” vs. “reinstate” vs. “return”: Waive – All of them? Just the 1st? 2nd? 3rd? No-show? Or the day of the no-show? Does reinstate mean to start over with a clean slate? Services for that one time? Letting the 2nd or 3rd no-show off the hook? Does return mean permanently?
- “No-Show” vs. “Late Notice”: What’s the difference? They were *not* in the classroom during the specified time. If it is a late notice, does this mean they did not cancel their services?
- “Permanently” vs. “first,” “second,” “third,” or “fourth”: Does permanently mean the student will not receive services again for the rest of the semester? Year? Just that week? When the disability support services office has waived the first one, does that mean the student has another “first” chance, or is it now the second one?

If s/he misses the morning class, that is the 1st no-show. Suppose the student misses the afternoon class. Is this a 2nd no-show? Or only for the same class missed?

- “Supervisor” vs. “counselor” vs. “service personnel”: Who must the students contact? With whom do they meet to rectify their absence?

Listed below are comments made by several schools regarding their no-show policy:

- “There is always a deaf consumer somewhere who needs interpreter coverage. Utilizing finite resources wisely benefits the deaf community. This instills a sense of responsibility in students.” – The University of Wisconsin
- “Service providers like it, and it helps us retain them, because the no-show policy is very liberal. They have three consecutive paid class sessions (no-shows) before they are cancelled.” – Cerritos College
- “Our no-show policy is clearly stated and well defined. Consequences are clearly spelled out, and there are opportunities for appeal after each violation.” – Montana State University-Bozeman
- “Having a no-show policy will continue to be an on-going challenge, because some students are quick to figure out how to ‘play the game.’ They will attend a class, skip class, attend class again, and the following class they will enter ‘no-show’ status again. This will allow them the flexibility and freedom like their hearing peers to not attend class and not have their services suspended.” – American River College
- “The interpreter will wait his/her time in class; if the student is a no-show, I can use that interpreter to substitute in other classes. Then the student shows up, looking for his/her interpreter, and realizes the interpreter has been placed elsewhere for the day. This makes the student know to be on time or call ahead!” – Ohlone College
- “It is verbally explained during training sessions that interpreting services will not be suspended if it defeats the spirit of accessibility laws and the institution’s educational mission. For example, I will not suspend interpreter coverage if a student misses two classes in a row and the third class session is a review for an exam. I prefer a strict policy with plenty of situational exceptions.” – The University of Wisconsin

When should deaf and hard of hearing students be exposed to the no-show policy?

1) First appointment after acceptance at school: After classes are selected and service needs are determined, NCOD’s written no-show policy is shown and explained to the student. After reading it and asking questions, students are asked to sign the form, acknowledging that it was explained to them.

2) Orientation: A two-hour workshop is presented to incoming deaf students at CSUN. The no-show policy

is again emphasized. More questions are asked and answered in a group environment.

3) Freshman Experience Class: First-time students are strongly encouraged to take a one to three units orientation course at California State University, Northridge during the Fall. NCOD’s Freshman Experience course for deaf students was initially created, because deaf students wanted a class in direct communication. They also wanted an opportunity to explore more deeply the issues that would impact them in college. If necessary, the no-show policy is again highlighted in class. In both Orientation and/or Freshman Experience class, role-playing is performed to maximize each student’s exposure to situational-type responsibilities. One example used in a role-playing situation is the following:

A student is complaining that he does not like to inform the front office when he is missing class. He decides to fight for “equal rights as hearing students.” He wins, and it is decided that deaf students no longer need to cancel services. Furthermore, service providers need to stay in class for 20 minutes in case students arrive late. Place this same student in the role of another student whose interpreter is sick. She has a test in class the following week, and the professor is reviewing what will be on the test. Because of the new policy, she cannot get a substitute interpreter.

Kincaid and Rawlinson (1999) state:

A university or college may impose reasonable conditions upon student access to and usage of accommodations. If the consequence of misuse is as severe as suspension of services, it must be emphasized that the conditions need to be

- 1) Reasonable and necessary
- 2) Clearly spelled out
- 3) Put in writing
- 4) Thoroughly reviewed with the student beforehand

I would encourage the college to develop a written statement that contains the student’s signature acknowledging receipt if it intends to suspend services. In all such cases, the college needs to carefully consider individual circumstances. Imposed conditions must allow students good cause exceptions for circumstances beyond the student’s control. Certainly, the college must afford the student the opportunity to grieve the suspension. As a practical matter, providers need to educate their superiors about consequences. Administrators should avoid undercutting the

effectiveness of the disability services office by enabling the student to do an end-run around it (p. 15).

Traditional One-Man Show vs. Team Approach

The traditional one-man show can be considered risky. A team approach is the ideal situation when setting up a no-show policy. Size of programs is obviously an important factor. NCOD at CSUN or Ohlone in Fremont have a larger deaf population and their staff consists of counselors, administrators, a financial person, and deaf professors. Many small programs have generalists, or one person that oversees deaf students *and* disabled students. These people do not always have much experience in deafness. Sometimes there is one person who is in charge of all services to deaf students, but s/he does everything: hires service providers, plays counselor to the deaf students, manages payroll, supervises interpreters, etc. The risk of the one-man show – where one person makes all the subjective judgments regarding the development of policy and the evaluation of “exceptional situations” – is that someone has to play God, so to speak.

Having a team of people develop the no-show policy provides a more concrete foundation and allows all bases to be covered. For larger programs, service coordinators can empower students by getting them involved with responsibilities. For instance, they can ask them to give feedback or be involved with the creation of a new no-show policy. Students can role-play. An example would be: “Three interpreters are out sick. Determine which of the three students waiting for a substitute will get the one available interpreter.”

There is always a time for all postsecondary institutions, including NCOD, to revisit their no-show policy and see what revisions are possible. Some facts are simply not arguable. Each program is given a block of money, but that does not necessarily change or affect the number of service providers. Interpreters and captionists do not grow on trees. No-show policies help organizations become adept at providing the best possible services given limited fiscal and personnel usage. The deaf CSUNians is a Political Action Committee at CSUN that coordinates all the complaints students have about service.

There are some flexible elements in NCOD’s no-show policy. These flexibilities are a result of input from students:

- Generally, students must contact NCOD two hours before class begins. For 7:00 and 8:00 a.m. classes, students can contact NCOD one hour before class begins.
- There are four ways for the student to contact the office to cancel services – by phone, by person, by fax, and by email.

- A first no-show does not require a student to meet with a counselor. S/he merely needs to request service again (via front desk, phone, email, or fax).

Programs with a small number of deaf and hard of hearing students may want to tap into other resources. This means asking deaf and hard of hearing students for their feedback. Offices can also ask a counselor from the counseling center on campus to help or a generalist from the disabled office for advice. Contact with other colleges can also occur in order to find out what their no-show policy is and to determine what they do differently and why. Finally, offices can invite two or three students to set up their own Political Action Committee (PAC).

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Where are all the Hard of Hearing College Students? Some Tips for Enhancing Services by Postsecondary and Rehabilitation Professionals

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Abstract

College administrators are undercounting students who are hard of hearing in part because many do not ask for special services. Other professionals are concerned that these students are being underserved by state Vocational Rehabilitation (VR) agencies. This article presents a cross-disciplinary description of some complex factors contributing to these adverse patterns and multifaceted solutions needed for developing comprehensive VR and Disability Support Services (DSS) programmatic initiatives to better serve this "invisible student population." A social psychological model of adjustment to hearing loss is described as are typical student case files. Specific VR and DSS managerial and staff roles in students' transitions from high school, recruitment, acceptance of hearing loss, and college persistence as well as critical components of high-quality programming are discussed. The paper includes comments made by conference session participants.

Program planners need to know how many students who are deaf and hard of hearing are enrolled in the nation's colleges. Unfortunately, the answer varies widely. National surveys of campus administrators, including those knowledgeable about students with disabilities, report between 20,000 and 24,000 students with hearing loss were attending institutions of higher education (Hopkins & Walter, 1999; Lewis & Farris, 1994, 1999). By contrast, a survey of students estimated that 258,000 with a hearing loss were in college (U.S. Department of Education, 1993). Based upon the latest demographic data (Ries, 1994), Watson and Schroedel

(2000) calculated that 197,000 of these students were hard of hearing, 52,000 deafened after age 19, and 9,000 deafened before age 19. Via audiometric criteria, Kochkin (1997) determined that amongst Americans needing hearing instruments, 72% had a mild loss (35 dB-45 dB), 21% a moderate loss (46 dB-65 dB), and 7% a more severe impairment (66 dB-100+ dB). Kochkin's survey used the same measure of severity of hearing loss as did Ries (1994), an interview protocol with responses cross-validated by audiometric criteria.

Even though most of these persons have a so-called "mild" auditory disorder, many could not clearly understand a professor speaking rapidly in a large classroom, and those with a moderate loss could benefit by using assistive listening devices (ALDs) in group conversations. However, only 5% of hearing impaired persons 18-34 years of age use hearing instruments (Kochkin, 2001), and among those who purchased hearing instruments during 2001 only 2% were 18-29 years of age (Strom, 2002). Among the many factors contributing to these age-related patterns with hearing aids is denial of the hearing loss. Only one in every five persons with a hearing impairment uses auditory devices (Kochkin, 2001).

Taken as a whole, these studies indicate that college program administrators as a group are unaware of the relatively large numbers of hard of hearing students on their campuses. In part, what is evident is that many of these students are not requesting services. Furthermore, some professionals believe that hard of hearing adults are underserved by Vocational Rehabilitation agencies (Conway & Sorkin, 1999; Corthell & Yarman, 1992; Glass & Elliott, 1992; Rehabilitation Services Administration, 2000). The purposes of this paper are to identify the reasons underlying these adverse patterns and present multi-professional approaches to remedy them. It is also important to jointly consider VR and DSS practices and policies, because developments in both professions impact the quality and quantity of services received by college students who are hard of hearing.

Barriers to Accessing and Enhancing Services

Specific problems create difficulties for those who provide and receive postsecondary support services. Students who are hard of hearing are confused by the diverse effects of hearing loss. For example, they may be able to hear and understand speech in some conditions, but not other conditions. These students also often lack peers who are hard of hearing as well as part of a mean-

ingful self-identity. VR and DSS service professionals frequently lack specialized training and misunderstand the psychosocial effects of hearing loss. Both groups often lack hard-to-find useful information.

It is especially important that service professionals understand that the term “mild” hearing loss can be misleading. Whereas 80% of this group can effectively communicate in familiar surroundings, such as home, less than 20% communicate well outside of home (Kyle, Jones, & Wood, 1985). These authors note that these individuals need effective access to information so they can feel self-reliant and comfortable in life. When their hearing diminishes to the point where this effectiveness is lost, they begin to acknowledge their hearing impairment and seek help. However, early use of hearing instruments can help to reduce communication stress and increase acclimation to the aids (Rawool, 2000). Use of aids can also eliminate much of the bewildering effect of “off-and-on” hearing – comprehending in some situations, but not others. It is crucial that these individuals receive counseling regarding the adjustment to loss of hearing (Kyle, et al., 1985). Thus, meaningful professional assistance to these persons combines appropriate fitting of auditory devices *and* personal counseling.

Unfortunately, many VR and DSS professionals and the students they serve are unaware that many who are hard of hearing live in a “twilight zone,” part of which is the damaged identity of being a partial hearing person. The other part is the label “hard of hearing” which lacks a meaningful *social* identity. Most adults who are hard of hearing do not meet similar adults, and – if they do – most are unwilling to disclose or talk about their loss of hearing. In other words, being hard of hearing is not a viable social referent group such as that shared by signing persons who are deaf. This “twilight zone” results from the social interactions between persons who are hard of hearing and persons who hear.

The Vicious Cycle of Stigma and the Self-Fulfilling Prophecy

People who are hard of hearing and individuals who can hear often stigmatize or negatively evaluate loss of hearing. Many individuals who are hard of hearing deny or minimize the communicative and social disadvantages related to reduced ability to hear (Chartrand, 2000; Hetu, Riverin, Getty, Lalande, & St. Cyr, 1990; Sorkin, 1997; Stika, 1997). This denial is expressed by avoiding social groups, pretending to understand misunderstood communication, and other deceptive behaviors that mask anger, depression, and frustration. Furthermore, experiments with persons who hear, including college students, found that subjects reacted negatively toward attributes of impaired hearing, such as behind-the-ear (BTE) hearing aids and unintelligible speech (Blood, 1997; Casanova, Katkovsky, & Hershberger, 1988). Moreover, workers who hear tease and ridicule hearing-impaired workers (Hetu & Getty, 1993).

These negative attitudes and behaviors by persons who hear reinforce the denial adopted by many persons who are hard of hearing (Kochkin, 1993). Extensive research on attitudes toward disabilities lends support to the existence of an observable vicious cycle: negative attitudes reduce the achievements of persons with various disabilities, and this underachievement, in turn, reinforces negative attitudes through a self-fulfilling prophecy (Schroedel & Jacobsen, 1978). For example, the mistreatment, miscommunication, and misunderstandings encountered by factory workers with adult-onset hearing loss inhibit their desires to be promoted to supervisory positions (Hetu & Getty, 1993). In short, this career immobility appears to support the stigmatizing “I told you so” attitude of workers who hear that diminishes the self-esteem and work performance of employees with hearing loss. This specific attitude differs from the “deaf people can’t do it” attitude primarily fostered by the paternalistic and overly protective expectations of parents and teachers of youth who are deaf.

How Persons Cope with Being Hard of Hearing

Persons who are hard of hearing use various coping styles to adjust to these social psychological conditions. *It is important to recognize this diversity of coping styles so that students who are hard of hearing are not stereotyped.* In addition to the cited studies above on denial, research on workers who are hard of hearing or late-deafened provide insights into how they interact on the job (Glass & Elliott, 1993; Hetu & Getty, 1993; Stika, 1997). These coping styles can be extrapolated to college students who are hard of hearing.

There are two primary groups of coping styles: proactive and reactive. Proactive styles include (a) assertiveness to obtain goals and (b) overcompensation, or endeavoring harder than peers who hear to succeed. Reactive styles are characterized by denial of the hearing loss, pretense, bluffing, deception, limited interaction, and social withdrawal. Many of these reactive behaviors reflect resistance to change by the person who is hard of hearing (Carmen, 2001). A resistant person invests much negative energy into maladjustment to their loss of hearing. An untreated hearing impairment reflects long-term problems with social relationships, communication, low self-esteem, negative emotions, and other setbacks. Without knowing better, such persons unconsciously develop what we term reactive coping styles. To effectively help this type of individual, the counselor must use compassion, understanding, and agreement to redirect the person’s energies toward more positive and effective behaviors (Carman, 2001). While using guidance, the counselor defers to the consumer’s right to make his or her own decisions.

Snapshots of Typical Students

These snapshots exemplify some of the unique issues VR and DSS service professionals face when working

with college students who are hard of hearing. Several common themes are found in these snapshots from VR and DSS case files. One is the wide range in loss of hearing, from mild to profound, among these students. Another is initial aversion to anything identifiable to loss of hearing: sign language, students who are deaf, hearing instruments, other communication accommodations, and the hearing impairment itself. These snapshots also signify the important helping roles performed by service professionals, including the vital role of assessment, particularly of communication abilities.

Gina

Gina's VR counselor, who is also hard of hearing, garnered some of the following information as a result of talking to her. Currently a high school senior, Gina wanted to attend a small private college and study the psychology of persons with hearing loss. Her ACT score was 13. She has trouble hearing conversations in noisy groups, often misunderstands, responds inappropriately, and sometimes bluffs. She also misses a lot of classroom discussions. Despite a moderate to severe hearing loss, she does not wear hearing aids due to auditory feedback problems and the inhibition she experiences when wearing them. Gina tried an FM personal ALD with her VR counselor and liked it. However, high school personnel had often asked Gina to use an FM system, notetakers, and hearing aids, but she had refused these accommodations. She had been reluctant to wear behind-the-ear (BTE) hearing aids. After a new audiological exam, she received a BTE aid on one ear and an in-the-ear (ITE) aid on the other. The VR counselor is now completing further diagnostic intelligence and academic testing.

Debbie

Debbie was referred to VR by the DSS office during her first year in college. At that time, she had a profound hearing loss in one ear and a mild hearing loss in the other and no longer wore a hearing aid. Also, her hearing aid did not have telecoils. Debbie did not self-identify many problems with her hearing loss during the communication assessment conducted by DSS staff. Her VR counselor assisted Debbie by replacing the hearing aid with a telecoil before the warranty ended. Debbie was advised to stay in touch with the DSS office. She also was instructed about using ALDs and personal alerting devices VR purchased for her. Debbie eventually used the FM system in lecture classes, but did not like using it in group discussion classes. Moreover, one professor refused to use the FM system, and Debbie received a D in that course. Her goal is to become a meteorologist.

Dale

Both Dale and his father are hard of hearing. Prior to attending college he took the Test of Adult Basic Edu-

cation. When his mother called the DSS counselor to schedule an appointment, she was asked if her son needed an interpreter. Her reply was, "We do not need that. Our family does just fine." This suggests denial of the hearing loss exists in the family. Subdued when he learned that five students who are deaf would be tested with him, Dale wanted to know why he was included with "those students." VR referred him to the specialized summer transition program at a community college. Uncomfortable in the beginning, Dale later began to warm up, especially when he met other nonsigning students who are hard of hearing.

He was exposed to ALDs and oral interpreting, but he refused to use them; he only wanted a notetaker. However, at midterm — when he was not doing well in his classes — Dale agreed to try an oral interpreter. Later he commented, "I never realized how much I missed." He was angry that he was not provided these services in high school. After discussing it with his VR counselor, Dale changed to a more academically demanding major. When his grades began to fall again, his counselor asked if he would try C-Print, which he found very beneficial and has regularly requested it. Dale is still uncomfortable with others knowing that he is hard of hearing. However, he will soon graduate and then transfer to a four-year college.

Phil

With a moderate to severe hearing loss, Phil was mainstreamed in grades K-9 before attending a high school for students who are deaf where he never fit into the peer culture. He had little initial contact with VR, because he chose an out-of-state college. After trying a college with limited accommodations, he withdrew to work for several years. He later enrolled in an out-of-state community college that had a program for students who are deaf and hard of hearing, but he felt out of place, since he was older and more mature than most other students. Encouraged by his counselor, Phil soon became involved in intramural sports and computer courses where he found his niche. Becoming a "big brother," student worker, and summer transition program assistant increased his interpersonal skills. He also befriended some same-aged students who hear.

Enrolled in developmental courses the first semester, he did well in his reading, math, and computer courses but had great difficulty with written English. He took second-level developmental English three times before he advanced to English Composition. Phil has almost finished his major courses, but slow progress in English delayed his graduation. His counselor taught him how to deal with frustration and outbursts in the tutoring lab. He did get his Associate's degree as a result of his determination, persistence, and special assistance from his instructors, tutors, and counselor.

Organizing and Enhancing VR and DSS Services

Program Preparation and Changes

Staff serving students who are hard of hearing need specific training to understand, among other things, the psychosocial differences between these students and those who are culturally Deaf. Enhanced communication is essential. Staff members must have good speech skills and possess a basic amplifier, such as a Pocket Talker, to reduce communication problems. Personnel must know about ALDs, including options for connecting them to hearing aids. Service staff should work closely with on- or off-campus audiologists assisting students.

VR and DSS staff can set up an attractive assistive devices center where students who are hard of hearing can easily try out communication technology. Designated staff need to know this technology well in order for them to proficiently demonstrate and answer questions about it. Possibly VR and DSS can share the cost of this center. DSS staff should educate faculty about ALDs. Furthermore, VR and DSS programs need to have widely available offices and pay phones with amplifiers and TDDs.

Do not presume students who are hard of hearing are being served appropriately. Counselors or other staff members may not be especially trained to assist these students. In addition, some state VR offices do not serve students who are hard of hearing due to order of selection policies by which they are not classified as severely disabled or most severely disabled, the top priority groups for agency services.

Recruitment and Transition

VR and DSS service professionals need to work well with high school teachers, counselors, and parents for advocacy and referrals. Moreover, these individuals need to understand the different legislative mandates for various services. Pre-college educational support services are publicly *entitled* by the Individuals with Disabilities Education Act. By contrast, provision of VR services are determined by eligibility criteria specified in the Rehabilitation Act. Furthermore, the civil rights associated with these services are identified under Title V of the Rehabilitation Act of 1973 and the 1990 Americans with Disabilities Act.

High school students who are hard of hearing as well as their parents and teachers may have doubts about successfully moving into postsecondary training. To counter this, DSS and VR personnel should circulate publications about the achievements of college students who are hard of hearing to inspire other students. More directly, DSS staff need to conduct summer transition or extended orientation programs to expose students to DSS services, career exploration options, dorm living, and extracurricular activities that include other students who are hard of hearing. These experiences can ease the transition to college life.

Efforts to Reduce Student Resistance

In addition to what was previously described about persons resisting acceptance of their hearing loss, service professionals can use other approaches to help students develop pragmatic problem-solving skills. It is important to use appropriate communication assessment instruments to assist student awareness of problems due to their hearing loss. Do not assume students are conscious of these difficulties. Many cannot readily identify communication difficulties without a reality-based questionnaire or other assessment tool. Service professionals often need a structured approach: (a) to help students identify problems one at a time, (b) persist until the problem is resolved, and (c) progress to the next identified problem. DSS personnel can also utilize peer counselors and older students who are hard of hearing; they can informally share ideas and information with new students.

Promoting Student Retention

Although it is known that 75% of students who are deaf quit college before earning a degree (Stinson & Walter, 1997), comparable information is unavailable on students who are hard of hearing. DSS personnel can promote persistence by disseminating relevant publications from Self Help for Hard of Hearing People (SHHH at www.shhh.org) or asking former successful students for testimonials new students can read. Another idea is to establish a Hearing Loss Awareness Day or week that includes displays with materials, captioned videos, and ALDs to demonstrate to faculty, staff, and students. It is especially important to train campus personnel about students who are hard of hearing. Staff should also inform students about on- and off- campus activities, such as events sponsored by SHHH chapters. DSS personnel should invite VR counselors to regularly meet with students whenever needed.

Critical Programmatic Components

There are several vital components to an effective VR or DSS service program for students or consumers who are hard of hearing. One is for service professionals to recognize that these consumers have unique characteristics which significantly differ from those of persons who are deaf. Secondly, it is necessary to assess programmatic services to these students. Look at how many students have been served, and identify areas that need improvement through reviewing program case files and other databases. A third critical component is that service staff need to have specialized training, which is an essential prerequisite for effective services.

The next thing that is critical is training in technology — audiology, hearing aids, ALDs, and alerting devices. This technology is difficult to understand, and most students who are hard of hearing are not taught about it. Many audiologists are unaware of ALDs and

related technology. It is important that you have trained staff who know this technology, because it often requires several people working together to come up with a solution. The technology is often imperfect and frequently changes as new devices become available. It is certainly worthwhile to develop good relationships with vendors of devices to ensure reliable follow-up assistance. Effective liaison with audiologists is also important.

Related to that is the need to use an assessment tool to discover each student's communication problems. They will not know this for themselves. Counselors need a pragmatic and realistic assessment instrument to help students identify real-life communication problems so that they can begin to take responsibility for them.

Furthermore, helping persons who are hard of hearing often requires extra patience and positive attitudes. Many students need time and encouragement to identify and address problems with their hearing loss. If the counselor overloads them with information about technology and services, they will feel overwhelmed. When interviewing a new consumer who is hard of hearing, it is advisable to have an ALD ready for him or her to try. This helps to overcome some of the fear about this technology. Effective counseling requires being supportive, adaptable, and creative in meeting the heterogeneous needs of consumers and students who are hard of hearing.

If DSS Builds a Quality Program, Will These Students Come?

There are two key foundations for a high-quality on-campus service program. The first includes meeting legal mandates in providing reasonable accommodation and equal access. The second is that a qualified professional serves as the designated DSS program coordinator. These programmatic attributes are essential for successful student recruitment, transition-making, and retention.

In order to increase the number of enrolled students, it is instrumental to begin with an effective recruitment plan. Collaboration with VR is also important, but it is not enough. Successful DSS program marketing requires developing good working relationships with campus administrators, staff, and faculty. DSS personnel must also inform these people — in addition to students, parents, and high school counselors — about what the program can and cannot legally provide. People are often confused about the “free” educational support services provided in grades K-12 in contrast to the continuing services offered by vocational rehabilitation and postsecondary programs.

The next step is for the student to make a smooth transition from high school to college. A specialized transition program sponsored by DSS for students who are deaf or hard of hearing is preferable. It helps them learn about role models, student peers, the structure of the college, support/access services, and campus social life. If a college does not have this focused transitional pro-

gram, then it is important to infuse information about DSS services into the general orientation period for all newly enrolled students.

Retention is another key issue. A comprehensive DSS service program is essential to assisting students to persist in college. In addition to well-trained personnel, such a program must have effective plans for student recruitment, orientation, accommodations, access, and training of campus personnel. DSS staff also need to be well-informed about the psychosocial adjustment needs of students who are hard of hearing. Furthermore, they need to be able to work closely with VR professionals.

Comments by Session Participants

John Schroedel. We are the first to admit that we do not know all the answers for improving DSS and VR services for college students who are hard of hearing, so we need your input and ideas.

Comment. I work in a DSS program in California, and I have not interacted with the VR offices in the last few years. I am beginning to contact the office in Sacramento. How can I blend our services?

Patty Conway. With VR, it varies from state to state. One example is their policies on the order of selection. Your staff has to be trained to recognize students who are hard of hearing with the most significant disabilities. We are not serving everyone who has a disability. I know that California is constricted by financial limitations. If a state agency is only able to serve consumers with the most severe disabilities, you will have a hard time getting services for consumers who are hard of hearing.

Carol Kelley. Because DSS does not always use the same standards as VR, you may be able to help students through DSS resources.

Comment. We serve a variety of students in Iowa. When we contacted VR, we found they had tiers for the severity of disability and that they would only serve a percentage of each group. Even though our students do not fit in the higher tiers, we are getting a significant level of support. The VR director was very willing to set up a 50-50 sharing arrangement. Also, I appreciate all of the assessment tools that you have given us.

Patty Conway. Relevantly, often you need to separate issues that arise from loss of hearing and those that may arise from mental health conditions.

Comment. For training on the psychological attributes of persons who are hard of hearing I recommend Sam Trychin, an expert trainer on this subject.

Patty Conway. We originally had Sam come in to train our DVR staff. We picked Sam because he allowed us to videotape him and we use these tapes now. The first module was a week long.

Comment. Sam is the one who turned me around. I went to a two-week session at Gallaudet University with him. There was a session at the Western Region Outreach Center and Consortia, based at California State

University at Northridge, available on the PEPNet Web site (<http://www.pepnet.org>). Sam is also available for independent training sessions.

John Schroedel: Campus outreach is also important. The University of Georgia DDS program started "Sound Off," which includes cathartic rap sessions for students who are hard of hearing to talk about coping with their hearing loss. These unsupervised group raps let students open up and serve as a unique club for these students. This is a way for DSS programs to reach out to students who are hard of hearing.

Comment. You can contact the four regional PEPNet Technical Assistance Centers (TACs) for information on serving college students who are deaf and hard of hearing. These TACs include people in each state to assist with general information and problem solving.

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Deaf and Hard of Hearing Students in Health Sciences Programs

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Abstract

Many health sciences programs and disability and rehabilitation professionals have taken the view that deaf or hard of hearing students will have difficulty succeeding in such programs. Actually, healthcare professionals who are deaf and hard of hearing have been and continue to be successful nurses, doctors, and dentists. The Health Sciences: Faculty Education Project is a three-year federal grant project located at Oregon Health & Science University (OHSU). The Project is one of 22 federally funded grants focusing on issues of educating faculty in higher education regarding the issues of students with disabilities. This is the only grant to focus specifically on health sciences programs.

Project Overview

As the number of students with disabilities has steadily increased in higher education programs, “high stakes” programs such as medical schools, law schools, nursing schools, and business schools are now feeling the impact of that increase of a diverse student population, including students with disabilities. Health sciences programs seem to be quite uncomfortable with the idea of students with disabilities as future doctors, nurses, and dentists. This project has focused specifically on training faculty in health sciences programs to the unique qualities of their programs and how to more effectively include students with disabilities in their programs. Faculty training has focused on the clinical training portion of students’ education. This is done through an interactive workshop called “A Day in the Life . . .”, which follows a student with a particular disability (deaf, LD, blind) through their clinical requirements in their particular course of study (nurse, doctor, dentate). Faculty play a key role in helping to “level the playing field” for the student in the case scenarios, as they brainstorm how to make it work while maintaining patient safety. Another key component of the training with faculty is the viewing of interviews we have conducted with practicing health care professionals who have disabilities themselves. These

videos illustrate the real life situations of successful health care practitioners with disabilities. These professionals discuss how they made it through school, what accommodations and strategies they used, and the value-added aspects they bring to their professions. These videos are available for purchase through our website at <http://www.healthsciencefaculty.org>

Unique Issues in Health Sciences Programs for All Students

There are several unique issues that come up when discussing *all* students in health sciences programs. The top two that are of consistent concern for faculty and students are clinical settings and patient safety. Students will be in clinical settings for a large portion of their training, and they will be working directly with patients. In fact, in some allied health programs there is very little classroom work, but rather the bulk of the training takes place in a clinical setting. Medical school programs usually include two years of clinical rotations.

A third unique issue for health sciences programs is the concept of the undifferentiated graduate, or the idea that all students must perform all skills. Even if someone chooses a specialty, such as pediatrics, s/he must perform all the clinical rotations – surgery, family medicine, ob/gyn, etc. This is true for all students. Students graduate with a broad education. Then, they spend their residencies focused on their particular specialties.

Most health sciences programs are lock-step programs. That is, there are very little to no choices about the classes students take and no choices about the order in which they take them. Lock-step programs have pros and cons. One of the pros is that students and faculty know what is coming next. It is not a surprise in what order classes will be taken; therefore, faculty and students can plan ahead of time. However, problems can arise if a student steps out of the program for any reason; this can include an illness or a family emergency (disability-related or not), and the student must wait a full year to get back into the rotation of classes.

A technical standard in health sciences programs is also a very hot topic. This includes all the non-academic requirements to get into a program. For most health sciences programs, there are usually prerequisites – a certain GPA and technical standards. Some technical standards are written very narrowly or specifically – for example, “You must be able to hear through a stethoscope” or “You must be able to

transfer a person from a bed to a wheelchair unaided.”

National exams are a fact of life for students in health sciences programs. In most cases, students have to take national and state exams to become licensed. The difficulty is that students with disabilities are receiving accommodations for their exams while in their programs, and healthcare professionals are receiving workplace accommodations; however, students are finding it very difficult or impossible to receive accommodations for state and national exams. This is very frustrating for students and faculty. A great deal of money is spent to educate and train health sciences students. These students are seen as capable and qualified, and they are graduating with their degrees from medical, nursing, and allied health programs. However, when these students take their exams – national and state – and request accommodations, they are being denied these requests.

Health sciences programs are fast-paced and rigorous. They want to keep students moving at a very quick pace, and students experience a great deal of stress. The environment is highly also competitive. Many of the students in these programs were top pupils in their undergraduate programs. They knew they were doing well and did not always have to work hard. However, in most health sciences programs, other extremely successful students surround them. Entrance into such programs is highly competitive, and students who have been accustomed to being at the top of their classes must compete with other students who are coming from the same perspective. No longer are students able to just slide through, so to speak, without much work; now they must actually study to pass.

Health care professionals are surrounded by the no-flaw myth. There is the feeling that if healthcare professionals are prescribing to others what they need to do to be healthy, they must present that they themselves are healthy. This means that they cannot admit that they smoke, that they do not exercise, or that they have any kind of flaw – such as, a disability. Few healthcare professionals will admit this, but it is pervasive. Students may bring this idea with them when they enter their programs, or they may be taught the idea directly or indirectly during the course of their studies.

Faculty members in health sciences programs play a different role than in most other postsecondary programs. Most college faculty members have a specialty they teach. They are knowledgeable about their topic and can assist students in the research and in-depth study in that field. Healthcare faculty members are usually clinicians first who also teach classes. They have the title of faculty but see themselves first and foremost as clinicians. When there is a student with a disability in the program, there are faculty members who will use their clinician roles to talk to the students as clinicians. They will make such comments as, “Have you been going to physical therapy? I know a specialist who can help you.” How-

ever, the students want to be taught; they do not want someone to take care of them. Faculty members do not intend this; rather, they resort to a role that feels the most comfortable to them. This role confusion can be hard on students. They are expecting to work with and communicate with their professors as faculty and mentors – not as clinicians who are questioning them about their own healthcare situations.

Disclosure Issues

Disclosure of a disability in health sciences programs feels unsafe and is, indeed, unsafe. There have been several court cases related to issues of accommodations for students with disabilities in health sciences programs. There is an immediate sense from institutions that if a student has a disability, s/he is automatically at a higher risk for issues related to patient safety. There are currently no studies or statistics that indicate that students with disabilities in health sciences programs have a higher level of patient safety incidents. Anecdotal information from students who have disclosed their disabilities shows that they feel a higher level of expectations and scrutiny. As a result, they feel there is no room for error, which is not the case for their non-disabled peers. There is a sense in the health sciences programs that students with disabilities do not belong there. The faculty, administrators, and students perpetuate this. It is not and does not feel safe to disclose; therefore, students with hidden disabilities (learning disabilities, attention disorders, and psychological disabilities) choose not to disclose. This is frustrating for the faculty members who are receptive to working with students with disabilities, as they feel they are unable to support or assist the students. There are some institutions that are receptive to having students with disabilities in their programs.

It is a competitive process to gain acceptance to most health sciences programs, and students who are accepted are considered excellent students. These are students who were accustomed to being the “cream of the crop” at their high schools or at their undergraduate institutions. They have had very little experience in failing to do good coursework. It is a new experience to be in a program in which *all* the students come from this same experience. Consequently, competition among students can be fierce. They do not want to admit to any flaws, and pride is at stake. They do not want to feel inferior, and they fear their peers’ reactions. They also do not want to be perceived as receiving favors or anything “special.” It is a culture that makes it difficult for students with disabilities to disclose. They do not want the resentment from their peers and would simply rather struggle than ask for accommodations.

ADA 101

The Americans With Disabilities Act (ADA) is not an entitlement law; it is a civil rights law that is akin to the Voter’s Rights law. The goal of the ADA, an anti-

discrimination law, is to assist individuals in getting in the door, so to speak. Unlike IDEA, the goal is not to foster successful learning but rather to create and set up a level playing field. There is a sense that if accommodations are provided the student will automatically be successful. In fact, the ADA is an outcome-neutral law; one is not guaranteed success. Individuals have the right to fail or succeed like everyone else does. However, a level playing field – that is, access to the educational environment – needs to be provided. This is different from IDEA, which stipulates the establishment of successful learning environments.

Southeastern Community College versus Davis (1979)

Southeastern Community College versus Davis (1979) is the only higher education court case to go before the Supreme Court. It happened eleven years before the birth of the ADA. However, 504 was in place. Francis B. Davis was a hard of hearing person who applied to a nursing program at Southeastern Community College; thus, the existence of this case.

There are several issues that arose as a result of this case – the question of “otherwise qualified,” the fundamental alteration of a program, and unreasonableness. This case has and continues to be one that Vocational Rehabilitation counselors, disability support service providers, and faculty use as a way to refuse deaf and hard of hearing students’ admission into nursing programs.

Was Davis otherwise qualified? At that time, the ADA did not exist. The court decided that Davis had to meet the qualifications to get into the program *in spite of* her disability. Reasonable accommodations that might be used in the course of the program were not taken into account. Was she qualified with her hearing loss and without taking into account possible accommodations? The answer was no. Now the ADA has combined these two concepts – otherwise qualified and reasonable accommodations. In the Davis decision, these two concepts were not seen as related. Since the Davis case, there have been education and employment cases that have combined these two concepts. Today, courts also consider mitigating measures. They ask, is the individual still a person with a disability after mitigating measures are taken into account?

At the time, Davis read lips. It was 1979, and most of the technology we take for granted now did not exist or was not readily available. The nursing program said that the only way she could get access to information in the clinical setting was if she was closely supervised on a one-on-one basis. The institution deemed this to be unreasonable.

There is quite a bit of controversy surrounding this case, and it is still debated and discussed among disability professionals and lawyers. Was there a thorough investigation into the effects and level of her hearing loss? Were there other alternatives for her, aside from being closely

supervised and monitored on a one-on-one basis? Davis was not given the opportunity to demonstrate how she would safely access information and do her required tasks. The institution made its decision based on its experience with her during the interview process and the interviewer teams’ difficulty in communicating with Davis. Based on this, they determined and assumed that she would be unsafe in her work with patients.

The original court found in favor of Davis, and the case went to the Supreme Court. Since that time, the ADA has been passed, and the concepts of otherwise qualified and reasonable accommodations have been combined.

Technical Standards

Technical standards are “all the nonacademic criteria that are essential to participate in the program in question” (34CFR §104 Appendix A, ¶ 5). How they are written is important. Technical standards should assess *what* and not *how*. If the standard is “the student must be able to transfer someone or move 50 pounds,” then that is the *what*. One can move it by asking for help or using a lift, etc. This meets the standard. Technical standards, however, often detail the *how*, such as “the student must be able to lift the 50 pounds by him/herself” or “the student must be able to talk to patients.” Often, technical standards are written using exit criteria as entrance criteria, such as “the student must be able to hear to detect a heart murmur.” It is difficult to accept that as an entrance requirement. By the completion of the program, a student should know and be able to detect a heart murmur, but, prior to entrance into the program, s/he may not know what a heart murmur is. They are in the program to learn that information.

Technical standards should not be written specifically to exclude people with disabilities or as a description of impairment. However, this occurs all the time. Standards such as, “must be able to hear,” “must be able to see,” and “must be able to communicate through talking” exist. Technical standards are often written specifically to exclude people with disabilities. Furthermore, programs are not required to have technical standards unless their certifying body requires them. There are a few programs around the country that have done away with technical standards all together. Instead, they rely on academic entrance requirements, personal statements, and personal interviews for the entrance requirements.

Most programs have competencies students must complete in order to proceed in their programs and/or pass and graduate from their programs. Often these competencies assess the issues that many institutions try to pre-screen for by establishing technical standards. The hidden agenda surrounding the issue of technical standards is the issue of patient safety. Most institutions have a list of technical standards that are sent to accepted students. Students are expected to read and sign the standards, indicating they are able to meet/fulfill the listed

standards. Students are not asked to demonstrate whether or not they meet the technical standards – not until students have obvious or disclosed disabilities. Then, suddenly students are asked to show/prove that they meet the technical standards. If any student has difficulty in a class, most institutions will not reject or dismiss the student. Instead, they work with the him/her to remediate the problem or difficulty. The same needs to be done for the student that experiences a disability. There are many safety nets already in place. Institutions will not graduate unsafe students with or without a disability. If a student fails a competency or task in the lab setting, s/he is not allowed to proceed to the clinical setting. The student with a disability needs to be treated the same. Disability does not automatically raise a student to a higher risk level. If you *only* ask the person with the disability to prove they can fulfill the technical standards, that is a problem. Other students are asked only to sign-off on the technical standards while the person with a disability must, in some cases, actually prove they can meet the technical standards.

The bottom line is clinical and patient safety. Bells go off when a student has a disability; there is an automatic assumption that patient safety is at risk. One of the ways for students to address the situation is to do clinical observations. They can spend time at a clinical site with faculty and gain their respect. Faculty will then feel that an understanding of the environment in which they operate is forming. This will also give students the opportunity to determine, in some cases, what serious issues are versus what faculty members say are issues. For instance, many faculty members claim that the inability to hear overhead pages is problematic. However, many hospitals do not use overhead paging systems anymore, because they are sometimes ineffective. Doctors and nurses carry individual papers. This is not problematic for deaf and hard of hearing individuals.

Direct Threat EEOC Guidelines

The EEOC has developed guidelines that institutions and employers can use to determine if there is a significant risk of a direct threat. One cannot randomly decide that a person is unsafe to work directly with patients. The following question needs to be asked: Is this student or any student really at risk of doing harm to a patient? Instead of making a judgment call based on a faculty member's view about what a student with a disability can or cannot do, these guidelines offer a step-by-step process to follow.

Other Issues

Questions are often raised about core requirements or substitutions for such requirements. Another issue can be oral proficiency exams versus written exams. OCR court cases defer to academicians. If programs can prove that a requirement, competency, or specific type of exam

is essential, they do not have to change it. This is true for education in general – not just health sciences programs. The academic side of the court gets to decide what is core or essential. However, faculty or an institution can determine that it makes little sense to prevent a student from continuing or graduating simply because they cannot pass an oral proficiency exam.

Health sciences programs expect students to be as good at knowledge or the didactic portion of their programs as they are at the clinical portions. Students spend time in class showing they understand the material, and then in the clinical situation they must show they are equally adept at applying that knowledge. These are very different skills, and students are rarely equally skilled in both areas. Most faculty will tell you that the most important skill for a healthcare provider is critical thinking. Applying knowledge and critically thinking through problems are very important. However, when it comes to exams, students can pass the cognitive portion of exams with 80% but must pass the hands-on portion of exams at 100%. There seems to be a disconnection here in terms of the traditional culture's training of health sciences students and the reality of the skills they will need. This relates back to the issue of the undifferentiated graduate. Is it really the best medical training model to require students to go through an arbitrary set of rotations? Not all specialties are covered in the rotations, and if there is one of those rotations a student cannot do, s/he cannot become a physician at all.

The Role of Disability Support Service Providers

Vocational Rehabilitation counselors, disability support service providers, and faculty must not limit their clients or students with disabilities. They must not automatically assume that a person with a disability cannot become a healthcare professional, and they must consider what they can do to eradicate misperceptions. It is important to understand that there are many successful individuals who are practicing healthcare professionals and people who experience some kind of disability, including deaf and hard of hearing nurses. It is also important to understand what the Davis case did and did not say. Disability support service providers can use that case as a way to understand program requirements and technical standards – reasonable and unreasonable. They must not use it as a way to deter deaf or hard of hearing students from pursuing careers in the health sciences professions. There are still roadblocks ahead, but healthcare professionals with hearing losses are showing that they are competent, capable professionals who bring a wealth of information and experience with them to the profession.

Resources

Websites:

Health Sciences Faculty Education Project
www.healthsciencefaculty.org

AMPHL (Association of Medical Professionals with
Hearing Loss) www.amphl.org

WROCC Outreach Site at Western Oregon University
www.wou.edu/wrocc

PAH, MD (Promoting Awareness in Healthcare,
Medical and Deaf)
[www.urmc.rochester.edu/smd/stdnt/pahmd/
welcome.htm](http://www.urmc.rochester.edu/smd/stdnt/pahmd/welcome.htm)
E-mail: PAHMD@aol.com

Technology:

Job Accommodation Network (JAN)
800-ada-work (v/tty)
E-mail: jan@janweb.icdi.wvu.edu
<http://janweb.icdi.wvu.edu>

Harris Communication
800-825-6758 (v)
800-825-9187 (tty)

List Serv Chat Group:

NOISE (Network for Overcoming Increased Si-
lence Effectively)
Contact Danielle at drastet@attglobal.net.

Accurate Assessment of Literacy Skills: A Possible Task for Educators

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members of the English Department continued the legacy, but decided to investigate literacy learning practices outside Deaf Education. They began to study the most recent pedagogical and assessment practices in literacy learning. To add to the task, the Department, composed of three instructional groups (Development English, freshmen and Sophomore English, and Junior and Senior English courses), employed different means of teaching and different assessment instruments in each group. Understandably, students who progressed through the groups were confused. To deal with these challenges, the Department established an Assessment Committee to tackle the following tasks:

- Establish continuity in curriculum
- Demonstrate continuity in testing and assessment
- Reflect the most current pedagogical practices

Abstract

With the increasing emphasis on high-stakes testing in post secondary institutions, educators are frustrated and perplexed as to how to present an accurate measurement of Deaf and Hard-of-Hearing learners' literacy skills. This problem exacerbates particularly when attempting to assess the literacy skills of those students who represent diverse ethnicities, cultures, and learning styles. This paper will discuss alternative approaches to traditional high-stakes assessment. The paper will include a discussion of how to develop students' self-assessment, how to create literacy portfolios, and offer real-world assessments to determine literacy growth. The paper will also discuss the process of changing views and attitudes about appropriate and accurate assessment that assists both students and educators in understanding literacy growth.

Introduction*History of Assessment Practices at Gallaudet University*

Struggling with the same dilemma that all teachers of English face, how to teach and to assess the literacy skills of their learners, the members of the Department of English at Gallaudet University have spent decades trying to teach and apply the most appropriate tool to assess students' English skills. In the past ten years, the

This investigation and self-assessment of the Department's practices caused a paradigm shift in the approach to teaching English. Similar to most English Departments, the methods of assessment were language tests: tests of parts of speech, sentence patterns, grammatical structure, verb tense, and verb patterns, and a written language test. These kinds of tests provided a survey of students' understanding of grammar, verb tense and patterns, and structure, essentially, a language assessment. Yet, the Department members knew this assessment was not getting at the heart of our students' abilities to use language. Further, students knew the tests weren't testing their abilities. Although students could pass vocabulary and grammar tests with remarkable scores; they could not read nor write.

The existing tests were based on memory rather than understanding. Some faculty members doubted that memorization was a means for a person who did not have a spoken language to acquire written English. The tests results verified these notions; students did not "own" English. They simply memorized what was necessary to pass the exit exams. They did not care about the importance of acquiring a language; nor did teachers ask them to care. At least, the means of assessment used did not ask them to care. English was simply a barrier test to pass to enter other courses. The impact, significance, and ability of English to provide power in a culture were not recognized. With the real-

ization that emphasis on the atomistic aspects of English was not helping students — and the understanding the English literacy, not just language, was important—members of the Department began to investigate new theories and practices in literacy learning. The faculty adopted the view that (1) literacy is the ability to gain fluency in a language and to recognize the contexts and values that give a language power (Gee, 1991) and that (2) language and literacy acquisition occur when there is a social/cultural need to use English. (Vygotsky, 1934/1986)

Teaching practices changed. Teaching now integrated more interaction between teaching and student and student and text. Teachers became facilitators rather than lecturers. Teachers helped students to build their literacy skills by scaffolding (Bruner, 1996) our lessons. Faculty established structures for students to connect their language learning to purposeful, real-world uses. Finally, the faculty members followed the belief that frequent, in-depth interactions are essential elements in thought and language development (Bakhtin, 1981).

The assessment committee searched for an accurate means to assess students' literacy skills (a test that would inform teachers and students of the use and understanding of reading, writing, and thinking abilities. Further, the Committee knew the Department needed a test that was normed and validated to help to compare its student population with others. Finally, any assessment tool must provide data that would inform and satisfy federally mandated requirements since Gallaudet University is a federally funded institution.

The Department needed a reading assessment instrument that did more than test vocabulary or short answer questions based on a brief narrative. The Department needed a reading comprehension test. The Degrees of Reading Power by Touchstones Applied Science Associates was viewed as the appropriate assessment instrument. The DRP is a MAZE test (as opposed to CLOZE test) that provides progressively challenging lengthy narratives with key words missing. Students may select the appropriate word to fill in the blank from a supplied list. All selections could fit, thus, requiring the reader to understand the text and to employ reading skills such as context clues. The DRP requires the reader to think and to interact with the text, thus reinforcing the notion that reading is an interactive process of meaning making. Further, to promote the concept that writing is a process of thinking and reflecting, members of the Department developed, tested, and normed the Gallaudet Written Exam (GWE). The fifteen years of development of the GWE resulted in a modified holistic test that informs both students and teachers of students' abilities to convey meaning through written English.

Although the Department now uses these tests as placement and achievement tests, they recognize that

no test is perfect. These tests are not high stakes tests. No longer do the results of these tests determine exact placement in a course or whether or not a student passes or fails a course. College entrance exam scores, interviews with teachers, and first-week in class assessments verify or invalidate placement. Further, the results of these tests are part of a full semester of assessments of students' abilities. Nonetheless, faculty strive to locate better assessment tools. The process is lengthy and arduous, but worthwhile. The English Department is now investigating a means to provide, as Elbow (2002) states, "A motion picture of a student's ability rather than a snap shot." The remaining portion of this seminar will invite you to participate in the application of the following literacy assessment instruments: The Literacy Portfolio, The Degrees of Reading Power, and The Gallaudet Written Exam.

One Alternative Assessment: Literacy Portfolios

Literacy portfolios have been created by many students as an alternative assessment. Some faculty members in the Gallaudet University English Department have been using literacy portfolios for a variety of reasons. Literacy portfolios can provide students and teachers with opportunities for on-going assessment. Assessment for portfolios can be done on a weekly basis so students can continually see their progress. Literacy portfolios can also provide students with opportunities for self-assessment. When students self-assess, they retain more of what they learn since they reflect on their learning processes. Literacy portfolios can show growth over a period of time, complement standardized measures and document what students do in class.

One Definition of a Literacy Portfolio

Literacy portfolios can be defined as purposeful collections of students' reading and writing tasks that show the students' efforts, progress and achievements during an academic year. Students must also include evidence of self-assessment and help select their portfolio items (Nickerson, 1996).

Students learn to be responsible for their own learning

Students who develop and maintain literacy portfolios can learn how to reflect on their own work in their portfolios in order to identify their strengths and weaknesses in reading and writing. This allows them to see their own strengths and build on their weaknesses. This process helps students become self-assessors and more responsible for their own learning processes.

What should students include in their literacy portfolios?

Students can include a variety of items in their literacy portfolios. They often include multiple drafts of

essays, reflection papers that discuss the essay drafts, interviews, attitude surveys, reading logs, and reaction papers to a variety of reading selections.

Multiple Drafts of Writing Assignments and Reflection Papers

When students write multiple drafts of their work, they reflect on their writing, revise their ideas, organization, and grammar structures, build on their strengths as a writer and (hopefully) become more confident. Students who self-assess engage in metacognitive strategies when they reflect on their own learning and become aware of their own cognitive processes for their reading and writing abilities. Students can ask themselves questions, such as 'How has my essay improved from the first to the last draft?' or 'How have my ideas changed since I read new information on this topic?'

Interviews

Teachers may want to interview students throughout the year in order to focus on the strategies students use while they read and write. During this process, students and their teachers become aware of the students' strengths and weaknesses. Questions on interviews can include ones such as, 'What do you do before you read a new selection?', 'What are your strengths related to reading and writing?' and 'What are your weaknesses related to reading and writing?'

Attitude Surveys

Attitude surveys help students think about their own feelings related to reading and writing. Students who have created literacy portfolios in our classes have documented their opinions on various surveys. These surveys enable students to see how their attitudes change over a period of time. Students may also want to complete attitude surveys that might include questions such as the following. Students read statements such as, "Books should not be read except for class requirements" and then are asked to circle their response ranging from strongly agree to strongly disagree.

Reading Logs

Students in our classes were asked to keep a record of reading selections they read and the length of time they read during two-week periods. After the students documented what they read and how long they read, they were asked to analyze their reading logs. As soon as students analyze what they have read and how long they have read, most students realize that they can and should improve their reading habits. Maintaining Reading Logs enables students to focus on their reading habits.

Reaction papers to reading selections.

Students can include reactions to reading selections they read and discuss in class. These reaction papers allow students to focus on metacognitive strategies, new topics or adding information to their existing knowledge of topics, and their feelings related to topics. Students often want to share their feelings about what they have read and reaction papers enable students to express themselves. These reaction papers also help students document what they learn in class over time.

Benefits of Using Literacy Portfolios

Students who develop and maintain literacy portfolios can typically see the following benefits when they use literacy portfolios. They can learn to assess their reading and writing abilities. For reading, the students increased their abilities to integrate new information with their prior knowledge for various topics and they learned strategies to help them comprehend text more fully than before. For writing, the students increased their knowledge of various topics that enabled them to come up with more ideas for their written work, they developed confidence as writers and they learned to assess the content and organization of their writing. The use of literacy portfolios can help students become engaged learners as they assess their reading and writing abilities.

The students documented some of their learning activities in their literacy portfolios (Au, 1994; Valencia, 1990). The students became aware of two aspects of their reading habits when they documented what they read and how much time they spent reading for their Reading Logs as other researchers have suggested (Au, 1994; Valencia & Place, 1994). As a direct result of documenting their reading habits and then assessing them, many of the students increased their motivation to read more and a wider variety of materials. The students also documented many of their ideas related to self-assessment.

Students who develop and maintain literacy portfolios reflect on their learning (Camp, 1990; Raines, 1996; Tierney et al., 1991). Many students who use literacy portfolios change their attitudes about reading and writing. When students change their attitudes and become more positive, then they typically become more responsible for their own learning processes. When students go through a process to develop and maintain their own literacy portfolios, they learn to become more independent in what they do. This independence is a goal that all educators share.

One Reading Assessment: The Degrees of Reading Power

The Gallaudet University Department of English has used the Degrees of Reading Power (DRP) test for many years as one of our assessment tools. Since the fall of 1999, the DRP has also been used as a placement tool (along with the GWE, which will be discussed later in this paper), replacing a test developed in-house that tested for specific reading skills such as locating the main idea and making inferences. Students initially placed in non-credit developmental English courses also have to achieve a specific score on the DRP as part of the requirements to qualify for credit English courses (along with an acceptable GWE score).

The DRP is a MAZE test produced by Touchstone Applied Science Association (TASA). For more in-depth information on the DRP, see the TASA website at <www.tasaliteracy.com>. A MAZE test is similar to a CLOZE test, in which every Nth word in a passage is removed; the reader then must supply the missing word. A MAZE test also removes words from a passage, but selects key words. DRP tests consist of nonfiction passages (arranged from easiest to hardest) in which selected sentences have a blank replacing a word. The test taker must then select which word fits the blank best from 5 choices.

The DRP tests many different skills that are involved in reading. As with any reading activity, students who can draw on real-world knowledge will have an easier time. Readers need to understand strategies writers use, such as repeating information for emphasis or to ensure clarity. It is important to have the ability to recognize context clues, such as indicators for how information is related, either within or between sentences or from one paragraph to the next. In other words, a test taker needs to understand the relationships indicated by key words such as coordinating and subordinating conjunctions and words and phrases used to indicate transition. Understanding such clues is necessary for correctly answering many questions, such as ones where the reader must supply a word that is a synonym or antonym for another word in the passage. In other words, the DRP requires test takers to not only understand what they are reading but also make reasonable inferences from information given to supply what is missing.

The DRP is primarily a measure of surface reading comprehension. Scores range from 15 to 99 DRP units. The DRP score is given for three different reading situations:

- **Independent**—the level of reading materials the student can handle on his/her own.

- **Instructional**—the level of reading materials the student can handle with some help.

- **Frustration**—the level of reading materials the student can not handle at all.

The score difference between independent and frustration is 11, except at the extreme ends of the scale. At Gallaudet, faculty members use the instructional level as the number for placement purposes since our goal is to place students in courses that are appropriate to their skill levels.

In addition to providing DRP tests, TASA also rates reading materials for DRP levels to allow appropriate matches between a reader and reading material. Most college textbooks are 70 DRP or higher. Students testing below this level can then be advised what this means and encouraged to seek tutoring to understand reading material in content courses, and to learn strategies to increase their comprehension of difficult texts. Students should also be advised what reading materials are available that will challenge them (so they learn to read more difficult material) while not frustrating them so much they give up. Some examples of lower-level books (and ones that are fun!) are *Harry Potter*, which has a DRP level of 55 and *Charlotte's Web*, which has a DRP level of 50. Not all books or other reading materials with DRP scores in the 50s are for children, though; *The Old Man and the Sea* has a DRP level of 50, but is clearly written for adults.

The DRP is a useful tool, but alone presents only a partial picture of a student's literacy skills.

One Writing Assessment: The Gallaudet University Writing Test and Scale

A group of five faculty members of the English Department at Gallaudet University met for the first time in 1994 to develop the Gallaudet Writing Scale (GWS), an assessment tool for use when evaluating students' writings. The members were Dr. Marcia Bordman, Mr. Terry Coye, Dr. Leslie Rach, Mr. Truman Steele, and Dr. Anne Womeldorf. Drs. Karen Kimmel and Tonya Stremlau eventually joined the committee. The GWS was ultimately in place and ready for distribution in 1998. It has been used with success ever since. Like the DRP, the GWS has been used as a placement tool in some instances.

The GWS is a 6-level, 7-band categorical scale for the holistic assessment of impromptu essays written without help by Gallaudet University undergraduates (attached). Students' writings are evaluated for competence in writing on rhetorical and syntactic levels, for their awareness of audience and for their use of language in addressing the question. Students' writing competence is rated from "cannot be rated," which

qualifies as “0” on the GWS to “clear competence,” which qualifies as “6” on the GWS. The goal of the GWS is to provide a reliable and simple means of gauging the general level of writing ability of students at varying levels of skill. The goal is also to provide trained raters quick, easy and reliable scoring of a student paper, to provide uniformity in evaluation, and to make evaluation specific with numbers. The use of the GWS has provided a wealth of information for research and for assessing the literacy of students. It has also resulted in greater satisfaction among professors and students alike.

The Gallaudet Writing Scale Handout explains that:

much of the general design of the scale and some descriptors and terms provided in the scale are taken from or adapted from the *Test of Written English Scoring Guide*, copyright 1990 Educational Testing Service. This rubric, however, is not connected in any way to TWE anchor papers nor is it endorsed by the Educational Testing Service. All anchor papers and interpretations of this rubric are established by Gallaudet University for its own purposes. Ongoing assessment of the GWS may lead to further revisions and new versions of it (Gallaudet University Department of English, 1996).

The GWS was developed specifically for use in evaluating the writing performance of students in Gallaudet English courses under test conditions. It is also developed for use in other conditions and in other courses at the university.

The GWS is currently in use for all writing tests throughout the English Department. In certain courses, the GWS scores are used to assess students’ writing for grading decisions. To illustrate, in freshmen and sophomore writing courses, students’ final grades are determined by their GWS results, as well as by coursework, assignments, and projects.

In developmental English courses, the GWS scores are used solely for placement purposes. Students taking the exam have to get a certain score to qualify for a freshmen English course. Students normally have to achieve a GWS score of “3” to qualify, along with the appropriate DRP score.

The use of the GWS is not restricted to testing. It can be used as writing assessment tool for students’ writing projects such as research papers, creative writing assignments, and more. It is also used to evaluate students’ writing portfolio and in-class written work.

The use of GWS has been successful in providing a valid, reliable and simple means of gauging the general

level of writing ability of students at varying levels of skill, providing trained raters quick, easy and reliable scoring of student papers, providing uniformity in evaluation, making evaluation specific with numerical results, providing language to trained raters to discuss papers with each other and with their students, providing specific data for research, and providing all interested parties a useful writing assessment tool. We hope that other departments will begin to use the GWS to evaluate student writing.

Appendix A

Gallaudet Writing Scale (Version 3.1)

Clearly demonstrates competence in writing on both the rhetorical and syntactic levels, though it may contain occasional errors. A paper in this category

- Shows an awareness of audience: uses an appropriate level of discourse and offers ideas that go beyond the merely expected, that are personal to the writer, or that will interest the reader.
- Addresses the question impressively: uses relevant, judiciously selected and organized support, though it may slight parts of the task of developing support.
- Demonstrates fluency in language: displays syntactic variety and effective sophisticated word choice and variety, though it may have occasional errors or awkwardness.

Demonstrates clear competence in writing on the syntactic level, though it may contain occasional errors, and at least minimal competence on the rhetorical level. A paper in this category

- Shows an awareness of audience: uses an appropriate level of discourse and offers ideas that go beyond the merely expected, that are personal to the writer, or that will interest the reader.
- Addresses the question impressively, though perhaps not impressively: uses relevant support for its thesis but may slight parts of the tasks of developing and organizing ideas.
- Demonstrates fluency in language: displays syntactic variety and effective sophisticated word choice and variety, though it may have occasional errors or awkwardness.

Demonstrates minimal competence in writing on both the rhetorical and syntactic levels, though it may contain some serious weakness or lack of expected element or quality. A paper in this category

- Shows a developing awareness of audience: may attempt an appropriate level of discourse, but ideas rarely go beyond the merely expected.
- Addresses the question but slights parts of the

task: demonstrates adequate organization and uses some details to support its thesis and illustrate its ideas. Connections between sentences or ideas occasionally may be missing or unclear.

- Demonstrates adequate but undistinguished or inconsistent facility with syntax and usage: contains syntactic variety and generally demonstrates control of vocabulary and idiomatic phrasing, though it may contain some minor errors or an occasional serious error which obscures meaning.

Demonstrates some developing competence in writing, but remains flawed on either the rhetorical or syntactic level or both. A paper in this category

- Shows little or no awareness of audience.
- Addresses the question but not adequately: its thesis may be weak or obscure, support for generalizations may be insufficient or lacking, and digressions and inconsistencies may occur; organization and development may be formulaic; connections between sentences are often missing, unclear, or misleading.
- Contains errors that obscure meaning, or an accumulation of minor errors; often contains language that does not express the writer's apparent intention; demonstrates limited and inconsistent control of idiomatic language and vocabulary.

Suggests incompetence. A paper in this category occasionally shows some understanding of syntax and topic, but it contains errors that obscure meaning and an accumulation of minor errors. Additionally, it may be seriously flawed by one or more of the following weaknesses:

- Failure to organize or develop: may use repetition in place of organization.
- Little or no detail, or irrelevant specifics.
- Use of ideas that are irrelevant, illogical, unfeasible, or immature.
- Little or no syntactic variety.

Demonstrates incompetence in writing. A paper in this category contains serious and persistent errors in usage and sentence structure and may be illogical or incoherent or reveal the writer's failure to comprehend the questions.

Cannot be evaluated. A paper in this category so seriously deviates from the expected result that the writer's skill cannot be evaluated. Blank, severely underdeveloped, illegible, and off-topic papers fall into this category.

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Testing Service. This rubric, however, is not connected in any way to *Test of Written English* anchor papers nor is it endorsed by Educational Testing Service. All anchor papers and interpretations of this rubric are established by Gallaudet University for its own purposes.

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SECTION V
Using Technology

Bridging the Digital Divide for Deaf and Hard of Hearing Students: Sign Language 3D Animation Software Authoring Tool

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Abstract

Computer graphical interfaces and text presented in software programs and on Internet Web Pages are part of the visual modality. However, this does not mean that, in being visual, these are equally accessible for deaf and hard of hearing people. Many deaf and hard of hearing individuals prefer communication presented in some variant of American Sign Language (ASL), their first language, and may choose if given the option, ASL-English interpreter services over English text captioning. SigningAvatar™ technology uses computer-generated 3D animated characters that can communicate in variants of ASL. This presentation demonstrated the SigningAvatar™ Authoring Tool software program, which allows users to rapidly create sign-enabled content to increase access of deaf and hard of hearing children and adults to digitally-based information.

Computer graphical interfaces, text and images presented in software programs and on Internet Web Pages are all part of the visual modality. However, this does not mean that, in being visual, these are equally accessible for deaf and hard of hearing students. Many deaf and hard of hearing individuals in the United States prefer communication presented in some variant of American Sign Language (ASL), their first language, and may choose if given the option, ASL-English interpreter services over English text captioning, or ideally both.

SigningAvatar™ technology uses computer-generated three-dimensional (3D) animated characters that can communicate in variants of ASL, to provide access and increase English literacy for deaf and hard of hearing individuals. The SigningAvatar™ Authoring Tool will allow individuals to rapidly create SigningAvatar™ scripts for creating sign-enabled content. The Authoring Tool provides the user with the ability to either import text from another document or to directly type in English

sentences. The Authoring Tool will semi-automatically transliterate and disambiguate imported English text into English-like ASL. For some situations transliterated content is sufficient for effective communication and access depending on the preferences and needs of the consumers viewing the content.

If the goal of the signed content is grammatical ASL, the Authoring Tool provides an interface to edit the transliteration. The interface layout is designed to be non-linear, meaning that you can insert, copy, move, paste and delete the content at any point without having to re-enter it (much like using a word-processor vs. a typewriter). There are many other features included that assist the user in refining the signed content. Using some of these features will allow the user to make the following grammatical changes:

- Use of grammatical ASL facial expression
- Use of grammatical eye gaze
- Omission of articles, prepositions and “to be” verbs
- Emphasis in the form of change in speed, or holding of a sign
- Use of signs that help organize a list of objects or persons using the fingers of the non-dominant hand
- Modified sentence structure (e.g., subject-verb-object to object-subject-verb).

Plans for future development include graphical tools that will allow the user to spatially inflect signs. The resulting sign language animation can then be easily exported in an HTML file for publishing on the Internet or CD-ROM software.

This technology will increase access of deaf and hard of hearing children and adults to digitally-based information and promote inclusive education and employment approaches which accords with the language and intent of the New Freedom Initiative, recent amendments to Section 508 of the Rehabilitation Act of 1973, the Americans with Disabilities Act, and Section 255 of the Telecommunications Act, and, thus, will have broad societal benefits.

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Practicing Job Interviewing Skills Using Virtual Reality Technology

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Abstract

This presentation demonstrated the prototype computer software program Virtual Interview Exercises for Workplace Success (VIEWS), which provides the opportunity for deaf and hard of hearing job seekers to practice employment interviewing skills. This software incorporates SigningAvatar™ technology which uses 3-D animated characters who sign in varying degrees of American Sign Language. The software presents an accessible virtual interview scenario with interacting characters and the opportunity to respond to typically asked interview questions. If the user selects a certain number of the best responses to the interview questions, the employer will offer the interviewee the job. This software not only provides the opportunity to independently practice interviewing skills, but it may also boost the confidence of the user.

The employment interview is often the final step in the selection process when employers decide which job candidate is the most qualified. Doing well in an interview means not only being able to communicate expertise in the given area, but it also means being able to respond to loaded questions. These questions are used to reveal whether the prospective employee will be able to socially integrate into the culture of the employment setting. For hearing individuals, successfully answering culturally loaded questions takes some study and practice. While the same is true for deaf and hard of hearing individuals, finding opportunities to study and practice interviewing skills can often be a challenge.

Virtual Interview Exercises for Workplace Success (VIEWS) is a prototype computer software program that provides the opportunity for deaf and hard of hearing job seekers to practice employment interview-

ing skills. This software incorporates SigningAvatar™ technology, which uses 3-D animated characters who sign in variants of American Sign Language (ASL). The software presents a virtual interview scenario with three interacting characters: the employer, the interpreter, and a deaf interviewee. The employer character asks the user typical interview questions. The employer speaks the question in English while the interface displays captions. Consecutively, the interpreter signs the question in ASL. The user is presented the option to repeat the signed interpretation. The user is then given several possible responses to the question in written English, which can also be previewed in ASL signed by the interviewee character. Once the user has selected his/her response, the interpreter interprets the response for the employer, who will then give an evaluative response and another question.

If the user selects a certain number of the best responses to the interview questions, the employer will offer the interviewee the job. This software not only provides the opportunity to independently practice interviewing skills, but it may also boost the confidence of the user, which is essential for successfully participating in an employment interview.

Funding for this research is provided in part by the U.S. Department of Education. Opinions, findings, conclusions, and recommendations expressed in this presentation did not necessarily reflect the view or opinions of the U.S. Department of Education.

Video Remote Interpreting (VRI) and Computer Aided Real Time (CART) Captioning Services in Minnesota Workforce Centers: A Technology Project to Improve Job Access Opportunities

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and Training Center (RRTC)

Abstract

This session described and reported the results of the Video Remote Interpreting (VRI) pilot project that used videoconferencing technology to help increase access to WorkForce Center services in three Greater Minnesota locations. Through the project, deaf and hard of hearing (DHH) consumers accessed VRI and computer aided real time (CART) captioning services. While DHH consumers prefer face-to-face communication, direct and timely communication is not always possible due to the shortage of qualified interpreters and captioners, particularly in rural Minnesota. The pilot project pooled resources of the U.S. Department of Labor; U.S. Department of Education - Rehabilitation Administration; Minnesota Department of Economic Security - Rehabilitation Services; CSD of Minnesota; The University of Arkansas - Little Rock Rehabilitation Research & Training Center; and the Minnesota Department of Human Services Deaf and Hard of Hearing Services.

On a daily basis, Minnesota experiences the “national crisis in interpreting” jointly declared by the National Association of the Deaf and the Registry of Interpreters of the Deaf. Demand for qualified interpreters continues to far outpace the supply – both nationwide and locally.

This Video Remote Interpreting (VRI) pilot project was designed to improve access to Minnesota’s WorkForce Center (WFC) system services in three rural Minnesota sites: Rochester, St. Cloud, and Brainerd. These “Greater Minnesota” locations range from one to two hours from the Twin Cities (St. Paul & Minneapolis) area. The sites were selected from among 53 Minnesota WFCs on the combined basis of

rural location, proximity to local telephone companies offering ISDN lines, and available onsite support staff. In addition, they had populations of potential users – people who are deaf or hard of hearing (DHH), including non-signers, and people with limited signing skills. Rochester and St. Cloud both have active deaf communities, while Brainerd has a small cohort of DHH students at the Central Lakes College.

The VRI pilot project selected and installed videoconferencing technology to help increase access to WorkForce Center services in the three rural locations and at the fourth location in the Twin Cities. CSD of Minnesota was selected as the technical assistance provider to coordinate the interpreter and CART requests for the project.

While DHH consumers prefer face-to-face communication, direct and timely communication is not always possible due to the national shortage of qualified interpreters and captioners, particularly in rural Minnesota. By using videoconferencing, the wait was reduced from two weeks to one or two days. DHH consumers were connected with interpreting and CART service providers from a pool in the Twin Cities metropolitan area on a scheduled basis. The pilot project also included capacity for filling walk-in requests for such services as well.

Project Design

Sign language interpreters & CART services are provided remotely – that is, from one geographic location to another via Integrated Services Digital Network (ISDN) lines. Three lines at 128 kilobits per second or “kbps” offer 384 kbps transmission from the Twin Cities offices at CSD of Minnesota to greater Minnesota locations. Polycom H323 Videoconferencing equipment was selected and installed at the four locations. The project enables DHH customers to tap the larger pool of available interpreters and CART providers in the Twin Cities metropolitan area. By using videoconference technology, the time required to secure these services was shortened from the usual one-to-two weeks to as little as one day.

To gain access to these services, the customer at the remote site requests an appointment. The onsite WTC support staff, whose signing skills are extremely limited, coordinates the appointment with professional staff and then confirms the conference room availability. WTC staff generate the interpreter or CART request (by

phone, fax, or e-mail to CSD), assists with equipment start-up at time of service, assures customers get evaluation forms, and forwards those along to CSD for distribution. At the time of service, the remote site customers see the interpreter or the CART transcription on a 27-inch monitor, while the interpreter or CART provider at CSD sees the remote customers on a similar but slightly larger (35-inch) monitor. Approximately 16 individuals in the pool of freelance interpreters are trained in operating the videoconferencing system. CART services are purchased from a small group called Paradigm Reporting & Captioning, Inc., who has provided services to the legislature, many state agencies, and local news stations.

The project was aimed at improving communications access. Employers improved their access to a hard-to-reach pool of job seekers. DHH consumers of the WorkForce Centers had more immediate access to interpreting or CART services for job interviews, opportunities to learn about resources and training opportunities, or opportunities to attend counselor meetings.

WTC staff, interpreting referral staff, and interpreters were trained to use the videoconferencing equipment. Most requests for services were made "online" and received responses within 24 hours. It was also necessary to train consumers on how to dress and what to expect in terms of hand motions and speed.

The VRI project was introduced to Minnesotans during a series of *Open House* events where videoconferencing technology capabilities were discussed by using "live" demonstrations. All participants at the events were asked to provide feedback by completing evaluation forms. A small group at each location was selected to participate in focus group discussions about how they saw themselves using the technology in the future. Ongoing evaluations were gathered after each VRI session, and follow-up focus groups were convened six months into the project. All the data gathering and analysis was provided by the University of Arkansas - Rehabilitation Research & Training Technical Assistance Center in Little Rock.

Project Evaluation

Faculty from the University of Arkansas RRTC for Persons who are Deaf or Hard of Hearing designed a two-part approach to evaluate the remote strategies used in Minnesota. The two strategies were modeled after approaches that had been successfully used before by the RRTC to evaluate remote services in Nebraska and Maryland. The two strategies selected allowed the project to assess satisfaction both prior and after actual use of the technology.

The initial strategy was to conduct focus groups at each of the participating sites to assess opinions regard-

ing this service delivery alternative prior to actual use. Following a demonstration of the technology, focus group participants were asked a number of key questions designed to assess attitude toward using the technology. To further demonstrate the approach, interpreting and CART services for these groups were provided using the remote approach. Project faculty led three focus groups that included a total of approximately thirty participants. Feedback obtained from the participants was very positive regarding the potential of this strategy. Comparable focus groups of users will be held at the conclusion of the project to see whether this positive view was supported following use.

The second strategy was to provide a written questionnaire to users after they had actually used remote technology. This one-page questionnaire included a number of questions that assessed satisfaction with multiple facets of the technology, their perception of the expressive and receptive communication via the technology, the types of situations in which the technology was used, and the sociodemographic characteristics of users. Preliminary results are based on thirty-five persons who used the technology during a six-month period. Interestingly, all thirty-five users requested and were provided remote interpreting. No users requested CART services via this technological approach.

Multiple questions targeted adequacy of the communication when using the technology. For example, seven questions assessed dimensions, such as speed of communication (fast-slow), natural (unnatural – natural), ability to follow the communication (easy to hard to follow), number of communication mistakes, and comfort of communication (uncomfortable to comfortable). Two specific questions assessed quality of the video and audio provided by the technology. Other questions specifically addressed the users' ability to communicate expressively and receptively through the technology. Examples of receptive dimensions included the ability to understand signs or CART, see facial expression, or read fingerspelling. Examples of the expressive dimensions included perception of user understanding, ability to sign fluently, and ability to repeat and clarify signing. Results of these analyses indicated that participants were satisfied and comfortable with the communication achieved using technology. Preliminary results indicated that on most dimensions mean ratings of the group were high – over eight on the ten-point response scale used.

Consistent with the service delivery network in which the technology was being used, most calls were for interpreting for employment-related services delivered through vocational rehabilitation or employment services of the Workforce Centers. Key service needs were in the area of job seeking, especially employment

interviewing. The efficacy of this approach to service delivery was evident in that about 85 percent of users said they would use the service again and 12 percent would probably use the service again. Only three percent of users said they would not use the service again.

Users included both persons with and without hearing loss. Consistent with the interpreting services requested, most users used sign language to communicate and described themselves as deaf or late deafened. As expected, remaining users were hearing individuals who needed sign language interpretation. About equal numbers of males and females used the service. The age of users reflected the entire gamut of potential users, but primarily persons of working age (25-54) were involved, a finding consistent with the service delivery setting.

Conclusion

In conclusion, preliminary results were highly positive on all dimensions. However, these results should be viewed cautiously, since they are based on small numbers of actual users. In fact, encouraging use throughout the six month period was a significant challenge. Those considering implementation of this technology would be advised to clearly assess the need and potential market for the services. Beyond solving technological problems in setting up the service, key decisions will include such practical issues as how to advertise and make these services available in potential users' natural environments. As the project proceeds to completion, more users will be identified and the results will be based on a larger pool of users. Practical problems will continue to be addressed to employ this technological approach to providing interpretation to individuals who experience the shortages of interpreters in much of the United States.

End Note: The project pooled resources of the U.S. Department of Labor; U.S. Department of Education-Rehabilitation Administration; Minnesota Department of Economic Security – Rehabilitation Services; CSD of Minnesota; The University of Arkansas – Little Rock Rehabilitation Research & Training Center; and the Minnesota Department of Human Services Deaf and Hard of Hearing Services.

Recipe for Foreign Language Literacy: Video/Caption Technology and Foreign Sign Language as Ingredients

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Abstract

Video/caption technology and foreign sign language can be successful ingredients for developing literacy skills in a foreign language. Using this technology, we – the authors – produced a unique Spanish reading program for American deaf students. In this paper, we describe the reading program, explain the theoretical rationale behind this combined approach, and discuss the results of the experimental assessment procedure.

The project consists of Spanish readings that go along with Spanish-captioned narratives in Costa Rican Sign Language (LESCO). The assessment shows that the students learned to associate specific LESCO signs with specific words in Spanish, thus improving vocabulary retention. Additionally, the LESCO stories created a scaffold for the students to approach the written texts simultaneously in a top-down and bottom-up fashion. This helped their global comprehension and improved their motivation towards the reading task.

Introduction

This paper discusses a Spanish reading program that is specifically designed for American deaf students. This program combines written Spanish and Costa Rican Sign Language (LESCO) through the use of video and caption technology. Specifically, the program consists of ten traditional Costa Rican legends that are professionally videotaped in LESCO and coordinated with a booklet, containing Spanish written versions of the same stories. Additionally, the videotapes are captioned in Spanish. The written stories range from the basic to the basic-intermediate level of Spanish, and they feature many of the key grammatical structures that are typically covered in a first year Spanish course. This paper explains the rationale for producing such a combined reading program, provides some theoretical background on reading strategies that are typically used by deaf individuals and on the cognitive processes that are generally involved in reading, and discusses the experimental design and results of the assessment of this product, conducted at Gallaudet University in the spring of 2001. Finally, conclusions will be summarized.

Program rationale

This combined LESCO/Spanish reading program is the first of its kind in that it explores the benefits that simultaneous exposure to foreign signs and a written language can have for deaf students that are acquiring literacy skills in an unfamiliar foreign language. Additionally, the program also addresses the intricate cultural and linguistic relationship that exists between the signed and the written language of a particular community.

It is well known that English is a second language for many American deaf individuals and that this fact, along with other factors that have been widely discussed in the literature, may pose difficulties in the acquisition of English literacy skills (Quigley et al., 1976; Wilbur, 1977; LaSasso & Davey, 1987, among others). Little has been said, however, about the difficulties and special needs that deaf students have when learning a totally unfamiliar foreign language – that is, a language to which they have not had any exposure through cultural contact. Most American deaf students who start learning a foreign language in college have never had any previous exposure to it. The same challenges that they may face in acquiring English literacy skills are presented to them when faced with the task of learning the written form of a foreign language to which they have no direct exposure. To this challenge one has to add the facts that the vocabulary is completely unfamiliar and that the unfamiliarity of the language leaves the students at a loss for any clues that can help them develop a phonological coding system for the language, a key reading strategy.

By combining foreign signs with written texts, the program gives students an alternate tool to decode the written vocabulary in context through access to contextualized, linguistic visual cues. The authors' claim is that the LESCO presentation of the stories allows the students to make foreign sign-written word associations that facilitate vocabulary decoding and retention. Additionally, watching the signed stories before reading the full Spanish texts allows the students to approach the written texts in a more holistic and contextualized manner.

Below is some background on reading strategies that are commonly used by deaf readers. What follows is a more detailed discussion of how the combined program can help the readers tap into some of these strategies.

Background on reading strategies

Readers use a variety of strategies for temporarily storing written information in their working memory.

One such strategy involves phonological coding (Shankweiler and Crain, 1986, among others). It is well known that phonological coding is a strategy that is commonly used by deaf readers, too (Conrad 1979; Hanson, 1990; Hanson, Goodell, and Perfetti, 1991). For some deaf readers, the coding may correspond with the actual pronunciation patterns of the language, and for others the phonological coding might be rather idiosyncratic but, nevertheless, quite effective in segmenting the basic units of the text (Hanson and Fowler, 1987). Another strategy that is known to be used by deaf readers in order to keep information in their memory buffer is to associate specific signs from the reader's sign language with specific printed words (Lane, Hoffmeister, and Bahan, 1992).

While it is possible that over time deaf readers will develop a phonological coding mechanism in an unfamiliar foreign language, it is unlikely that this strategy will be successfully employed at the beginning learning stage when the students are first presented with an unfamiliar spelling system and subjected to phonotactic constraints different from the ones they are used to seeing in English – with no access to the sound system of the language to assist them in decoding the spelling. Fostering associations between the unfamiliar written words and linguistic visual cues (in the form of foreign signs) might provide an alternative decoding strategy at the initial stages of literacy acquisition. In particular, the program fosters sign-written word associations by means of the careful timing of the Spanish captions that the students see on the screen while they watch the LESCO stories. The captions are simple and short, and they highlight the key Spanish vocabulary that the students will later encounter in the written texts. Classroom use of the videotapes indicates that, in fact, the students make quick connections between signs and captions and that these connections enhance vocabulary retention (both spelling and meaning) and global text comprehension.

Some clarification is in order regarding the authors' choice of signed language for this program and the extent to which the signed stories are accessible to the students. While the written form of Spanish is rather uniform across most countries in Latin America and in Spain, no such uniformity is found across Spanish-speaking countries regarding the sign languages used by their deaf communities. Since sign languages are naturally occurring languages, each country may have one or more sign languages that may be mutually unintelligible, regardless of the mutual intelligibility of the spoken language. In selecting a sign language for the program that would be culturally related to one of the Spanish-speaking countries, we were thus presented with many choices. We opted for Costa Rican Sign language mainly because it is closely related to ASL, due to continued contact between the two languages through historical and educational links between the two communities. In

fact, it is estimated that in educational settings, LESCO shares between 70-80% of its vocabulary with ASL. LESCO thus provides a perfect balance for the program's purposes. On the one hand, the signs and some aspects of its grammar are different enough from ASL as to not to completely give the stories away to the students. On the other hand, its similarity to ASL allows the students to understand enough of the stories so as to contextualize the Spanish vocabulary presented by the captions. Thus, rather than adding an extra burden by simultaneously presenting the students with foreign signs and foreign written vocabulary, the LESCO signs provide a tool to decode the captions in context and to retain the Spanish vocabulary by associating written words and signs. The authors would like to emphasize that the signed versions are not one hundred percent accessible to the students. However, rather than throwing the students off track, the relative unfamiliarity of the LESCO signs motivates the students to read the full-fledged Spanish texts in order to achieve a more complete understanding of the stories.

Cognitive processes involved in reading

The approach used assumes the theory that the reading process happens both simultaneously bottom-up and top-down. That is, on the one hand, the reader focuses on the bottom, or more basic, units of the texts (letter combinations, phonology, syntax) and then builds the meaning of the text from these; on the other hand, the reader also builds the meaning of the text from previous, general knowledge and expectations (about the subject, about the world, and about the language) and then deduces the meaning of the bottom units of the text from the top-down. Providing a scaffold or a format previous to approaching written texts is in line with recent theories and methodologies on literacy development (Paul & Quigley 2001). Without a frame of reference that the beginning reader can utilize, a bottom-up based reading process yields less than optimal results, especially when dealing with a foreign language, where most bottom text units are unfamiliar and uncodifiable by the reader. Watching the LESCO stories before approaching the written texts helps beginning readers in two ways: as discussed above, it assists them in decoding and retaining vocabulary, thus facilitating the bottom-up cognitive process. Additionally, watching the videotapes provides the readers with a general frame of reference on which they can later rely in order to deduce the bottom units of the text in an alternating or simultaneous top-down and bottom-up fashion.

Assessment

The authors assessed the effectiveness of this program in the classroom setting by comparing the reading performance of three intermediate Spanish classes at Galaudet University. The results of the pilot assessment are positive and point to the LESCO videotapes as an effective

tive and motivating tool for developing reading skills in Spanish among deaf students. Additionally, we also collected anonymous answers to a questionnaire that requested information about attitude and motivation towards the reading task. Incorporating foreign sign language improves motivation and enhances cultural interest, and this is discussed below.

In assessing the effectiveness of the combined LESCO/Spanish tool, we posed the following questions: 1) do the LESCO videotapes enhance global comprehension of the written texts by facilitating the top-down cognitive process? 2) Do the captioned LESCO videotapes improve Spanish vocabulary recognition and retention by helping the students establish contextualized connections between signs and captions? The hypothesis was that watching the videotapes previous to reading the texts would in fact help the students' reading task by familiarizing them with the vocabulary and, thus, reducing dictionary dependency and frustration. Additionally, the hypothesis proposed that the videotapes would provide the students with a scaffold that would help them deduce the basic units of the text in a contextualized manner.

Evaluation design

A total of thirty deaf students enrolled in three Spanish 112 classes (second semester Spanish) at Gallaudet University were involved in this assessment. All three groups were taking Spanish 112 with the same professor at the time when the assessment took place. The students read four of the Costa Rican stories at different points in the semester. Each text was given to them twice in class with an interval of about ten days between readings. For each story, all the groups first read the story in class, without watching the videotape. Then, they answered some comprehension questions and completed a fill-in-the blank vocabulary retention exercise. Both the reading and the students' answers were collected, and the number of correct answers was calculated for each student. Ten days later, the students read the same story again. This time, the two experimental groups watched the LESCO rendition one time right before reading the text. The control group simply read the story again without ever watching the videotape. The students in all three groups were again asked to complete the same comprehension and vocabulary exercises. The authors then measured how much each student's score improved between the first and the second reading of each story. We also checked to see whether there was any correlation between each student's score improvement and the group the student was in.

Results

As shown in table 1 (appendix I), the results show a positive trend. The mean improvement scores for each reading are higher for the students who were in the two experimental groups than for the students who were in the control group. That is, the subjects

who watched the videotape before reading the text for the second time show a larger score improvement with respect to the first time they read the text than the students who simply read the text twice. Score improvement showed up both in the comprehension questions and in the vocabulary exercise. The authors conclude that this is due to two factors. On the one hand, the captioned videotapes encouraged written word-sign associations that fostered vocabulary decoding and retention. On the other hand, we believe that the videotapes facilitated the global reading task by activating the top-down cognitive process.

While one might argue that the score improvement observed in the experimental groups could be due to the fact that they had a more extensive exposure to the vocabulary through the captions and through the written texts, this explanation is unlikely. This is because the students were able to answer the comprehension questions while they had the texts in front of them and, therefore, there was no limitation as to the number of times they could go over the texts and over the vocabulary.

The experimental groups seem to have done better because they were more able to decode the vocabulary and comprehend the text more globally. That is, citing Krashen's 1996 key terminology on literacy acquisition, the written input was more comprehensible to the students if they watched the videos first. Again, here we would like to emphasize that LESCO is different enough from ASL as to not completely give the story away to the students before they read the texts. The comprehension questions were carefully designed to test comprehension of the written texts, not of the videotapes. In fact, the written texts contain some details that do not appear on the LESCO stories and whose comprehension did not depend on comprehending the signed version. What the LESCO stories provided was a general, contextual frame that made it easier to deduce the content of the written stories (in a top-down fashion). They also provided contextualized familiarity with the basic vocabulary that facilitated the bottom-up reading process, too.

At the end of the assessment procedure, we distributed an anonymous questionnaire requesting feedback from the subjects in the two experimental groups about the reading program and about their overall attitude and motivation regarding the reading task (see appendix II). The subjects' answers reveal that they felt the videotapes enhanced their comprehension and their vocabulary retention and, no less importantly, they reveal that the LESCO videotapes motivated them to read the stories and made the reading task more culturally relevant and enjoyable.

Conclusion

To summarize, as we hypothesized, the video component of the combined LESCO/Spanish reading pro-

gram provides a scaffold that later facilitates deducing the bottom units of the written texts. Enhancing top-down cognitive processing in reading is particularly relevant in a situation in which the bottom information is in an unfamiliar foreign language to which the readers have had limited exposure. As reported in Kelly 1995, average deaf readers seem to compensate for their limited ability to process texts in a bottom-up fashion by relying on prior knowledge which activates the top-down processing of information. This is in contrast to skilled, deaf readers whose bottom-up and top-down processing is more balanced.

While one would not want to make the students dependent on a top-down reading strategy only, given Kelly's 1995 findings that skilled readers use a more balanced reading strategy, it seems unrealistic to expect beginning students of a foreign language to be able to rely on a bottom-up strategy before they become sufficiently familiarized with the vocabulary and the spelling system of the language. This is where the context provided by the videotapes comes to the rescue. Importantly, however, the improved results of the experimental groups over the control group in the vocabulary task also indicates that the videotapes enhance vocabulary decoding and retention, thus helping a bottom-up approach to the text too.

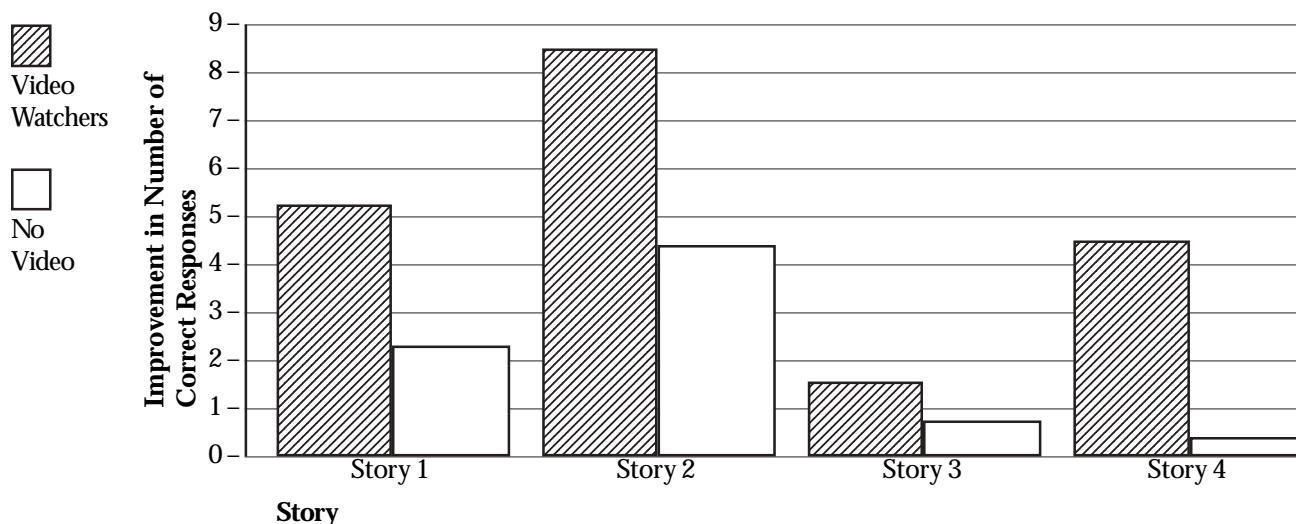
In addition to the practical advantages of incorporating foreign signs as a way to aid the reading task in a foreign language at the early stages of foreign language acquisition, the program recognizes the cultural and linguistic value of the sign languages associated with foreign deaf communities. Given the growing interest in research in signed languages both inside and outside of the United States, incorporating foreign sign language in the foreign language curriculum for deaf stu-

dents is only logical and fair. Foreign signs motivate deaf students to learn, and they raise awareness about the cultural and linguistic relationships that exist between the language of a particular deaf community and the coexisting, written form of the spoken language of the hearing community.

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Appendix I. Table 1 Mean Response Improvement



Paul, P. and Quigley, S. (2001) *Language and Deafness*. San Diego, CA: Singular/Thompson Learning.
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Wilbur, R. (1977). An explanation of deaf children's difficulty with certain syntactic structures. *Volta Review*, 79(2), 85-92.

Appendix II.

The numbers under each letter indicate the number of students who circled that letter as their answer. A total of twenty students from the two experimental groups answered the questionnaire.

Please, answer the following anonymous questionnaire by circling one of the letters (A, B, C, D). **A is the most positive, and D is the most negative.**

- 1) Do the Costa Rican Sign Language (LESCO) videotapes make the Spanish readings **easier to understand**?
 Very much so A₁₂ B₄ C₄ D Not at all
- 2) Do the LESCO videotapes help you understand the Spanish readings **more in-depth**?
 Very much A₁₀ B₄ C₅ D₁ Not at all
- 3) Do the LESCO videotapes help you **deduce the Spanish vocabulary** on the written texts?
 Very much A₉ B₉ C₂ D Not at all
- 4) Do the LESCO videotapes help you **remember the Spanish vocabulary** better?
 Very much A₈ B₉ C₃ D Not at all
- 5) Do the LESCO videotapes help you **understand the Spanish grammar** on the readings?
 Very much A₅ B₁₂ C₂ D₁ Not at all
- 6) Do the LESCO videotapes **motivate you to read** the Spanish stories?
 Very much A₁₃ B₃ C₄ D Not at all
- 7) Do the LESCO videotapes help you **appreciate the cultural information** in the stories?
 Very much A₁₄ B₆ C D Not at all
- 8) Does the combined approach to reading (LESCO videotapes and Spanish texts) **make the reading experience more pleasant or more burdensome**?
 Much more pleasant A₁₁ B₈ C₁ D More burdensome
- 9) How much **LESCO** could you understand?
 100% A₁ 80% B₁₅ 50% C₂ less than 50% D₂
- 10) Did the Spanish captions help you understand the signs?
 Very much A₁₀ B₇ C₁ D₂ (not at all)
- 11) Would you recommend the use of this approach for other foreign language courses?
 Strongly A₁₆ B₃ C₁ D Not at all.

SECTION VI
Student Preparation for College

Your Key to Evaluation: The Computerized Adaptive Testing Version of the Transition Competence Battery for Deaf Adolescents and Young Adults

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Abstract

Assessment data should serve as the cornerstone of the transition and rehabilitation process, guiding the provision of service offerings. The instruments that are employed and the data derived should relate specifically to the content of the transition process. This type of information will have relevance for instruction (i.e., determining what the individual needs to be taught) and for planning the transition from the school to the community. Unfortunately, psychometrically sound assessment instruments developed specifically for deaf adolescents and young adults are rare. This paper describes the development and current state of research on one such instrument: The Transition Competence Battery.

For too many years teachers, parents, and professionals working with deaf adolescents and young adults have faced the difficulties of adapting materials developed for students without hearing losses for their deaf students. This creates a 'Catch 22' for educators: 1) instruments not normed for deaf students become invalid for the population once administration procedures are altered, thus providing inaccurate information about the deaf student's status (but they must be altered in order to administer them); 2) hearing is assumed to be present in these materials, and so testing of skills particular to deaf student's life experiences is necessarily absent; 3) the language used in materials developed for hearing students is often inaccessible to deaf students, resulting in test scores that reflect a deaf student's English comprehension and *not* their mastery of the subject. Obviously, this serves neither the students nor the educators.

The Transition Competence Battery (TCB) is a unique assessment tool designed to measure the transition skills of deaf high school adolescents and young adults who plan to enter the work force, job training programs, or two-year colleges. This segment of the deaf, high school population is both the largest and in need of the most services to succeed in their transition

to adult life. Development and research of the TCB began 16 years ago. When the project was initiated in 1986, a review of the pertinent literature and existing curriculum demonstrated some significant areas of weakness pointing to the fact that deaf students' transition needs were being overlooked and underserved. The factors that provided the impetus for the TCB's creation are that tests are not often written or standardized for deaf students, linguistic access in assessment measures has not been a design consideration, and that other transition assessment instruments are not inclusive of deaf students' life experiences.

Funded by a grant from the Federal Office of Special Education Programs, the TCB was stringently developed with the goal of producing a nationally standardized assessment tool. The defining characteristic of the TCB is its accessibility to students who rely on sign communication.

Transition Competence Battery

The first phase began with a nominal group technique (NGT) of 18 professionals and consumers. Seeking input from teachers, administrators, VR counselors, parents, employers, and deaf adults, two questions were asked: 1) What are the five most important independent living skills Deaf students should have? 2) What are the five most important employment skills Deaf students should have? Project staff then grouped the responses into three areas each within two broad domains. The Employment Domain includes job-seeking skills, job related social skills, and work adjustment skills. The Independent Living Domain includes health and home skills, money management skills, and community awareness skills.

A national survey was then conducted asking respondents to rate the skills developed in the NGT according to 1) the skill's importance in the successful transition of deaf students and 2) the presence of the skill, i.e., do most students perform the skill well or is it an area of weakness for most students? From these ratings, the skills were prioritized and those rated as most important and least often present were selected for inclusion in the test battery. A second group of professionals were convened to begin item writing. Translating these skill areas into questions and then into a test required careful consideration of issues such as, target population's literacy; what language should be used; how the questions should be formatted; whether or not the use of graphics would detract from the test's utility; and whether or not the test should be

time limited. All items are presented on video in conceptually accurate Pidgin Sign English (PSE) in a 3-option multiple-choice format. More than 900 items were developed to be considered for inclusion in the final product. Two hundred items were selected from this initial item pool as appropriate for the 6 subtests.

Nationwide standardization of the TCB consisted of traveling to schools for the deaf and mainstream programs across the US with the 6 videotape subtests. The test sessions were conducted in small groups (generally 6-10 students) watching the test signed in conceptually accurate Pidgin Sign English on a large TV monitor. Standardized instructions were presented in PSE on the videotape of the first subtest. Items were presented in a multiple choice, three option format with a maximum amount of time allotted for responding to each item (the test was not meant to be timed, however, in order for the administration to be standardized, there needed to be a fixed time limit on response time). After the question and response options were presented to the students on the video, they had the opportunity to read a written version of the question in a test booklet. They responded on a separate piece of paper by circling the correct response (A, B, or C). They were also provided scratch paper to use for math items. Calculators were not allowed. Each test required approximately 30 – 45 minutes to administer. Because of the length, some sites broke the testing into two 3-hour days.

Fourteen programs and 230 students participated in the project. In order to be retained in the battery, items had to possess a point-biserial correlation of at least .2, reach a moderate level of difficulty (i.e., 40 – 80 percent of students answering item correctly), and the signed version of the item had to be judged conceptually accurate by project staff. From the 200 items field tested, eighteen items were deleted from the final version of the battery.

The proportion of items answered correctly by students ranged from a low of .51 on the Money Management subtest to a high of .73 on the Job-related Social Skills subtest. The tests' internal consistency reliability indices ranged from .67 on the Money Management subtest to .86 on the Job Seeking Skills subtest. In general, an index of .75 to .80 is regarded as acceptable for group administered screening instruments (Bolton, 1987; Salvia & Ysseldyke, 1986). All subtests exceeded this standard except the Money Management. This subtest was the shortest (only 20 items) and also included several functional math items, and therefore may have involved more guessing on the students' part. Test-retest correlations were strong (.77 to .90), again with the exception of the Money Management subtest (.61). This supports our hypothesis that guessing was a significant factor in students' responses on this subtest. Complete information on the reliability and validity analyses of this project can be found in Bullis and Reiman (1992).

Mini Transition Competence Battery

Even though the results of the development of the TCB were very positive, several improvements to the test could be made. With group administrations of the videotape assessment, some students must wait for others to finish answering each question before the next video question is presented. Thus, the slower students may experience peer pressure to complete items quickly; faster students may become bored and be distracting to the other students. Even though item statistics surpassed acceptable levels, our later research comparing group with individual administration showed improved scores and psychometrics in the individual administrations. Test administrators gained a greater intuitive feel of the individual's skills and capabilities and would prefer this approach if it were not for 6 to 8 hour per pupil administration time. Finally, the amount of time required for testing was simply prohibitive for many sites.

In response to these concerns, a second line of research began to develop the Mini TCB. Using the items developed for the TCB and the data collected in the standardization research, Item Response Theory (IRT) parameter estimates were computed using three logistic models. All six subtests were essentially unidimensional for adequate IRT modeling. Items were screened utilizing a three-parameter model (item difficulty, item discrimination, and guessing). Using this model, we identified 48 items that best measured performance at the proficiency (screening) level of ability.

Five hundred and ninety three students participated in the field test of the Mini TCB, including 133 four-year college students making up a comparison group. Concurrent validity study subjects took the Mini TCB and the full test battery 2-4 weeks later. Correlations between the Mini TCB and each of the subtests ranged from .73 to .86. Reliability study subjects took the Mini TCB once, and then again 2-4 weeks later. The test-retest index was .75. Students in the construct validity study took both the Mini TCB and the 6 subtests of the TCB. In the planned comparisons, we found that the college students (students definitely *not* included in the target population) performed significantly higher on the Mini and the six subtests than mainstream, residential, and community college students. Complete information on the reliability and validity analyses of this project can be found in Bullis, Reiman, Davis, and Reid (1997) and Bullis, Reiman, Reid, and Davis (1995).

Taken together, these results provide strong support for the psychometric characteristics of the Mini TCB, suggesting that it would be a suitable and important instrument to use with adolescents who are deaf and in transition. This screening tool requires approximately 45 minutes to administer. Large groups of students can be screened with this tool, and the more intensive test battery need be administered only to those students not passing the screening.

Computerized Adaptive Testing version of the TCB (CAT-TCB)

The Mini TCB has been well received by users in the field. The reduction of time required for testing has made it much more accessible to school programs. Since the beginning of the research on the TCB, though, there has been a huge increase in computer use, and many have requested a computerized version of the test rather than videotape. A computerized version of the test (e.g., CD ROM) would be useful in numerous ways: a computer program installed using a CD ROM is less susceptible to the wear and tear to which a videotape is exposed; because the test would be administered individually and all students receive a different combination of items, peer pressure would no longer be an issue; and because students would be able to respond directly on the computer, reports could be compiled and hand scoring would no longer be necessary.

Until recently, the technology simply did not exist that allowed for the high quality video required in the instruction of deaf students to be shown on computers. Both the quality of the video and the size of the video files made a computerized version of the test impossible. Fifteen years later, 80 Gigabyte hard drives are available on laptops, processor speeds and increased video memory allow for smooth presentation of video, and storage options such as CD and DVD make portability possible as well. In addition, adaptive testing (which tailors the test to the individual student) is an exciting possibility in a computerized version of the test.

Item Response Theory (IRT) is a statistical technique that allows us to determine, among other parameters, the difficulty of each item based on the information gained from our nationwide standardization data. The information gained from the IRT analysis has been used to write a computer program that, based on the student's correct or incorrect response to the current question, will choose the next appropriate item to present to that student. An incorrect response leads to a less difficult item; a correct response leads to a more difficult item. This process, known as Computerized Adaptive Testing (CAT) results in 1) increased efficiency in testing since fewer item responses are required to maximize confidence in the estimated ability level, 2) greatly reduces total testing time—we can assess students in about 45 minutes across the entire test battery, 3) individual pacing so that students can work at their own speed, 4) an increased interest level for the student as only items of appropriate difficulty are used, and 5) immediate scoring and reporting via a computerized printout of the results. As with the TCB, the results of the testing can be used in developing Individualized Education Plans and Individualized Transition Plans.

Rather than six different subtests, the CAT-TCB is presented in two domains: Employment and Independent Living. Students view standardized instructions on

the computer which include information about the research project, how to use the navigation buttons in the program, how to respond to the items, and examples.

Students see the item stem and response options signed in PSE first. Next, the response screen appears. It includes a written version of the question and the three response options. Students can choose to view that question over, or pick a response and choose to continue. Responding is a two-step process that allows the student to change his or her mind and select a different answer before continuing.

The reporting function allows for both individual and group data to be compiled for the instructor. Students and instructors have responded very positively to this new version of the test. Testing in both domains takes about 45 minutes to an hour.

Summary

Field testing is nearing completion and analysis will take place in the Fall of 2002. The CAT-TCB is being analyzed by comparing student performance on it with the Mini TCB, and via formative evaluation information collected from participants. Updates will be available on the CAT-TCB website at <<http://www.wou.edu/nwoc/cattcb/cat-tcbhome.htm>>. A commercial publisher will be sought. The TCB and the Mini TCB are currently available from James Stanfield Publishing Company at <<http://www.stanfield.com>>.

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Transition Planning Process: Giving Deaf Students a Voice

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Abstract

Adolescents with disabilities and their families face many challenges, especially at critical transition points in their lives. Such transitions include moving from middle school to high school, moving from high school to employment, entering a postsecondary education program, and/or deciding to live independently in the community. The success of each transition is contingent upon the coordination of several factors such as services, experience, and programs that assist individuals in selecting and achieving goals. Due to the diversity of goals, various professionals including special educators, vocational support personnel, employers and community/adult service providers may participate in the transition assessment process. However, success of this process depends on the active involvement of the adolescent and his or her family.

This research investigated perceptions of deaf students to identify key services and experiences that facilitated their successful transition from secondary and post-secondary education into adult life and employment. The investigation considered students' participation in the planning process and what effect it had upon their decisions regarding directions or goals they chose to pursue. Implications for teachers and administrators who work with these students are also included.

Current Practice

The student with a disability should be at the core of transition planning. Ward and Halloran (1993) stated "the ultimate goal of education must be to increase the responsibility of all students for managing their own affairs" (p.4). The reauthorization of IDEA in 1997 has made it clear that secondary special educators are responsible for inviting students and their families to IEP meetings when transition goals are discussed, and for inviting personnel from other agencies to ensure that transition services are coordinated. Thus, IDEA '97 reinforces the need and importance of teaching self-determination and providing choices for students with disabilities to the greatest extent possible including students with hearing impairments (Sitlington, Clark, & Kolstoe, 2000).

Although the development of a concrete transition plan is an important and tangible outcome, it is not the most critical outcome. When a transition plan is successful, students may experience changes in the way they view themselves as well as the way in which they interact with others. Students during the transition process should experience a variety of opportunities in which they are able to take charge of important life decisions in a manner reinforced by their teachers and parents. These opportunities facilitate a growing sense of empowerment and a reduction in feelings of helplessness. This sense of empowerment is fortified by a new set of skills; students learn planning and problem-solving processes that can be used throughout their lives (LeNard, 2001).

Despite the importance of student-centered transition planning for deaf students, several issues impede success in the transition planning process:

A steep decline in the enrollment of deaf students in residential schools has occurred over the past 20 years. The President's Commission on Education of the Deaf estimated in 1987 that the drop-out rates for deaf students was at 79% for AA degree programs and 71% for BA degree programs (Fernandes, 1997).

Over the past 20 years, the educational system has seen the largest increase of deaf minority students. In a recent article on the diversity revolution in deaf education, the most recent Annual Survey report indicates that about 44% of deaf and hard of hearing children and youth enrolled in educational programs are from diverse multicultural backgrounds. However, these students continue to significantly lag behind their white peers on nearly all national and regional studies of educational and occupational attainments (Anderson, 2001).

Deaf students, by virtue of the communication difficulties have uneven academic development when compared to their hearing peers (Allen, 1992).

Participation in vocational programs was neither necessarily helpful nor predictive of future employment or career planning. The

impact of family influence appears to be the strongest predictor for determining employment outcome, not work experiences or training (Schildroth, Clark, & Kolstoe, 2000).

Employment opportunities in the future will require higher levels of literacy and mathematics. Deaf students often are placed in vocational tracks where reading and mathematics are de-emphasized which will impose barriers to employment (Steward & Kluwin, 2001).

Deaf students often lack instruction in advocating for themselves during transitioning planning which limits their opportunities for additional academic and vocational training (Garay, 2000).

Communication and language concerns are central to many employment and transition issues for deaf students. Lower academic achievement levels and reduced mastery of literacy skills coupled with poor self-advocacy skills documented in the literature as is the case for many students with disabilities can result in a lack of successful transition planning.

The outcome for future employment for students with disabilities in general is lower than their non-disabled peers. Since the 1990s passage of the Individuals with Disabilities Education Act (IDEA), as well as the recent reauthorization of IDEA 1997, there has been a flurry of activity in the area of transition planning. This Act now requires transition planning be addressed within the Individualized Education Plan (IEP) process for all special education students beginning at age 14. Since the reauthorization of IDEA, attempts have been made to develop new and more successful approaches for transition planning.

Researching about deaf students' accomplishments has long been a tool used by administrators for reporting program outcomes and their program's accountability. Typically, a written survey is used to ask questions about their education, place of residence, employment, and other aspects of their lives that fit into predetermined categories. This author's study of deaf students was different in that the purpose was to give a voice to this population. The author, who is deaf, wanted the participants to share how and why the deaf participants made decisions about transitioning from high school to adult life.

This study investigated perceptions of deaf students to identify key services and experiences that facilitated their successful transition from secondary and post-secondary education into adult life and employment. Only those who graduated from high school in a midwestern state were surveyed (either residential or

mainstream) and who completed the transition process. This investigation considered students' participation in the planning process and what effect it had upon their decisions regarding directions or goals they chose to pursue.

This study was conducted through in-depth face-to-face interviews, and an online survey. It provided a unique perspective from the author's own experiences as a deaf graduate and the deaf students themselves who participated in this study.

The deaf participants used the mode of communication that was most comfortable to tell their stories in their own words. It is from these stories that the author hopes to make suggestions to classroom teachers related to students who are deaf and the transition process. In addition, the author hopes their reflections on strategies for participating, making decisions, and solving problems will help administrators and teachers think about the real-world needs that deaf students face after graduation.

Of the 69 students participating in this study, 26 took the survey online. Those who chose not to take the online version of the Transition Assessment Questionnaire (TAQ) had an additional option: they could answer the questions through in-depth interviews, or they could have a TAQ administrator translate the survey into American Sign Language (ASL). This option allowed those who were uncomfortable reading or understanding printed English the ability to participate by taking the survey in their primary language.

Emerging Themes Related to Transition

An analysis of information related to various supports available for deaf students is important for teachers and administrators to consider. The themes that emerged from the data gathered from these 69 students leads to the following recommendations that are supported in the literature:

1. Student participation is crucial. Deaf students must be more than observers at their IEP meetings; they must be provided with tools to be effective participants. For the most part, activities are the same for all students. However, the unique communication needs of deaf students and especially students from minority cultures must be taken into consideration related to participation. Teachers must understand that transition planning today is a complex process requiring intensive evaluation of each deaf student, including the coordination of a variety of educational and employment (Stewart, & Kluwin, 2001).

2. Efforts must be made to involve families in the transition process. School personnel need to be sensitive to family values, communication needs, and per-

sonal situations. Families should be encouraged to participate to whatever degree possible identifying transition needs related to the deaf culture.

3. *Teachers need to be aware of the feelings of parents of deaf children.* They must understand the different views related to cultural attitudes, language barriers, and social status associated with being deaf. There are many unique obstacles facing deaf and hard of hearing students in transitioning from school to work (Starnes, 2001). Some of these obstacles include:

- *Language.* The use of colloquial expressions is sometimes misperceived by both the deaf and hard of hearing student and their employer, creating confusion on both sides.
- *Role expectations and work ethic.* Sometimes, students are naïve about the rules and behavioral expectations that govern the workplace because they spend their lives exclusively in a school environment and are not prepared for the outside workplace.
- *Parental expectations.* For those students who have grown up in homes where communication is problematic, they may find that their parents have unrealistic expectations of what they can or cannot accomplish. Often times, the parents relegate some of the work traditionally handled at home to the school. As time goes on and schools and professionals take over their children's lives, the parents become used to being "out of the loop." Thus, the parents don't learn about academic and vocational training options or job skills and careers available to their children.
- *Life skills.* The incidental learning that occurs as hearing children watch and listen to their own hearing parents becomes essential to a successful transition. This learning often lacking is in homes where there have been communication barriers. Students need to gain independent functional experience. They need to know how to write a check, shop at the grocery store and balance their bank account. They need to learn how to budget, pay their rent, and how ATM cards work.
- *Uneducated public.* There is still much apprehension and misperception about deaf and hard of hearing people among employers. For some business leaders, the passage of the Americans with Disabilities Act only increases their anxiety that interpreter services for employees will greatly affect their profit margins.

4. *Transition planning should start in middle school.* Many aspects of the transition planning process take place in senior year or prior to graduation, disallowing appropriate time for the student to participate in activities recommended in their IEPs. A discussion regarding how to participate in transition planning should be delivered to the student within their middle school program, teaching life skills and career education options. Families and students should be introduced to the major areas of transition planning when they begin coursework. They should also be made aware of areas crucial to the student's successful future (i.e., how to go to college, how to use interpreters, and finding accurate information for obtaining assistance with independent living or college life).

5. *Transition planning must be sensitive to cultural factors.* Professionals involved in the transition planning must be aware of various cultural factors, including deaf culture that can affect the student and family participation in the transition planning process. Many deaf students have shared that they had no role models and felt no one really understood their needs or interests. More than half stated they discovered and obtained information through the deaf community. Professionals and families need to be cognizant of what the deaf community has to offer.

6. *Transition planning must be comprehensive.* Students, teachers, and parents must be aware of the importance of training students to participate in the transition planning process. The belief that students with disabilities and their families should contribute actively to the decisions and planning processes related to their post-school goals has been clearly documented (Ingraham & Anderson, 2001). Research exploring the extent to which students with hearing disabilities actually engage in the transition process is scarce. Of the few studies published, one recurring concern was evident: students did not report receiving any self-determination training relating to decision-making (Ingraham & Anderson, 2001).

Implications for Teachers

Although there are many factors that affect deaf students' participation in the transition planning process, one that often is acknowledged but seldom addressed directly is motivation. According to the students interviewed, one way to increase deaf students' motivation is by teaching deaf students how to make decisions about their learning and participation in their transition experiences. By teaching students how to make effective decisions and providing them with opportunities to make important learning and career decisions, they can be empowered to become active participants in advocating for and negotiating their own futures. Deaf students shared:

"I did not participate in my transition planning because my parents took care of it for me. Now that I am out in the real world, I am mad because I was not informed of services that could have been helpful to me." "During my first year at college, I was not informed of community services that could be of help to me. My VR counselor was not of help to me except to pay for tuition and books. It would have been helpful if I knew how to access interpreters and the deaf community." "Everyone was making decisions for me and I was too angry to say anything during the meetings."

The idea of teaching deaf students how to make effective learning and career decisions and how to use self-advocacy skills is based on research which has shown that students who have positive self-perceptions and control over their learning abilities are more willing and likely to work successfully with the adults in their environment (Van Reusen, Bos, Schumaker, & Deshler, 1994). According to these authors, self-advocacy refers to an individual's ability to effectively communicate, convey, negotiate or assert his or her own interests, desires, needs, and rights. It involves making informed decisions and taking responsibility for those decisions. Providing students who are deaf with opportunities to learn how to communicate effectively and to use decision-making and self-advocacy skills can help prepare them to become full participants in the transition planning process. However, the barrier to this training is that many times people in the business or academic world are still under various misconceptions, such as *"I didn't know that deaf people would be allowed to drive"* (Starnes, 2001).

What Should Teachers Do?

Teaching deaf students to advocate for themselves will have the greatest impact when they are actively participating in their own transition planning process. There are several ideas and suggestions that students provided that can be incorporated into the transition planning process and meetings with deaf students to ensure that they have the opportunity to share information and ideas.

1. Define "transition planning." Teachers should help deaf students explain the purpose of transition planning in their own words and discuss expectations and/or activities that will occur during these conferences. Deaf students shared: *"I don't think anyone told me what transition planning meant, I was only told about VR services."* *"I don't think I had this kind of service when I graduated."* *"I did go to a meeting but I don't know if it was called transition."*

2. Teach the student how to participate. Deaf students must know how to influence decisions being made about them. They need to have strategies for what to say and how to act during conferences, and they also need to be prepared to advocate for themselves. Students must have a clear understanding of their own strengths and areas of challenge. They can be their own best advocates as they increasingly participate in the drafting and implementation of their own IEP. However, many deaf students are not prepared to do this, partly because they're unaware of their own capabilities. Once students are aware of their own capabilities, they begin to build a solid self-advocacy mentality that will carry them throughout their adult lives. Students who are not encouraged to speak up during their high school years might run the risk that these skills will not develop until much later or they may not develop at all (Ingraham & Anderson, 2001). Deaf students shared: *"I was not able to graduate on time. I didn't know what credits meant in college terms and I felt people were taking advantage of me if I overlooked the rules or did not know what I needed to do in order to plan for college."* *"I felt my high school experience at (deaf school) was like prison! They made all the decisions for me and told me what I go do after high school."*

3. Create opportunities to practice. Without any prior systematic practices, students who are deaf often are not able to internalize the skills needed for asking the right questions at the appropriate time. How is this unique to deaf students? Deaf students shared: *"I think there was only one meeting that my parents told me I had to come to and I went with my parents, but I just sat there."* *"The teachers and deaf counselors were supportive about my goals but didn't teach me how to prepare for them."*

4. Allow time to respond. Deaf students need a longer "wait time" to think about what needs to be said, remembering how to communicate their responses, and what type of questions to ask. One deaf student shared: *"Everyone was talking so fast and I couldn't understand the questions, so I didn't say anything."*

5. Teach how to make eye contact. Since students who are deaf often rely on interpreters for effective communication when parents and other adults are in the meeting, they tend to look more at the interpreter than at the other members. If eye contact with the student is infrequent, the student may assume that his or her participation is not valued or important. Another deaf student shared: *"I didn't know what was going on and what they were saying about me, because I was busy watching the interpreter."*

6. *Teach how to share opinions.* A good way to encourage deaf students to participate is to ask them to share their own opinions. Teaching them the importance of eye contact, self-cueing strategies, and making comments on their opinions will likely increase the student's motivation to participate in the transition process. One deaf student shared: *"I wanted them to tell me more information on different options, and add it into learning how to problem-solve and how to fight for your rights."*

7. *Teach how to pay attention.* Deaf students need to know how to pay attention to what is being said and how to think about the information being used for planning. Most importantly, they need to know how to respond positively about the information being discussed and how to ask for clarification to help them better advocate for themselves. A deaf student shared: *"I did go to the meeting but it was really boring, and I didn't get anything good out of it."*

8. *Teach how to use interpreters.* Deaf students need to know how to effectively use interpreters. They need to know how to let the interpreters know when they do not understand, or how to interrupt the conversations appropriately so that they can participate and answer questions correctly. Deaf students shared: *"I couldn't understand the interpreter. I needed a better interpreter."* *"People were talking and not signing; and when I say something, no one really understands what I say because they didn't know ASL."*

Questions for Students to Consider

- Questions related to their abilities and limitations. *"I wish I learned more about being deaf and how hearing people can work better with us."*
- Questions that help them understand about their strengths and weaknesses. *"I felt like my teachers lied to me about how bad my English, and I can't write."*
- Questions that help them demonstrate their knowledge about locating and using community resources. *"I need to know more about deaf community and how I can get help with finding an apartment."*
- Questions that help determine their communication needs, requesting interpreters, getting telecommunication devices, and strategies for enhancing better communication with people who may not fully understand their language or preferred mode of communicating. *"I need help with technology skills requirements for work."*
- Questions that help identify their social and family-living situations. *"I wish they taught me better social*

skills, ability to stand up for yourself, and wish my parents helped me practice skills on my goals and interest."

Although these types of questions are not exhaustive, they do provide the basis for preparing students who are deaf for other types of conferences, meetings, or settings where they need to advocate for themselves. The goal of asking and practicing specific questions is to have the student initiate and conduct a meeting in which they advocate for themselves regarding issues or problems prior to participating in the actual transition planning process.

The preparation of transition planning with deaf students is just beginning to be recognized as important. The need for greater student involvement is essential to the deaf student's success in the post-high school environment. We know that the current outcomes for students with disabilities who do not benefit from their transition planning process tend to move from one institution to another. They often live at home for longer periods and express greater frustration with isolation and lack of social relationships in their lives (Sitlington, Clark, & Kolstoe, 2000). Therefore, teaching deaf students how to advocate for their needs to pursue their goals is essential. If teachers can motivate deaf students to take proactive roles in their transition planning, they will develop the confidence and self-determination skills necessary for achieving their goals and interests in life.

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Author's Note:

I am a deaf Hispanic faculty member and am familiar with the stigma placed on deaf individuals who are not from the mainstream. As a deaf student, I was not involved in transition from school to life for many of the same reasons given by the participants of this study. If you are a teacher who works with deaf students, I hope you will gain an understanding from an insider's point of view. Although the issues raised in this article remain unresolved, it is my hope that these deaf students' stories will provide direction and a foundation to ensure that your deaf students are heard in the transition process.

Gates to Adventure: Transition to Postsecondary Training for Deaf and Hard-of-Hearing Students

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Abstract

The Postsecondary Education Programs Network (PEPNet) developed an online training designed to provide students who are deaf and hard of hearing with information and skills they will need to plan their participation in postsecondary education and training programs. PEPNet is the national collaboration of the four Regional Postsecondary Education Centers for Individuals who are Deaf and Hard of Hearing. The Centers are supported by contracts with the U.S. Department of Education, Office of Special Education and Rehabilitative Services. The goal of PEPNet is to assist postsecondary institutions across the nation to attract and effectively serve individuals who are deaf and hard of hearing. *Gates to Adventure* is recommended for secondary students who are deaf or hard of hearing, as they begin considering postsecondary options. The training is offered free of charge at <www.pepnet.org>. The training was developed to help students:

- Identify reasons for becoming involved in making future educational/training plans,
- Understand the importance and the components of a postsecondary options personal self-assessment,
- Understand major career categories,
- Understand the range of postsecondary educational options available to learners,
- Understand that the requirements for entry into postsecondary options vary and require advance planning in order to be met, and
- Describe services that are available for postsecondary students who are deaf and hard of hearing.

Project Development

In the fall of 2000, the Postsecondary Education Programs Network initiated the development of mate-

rials intended to supplement freshman orientation programs for deaf and hard of hearing students attending colleges and universities. During discussions with professionals in the field, concerns have been raised about student transition from secondary education to postsecondary education and training opportunities, including issues such as career planning, postsecondary options, academic skills, life management, access and accommodations, self-assessment, self-determination, and rights and responsibilities.

Each of the four PEPNet regional centers sent several representatives to a planning meeting in Minnesota in December 2000 to begin the project. During a discussion about the project goals, the development team decided to shift the focus to transition skills needed by individuals considering the wide range of postsecondary education and training. Instead of identifying only incoming college freshmen as the target audience, the group agreed to expand the audience to include young adults ages 14-21. Interested persons over age 21 would also be welcome to use the materials. Because of the nature of the material, additional audiences might include school counselors, administrators, support staff, high school teachers, rehabilitation counselors, parents, or student advocacy groups.

A Web-based format was selected for the project to allow for widespread use of the materials. Members of PEPNet previously developed an online training for faculty and staff related to deaf awareness, and the planning team believed that the online format would also be a good strategy for this project. A highly interactive, attractive program with links to additional resources would be a unique way to engage young deaf and hard of hearing adults in the training program. The team planned to develop related supplemental materials for teachers and counselors for use with the student.

Staff members from the Postsecondary Education Consortium (PEC) and the Midwest Center for Postsecondary Outreach (MCPO) shared the leadership for this project. To facilitate the development of the online training, the project team contracted with Seward Learning Systems (SLS), an instructional design company that worked with PEPNet several years ago on the first online training. The SLS instructional designer assigned to this project previously taught deaf and hard of hearing students and was aware of many of the issues related to the presentation of information in the product. The project development team included

16 members from across the country. Eight of the 16 members had ongoing student contact, and six of the team members were deaf or hard of hearing.

The development team helped structure the content of the online training program through feedback at the December 2000 meeting and follow-up online chats. The team maintained regular contact through email during the winter and spring of 2001. In addition to comments about content, the development team provided feedback about the visual treatment and screen design as well as suggestions for making it interesting to young deaf and hard of hearing adults.

The instructional design team created an adventure park theme as the visual treatment for the training. Through this design, related content areas can be explored through various challenges in the adventure park:

- *Lion Pit* addresses issues related to self-awareness and self-understanding;
- *Forest Maze* addresses issues related to career planning;
- *Rope Climb* addresses issues related to postsecondary options;
- *Swinging Bridge* addresses issues related to postsecondary planning.

Utilizing the Training

When beginning the training, participants must sign in and provide some demographic information that is collected to report statistics regarding the summary information about the users. Participants may sign in as a student, participant in a job rehabilitation program, vocational rehabilitation client, teacher, school counselor, vocational rehabilitation specialist, or parent. Students, trainees, and VR clients are asked to provide information about their home state, zip code, country, age, type of program currently attending, and school name and location. Teachers, counselors, and parents are asked to provide more detailed information, including their name, school contact information, and information about the ages and numbers of students with whom they are associated.

The privacy policy states that the activity results are saved only during the learner's current session with the software. None of the answers that a learner gives to the questions within the training program are saved in a database or in any location on the computer that is used to access the training; no cookies of any kind are used as part of this training program. Demographic information about learners that is collected as part of this sign-in procedure is saved and routed to the PEPNet database. This information is strictly used for funding purposes.

Participants have several tools available to assist them throughout the training. A *backpack* includes a copy of an adventure map to guide participants to different content areas. The *Sherlock Holmes cap* provides clues associated with questions presented in the review

section. *Adventure guides* offer tips connected with the content within a given section. The project team wrote descriptions of these individuals and related tips to serve as possible role models or peers; the adventure guides are not real people. The *mentor* symbol links the participant to additional suggestions and advice offered by actual deaf, hard of hearing, and late-deafened professionals in the field.

Participants use the adventure map to select a content area. Although they can begin in any section, starting with the *Lion Pit* and moving around the map will help the participant build the skills and knowledge needed for transition. They may find it helpful to go through each section more than once to more fully process the information. Having access to the adventure map allows participants to complete a section and return at a later time to work through the next session.

Knowing Yourself – Lion Pit

This section was developed to (a) help the participants develop a better understanding of themselves, (b) understand that this knowledge will help them choose a postsecondary option and career, and (c) understand that knowing themselves better includes: hearing loss, communication style, personality, academic skills, and interests/abilities. The content in this section includes the following concepts:

- Knowing oneself better increases confidence to make good decisions about the future.
- People choose jobs or careers that are a good fit with their interests and abilities.

Career Planning – Forest Maze

This section was developed to (a) help the participant have a beginning understanding of the Holland Code system, (b) know more about six career groups included in the system, and (c) understand some of the personal characteristics and academic skills that match up with jobs in the six groups. The content in this section includes the following concepts:

- People identify career areas that interest them and look for postsecondary options with training in these career areas.
- Grouping interests can help a person identify a career direction.
- The Holland Code system can be used to describe career areas:
 - Realistic (physical),
 - Investigative (science),
 - Artistic (creative),
 - Social (helping people),
 - Enterprising (business), and
 - Conventional (practical).

Postsecondary Options – Rope Ladder

This section was developed to help the participant (a) have an understanding of available postsecondary

options, (b) answer questions to find out what option might be best for that student, and (c) understand differences between high school and postsecondary education/training. The content in this section includes the following concepts:

- Employers want skilled workers.
- There are various options for improving skills, including:
 - Short-term training,
 - On-the-job training,
 - Proprietary schools,
 - Vocational-technical schools,
 - Two-year colleges, and
 - Four-year colleges/universities.
- Institutional variables should be considered:
 - Size,
 - Number of deaf and hard of hearing people enrolled, and
 - Location.
- High schools and colleges have different expectations and practices.

Postsecondary Planning - Swinging Bridge

This section was developed to help the participant (a) understand need for advance preparation, (b) understand the application process and deadlines, and (c) understand admissions testing and financial aid. The content in this section includes the following concepts:

- Students need to plan ahead during high school:
- Courses,
- Interest inventories.
- Visiting programs can give students a better idea of what is available.
- There are several steps required when completing applications.
- It may be necessary to take admissions/placement tests.
- Students may seek and apply for various types of financial aid.
- Each student must make the decision that is the best fit for him/her.

Interactivity

The project development team wanted to avoid having numerous screens that were full of text. They supported having a very rich visual format that allowed a great deal of interactivity with the concepts. The content experts provided a lot of information that had to be included in a fairly compact program. This created a challenge for the instructional design team.

Through the use of FLASH animation, the graphics were enhanced to create a more interesting visual effect. To get the participant's attention, the instructional design team incorporated FLASH files into pro-

gram menus and buttons. Flash animations that show movement through the areas of the environment also added interest and acted as a reward for finishing a section of content.

Interactivity included the clicking on hotspots that display additional material, dragging objects on-screen, inputting text, and dragging sliders. This helped the participants engage the content, thus enabling them to spend more time thinking about and evaluating that information.

Settings for Use

The online format provides access any time the participants would like to use it. Individuals may work through the program independently or together with a teacher, counselor, mentor or parent. Small groups may work through the program under the direction of a teacher, counselor, or other resource staff. Although not specifically built into the program, there are numerous opportunities for discussion between the participants and their adult mentors. Supplemental materials will be developed for use with this training program.

Accessing the Training

This training program was designed for access via the Internet on either a PC or a Macintosh computer with a mouse or compatible pointing device. A Pentium processor – 200 MHz or higher, using Windows 95, Windows 98, or Window NT as an operating system – or MAC Power PC at 200 MHz or higher is recommended. For best results, participants should use Internet Explorer 4.0 or above or Netscape Navigator 4.0 or higher as their Internet browser; ISDN bandwidth is preferred. A FLASH 4 or 5 plug-in is necessary. A printer is needed to print self-assessment results; email may be used instead printing the results.

Summary

This project was developed to enhance the transition skills of young adults who are deaf or hard of hearing. It is one of many tools that can be used by participants in small group or individual settings. Because there is a great deal of information included in the training, participants may go through the training multiple times as they progress through high school or focus on planning for the future. Results from the self-assessment section may be used as part of the student's Individual Transition Plan (IEP).

How Many Ways Can We Define Confusion?

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Abstract

This paper is an analysis of the confusion deaf students experience when reading English. Misunderstandings occur at the morphological, syntactic, semantic, and discourse levels. When students are cognizant of these problems, they can improve their reading comprehension. This paper is also an appeal to challenge the status quo, so that changes in deaf education will be made, thereby allowing students to reach their full potential. Educators should view English and ASL as equal, and both languages should be used in teaching deaf students.

Introduction

Deaf students in schools today are not progressing at a reasonable rate. They graduate from high school, but many of them have not achieved success. A good number go on to college and continue to struggle with a language that has eluded them all of their lives. I commend deaf students for their efforts and perseverance. Our students work hard, but through no fault of their own, too many of them are under-prepared by the time they get to college. Deaf students are products of a system that has failed (Johnson, et al, 1989; Strong, 1996).

Teachers of deaf students also have a very difficult job. Yet teachers are committed and have hope. They know this field can be as trying as it is rewarding, and they are painfully aware that changes in deaf education are necessary. Professionals come to conferences such as PEPNet to gain new ideas and insights, to learn innovative teaching techniques, and hopefully, to make necessary changes.

Educational consultant, Ed Vitale, wrote a book titled, *Thinking Your Way Through English Grammar*. Mr. Vitale states the importance of taking students from where they are. Our goal is for students to improve their skills in a semester or school year. But we cannot overlook the level at which they are beginning their studies with us. What do they know? What do they already understand? Deaf students *do* have a great deal of knowledge about English. We should use what the students know as a springboard for new ideas to be taught (Paul,

et al, 1992). Ed Vitale also recommends that teachers *not* do for students that which they can do for themselves. Instead, find out what students do not know or understand and guide them in helping themselves.

When referring to English for deaf students, I am referring to English in print, not spoken English, nor the coding of English on one's hands. We must keep in mind that deaf students do not have full access to English unless they are reading (Neuroth-Gimbrone and Logiodice, 1990). Although many schools promote the manual coding of English, in reality, our students get exposure to the English language through reading. The most accessible language for deaf students is a visual one, American Sign Language. Deaf children can acquire this language naturally. Written English, then, is a second language for deaf students (Johnson, et al, 1989; Neuroth-Gimbrone and Logiodice, 1990).

The Process of Reading

Reading is a very intricate process. Students must read, understand, and retain what was read. Consideration must be given to new words, cohesion, sentence and paragraph structure, as well as world knowledge. This can be overwhelming in one's first language; imagine the daunting task one faces when attempting this in a *second* language. Still, the goal is for deaf students to be proficient, efficient, and effective readers in English.

What transpires as a person reads? Some researchers believe that reading is a top-down process, that all of the knowledge a reader has about the world is what he brings to the printed page. Others believe that the task of reading is a bottom-up process: decoding what is written on the page. A reader must understand the words and structures in print. However, many researchers now believe that reading is an interactive process: top-down *and* bottom up (Grabe, 1993). A reader's knowledge is combined with the decoding of sentences; both are needed to decipher the written text.

When deaf students misunderstand what they read, where is the breakdown? Is it due to top-down or bottom-up processing? I believe both types of processing contribute to their misunderstandings. This discussion will focus on bottom-up processing although the intent is not to minimize the importance of a reader's world knowledge.

The amount of questioning a teacher does to determine what students have understood from reading mate-

rial will depend on the task at hand. Is it necessary for students to understand every word? Or is it enough to get the gist of the text? When the goal is to go through an article carefully and understand every sentence, the class can translate sentences into ASL.

Morphology

The analysis of students' misunderstandings begins at the morphological level with derivational morphology. Even though the teaching of prefixes and suffixes can help increase a student's vocabulary, affixes can also cause problems as students read. Students learn that the prefix "de-" can undo or negate a term, such as "desegregation." But what about "denote," "delighted," or "depressed?" The meanings of prefixes may be overused at times, and consequently, misunderstandings can occur.

Many adjectives and their adverbs have the same meaning. For example, if students learn that the adverb form of "clever" is "cleverly," they have added to their vocabularies. However, they will see "hard" and "hardly," "bare" and "barely." In these cases, the meanings of the adverbs differ from those of the adjectives. If deaf students are not avid readers, they may not realize this.

Inflectional morphology can also be tricky. The morpheme, "ed" in English is always interpreted to mean something has been finished. When teaching grammar, one can steer the lesson to reading. The following three sentences came up during one such lesson.

- A. Last night, I started writing a letter.
- B. This morning, I continued writing my letter.
- C. This evening, I finished writing my letter.

I asked about sentence A. Was the letter finished? The students said that it *was*, because it has "-ed," and "-ed" means finished. I explained the meaning of "start" and the use of "-ed." Then I asked about the second sentence. Again, my students said the letter was finished, and once again, I explained. The vocabulary in the sentences above is not difficult, yet the students misinterpreted their meanings.

Verb inflections cause difficulties for students. The "-ing" ending is a perfect example. Students often think that the "-ing" ending always indicates a verb, though the "-ing" ending can also indicate a gerund or adjective. Irregular verb endings also throw students off. Recently, I had a terrible time convincing a student that "bit" was the past tense of "bite." She swore that she had never seen "bit" before. Other students were incredulous that "born" is the past participle of "bear."

Is there any teacher who can say that the final -s in English doesn't wreak havoc with deaf students? The -s added to third person singular verbs, the -s added to plural count nouns, and the possessive -s can and *do* become confusing. Do deaf students truly understand the

difference when they read nouns and verbs with final -s?

ASL verbs do not inflect by adding the fingerspelled letter -s to signs. ASL *does*, however, express plural in a variety of ways. A classifier might be used to show a stack of books or books in a bookcase. Plurality can also be expressed by the repetition of a sign. If negative transfer from ASL to English does occur, an easy solution is to use contrastive linguistics to explain the differences between inflections in ASL and English.

When teachers discuss parts of speech in an English grammar class, they can include a discussion of ASL grammar. A noun in English may not be a noun in ASL; an adjective in English may be a verb in ASL. Some ASL verbs also function as adjectives in certain structures (Padden, 1983). This is important information to share with our students. Bringing ASL into the English classroom validates ASL. Isn't it about time for that? Examples in both languages enhance students' comprehension of written English and allow them to develop a healthy respect for both languages (Strong, 1992).

Sometimes our students know only one form of a word. They know the word "poor" but not "poverty." They are familiar with the verb "hate" but not the noun form, "hatred." Educators mustn't assume that students understand common word forms. "Succeed," "successful," and the noun, "success" may not be difficult. But what happens with "succession"? What do students think? This is a case where teachers need to check students' understanding.

Syntax

Syntax also causes major problems in reading. Consider the following sentences.

- A. I shocked my friend.
- B. My friend shocked me.

In order to teach "emotion" verbs and their accompanying adjectives, I sign a story involving a situation in which my friend becomes shocked. I ask students which sentence fits my situation. Many of them choose sentence B. This doesn't surprise me, since an ASL signer would set up the situation first and sign, FRIEND SHOCK at the end. This means my friend was the person who felt shocked. Verbs such as SHOCK, FRUSTRATE, SURPRISE, EXCITE, and BORE function very differently in English and in ASL. What's more, the English verbs can be changed to participial adjectives:

- A. My friend was *shocked*.
- B. My news was *shocking*.

Relative clauses in English can also be confusing to deaf students.

- A. The boy who hit the girl ran home crying.
- B. The man waiting for his wife saw the accident occur.

Many students say it was the girl who ran home crying in sentence A. Who saw the accident in sentence B? The wife, they say. When explaining the meaning of sentences with embedded clauses, any reading lesson can become a grammar lesson for the sake of comprehension.

The structure of English sentences frequently causes the meaning to be ambiguous. Consider the following:

- A. young men and women
- B. Spanish history teacher
- C. Thomas watched the police with binoculars.

English is often vague in this way. Who was young? Describe the teacher. Who had the binoculars? One must disambiguate these sentences, and then express them in ASL.

Semantics

Semantics is a fuzzy area for reading comprehension. Explaining semantic restrictions helps students realize that words have limits to their use. Synonyms do not have exactly the same meanings (O'Grady, et al, 1982). Consider for example, the nuances of meaning in the synonyms: change, adapt, modify, and revise. Another group to consider is: important, pertinent, essential, and significant. Each of these words is used in specific contexts. Students may be unaware of subtle differences in meanings.

Understanding the connotations of English words can narrow their meaning. Some words have a positive connotation, others, a negative one. "Take advantage of" in English can be positive or negative, depending on the context. Compare this to TAKE ADVANTAGE OF in ASL. There is one sign for the positive meaning and a different sign for the negative meaning. An interesting difference to discuss in class. Students can learn to use context clues to decide if a word has a positive or negative meaning.

Figurative language is extremely problematic for deaf students; so much of English is figurative. Teachers can make comparisons between literal and figurative meanings. Two such examples are given below. How would deaf students interpret these sentences?

- A. The woman in red works in my company.
- B. My company is in the red.

Since it would be impossible to teach all examples of figurative language in English, teachers can do the next best thing: encourage students to read voraciously and provide interesting and understandable reading material (Krashen, 1993). Allow students to read comic books, the sports page, anything they will comprehend. If they lose interest in one book, they simply select another. Half the battle is convincing students of the importance of reading. Students will pick up the meanings of new

words in context as they read; incidental learning will occur (Zaki, 1997). However, students must do a great amount of reading and see words in a variety of contexts for this to happen. Teachers can provide guidance in helping them to guess correctly, rather than misunderstand, the meanings of new words.

Educators can also discourage students from reading and signing at the same time. When this is done, students are looking at one word at a time. However, idioms, just as all phrases and clauses, must be viewed in their entirety. Helping students chunk information is good practice for any sentence, whether the words are used literally or figuratively.

Another way to discourage students from signing while reading is to apply the "language overlap" principle to spoken languages. If one is trying to create an Italian sentence, would he take Italian words and impose the structure of English onto them? Is the resulting "language" Italian or English? It is neither. That much seems logical. Yet, attempts to overlap ASL and English are made all the time: simultaneous communication. This is carried over into *reading* and signing at the same time. Students who believe they are adept at signing while reading cannot explain what they have "read," because there is no meaning for them. This isn't surprising.

A common practice in a reading class is to determine meaning from context. This is no easy task for a second language learner. While reading an article about a boy who wanted to divorce his parents in order to be adopted by another family, a student saw the word "abandoned." He guessed that "abandon" meant "to adopt." He was in the right ballpark, just on the wrong end of the field. This type of misunderstanding makes sense.

English is loaded with homonyms. Even common words have a long list of meanings. If students are reading and signing at the same time, what is the probability of their signing the correct meaning of a homonym? The "best friend" of a deaf student, a dictionary, may not solve this problem. Dictionaries often cause more confusion than clarification. When seeing a list of definitions, a student might automatically choose the first meaning regardless of the context. Another dictionary-related problem is that a student might select one word from a long definition and assume that one word is the meaning.

Discourse

Language in discourse is sometimes misunderstood. Frequently, dialogue in novels is the culprit. Page after page of dialogue comes up, and students are not sure who's talking to whom. Also, the actual words of a dialogue might be interpreted incorrectly. If one is sitting near an open window, for example, and states that the room is cold, he's indirectly asking someone to close the window. Students might take that indirect speech act (Ellis, 1994) literally: the temperature of the room is being discussed.

Helping Deaf Students in the Classroom

Checking students' misunderstandings in morphology, syntax, semantics, and discourse should aid in comprehension. Testing overall comprehension is done in a number of ways. Class discussions, summaries, and tests are frequently used. Students can also explain what they've read by interpreting it into ASL (Livingston, 1997). Those who read well can provide a lot of detailed information in this manner. If a student merely reads an article and answers questions at the end, is that a test of comprehension? Or is it a test of the student's ability to locate answers?

What other methods can educators use to help deaf students? They can encourage students to think for themselves (Bosso and Kuntze, 1994). Classroom instruction in reading strategies can foster independence and empowerment. Students can practice thinking *before* they begin reading. Scan a text. Check out new words and ideas. Build on these strategies *while* reading and *after* reading. Ask questions. Make predictions. Test those predictions. Answer the questions that were raised (Clarke, 1993). These strategies should aid in understanding and retention and put students on the road to becoming independent learners.

Independence in education means students take control of their learning. If this is not done, students will continue to see teachers as magicians who make everything happen. Literacy stories of deaf college students were collected and analyzed. Good readers had learned early in life to depend on themselves to get information. They accepted information from parents and teachers but did not depend on it. Those who were poor readers had always depended on others to provide information to them (Wood, 1998).

Educators should also maintain high standards and expectations. This may require explaining concepts in great detail, allowing extra time to complete assignments, and keeping a close watch on students who are struggling. Misunderstandings can be remedied. But lowering expectations deceives students and passes on serious problems to the next grade or level.

The task of learning a second language is made more difficult if one is not fluent in his first language. Evidence shows that students with low levels of competency in their first language will likely perform poorly in their second language (Strong, 1996; Walqui, 2000). Yet how many elementary programs make sure that deaf students acquire *their* first language? Day care workers, caregivers (Johnson, et al, 1989), and teachers at all levels can be involved in deaf children's acquisition of ASL. Deaf speakers and videotapes can supplement course work. Deaf role models can enhance students' linguistic skills (De Houwer, 1999) and boost their self-esteem. Schools and colleges can offer ASL and Deaf Culture classes.

Helping Deaf Students Outside the Classroom

In addition to in-class strategies, there are a variety of ways to improve deaf education outside the classroom. Build positive relationships with professionals in elementary and secondary education. Expose young deaf students to ASL. Allow older deaf students to do school-related projects in elementary schools. Use distance learning to bring ASL storytelling to remote areas. Push for bilingual education programs. It's time to roll up our sleeves and get to work.

The Need for Change

The following quotations govern my teaching:

"Education is learning what you didn't even know you didn't know" (Daniel J. Boorstin).

"And that's it. That's why I want to teach: to make a permanent difference in the life of a child" (author unknown).

Changes in deaf education are crucial. The power to change rests in the hands of committed professionals who are willing to make a difference. The following passage, taken from an article on the teaching of sign language, is appropriate for the message of change.

Deaf children should be educated in the language of their community, ASL, and taught English as a second language through the medium of their first language. Educational programs for teachers of the deaf and sign language interpreters must adequately teach the linguistic expertise necessary for those roles. **If this does not happen, the gulf between the understanding of the deaf experience and the actual services provided to deaf people will continue to widen, so that although we will continue to understand better the damage inflicted by unchallenged policies and assumptions of the status quo, we will fail to do anything about it**" (Rudser, 1996, p. 111, emphasis mine).

Deaf students deserve more than the status quo. They are bright, capable people, and they have not yet lived up to their potential. This is a tragedy. The time has come to challenge the established policies. We *can* take action, and we *must*.

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SECTION VII
Program Development

Two-year Postsecondary Educational Institutions in the Midwest Serving Deaf and Hard of Hearing Students: Technical Assistance Needs and Programmatic Changes

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Abstract

A research project was conducted that examined the provision of support services (e.g. interpreting, notetaking, real-time captioning, C-print, counseling, tutoring) to deaf/ hard of hearing students attending two-year postsecondary education programs in the 12-state Midwest region between 1996-2000, and where the Midwest Center for Postsecondary Outreach (MCPO) was able to positively impact quality of services to students. The information shared can be used to assist programs in designing innovative outreach, technical assistance and consultation services.

In the early 1950's, only a small minority of deaf and hard of hearing students had access to postsecondary education programs that could meet their unique communication needs. At that time, Gallaudet College in Washington, D.C., the world's only liberal arts college for deaf individuals, had an enrollment of just 300 students. There were a handful of additional deaf students attending other programs in the nation, but not necessarily with specialized support services such as sign language interpreting and notetaking, the most commonly identified types of support services for such students.

During recent years, postsecondary educational opportunities for people who are deaf and hard of hearing have been expanding on college campuses across America. More programs are becoming accessible, and the number of such students enrolling in them is steadily increasing. "During the 1970's, the number of postsecondary programs for deaf students in the United States grew rapidly. Community colleges and special postsecondary programs began to take on increasing numbers of deaf students. A growing concern among professionals in organizations serving deaf people regarding unemployment and underemployment led to federal legislation to ameliorate the problem" (Lang & Connor, 1988, p. 26). There was legislation that called for federal support of several regional

postsecondary programs for deaf and hard of hearing students, housed at already-established higher education institutions.

The purpose of establishing these programs was to demonstrate the feasibility of setting up model programs for deaf and hard of hearing students at existing postsecondary programs for the mainstream population (Moores, 1979, p. 15). These programs were initially supported by funds for vocational education at the state level, designed for students with disabilities.

In the 1992-93 academic year, there were an estimated 20,040 deaf and hard of hearing students enrolled in postsecondary education institutions nationwide, including an additional 2,500 enrolled at Gallaudet University and the National Technical Institute for the Deaf (Lewis, Farris & Greene, 1994, p. iii). The 1999 edition of "College and Career Programs for Deaf Students: 10th edition," lists two national programs and over 145 postsecondary programs, which shows an explosion of postsecondary programs for deaf and hard of hearing students. "Prospects for deaf people are considerably different than 20 - 30 years ago. Postsecondary education for the deaf is beginning to mature" (Nash, 1988, p. 9). With this increase has also come improved access and accommodations in postsecondary programs for such students.

As a result of federal legislation which shifted the focus of funding from direct service programs for deaf and hard of hearing students to outreach and training at the institutional level, the Postsecondary Education Programs Network (PEPNet) was formed in 1996 to create effective and efficient technical assistance services to postsecondary educational institutions in providing access and accommodations to such individuals. Colleges were ultimately responsible for the provision of support services to deaf and hard of hearing students; they could no longer depend on federal funding to provide accommodations.

The purpose of PEPNet is to promote increased and improved access and availability of postsecondary educational opportunities for individuals who are deaf and hard of hearing. It is designed to facilitate more equality, consistency and uniformity in quality of support services. The four regional technical assistance centers of PEPNet are:

1. Midwest Center for Postsecondary Outreach, St. Paul Technical College, St. Paul, MN (MCPO)

2. Northeast Technical Assistance Center, National Technical Institute for the Deaf, Rochester Institute of Technology, Rochester, NY (NETAC)

3. Postsecondary Education Consortium, University of Tennessee, Knoxville, TN (PEC)

4. Western Region Outreach Center & Consortium, National Center on Deafness, California State University, Northridge, CA (WROCC)

While all four programs have different technical assistance delivery structures, the mission for all programs is the same: to enhance postsecondary educational opportunities for deaf and hard of hearing students through technical assistance services. MCPO offers consultation and training on services for deaf and hard of hearing students, presentations at workshops and conferences, and access to a network of other professionals in the field of higher education and deafness. Issues that can be addressed include, but are not limited to: interpreting services, notetaking, tutoring, real-time captioning and C-print, legal obligations required under the Americans with Disabilities Act, and teaching English as a second language to deaf and hard of hearing students. MCPO accomplishes its work through the funding of four outreach sites: Harper College in Palatine, IL; the Center for Sight and Hearing in Rockford, IL; the University of Wisconsin-Milwaukee; Columbus State Community College in Columbus, OH; and a fifth site at MCPO in St. Paul, MN.

In addition to technical assistance, consultation and training services, PEPNet offers teleconferences, on-line training modules, and regional and national conferences. PEPNet also has a Resource Center housed at WROCC; which offers a wealth of products including training packages, handbooks, books and booklets, tip sheets, videotapes, and curriculum guides.

In 1997, PEPNet conducted a national needs assessment survey of postsecondary institutions to determine the status of support services available to deaf and hard of hearing students, and to identify preferred strategies for information access and dissemination. In 2000, a follow-up study to the national PEPNet needs assessment was done as a dissertation research project by the author to determine the impact of MCPO on provision of services to students in public two-year, non-profit postsecondary institutions in the 12-state Midwest region, since its establishment in 1996.

This study was designed to find if there were any changes in the number of deaf and hard of hearing students enrolled, served or graduated, preferred topics or modes for training and information dissemination, level of support services (levels of service provision, funding and staffing), and the relationships between any identified changes with the establishment of MCPO. Information was also gleaned about various

technical assistance services that have had the most positive impact on service provision, and where disability service providers felt they were most positively impacted by MCPO services in regard to services for deaf and hard of hearing students at their institution.

It was found that there was an overall decline in the number of deaf and hard of hearing students served and graduated, although a higher number of institutions were having contact with these students. The top five preferred training topics and modes for delivery were largely unchanged between 1997 and 2000, although there seemed to be lower rankings in the post-data, which could be linked to MCPO's efforts, resulting in increased awareness and decreased need for technical assistance and consultation services. The technical assistance services shown to have had the most positive impact on level of services to deaf and hard of hearing students are the MCPO/ PEPNet website, PEPNet conference, PEPNet Resource Center, phone consultation, teleconference participation, and training modules on the PEPNet website.

In regard to service provision and staffing, there have been growths in the areas of sign language interpreting, C-print, real-time captioning, notetaking and tutoring. The data shows that this can likely be credited in part to PEPNet and MCPO services. On the other hand, level of funding for disability services has remained stagnant, which fits in with funding being ranked as one of the top five training needs identified, and ranked as the lowest in areas positively impacted by MCPO. Generally, it seems that many programs do not have strong institutional commitment and support to increased funding for disability services, despite the growing need and cost for services.

Several conclusions and recommendations pertaining to the provision of services to deaf and hard of hearing students in higher education arise from this study, which fall in the areas of marketing, MCPO services, intervention, specialized programming, diversity, funding and policy development. There needs to be increased marketing of MCPO services, and MCPO needs to continue to provide services addressing the areas of funding/ resources, technology for accessibility and learning, student retention, and improvement of support services.

It is clear that there is a need for further intervention at levels preceding higher education: with doctors and audiologists, with parent-infant educators, and within the K-12 school system. There is only so much that MCPO can do to impact the success of deaf and hard of hearing students if they do not have the academic preparation and skills necessary for the rigors of higher education.

Although the trend is towards attending one's local school district, the 'clustering' of deaf and hard of hearing students at designated schools that provide specialized support services, which used to be a popu-

lar option, may still need to be considered a model of effective service delivery. "Availability of qualified service providers is dictated by a 'critical mass' approach, whereby a number of traditionally underserved Deaf persons would be grouped in a way to receive the consistent attention of these professionals" (Long & Dowhower, 1991, p. 109). Specialized programs that serve a large number of such students also allow for more effective and efficient use of staff and fiscal resources to serve a larger number of students, rather than the scattering of students and support service staff at a large number of institutions, all duplicating one another.

Next, needs to be a new focus on deaf and hard of hearing students with secondary disabilities and of various backgrounds. It is clear that the student body is becoming increasingly diverse, with more hard of hearing students, more students of color, more with secondary disabilities, and more students with second, third or fourth language issues.

Funding for disability services is an ongoing concern, which the data clearly shows. The area of designing access services for students with disabilities, both physically and programmatically, has been receiving heightened institutional and public awareness, in part due to legal and advocacy efforts. However, administrators are under pressure to provide more services with fewer resources. This need goes back as far as the early 1980's. "There will be a clear need for (disabled student services) program staff to become better managers, but more pointedly, better managers in order to 'do more with less.' There is clear need to gather and bear the hard facts about accommodation needs and the associated costs, changing patterns in the disabled student population, and the benefits of equal accommodations and access as a human resource investment" (Blosser, 1981, p. 83).

Finally, development of policy and guidelines and collaboration in regard to services for deaf and hard of hearing education are additional areas of concern. There is a widespread effort by many campuses to integrate services to disabled students. While the outcome has been positive, there has been some oversight of the political and programmatic need for central coordination of support services for students with disabilities. There needs to be an overall campus coordination, less competition among departments for funds, systems for student referrals, development of cost-effective services, and overall monitoring and managing of resources.

In conclusion, careful analysis of the data has provided new information on how and where MCPO has made an impact since its establishment in 1996, and the information can set the framework for planning future technical assistance and research activities by PEPNet, policymakers, and researchers. While this particular research was limited to two-year colleges in the

Midwest region, it can also be applied to various higher education institutions, including four-year colleges and proprietary schools.

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The TinkerToy Conundrum: Building Links to a New Partner

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Abstract

As service providers, we search for ways to obtain services for individuals who are deaf and hard of hearing. Although we do our best to provide services within our programs, this initiative is not always possible due to resource limitations of time, staff and funding. Faced with these shortages, we often must seek other resources. The discovery of an underused or untapped resource that can assist us to provide services and complete our mission is important. Community Rehabilitation Programs are resources available to help provide services for students who are deaf and hard of hearing. Community Rehabilitation Programs offer a variety of programming from assessments to job readiness training to many community contacts, especially with employers. After a review of the history, available services and benefits, the participants in this workshop used TinkerToys to construct a visual model representing links and strategies to partner with this valuable resource.

Introduction

Many Community Rehabilitation Programs (CRPs) were established in the early 1970s as the result of an identified need to serve individuals with disabilities including those who were deaf or hard of hearing. Part of this impetus came from within the deaf community as they saw a need for employment related services. In the beginning an assumption was made that individuals who are deaf would benefit from and be able to participate in traditional rehabilitation facilities, the term used at the time. Services were mostly available through general rehabilitation facilities serving all disabilities and this was done out of necessity not choice. The traditional rehabilitation setting did not have skilled deafness professionals. Service providers lacked understanding of deaf culture, the varying degrees of hearing loss and the specific needs of this group (COED, 1988).

Communication issues were vast because service providers relied on English as the preferred mode of communication. For persons who were deaf this often meant the use of paper and pencil, not sign language. To determine the types of services to render, providers used English-based tests to evaluate individuals with a hearing loss. These were not appropriate and often resulted in misdiagnosis and the resultant focus on the delivery of inappropriate services. However, these tests were appropriate for persons who use English, such as individuals who were late deafened or some hard of hearing. With the exception of some demonstration programs and a few state-operated facilities, the population was served in this manner throughout the 1970s and into the 1980s. The bulk of the deafness-related funding was directed toward traditional postsecondary programs (Petersen, 1981).

In the early 1980s professionals in the field of deafness advocated for specific services for persons who are deaf, hard of hearing, deafblind and late deafened. Traditional programs to serve these populations decreased; instead, there was growth in both the number of rehabilitation facilities serving these populations and in the number of qualified service delivery specialists. The recognition of different modes of communication and the various methods to communicate reduced the need for the old paper and pencil method. The need to redirect rehabilitation plans to a client center-based one came about as a result of changes to the rehabilitation act (Sligar, 1994).

To define and broaden the parameters of community rehabilitation programs, the 1992 Amendments to the 1973 Rehabilitation Act changed the definition from one that links services to a building (place bound) to one that is linked to the provision of services (non-place bound). The CRP was defined as a program that facilitates or provides direct vocational rehabilitation services to individuals with disabilities. The 1990s ushered in more demonstration projects for persons who were low functioning and deaf and saw an increase in general programs serving the populations. The current situation finds a variety of services from highly specialized programs as outlined in the next section to general programs offering some services to general programs with only access services, e.g., interpreting.

Community Rehabilitation Programs

There are many types of community rehabilitation programs throughout the country with various mission statements, goals and objectives, purposes, services and support, funding streams and clientele but what they all have in common is serving individuals with disabilities including those who are deaf or hard of hearing. To illustrate this point two CRPs are described. These two programs are approximately 75 miles from each other with one in Illinois and the other in Wisconsin. The uniqueness is that both facilities serve individuals with sensory losses but the size, resources and services differ.

The Center for Deaf-Blind Persons, Inc. is located in Milwaukee, WI, with a population of over a million. Milwaukee is a heavy industry and service-based community. The Center's existence came about as the result of one woman's quest to find a facility in the community to assist with her dual loss of vision and hearing. After her extensive search yielded not one service, the program began in 1985. The Center's mission is to provide services to minimize effects of deaf-blindness on the individual and family, and to increase community awareness and acceptance. A variety of rehabilitation programs and services are available such as activities of daily living, communication, leisure, technology, case management, pre-employment and employment assistance, as well as social and support groups. High quality staff with rehabilitation degrees in different professional disciplines provides the services to individuals. The Center works with youth and adults and is funded from various sources including foundations, individual contributions and federal and community contracts or grants.

The Center for Sight & Hearing is located in Rockford, IL, with a population of 300,000. Rockford is also a heavy industry and service-based community. The Center for Sight and Hearing was established in 1960 for persons who were blind and, as service needs increased for persons who experienced a hearing loss, the Center became a program serving persons who were blind, deaf and deafblind. The Center's mission is to help people with a hearing or vision loss to live independently. A variety of rehabilitation programs and services are available such as activities of daily living, communication, assistive technology training and sales, case management, pre-employment and job placement assistance, social and adjustment counseling. Qualified staff with varying rehabilitation backgrounds provides the services to individuals. The Center works primarily with adults and obtains funds through Lions Club, foundations, state and federal contracts, individual and business contributions. The center serves as an outreach site for the Midwest Center for Postsecondary Outreach at the Technical College in St. Paul, MN.

Both agencies are very similar in the areas of programs and services, mission statements, types of industry within the community, qualified staff, various funding streams, persons served and community connections. The agencies differ in the areas of age and type of disability, years in business, staff and local population size, and some rehabilitation services (not all programs were listed).

The purpose was to illustrate two community rehabilitation programs and what they have to offer in their communities. Service providers, professionals and others are often not aware of the community rehabilitation programs in their communities. These programs are overlooked as a resource to supplement the depleting funding and other resources of one's own program.

Demystification and Benefits of a CRP

Community Rehabilitation Programs continue to be a mystery. When introducing facilities by name, people often smile politely and this belies that they do not understand what it is or what services are offered in a CRP. It is easy to overlook the benefits that are available through a CRP. A common definition of postsecondary education is that it includes two and four year colleges and programs not community rehabilitation programs, vocational training programs or proprietary schools. This narrow view can limit access to a valuable resource.

What do CRPs offer? What is their value to students and consumers who are Deaf, Hard of Hearing, Late Deafened, and Deaf-Blind; to private or public programs; professionals and service providers; postsecondary programs and researchers? The benefits of CRPs are many. Some examples include:

- Assistance with daily living skills instruction;
- Contacts with employers;
- Information on employment opportunities;
- Provision of professional development opportunities within their area of expertise;
- Program consultants;
- Potential advisory council members;
- Provision of a variety of employment related services including job readiness, on the job evaluations, etc.; or
- In some cases residential services are available.

Community Rehabilitation Programs are a great asset to other community-based programs, including two- and four-year colleges and universities. CRPs provide resources and information that other institutions do not have or the purpose and mission of the institution is not conducive to provide such services. Demystifying and understanding these resources takes time and commitment. CRPs provide additional supports to programs with limited or restricted funds;

staff availability or facilities purpose does not cover certain programs. Linkages or partnerships need to be constructed that serve both institutions (Johnson & Sligar, 1993, 1992).

TinkerToys Unite!

In order to develop a working model of how to link two- and four-year colleges and universities with CRPs the workshop participants were divided into two groups and given a box of TinkerToys. The instructions were to use the various items to represent needs and links between the two organizations. Group model construction took two different approaches. One group developed a model based on student needs with outreach to various resources in the community. These included mental health and one-stop employment centers. Time limited the development of implementation strategies but there was significant emphasis placed on the diverse opportunities available if the college or university program were to examine the possibilities in their own backyards. The second group viewed the possibilities that existed for implementation, including the use of technology. Also included were the formation of personal relationships and recognition of the importance of mutual benefits. Both groups agreed on the importance of developing these links and the wealth of resources available.

Summary

Community Rehabilitation Programs (CRPs) are a valuable resource for postsecondary institutions and for students who are deaf, hard of hearing, late deafened or deaf-blind. The development of partnership opportunities between CRPs and other postsecondary institutions can provide solutions to a variety of issues or needs for students who are attending, planning to attend or completed postsecondary programs. The linkage of CRPs and postsecondary institutions helps with such varying needs as solutions for student diversity, assistance with student daily living skills (e.g., budgets, transportation, and time and personal management), provision of employer contacts to assist students with local job opportunities and other student needs. Community rehabilitation programs can also assist postsecondary institution faculty and staff with professional development opportunities, access to professional peers to deliver services to students who are deaf, hard of hearing, late deafened or deaf-blind, or serve as advisors.

The TinkerToy Conundrum

What is the difference between TinkerToys, CRPs and a Postsecondary Program? The answer is YOU!

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The Interpreter/Captionist: Integrating ASL and English in Academic Settings

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Abstract

A new challenge opened up for Miami-Dade Community College when Deaf students, who had previously received sign language interpretation as their support service, began requesting real-time captioning. Reasons for wanting to change their traditional support mainly involved concerns with access to the English vocabulary used in the classroom. Implementing this change proved more complicated than merely a substituting a captionist for a sign language interpreter. Interpretation was still needed.

The program staff decided to train sign language interpreters to become captionists. This paper will address the following issues: (1) student concerns with their previous services; (2) the rationale for the decisions; (3) how the college implements the use of both interpreting and captioning, sometimes both within the same class; and (4) student response to this new service delivery model.

Many Deaf college students are readily provided access to classroom information with sign language interpreters. However, those students who are late-deafened or orally educated have not benefited as well through the traditional method of using oral interpreters. Real-time captioning now offers a superior service to this special population.

In the process of providing real-time captioning to students, Miami-Dade Community College ran into many new challenges. Among the selection of services such as CART, C-Print™, TypeWell, or something else not yet identified, which system should be selected? What criteria should be used to make this selection? Who should provide the service: interpreters, secretaries, or court reporters? How should it be delivered: contracting with an agency, using existing staff, or hiring new staff? Who should receive the service? Should it be limited only to those students who cannot benefit from any other service, or should it be open to any student who requests it? Should it be available only for certain courses?

The program staff researched current real-time captioning systems; developed criteria that would fit the students' needs; and decided to train interpreters to provide the service. Because of student concerns with their current services, they offered the real-time captioning service to any student who made a request for it.

In order to implement the service, however, the program staff found that it was not as simple as merely substituting a captionist for a sign language interpreter. New decisions had to be made according to several issues:

1. *Subject matter.* Math and some science courses can be difficult to caption.
2. *Classroom activity.* Discussion groups are not always easily captioned.
3. *Technology used in the classroom.* Captioning sometimes has to be adapted when using "Smart Classrooms" or working with other media.
4. *Teacher attitudes.* Certain teachers complained that the captioning equipment took away from the 'human' element of natural expressive language.
5. *Student considerations.* Students may change their minds about the service after a period of time.

Some of these decisions are still evolving during negotiations about students' access to classroom information, classroom discourse, socialization with teachers and peers, and access to printed English.

Background

Oral deaf students needed access to classroom lectures. The program staff had tried oral interpreters and notetakers, and assigned two notetakers in each class to offer what was hoped to be fairly comprehensive class notes. The students, however, did not find these services to be satisfactory. They decided that real-time captioning would fill this need.

Miami-Dade Community College provided meeting space for court reporters to learn CART in a workshop. They contracted with a CART provider to transcribe in the classes of the oral deaf students. As soon as the CART transcriptionists started showing up on campus, the Deaf students who had been using sign language interpreters began requesting captioning services. There were double the number of requests than originally projected.

The signing Deaf students had a variety of reasons for requesting captioning in lieu of interpreting:

1. The students felt they were missing key vocabulary from the classroom lectures. Fingerspelling was not always adequate, because it was fleeting and still required processing of the fingerspelling to the word in printed English.

2. They wanted the transcripts to study from because they were much more thorough than the notetakers' notes.

3. Key phrases/sentences from the lectures often showed up on the tests. It was easier to recognize them in print than to rely on memory and translation from the interpretation.

4. Certain courses, such as English Composition, Reading, and Grammar, were easier to access through English in text form than through ASL (interpreted or transliterated).

Providing the Service

The CART contracting was successful, but not a long-term solution. For what was being spent per semester, the college could hire its own captionists and provide an 'in-house' service. This way, there was more control over the hiring criteria of the captionists and greater flexibility in scheduling. This also eliminated the extra time needed for contract negotiations and billing. The program staff began to consider who they would hire, which system (or systems) they would use, and whether or not they would train the captionists or look for people who were already trained.

Deciding Which System to Use

The program staff explored several systems, and decided against a verbatim system. Being a community college, there were many students taking 'pre-college' courses or vocational-type courses. A summary-type system is helpful for students who struggle with reading, or who are trying to improve their reading skills. The summary-type systems are also adaptable in their presentation: captionists can take the spoken discourse of the instructor and revise it into captions that read more like written discourse. For literate Deaf students, this is much easier to follow.

Miami-Dade Community College chose C-Print™ specifically for several reasons: (1) there was a training session being offered at the time it was needed; (2) it was relatively easy to learn, enabling new captionists to be trained quickly; and (3) there was financial support for training through PEPNet stipends.

Selecting Prospective Trainees

When selecting prospective trainees, several issues were considered:

1. *Administrative.* Program staff members were unsure as to whether they would be able to establish a "new" position (captionist) expediently. They decided to train existing staff members and add "captioning"

to their "other duties as assigned". The interpreter/captionists receive their regular rate of pay for captioning; however, there are a greater number of course offerings for them than for those interpreters who do not caption.

2. *Candidate selection.* Sign language interpreters already have the processing skills and knowledge of working with Deaf students. Both are critical skills for captionists.

3. *Incentives to participate.* The college made a commitment to the program and paid all participants for their on-site training. Full-time staff received leave time and compensatory time; part-time staff received their regular hourly rate. The college also purchased equipment for each trained captionist.

4. *Availability.* Most trainees were available in the evenings. One of the full-time advisors was also chosen for the training, because he is available during business hours and could conceivably provide class coverage in emergency situations.

Criteria for Service Provision to the Students

The program staff developed criteria for who would receive the captioning services. They considered issues such as testing the students for a certain reading level, offering it for certain courses, providing captioning according to the students' grades when they had used captioning in the past, etc. They decided that this seemed discriminatory and unfair. Since this was a new service and Kendall Campus was the first campus to provide it, it would be impossible to demonstrate that a student needed to show previous success with captioning, if the student had never used it before. If one of the goals was to use the captioning to help the Deaf students with their reading; why would they be cut off just because their reading levels were low? The service was open to any Deaf student who requested it, pending availability of a captionist.

In scheduling the captionists, since all of them were already interpreters, the service schedule was not affected if a Deaf student selected one service over the other. The student could conceivably get the same person as his/her interpreter *or* captionist. However, students who specifically requested interpretation were usually given an interpreter who does not caption.

Providing the Service

Students are advised and given a demonstration of the service prior to receiving C-Print™ for the first time. They make a separate decision for each course of whether they want an interpreter or captioning. Then they are offered choices as to what their captioning/notes will look like: outline form or verbatim-style; leave in or leave out digressive comments; bold or italicize the vocabulary, announcements, assignments, due dates, etc; add headings or not; include information

written on the board or not font (size and style); etc. The other decision that students make is what kind of expressive communication they will use: voice for themselves or sign and have the interpreter/captionist voice for them.

Advantages to the Interpreter/Captionist Role

The Code of Ethics is the same in regard to confidentiality, professionalism, impartiality, and message equivalency.

1. Students feel comfortable because they can communicate easily with their captionists.
2. Classroom activities within a single class can be captioned (i.e.: the lecture) or interpreted (i.e.: the small group discussions), depending on which is more accessible for the student.
3. Students can change their minds about which service to use, depending on class format.
4. Students are not held to one support service for all of their classes. They report that switching from captioning to interpreting (during the same class or from class to class) is less visually fatiguing than watching captioning all day.
5. Students report that the interpreter/captionists include facial expressions that provide additional information.
6. For the interpreter/captionist, switching back and forth between interpreting and captioning seems to be less physically stressful.
7. If the equipment breaks down, sign language or oral interpreting can be used as a back-up service.

Challenges

1. Certain courses are difficult to caption (e.g.: some math and science courses) due to extensive board work with simultaneous explanations, or use of symbols and graphics.
2. Captioning has to be adapted when using “smart classrooms” or working with other media.
3. Some faculty members complain that the captioning equipment takes away from the “human” element of communicating in a natural, expressive language (such as American Sign Language).
4. It may be necessary to negotiate with instructors and students for the consecutive use of captioning and interpreting.

Current Status and Looking to the Future

Almost every Deaf student who uses captioning for a portion of his/her academic schedule has been satisfied with the service. In the three semesters of use, the overall grade point average of Deaf students has increased, and the number of course withdrawals and failures have decreased. Faculty use the notes for their own reference to use with students who are absent on a certain day, and as support for when (or if) information/assignments were announced.

The college is considering sponsoring more training sessions to train new captionists and to provide updated training to current captionists. In addition, program staff members are working on extending captioned classes to “sister” campuses through distance technology, using the campus network

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Miami-Dade Community College - Kendall Interpreter/Captionists

Traci Henderson & Felix Maymi
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PEPNet 2002 Presenters:

Brief Biographies

The following is a list of all conference presenters who participated in *PEPNet 2002, Diverse Voices: One Goal*, April 10-13, 2002. Brief biographies, credentials, and affiliations are given. Not all presenters shown here submitted articles for publishing in this volume of proceedings.

Biographies of Presenters • Plenary Sessions

Frank Bowe is a Professor in the Counseling, Research, Special Education, and Rehabilitation Department at Hofstra University in Hempstead, New York. Dr. Bowe is a recognized leader in civil rights for people with disabilities. His professional experiences include: Regional Commissioner within the Rehabilitation Services Administration (RSA); Chairperson of the Commission on Education of the Deaf; Director of Research for the U.S. Architectural and Transportation Barriers Compliance Board; and the Executive Director of the American Coalition of Citizens with disabilities.

Dr. Bowe has received many honors and awards, including Who's Who in the World; the "Disability Achievement Award" from the American Public Health Association; the Distinguished Teaching Award from Hofstra University; the National Hall of Fame for People with Disabilities; the Distinguished Service Award of the President of the United States; and the Americans with Disabilities Act Award from the Task Force on the Rights and Empowerment of Americans with Disabilities for Contributions to the ADA. (Taken from <<http://people.hofstra.edu/faculty/frank-g-bowe/resume.htm>>.)

Patty Conway, B.S., CRC is currently the Program Administrator of the Deaf and Hard of Hearing Services Branch with the Kentucky Department of Vocational Rehabilitation Services. She is responsible for administration and oversight of all services provided to deaf, hard of hearing, late deafened, and deafblind individuals. Ms. Conway also coordinates and administers a unique statewide funding program which reimburses state supported postsecondary programs for interpreter and notetaker expenses. Also, she has coordinated an initiative in the agency to establish special-

ized services using a national model, The Rehabilitation of Individuals Who are Hard of Hearing and Late Deafened and has presented this project the state, regional, and national conferences. Ms. Conway was a member of the 25th Institute on Rehabilitation Issues study group, "Improving Rehabilitation Services and Employment Outcomes for Individuals Who Are Deaf and Low Functioning (LFD)" and has assisted with presentations on this topic.

Dr. Robert Davila has served as the Chief Executive Officer (CEO) of the National Technical Institute for the Deaf (NTID) and Vice President for RIT since July 1996. Dr. Davila is the first deaf person to hold this position in the 33 years of NTID's existence. Dr. Davila is internationally and nationally renowned as a leader of the deaf community. Prior to assuming his duties at NTID, Dr. Davila was the first and only deaf person to be appointed to a sub-Cabinet position in government. He served as the Assistant Secretary for Special Education and Rehabilitative Services in the U.S. Department of Education from 1989 to 1993, under President George Bush. He came to RIT after serving as the first deaf headmaster in the 180-year history of the New York School for the Deaf and becoming the first deaf member of the school's board of trustees.

Throughout his career, Dr. Davila has been advocating for the rights of disabled people around the world. From 1978 to 1989 he held several positions at Gallaudet University in Washington, D.C., including Vice President of Pre-college Programs, Professor in the Department of Education, and Dean. Dr. Davila was the first deaf person to serve as President of the Council on Education of the Deaf, the Convention of American Instructors of the Deaf, and the Conference of Educational Administrators Serving the Deaf. He is one of only two individuals to become the president of these three major education organizations in deafness. Dr. Davila has been a member of numerous boards and advisory councils, including the National Institute on Deafness and Other Communicative Disorders, the Universal Design Committee of Verizon Telephone Company, and the National Theater of the Deaf. He is currently Vice Chair of the Board of Trustees of Hillside Children's Center and Chairman of the Board of Trustees of the New York School for the Deaf in White Plains.

Dr. Davila earned his B.A. in Education at Gallaudet University, an M.S. in Special Education at Hunter College, and he holds a Doctor of Philosophy degree in Educational Technology from Syracuse University. He was elected to the Hall of Fame for Persons with Disabilities in 1987 and the Hunter College Alumni Hall of Fame in 1991.

Nancy Kasinski has worked cooperatively with the Illinois Office of Rehabilitation Services for twenty-four years, in her positions at Northern Illinois University as former Director of Services for the Hearing Impaired, and current Director of the Center for Access-Ability Resources. Representing 4-year public universities, she served as a member of the task force that "came to the table" to develop the interagency agreements currently being implemented in Illinois. Ms. Kasinski is the immediate Past-president of Illinois-Iowa AHEAD. She has also served as President and board member of the Illinois Deafness and Rehabilitation Association (IDARA), and has been active in the Association on Higher Education and Disability (AHEAD). She has a Master's degree in Communication Disorders with an emphasis in Counseling with the Deaf.

Dr. Sue E. Pressman is an organizational career management consultant, experienced trainer, facilitator, and coach. She is the only known career counselor fluent in American Sign Language on contract to the federal government providing ongoing career services to Deaf and Hard of Hearing employees.

With more than twenty years of experience working with the Deaf and Hard of Hearing people, she is the author of one of the few research publications in the area of career development in the deaf population and is clearly one of the leading experts in the country on life and career planning in the Deaf community. Her counseling and training style capitalizes on her natural friendliness and genuine care for people at work.

In 1996, she was invited to serve as an organizational facilitator for a group of her colleagues interested in establishing an organization for Deaf and Hard of Hearing employees. In 1997 the Deaf and Hard of Hearing in Government (DHHIG) was established and became a nonprofit organization that is recognized by the U.S. Office of Personnel (OPM) as the premier networking and information resource for all issues related to Deaf and Hard of Hearing Government employees. Dr. Pressman served on the first Board of Directors for a three-year term and continues to serve as a consultant to the Board.

In the field of rehabilitation with special populations, Sue has extensive experience consulting with human resource professionals to assist with identifying

reasonable accommodations enabling businesses to comply with the Americans with Disabilities Act (1990), the Rehabilitation Act of 1973 as amended, as well as other key federal legislation prohibiting employment discrimination, and employee career development. She has served in the role of consultant for federal and state agencies, business and industry nationwide, and Gallaudet University, for a wide range of career issues such as career decision-making, transition, and integrating people with disabilities into various workplace environments. Most recently, she has completed a handbook for the U.S. Department of State entitled "Focus on Ability" which emphasizes resources and techniques for including people with disabilities in the workplace.

Dr. Pressman's credentials include a Ph.D. in Counselor Education from Virginia Tech, M.A. in Rehabilitation Counseling from Gallaudet University, and a B.A. from the University of Florida in Speech Pathology. She holds Professional Counselor Licensure in the District of Columbia, National Counselor and Master Career Counselor Certifications, and an Advanced Facilitator Certificate.

Annette Reichman is the Chief of the Deafness and Other Communication Disorders Branch, Rehabilitation Services Administration, for the Office of Special Education and Rehabilitative Services at the U.S. Department of Education. She is formerly the Director of the Valley Center of the Deaf in Phoenix, Arizona, where she managed many agency services. She has also managed a workforce of up to 200 communication assistants under a subcontract with MCI for telecommunication relay services, and has held a position as the program coordinator and counselor for the Community Outreach Program for the Deaf in Tucson, Arizona. Ms. Reichman also has provided mental health counseling to deaf and hard of hearing adults on a variety of issues, and was the Vocational Training Coordinator for the Community Outreach Program for the Deaf, also in Tucson. Ms. Reichman holds a B.A. degree in Psychology from Gallaudet University, and an M.S. in Rehabilitation Counseling with the Deaf from the University of Arizona.

Biographies of Presenters • Concurrent and Poster Sessions

Tammy Adams, M. Ed., State Coordinator for the Deaf, Alabama Department of Rehabilitation Services in Montgomery, Alabama.

Camille Aidala, M.A., Instructional Developer at the National Technical Institute for the Deaf, Rochester Institute of Technology in Rochester, New York.

Kristin Murphy Amey, M.A., Student Personnel Specialist and Instructor of Freshman Experience Course at California State University, Northridge.

Donalda Ammons, Ed.D., Professor, Department of Foreign Languages and Literatures, Gallaudet University.

Catherine Anderson Ph.D., Director of First Year Experience at Gallaudet University in Washington DC.

Donnell H. Ashmore, M.A., Associate Professor and Director of the Center on Deafness at The University of Tennessee, Knoxville.

Claudia Bergquist, M.A., Counselor and MCPO Outreach Site Coordinator in the Department of Disability Services at Columbus State Community College in Columbus, Ohio.

Patricia Billies, M.S., Project Coordinator, Northeast Technical Assistance Center at National Technical Institute for the Deaf at Rochester Institute of Technology, New York.

Lynn Blashaski, M.S., Deafblind Specialist, Center for Sight and Hearing, Rockford, Illinois.

Nancy J. Bloch, Executive Director of the National Association of the Deaf, Silver Spring, Maryland.

Steven E. Boone, Ph.D., Director of Research at the Rehabilitation Research and Training Center for Persons who are Deaf or Hard of Hearing at the University of Arkansas in Little Rock.

Marcia Bordman, Ph.D, Professor, Department of English at Gallaudet University in Washington DC.

Jennie Bourgeois, Coordinator of the PEC Louisiana State Outreach and Technical Assistance Center; Deaf and Hard of Hearing Specialist for Louisiana State University in Baton Rouge, Louisiana.

Marles Bradley, M.S. Instructor at Moore Norman Technology Center in Norman, Oklahoma.

Maureen Brady, IC/TC, Support Services/Interpreter Coordinator, Center for Deaf and Hard of Hearing Students at Camden County College in Blackwood, New Jersey.

David Buchkoski, M.S., Training Coordinator at the Midwest Center for Postsecondary Outreach at Saint Paul Technical College in Saint Paul, Minnesota.

Gerard Buckley, Ph.D., Associate Dean for Student Affairs, National Technical Institute for the Deaf at the Rochester Institute of Technology in Rochester, New York.

Cindy Camp, M.A., PEC Outreach Specialist for the Alabama State Outreach and Technical Assistance Center; Disability Specialist in Deafness, Jacksonville State University, in Jacksonville, Alabama.

Michael Carnahan, Technology Design Specialist, St. Petersburg College in Seminole, Florida.

Nancy Carr, Director of the Office of Special Services at Bergen Community College in Paramus, New Jersey.

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Mary Clark, Consultant, M. Clark and Associates in Oak Park, Illinois.

Carole Collier, Coordinator of Services for Deaf and Hard of Hearing Students at the University of Iowa in Iowa City, Iowa.

Judy Colwell, Ph.D., Coordinator and Trainer of the Typewell Educational Transcription System.

Patty Conway, Program Administrator, Deaf and Hard of Hearing Services Branch, Department of Vocational Rehabilitation in Frankfort, Kentucky.

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Cheryl D. Davis, Ph.D., Coordinator of the Northwest Outreach Center at the Regional Resource Center on Deafness at Western Oregon University in Monmouth, Oregon.

Jeff Davis, Ph.D., Project coordinator for a FIPSE project and Associate Professor in the Counseling, Deafness, and Human Services Department at the University of Tennessee, Knoxville.

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Robyn K. Dean, BA. CI, CT Faculty Associate in Psychiatry, Project Director for UR-UT collaborative FIPSE-funded grant project.

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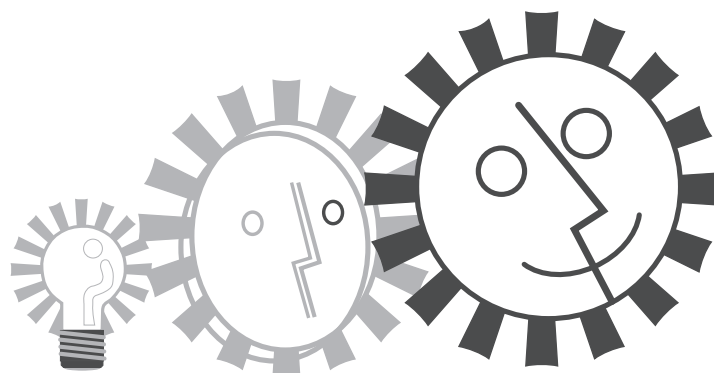
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Foreword and Acknowledgments

Marcia Kolvitz
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Educators have seen significant changes during recent years regarding the provision of services to students who are deaf and hard of hearing. Disability support service offices have been affected by changes within the student population, within the institution itself, within the state system, and within the federal government. Recent legislation such as IDEA, the ADA, and the reauthorization of the Rehabilitation Act have further impressed the need to develop good working relationships between and among groups of service providers. *PEPNet 2000: Innovation in Education* provided a unique opportunity for professionals to interact with colleagues to learn more about best practices and effective strategies for meeting the needs of students at the postsecondary level who are deaf and hard of hearing. The conference offered participants the opportunity to identify and implement theories and practices of managing and delivering effective support services to students and clients.

The Postsecondary Education Program Network (PEPNet) developed this biennial conference as an activity to bring professionals together from across the country who are interested in enhancing the quality of postsecondary educational opportunities for students who are deaf and hard of hearing. The conference offered sessions that were of interest to disability support services staff, administrators, counselors, interpreters, tutors, and faculty members from developmental studies as well as college-level courses. Interested secondary-level faculty and staff and adult service providers from rehabilitation agencies and centers for independent living were also encouraged to participate. Students in related professional areas such as rehabilitation counseling, interpreting, deaf education, student personnel services, social work, counseling, and psychology were also welcomed at the conference. The conference featured sessions that offered practical, replicable strate-

gies for providing services to students who are deaf or hard of hearing and attending postsecondary educational programs. This publication offers the reader a sample of the information that was exchanged during the conference.

Building on the strong response from PEPNet '98, this was the second national conference that focused on postsecondary education and students who are deaf and hard of hearing sponsored by the Postsecondary Education Programs Network (PEPNet). Once again, the response to the conference was phenomenal. More than 450 participants came from across the United States as well as Canada and Japan to learn new information, share their experiences with their colleagues, and establish linkages with other service providers. This conference also served as a link between traditional postsecondary programs for students who are deaf and hard of hearing and the numerous colleges and universities across the country who strive to provide quality services, even though they might not offer a program specifically designed for deaf and hard of hearing students. Including service providers from vocational rehabilitation and related community agencies further enabled the development of networks and partnerships so that the needs of students could be better addressed.

As a result of this conference, we may feel more prepared as we look toward the future and deal with the changes as they occur. Surely one of the effects of the conference has been to more firmly establish collaborative efforts between professionals sharing a common goal: the most effective educational programs for students who are deaf and hard of hearing. Instead of operating in isolation, we can create opportunities to share knowledge and experiences to do so.

This conference would not have been possible without the involvement of many individuals and the support of their sponsoring institu-

tions. The confidence and support shown by the directors of the four PEPNet centers is greatly appreciated. All of the members of the conference planning committee worked hard during the past year: Dave Buchkoski, Terri Goldstein, Pat Billies, Debra Wilcox Hsu, Kay Jursik, Allisun Kale, and Gary Sanderson. So much of the work behind the scenes would not have been successful without the hard work of the staff members Sherlea Dony, Pam Francis, Charles Johnstone, Mary Lamb, Michelle Swaney, Patricia Tate, Charley Tiggs, Heather Webb, Julie Danielson, and Paula Zack. Numerous volunteers from each of the four PEPNet centers, state sites, hubs, affiliate programs, and “friends of PEPNet” offered their services, making this truly a collaborative effort. Ongoing support from the U. S. Department of Education, Office of Special Education and Rehabilitative Services enabled us to continue outreach and technical assistance efforts and reach an even larger audience than in the past. Of course, the interest and enthusiasm of all of the presenters and participants made this conference a very meaningful event. We appreciate the time and effort extended by many of the presenters to also submit an article for this volume of conference proceedings. To everyone involved, thank you very much.

PEPNet consists of the four Regional Postsecondary Education Centers for Individuals who are Deaf or Hard of Hearing: Midwest Center for Postsecondary Outreach, Northeast Technical Assistance Center, Postsecondary Education Consortium, and Western Region Outreach Center and Consortia. The mission of the Network is to promote opportunities to coordinate and collaborate in creating effective technical assistance to postsecondary educational institutions providing access and accommodation to individuals who are deaf or hard of hearing. The members of PEPNet promote quality educational activities and outreach services through nationwide collaboration and information exchange and serve as a clearinghouse for resources and referrals. The four centers are funded through an agreement with the U.S. Department of Education. This publication was developed under a grant from the U.S. Department of Education, Office of Special Education and Rehabilitative Services (OSERS) and produced through a cooperative agreement between The University of Tennessee and OSERS. The contents herein do not necessarily represent the Department of Education’s policies nor are endorsed by the Federal Government.

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Information about all four PEPNet Centers is available on our web site at <<http://www.pepnet.org>>.

Section I

Plenary Sessions

Navigating Our Institutions¹

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Abstract

The disability field is changing and so are the institutions where we work. From faculty governance to curriculum revision, to strategic planning, to information systems, and to facilities design and construction, campus components and disability are constantly intersecting. How do we navigate ourselves and the disability agenda to ensure access? How do we infuse disability services into the total operation of our institutions? How do we promote an appreciation of disability identity, experience, and community? Sue Kroeger will address the importance of disability service providers learning how to dippy-doodle in ways that can empower themselves, disabled people, and institutions to create more inclusive cultures and universally designed environments.

Raymond Olson:

I'd like to speak on behalf of all of the PEP-Net directors in thanking you for taking part in this conference and making it such a huge success. As the conference comes to a close, I have the very great honor to introduce a lady that I have a lot of respect for. I count her as a mentor, and I think a lot of you could do the same.

When Dr. Sue Kroeger left Minnesota recently, it was our loss and somebody else's gain. She is currently the director of the Disability Resource Center at the University of Arizona. However, from 1985 through 1999, she was the director of Disability Services at University of Minnesota. She supervises and, I believe, mentors 40 employees that are either full-time or part-time at the University of Arizona.

She received her Master's degree from the University of Arizona and completed her doctorate at the University of Northern Colorado. She has worked in public and private rehabilitation

in addition to her numerous administrative duties. Dr. Kroeger has published articles on disability and higher education and was the coeditor of a book entitled, "Responding to Disability Issues in Student Affairs," published in 1993. She has been the Treasurer of the Association of Higher Education Disability (AHEAD) and is currently the President. She holds adjunct faculty status in the Department of Special Education and Rehabilitation at the University of Arizona. She has been the principal investigator of numerous federal grants and is a national and international consultant.

Dr. Kroeger will talk about how important it is for disability service providers to learn how to "dippy-doodle" in the ways that empower themselves, disabled people, and institutions, and how to create more inclusive cultures and universally designed environments. I think the word "dippy-doodle" is one that a lot of you can probably identify with.

Sue Kroeger:

Thank you, Ray. It's really great to be here. I wish that I could have been here for the whole conference. Since I arrived this morning, I've talked to a number of you, and all I have heard is what a wonderful conference this has been. I hope you are proud of it, because that is a major, major accomplishment. (*applause*)

Many of you may know Anita Stockbauer who will help me with my overheads. We were talking at lunch about the conference and decided that we will both take back many wonderful ideas and possibilities to pass on to the AHEAD folks. We'd like to see if AHEAD can make some significant strides forward in providing better access to its conference and services. Thank you for being

¹ This is an edited transcript of the plenary presentation..

a model, not only for all of our programs and services but also for AHEAD. We will look to you for guidance and support. I also want to add that PEPNet and AHEAD really are developing, I think, a wonderful partnership and relationship. I think it's strong and getting stronger, and I think it really has a bright future. So I hope that's as exciting for you as it is for me.

Last night, when I was packing to come here today, I was talking with my two daughters. One is 11 years old, and the other is 4 years old. Obviously, there is a big difference between an 11-year-old and a 4-year-old. While I was packing my suitcase, they were asking me where I was going, what I was doing, why I had to go, and why I couldn't call in sick. *(laughter.)*

I thought, "Well, they are both paying attention to me. Maybe I'll tell them exactly what I'm going to do." So I just started to explain about this trip. I might have only said one or two sentences about representing the association and a little bit more about what I was going to talk about. Just as I got to the end of the second sentence, the phone rang and my 11-year-old screamed, "I'll get it!" She looked back at me and said, "Cool, Mom. I think they'll love it," and she left the room. So I turned to my 4-year-old, thinking that she probably wasn't more interested in what I had to say either. She turned, looked at me and said, "Well, if you were telling that story at my school, it would have to be longer and have pictures." *(laughter.)*

So, you're going to get a little more than two sentences, and you are going to get some pictures. So bear with me.

I'm curious how many of you in the room were at PEPNet in Orlando. *(showing of hands)* Quite a few of you? Were any of you at that plenary panel where I was up on stage and the smoke started coming down? *(showing of hands)*

Well, you know, I didn't get very far in that little talk, which is probably why they were nice enough to invite me back. But when Debra Wilcox Hsu called and said she wanted me to do something more with that dippy-doodling concept, I thought, "Well, I don't know; that dippy-doodling thing might be saturated." I couldn't think what more to do with it. Then I really began to think about it and realized that how I talked about dippy-doodling a couple years ago was grounded in experiences that I was having at the University of Minnesota. As many of you know, I had

been at the University of Minnesota a long time, so I had established relationships. The staff and I literally grew up together. I think when I went in 1985, there were only a few of us. When I left in 1999, there were more than 45 people in the department. We all sort of evolved and developed our rationale around dippy-doodling together.

Since I now live in the wonderful State of Arizona and work at the University of Arizona, I'm working with a staff that has a very long, rich history but not with me. So I think that has been an interesting challenge for me to think about dippy-doodling in a place where I don't have the relationships or the long history with the staff. In thinking about dippy-doodling, I've come to appreciate that you really need to plan for it. I'm not sure that I fully appreciated that prior to moving this past summer.

As many of you know and feel on a daily basis, the disability field is changing, and so are the institutions where we work—from faculty governance to curriculum revision, to strategic planning to information systems, and to facilities design and construction. All of those components in disability access are constantly intersecting.

So how do we navigate ourselves and our disability agenda to insure access? How do we infuse disability access into the total operation of our institution? How do we promote an appreciation of disability identity, experience, and community? How do we not only be let in the college or university door but also into the rooms of power and decision-making with the understanding that, once inside, we're probably going to want to rearrange the furniture, remove a few walls, build ramps, use sign language, and generally move in as co-owners, rather than short-term tenants that some are hoping we are? It is so critical that we as disability service providers and administrators learn the political dances, which I like to refer to as dippy-doodling, so as to empower ourselves, disabled people, and our institutions to create those more inclusive cultures and universally designed environments.

I want you to listen to this wonderful description of one of the world's most passionate dances, the Tango, and think of it as an analogy to dippy-doodling on the higher education dance floor. Imagine the disability services director and the college president facing each other, assuming the position, and breathing in anticipation. The powerful issue at hand swells for them to take in.

One partner initiates movement. The other feels the direction and the timing. They are now mirror image figures. One has the other's agreement to be led; of course, that would be the president, and therein lies the balance. Without agreement and balance, there is no Tango. How hard can it be for one of them to step, then walk back three steps, cross in front, step back, and close? Eight beats in all; it's so simple, yet excitement grows. It is the prelude to exquisite communication. The passionate issue unfolds. You don't have to know the person or even want to know them. It seems different with each partner. You learn about yourself through the partnership. The Tango has begun. It takes your breath away. So breathe and relax. You want to know about posture and how to move your body, not just how to do the steps. You want to be elegant and poised, comfortable with who you are. The dancers seem to have no expression except concentration on their faces. The emotions are brewing within. Hearts are beating. This is the ultimate in dipsy-doodling.

Of course, there are many other types of dipsy-doodling that take place on our campuses that may not appear on the surface as smooth or choreographed as the Tango, like the Charleston or the Jitterbug. But there is a need for us to have a wide range of dipsy-doodle steps in our back pocket when we begin to advocate. All of the steps are designed to draw on the power of others vested with institutional power, such as the president, the provost, the deans, and the faculty. We dance to win influence with those in power and then retain that influence. These are critical activities in this work, whether you are administering a unit or providing direct services. Dipsy-doodling can help you to assess your campus culture, navigate the spaces of power, build alliances, and create universally designed environments.

The first slide shows a John Callahan cartoon. In this cartoon, there is a bunch of people from quite diverse groups standing around saying, "Hey, let's not take this diversity thing too far." In the middle of the group is a guy with a GOP sign on his chest. You know, I can do this now that I'm from Arizona where the GOP has a little more clout there than in Minnesota. But to do dipsy-doodling, it's really important to plan for it.

I don't know if you all feel this on your campuses, but when we start getting into diversity work, I just find that it's so easy for people's eyes

to glaze over. You know, one group after another comes in and pretty soon people think, "Okay, who's here this week wanting my time and attention?" I think a big benefit of planning your dipsy-doodling is that it really pushes you to articulate a clear mission and vision, which in turn increases your external support. I also think that when administrators understand the intent of your dipsy-doodling, they feel more confident in your future actions. So clarifying your values, your rationale, your activities, and your desired outcomes really provides a context for resource allocation on campus, and it also improves the image of your disability access initiatives.

I think the first step in planning for dipsy-doodling is to clarify the values that are core to your effort. I'd like to illustrate this with some examples. Certainly one of them would be the interdependence of the human community. You know, we in America are incredibly obsessed with individualism. I really think we have a somewhat distorted sense of independence, which I think thwarts the development of community. The disability community really is in a wonderful position to model and redefine what it means to be whole, interdependent members of the human community. So I think the interdependence of the human community is a core value.

Another example that people may be tired of hearing from me is the sociopolitical definition of disability. I think we absolutely have to find a way to embrace it stronger and more widely. If you look around at our systems, our institutions, and our families, the medical and moral models of disability are alive and well. They are incredible barriers to our access agendas.

Another value is what I call the cross-disability community. We have got to find a way to subvert the disability hierarchies and appreciate the shared experiences as well as the very profound and significant unique differences among the different disability groups. But we need to find a way to build cross-disability community.

Another value might be global disability community networks. We have to find ways to end our isolation as individuals with disabilities by fostering these global networks.

Multicultural coalitions might be another value to consider. We need to challenge the prejudice and bigotry which exists within the disability community and build coalitions incorporating other social justice agendas into our agenda.

The cartoon displayed now has a person laying on the ground, kind of chopped up, and a guy with a knife is standing over him. When the police arrive, they said, "Don't arrest him. Instead, let's examine the root causes of the problem." I think that it's important to examine the root causes of the problem. It's important for us to take realities and trends into account. What are those external forces that will impact our dipsy-doodling? What's the current situation that makes dipsy-doodling necessary? I think we need to be clear on the rationale.

What is our rationale for feeling a need to go out there and build these relationships and navigate the campus? I think one reality is the perception that wrongs relative to the disability community can be righted through public policy. A short time before his death, Irv Zola, a disabled person, historian, writer, activist, and scholar, reviewed a few books on the history of disability and made this very important observation, which stuck with me over the years. He wrote, "We cannot and should not root the origin of our history solidly in the 20th century, since there has been an eternal existence of chronic disease and disability and also personal, social, and political attempts, both to deal with it and to deny it. Without this sense of history, there is no societal or even personal appreciation of the depth of the fear of disability. Without appreciation of the depth of the fear of disability there is a naiveté that wrongs about disability can be righted by single actions like the ADA. Without recognition of its presence through both time and space, we will ultimately seek the elimination and prevention of disability as our primary goals rather than its integration, acceptance, and ultimately its appreciation."

Another reality that we live with is that too many people still believe that disability access consists of making reasonable accommodations for individuals, rather than changing environments. This is prevalent in the moral and medical models of disability, where the deficit is lodged firmly with those of us with disability. Essentially, it's our problem to fix. The concept that the environment may be disabling or poorly designed really hasn't taken hold yet, although recently I have been hearing the phrase "universal design" over and over. It may be that we have designed and constructed all sorts of environments - whether it's an information environment, a physical environment, or an employment environment

- but these have been designed and constructed to exclude rather than include. So it may be that we are on to something with the concept of universal design.

Another reality, though, is that there are hardly any disabled people at the table all of the time and on all issues. On most of our campuses, critical decision-making committees or groups never consider disability access because there is usually no voice at the table to remind them of its importance.

Conservative backlash is another reality. You know, we have lawsuits, and we have accountability as to who is and who isn't disabled. How much funding do we have to provide for civil rights? We also have the reality that the demand for access is up and amount of resources is down. We have competing attitudes. As people with disabilities, women, gays and lesbians, and people of color become more active advocates, those with the privilege and power are claiming that these groups have an advantage.

Another reality is that most of our organizations and offices working on diversity just have too little clout. In honor of my daughter, Andie, I have another picture. This is a cartoon that shows poor design. The swing was not built to swing but to throw somebody's head into the ground. What this says to me is that it's very important for us to define a mission that is inspiring. That really is the highest function of a disability access initiative. This picture, however, certainly wouldn't fit as a great vision for our campuses.

I'd like to show you another picture. It's called a level playing field, and it's a picture of a cemetery. (*laughter.*) We talk about leveling the playing field, don't we? We need to be careful what we wish for. Again, I think defining the mission is fundamental. We have to find ways to really be visionary and strategic about our vision and mission. We need to be clear about what it is that we're working so hard for. Without these, it is hard to determine how to adapt the various dances to the diverse disability related issues and create healthy tension without reaching that dreaded *gag* response.

Another analogy I like to use sometimes is a dripping faucet. Just as with dance, a dripping faucet can be soothing or aggravating, depending on the context or the interrelated conditions in which the drips occur. Imagine yourself as a dripping faucet advocating for disability access. How fast are the drips? How hard do they hit the

surface? What other noises are competing with the drips? And probably most importantly, did your campus think the dripping faucet had been fixed? We hope not.

While our vision for dipsy-doodling might be universally designed communities that honor and appreciate disability as an integral part of the human community and diversity, the mission might be about getting our campus communities to take responsibility for their self-awareness and their other awareness to become visionary, energetic, and enduring. Our dipsy-doodling mission is to build community capacity. I see community capacity as the combined influence of a community's commitment and a community's resources and skills that can be deployed to build on community strengths and address community weaknesses. So commitment refers to a community-held will to act based on awareness of problems, opportunities, and workable solutions. I think commitment also refers to a heightened state of support in key parts of the campus to address problems, solve problems, and strengthen the campus response.

Resources, as you can imagine, refers to financial assets and means to deploy them intelligently and fairly. It includes information or guidelines that insure the best use of funds. Resources also refers to skills and knowledge, including all of the talents and expertise of individuals and organizations that can be marshaled to address problems, seize opportunities, and add strengths to the community.

Communities and the groups and institutions within them vary tremendously in capacity. Think again of your campus community; even those most seemingly broken down do have capacity and are capable of developing more.

So the three essential ingredients of community capacity - commitment, resources, and skills and knowledge - do not just happen. Rather, they are developed through effort and willingness to work and initiative and leadership, *à la* dipsy-doodling. To build community capacity, dipsy-doodlers must adjust their dance steps and ask some very key questions. To what extent will my campus increase its capacity to improve access for disabled people? Where do I see increased commitment, resources, and skills? What more needs to be done to garner and deploy resources and to galvanize campus support, skills, and action?

The final set of decisions made in shaping our dipsy-doodling vision and mission is the iden-

tification of the key activities that we need to move a college or university from the existing to the desired state of affairs. To keep our focus, these should be limited in number and should concentrate on substance. Some examples might be: (a) educating community members, helping shape opinions, and galvanizing commitment; (b) attracting and collecting financial resources, compiling information, and shaping ways for deploying these resources to catalyze change in the way problems are addressed and opportunities seized; and (c) organizing people and work, developing skills, and coordinating or managing sustained effort that builds up the positive qualities of community life that can begin to resolve a problem.

Finally, it's important to think about how to measure dipsy-doodling progress toward our vision. What are the desired dipsy-doodling outcomes? Some examples might be the presence of disabled people at all levels of the institutions or improved attitudes of disabled people.

My favorite outcome, but one that is probably hardest to get on a campus, is creating incentives and sanctions for all units with respect to their accomplishments in improving access. This includes evaluating the performance of all administrators regarding their effectiveness in improving disability access and developing programs for disabled people in supervisory positions to expand their job skills and increase local pools for advancement. This results in increased commitment, skills, knowledge, and resources. Models of universal design are identified, recognized, and exported to new areas. Finally, data is refined, systematically collected, analyzed, publicized, and factored into the institutional reward system.

The last cartoon I have shows two older men sitting, backwards in their chairs, on a front porch. One guy says to the other, "I think if I had to do it all over again, I'd sit on this chair frontwards." *(laughter.)*

One thing we don't want to do is put a lot of time and effort into an initiative and then have that feeling at the end that maybe we should have done something different or tried things a different way. Or, like the men in the cartoon, we wouldn't want to feel like if we had the chance to do it over again, we'd do it another way. What we really want to do is try a lot of things, keep trying, and not give up. This work is too important and it requires so many of us to do it. There really are no panaceas in managing a disability access agenda, but I think dipsy-doodling, or po-

litical dancing, or whatever you want to call it, can be a useful tool in moving higher education systematically toward universal design.

Over the years, I've learned that strong leadership from the top is as absolutely indispensable as a talented and productive disability services staff. I've also learned that we need to dipsydoodle within a broad range of constituencies. We can't focus just on upper-level administrators. We have to change departmental cultures as well. We have to remain flexible and adaptive, within reason, and maintain a certain amount of wiggle room. We need to have allies in strategic locations of the campus. Most important of all, we

need to demonstrate the passion and the fun of creating inclusive cultures and universally designed environments.

I want to thank you again for inviting me here today. I encourage all of you to participate with us this summer at the AHEAD conference in which our theme is universally designed environments in higher education. We look to you for guidance and support in modeling a universally designed conference.

Thanks for all your wisdom, your passion, and your expertise. Again, thank you for inviting me here this year. And I hope you all have a wonderful trip home. (*applause*)

Words Upon a Window Pane: Opening Doors for the Deaf College Student

*Harry Lang,
Bonnie Meath-Lang*
National Technical Institute for the Deaf
Rochester, NY

Karen Hopkins:

Good morning. I have the honor this morning to introduce our plenary speakers, Dr. Harry Lang and Dr. Bonnie Meath-Lang. I have known both of them for many years. They are exemplary professors at NTID, the National Technical Institute for the Deaf, and Harry is an educator ever-promoting science. You will see his name as 'outstanding this' and 'outstanding that,' and most often connected to promoting science, particularly among persons who are Deaf and hard-of-hearing. He is quite a prolific author, and I believe his third book is coming to print this week, or maybe it has happened today. He will probably tell you a little bit about that and where to find it.

Bonnie is an exemplary educator as well. She is an artistic director, a performer, and a playwright. What they are going to share with us today is what research has shown about teaching and learning among students who are Deaf and hard-of-hearing, and they will add an historical flavor to that based upon a book that they published together as well as other research they have conducted. They will also be talking about learning styles, the impact of technology, and a number of things that you'll be able to carry back to your home environment that will, in the end, have an impact on teaching and learning in your settings across the United States. At this time, I would like to turn it over to Bonnie and Harry, who will be sharing with you their perspectives. And then we hope to have about fifteen minutes at the end for questions and answers.

Harry Lang:

Good morning. First, before I forget, I want to thank all of the people who invited us and are supporting us for this presentation, including the interpreters and the captionist. About one hour before I left Rochester two days ago, I received some sad news that I want to share with you. A good friend of ours and a good friend of all of yours, Bill Stokoe, passed away on Tuesday evening. I received some e-mail from a friend at Gallaudet University about Bill's death, and I wanted to share this with you. I'd like to ask you to take a moment of silence in honor of Bill. He committed his life to American Sign Language research.

Thank you. Let me explain a little more about myself. I became deaf at the age of 15 in Pittsburgh, Pennsylvania, and I attended the Western Pennsylvania School for the Deaf (WPSD), a residential school located there. Aaron Gorelick is voice interpreting for me today, and I have asked him to add a Pittsburgh accent.

As Karen said, we plan to talk about teaching research. I have taught at NTID in Rochester, New York, for 30 years in physics, mathematics, and a methods course for preservice teacher education in NTID's Master of Science in Secondary Education program. When I graduated from WPSD in 1965, I looked around for colleges. I was accepted to Gallaudet College, but I wanted to major in Physics and Gallaudet didn't have a comprehensive Physics program at that time. So I searched around for other places, and found a small college near Pittsburgh called Bethany College in

West Virginia. Six classmates from WPSD attended Bethany with me.

At that time in the United States, there were no more than 500 Deaf and hard-of-hearing students in college, including Gallaudet. I was majoring in Physics, with no interpreters for four years—no notetakers, no captionists, no telephone, no TTY. I received my bachelor's degree in Physics with no support. Please think of this presentation as a standing ovation to those of you who provide support services.

Bonnie, would you say a few things about yourself and your background?

Bonnie Meath Lang:

Like Harry, I started at NTID as a very young professor, and as a woman teaching in a college environment, I had very few models. In that way I connected very much to the experience of my students, and I became very interested in the idea that perhaps I could effect change by finding stories, telling stories, and acting out stories. And so as a teacher, first of English then later of drama, there was a hidden agenda in my work: To find the stories that speak to people like myself, who wanted to identify people in history and in contemporary life whose lives point to the way we can and should live our lives. People like Bill Stokoe, who had the vision and the courage to pursue an area of research that was unpopular at the time. People who had the courage to stand up for themselves, to create art and theater under nontraditional circumstances. Those kinds of stories have motivated both of us, and we have cherished them as we pursue the demands that come with educating our students.

Harry Lang:

My own research focuses on the teaching/learning process. I'd like to share a few of those studies today.

When I began the "Teaching Research Program" at NTID, we asked 100 college teachers to identify the most important priorities for research. The top priorities they identified were communication issues in teaching, learning styles and teaching styles, and the characteristics of effective teachers. Today we will summarize five different studies that we chose from a host of studies that have strong implications for your work in providing support services to deaf students.

Bonnie Meath Lang:

At the same time, these areas of research are very much connected to life history work. Throughout history, deaf people have found their own ways to succeed as students pursuing an education. And some of those strategies have been both self advocating and affirming, we believe, to the work that you are all engaged in.

Harry Lang:

Back in 1984, I was invited to interview Dr. Stephen Hawking. At that time, I was a physics teacher and it was an honor to interview him. I was the president of an organization of scientists with disabilities, and during the interview I had an ASL interpreter. Dr. Hawking had a graduate student he brought with him. Hawking has Lou Gehrig's disease, amyotrophic lateral sclerosis, and his speech was unintelligible. He would speak and his assistant would repeat his words, and then the ASL interpreter would interpret for me. In the middle of the interview he looked up and he said, "Dr. Lang, it must be difficult to be deaf." I was taken aback when he said that. I love tennis, and my idea of being "handicapped" is someone with a mobility challenge like him. On the other hand, he saw the issue of communication and deafness as a "handicap." When I arrived home in Rochester, I thought about his perception and the attitudes people have about disabilities.

That started me on a quest for life stories related to people's attitudes. I believe attitudinal barriers often impede the progress of deaf people, and I want to point out how that relates to our work.

I soon began what I call "NIH Research." No—that does not stand for National Institutes for Health. It is an abbreviation I use for "Needle in the Haystack" Research. I began searching through histories of biology, chemistry, speedreading, etc., and looking for the term "deaf." Bonnie and I began working in both the arts and sciences around 1988. During vacations, we traveled to Italy, France, Germany, Scotland, Ireland, Canada, and other countries, searching through libraries, reading through books, and looking for such words as "dov" in Swedish, "gehorlos" in German, and other terms for deafness. One by one, we found more than 1,000 deaf women and men in science, math, engineering, and medicine. We stopped counting after about 1995. We focused

on what these deaf people contributed to science, arts, and humanities.

We found Nobel laureates. There are eight craters on the moon named in honor of deaf people. We found that each of those 1,000 deaf people had experiences relating to the attitudinal barriers they faced, and the struggles in their lives. Two-thirds of those 1,000 scientists were either born deaf or became deaf before the age of 5.

A book I published called *Silence of the Spheres: The Deaf Experience in the History of Science*, described the barriers deaf people faced and their contributions in fields of science. The book Bonnie and I wrote together, *Deaf Persons in the Arts and Sciences: A Biographical Dictionary*, included 150 life stories. And as Karen mentioned, there is a third book coming out this month, *A Phone of Our Own: The Deaf Insurrection Against Ma Bell*. All of these books describe the life experience of deaf people. We would like to connect a few of these stories to the information we share with you today.

Bonnie Meath Lang:

Deaf people's lives are also a very powerful inspiration for works of art. We have found at NTID that our students have been inspired by learning about the lives of deaf people through art. Two performances that we recently produced included a play I wrote called *A Sailor's Daughter* based on the life of the deaf French feminist playwright, Marie Leneru, who lived in the late 19th century. She died during World War I. Leneru created a powerful individual voice that is still very much a part of French literature. Very few people know about her; fewer people know that she was deaf. She also wrote a moving diary about her inner and outer life as a deaf person and her feelings that those lives, like many of ours, are often in conflict.

Two years ago, we lost a cherished colleague named Michael Thomas, who died at the age of 46, and was a very close friend of Harry and mine and a close friend to our program, as well as an inspiring teacher and institutor of the RIT Dance Company. We wrote and developed a multimedia dance and theater presentation based on the themes of his life as a deaf artist/choreographer, called *The Spirit and the Man*.

These were two works of love that I think demonstrate not only to us but to deaf students that these lives and this work can be creatively inspi-

rationally and artistically successful. The impact of these histories is repeated every day with the young deaf people we see and that Harry sees in visiting school programs. We have received hundreds of letters from deaf students talking about how important it is for them to know that there are other deaf people who have strived, who have pursued an education under difficult circumstances, and who have fought for access. And that is, we think, a very fundamental part of our students' education.

There is impact, too, on their teachers and on parents who have also written us. We have presented some of this work at conferences for parents of deaf children, who are unaware of the lives of famous deaf people. Certainly, these stories can carry to the gatekeepers, to the college administrators and to the people making decisions about the educational lives of our students. In the long run, we hope such stories carry to government officials, because these lives validate what we are finding about the potential for success and the characteristics of success for deaf people.

One of our favorite stories is the quotation that you saw when you were coming in to this presentation space, "Perseverantia omnia vincit," which was a quotation by Gideon Moore, a deaf chemist whose work really began to skyrocket after his graduation from the University of Heidelberg in Germany in 1869. Before Heidelberg, he went to Yale College, and when he left Yale this was found etched on the window of his dormitory room. We can look to this quote with interest—not only because it's an early example of dormitory vandalism—but also for the message that is communicated. Certainly this young man who went to Yale college and his deaf brother, H. Humphrey Moore, who is another story later on, experienced much that required perseverance. And that perseverance led later to Gideon's studying with Robert Wilhelm Bunsen, the famous German chemist, and to becoming one of the foremost chemists in the United States.

Harry Lang:

Bonnie mentioned that we received a stack of letters. Here is one quote from a deaf college student that shows the impact of such life stories: "I am now more aware of how we, deaf, have to work twice as hard to get where we want to be, to get what we need, to get support and equal rights. By doing this, we will make it easier for our next gen-

erations to have more equal access to life as did the past generations made it easier for us today.”

With this prefatory note about the impact of life histories on motivation and self esteem, I would like to summarize our first research study relating to learning styles. In this investigation there were six styles in every learner’s “profile.” The measure we used shows how *collaborative* or *competitive* one is—also how *dependent*, *independent*, *participative*, or *avoidant*. The first finding in this study was that deaf students are highly “dependent.” The term “dependent” in this measure is really not a negative concept. It means that these are students who need structure and organization and clarity. A teacher who is very organized and structured really helps such students learn better. We also found that deaf students were lower in the competitive style than expected, and that has direct implications for us. For example, some college professors, such as those in business programs, may encourage competitive behaviors. Students who are not strong in this style will be more challenged in such courses.

Issues also emerge related to empowerment and self advocacy. In our jobs, we are often involved in putting out fires. Developing a sense of self advocacy in deaf students is important. The students need to realize what’s happening in society among deaf people so they can advocate for themselves more and more.

Of those six styles, the one that shows a statistically significant correlation with achievement as measured by course grades is the participative style. Let us connect this to a real life story. At the age of about 11, Konstantin Tsiolkovsky became deaf. His mother gave him a kite. Connecting a small bucket to the kite string, he sent a cockroach into the high altitudes of his kite, and he dreamed of sending human people into space. It was in the 19th century when he first built a rocket and for years struggled for recognition by the Czarist regime. Many years later, in 1957, Sputnik was set into space, honoring this deaf man on the 100th anniversary of his birth. He is now known as the “Father of Rocketry.” His participation in a science experiment as a child led him to great breakthroughs.

Bonnie Meath Lang:

A more contemporary example is the deaf percussionist, Evelyn Glennie. She is very active in deaf organizations in England and around the UK. She is one of the world’s only solo percussionists

at this time, and has had many musical compositions written expressly for her. She is an excellent example of a person self advocating and *participating* in her own education. As her progressive hearing loss continued through her elementary school education, she pursued alternatives in studying music. She also pursued financial support for her art by writing to patrons until she was sponsored by a group called the Beethoven Society to study at the Royal Academy of Music. She was always experimenting, directly participating in determining how she could feel and read the music, how she could follow conductors, etc.

In addition to participating and creating one’s own success, one thing that Harry and I learned through the life stories was the importance of *networking*. To reinforce what he said about the great work you’re doing with PEPNet, your own manner of organization is a model. It was also very exciting to see some students involved with sessions this year and at past conferences, because they are learning through this conference experience to network.

There is a great deal of support in history for this kind of work. For example, we discovered a group of deaf women who set up a professional network and became master translators and cultural researchers at the Hispanic Society in New York City from the early 1920s through the 1950s. They, in turn, supported internships for other students to go there, to learn languages, and to research cultures.

There was also a group of deaf actors in the silent films, as you know from John Schuchman’s book *Hollywood Speaks*. These were some of the pioneers of the film industry. They networked with what was called the Bohemian Club, a group of very avant-garde writers, artists, actors, and poets. People like Ernest Hemingway were members of this Club, as well as actors like Charlie Chaplin. There was a whole deaf contingent who joined that club from the California deaf actors of the 1910s and 1920s. There is strong support in history for helping students find their organizations and find their networks of like-minded people.

Harry Lang:

In addition to encouraging participative learning styles, we also have research that supports *active learning*. That is important for both future employment and academic success. There is a saying that summarizes all of this very well: “Tell me, and I’ll forget. Show me, and I’ll remember.

Involve me, and I will understand.” I emphasize this in many teacher education workshops. It is critical for all of us to remember.

In a second research study, we examined characteristics of effective teachers using what we call a “structured response method.” We listed 32 characteristics that teachers generated in interviews. We distributed those to deaf college students and their professors and asked them to rank and rate the characteristics. The most important characteristic, from the perspective of deaf college students, was knowledge of course material. That top characteristic is exactly the same one identified in many studies with hearing college students.

On the college level, it’s not that serious a concern, but at a K-12 level, it is. In science and math education, about 80 percent of the teachers teaching deaf students have no degree in the content area. So that is an issue for teacher preparation, and it is an issue of establishing partnerships that we professionals in postsecondary education should consider.

Bonnie Meath Lang:

Again, the value of this characteristic is validated in life histories. One of the most interesting persons we researched was really the first woman anthropologist in the United States who gained notoriety, Ruth Benedict. Maybe some of you have read her book, *The Chrysanthemum and the Sword*, which was based on her studies of Japanese culture. She was a student of Franz Boas, a foremost anthropologist in the United States in the early 1900s and the person who set the stage for seminal cultural investigations. She was experiencing a great deal of frustration as a student, but Boas’ own work, which drew from different fields and different methods of inquiry, encouraged her as a deaf person to try and research more intently the visual aspects of culture. At that time, the prevailing methodology in anthropology was the transcription of oral languages and folklore, and later on, the taping of oral language. Benedict studied dance, costumes, pottery, and other visual aspects of culture. In doing so, she later became the person who was the authority in that field, and the teacher of Margaret Mead. A deaf person teaching at Columbia University, she had enormous influence in her discipline. In part, this certainly was the result of having had a teacher with the authority and knowledge of the discipline to be able to experiment and broaden his field—and encourage his students to do the same.

Harry Lang:

We found as we studied characteristics of effective teaching very similar patterns in the observations of deaf and hearing college students. There were two characteristics that were uniquely of concern to deaf students. One was that deaf students preferred more direct communication with their professors. And, secondly, deaf students want professors who understand deafness and deaf people.

Bonnie Meath Lang:

One of the silent film actors that we researched, and later a great artist and photographer, Theophilus D’Estrella, from California, worked with the Sierra Club at the time of its founding to document the environmental concerns of that club. His artistic talent became apparent to his teachers, and one sent him to Virgil Williams, one of the top artists in San Francisco at the time. Williams had no experience with deaf people, and decided that he would write notes with Theophilus D’Estrella. This communication later became a book, “Notes to a Deaf Mute Pupil,” which is still read by people in arts education and teacher education as a very important document on how to help students access their creative sources. It is also an early example of direct communication by a totally inexperienced teacher.

Harry Lang:

There are professors in the early history of deaf people in higher education who learned sign language. Perhaps you have had that experience of colleagues who voluntarily studied ASL and Deaf Culture at your colleges. We drew upon life histories from many years ago to show that it is really not a new issue with our students. Many people have experienced barriers in the past and have found wonderfully innovative solutions in their relationships to overcome those barriers.

Also important was the fact that of the teaching characteristics we examined, there was a statistically significant difference between the teachers’ perceptions and students’ perceptions for half of those, 16 of the 32. Therefore, we cannot assume that the deaf students know why we, as teachers, emphasize certain things. The students do have different perceptions, and sometimes that can hinder their progress. One good example is in relation to encouraging active learning. Deaf students had a statistically significant *lower* mean rating of that characteristic relative to teachers—

meaning that the students themselves do not see the value of their active participation in learning activities. Yet as we have mentioned earlier, the more participative a student is, the better the course grades.

Another study of the characteristics of effective teaching used an “unstructured response” method. That means we did not have a pre-selected list of characteristics that people looked at, ranked, and analyzed. Rather, we interviewed 58 deaf college students and collected 839 “critical incidents.” We asked them to reflect on their experience in college and think about something that happened in class that motivated them to learn from that teacher or situations that happened in class that were de-motivating. We collected 839 incidents, and we asked three college professors to categorize them. Direct communication with the teacher, once again, emerged as very important. That issue came up in 10 percent of the incidents.

In this study, there were 33 characteristics in all. We found that “teacher affect” variables were important as students reflected on effective teaching. Examples of affect included the teacher being caring and establishing rapport.

Bonnie Meath Lang:

This is also one of the ways we believe that students become aware of their own “generativity.” You may remember what that student said in the beginning of our presentation—that he knew now that he had to work harder. Why? Because if he did that and succeeded, it would make it easier for *future* groups of students. That is one of the most powerful messages we can transmit to our students.

One of our favorite examples is our friend Robert Panara, who is the founder of NTID’s theater and English department. Bob always looks back with fondness at another great deaf teacher, Frederick Hughes, who instilled in him his interest in drama. Bob, of course, came to NTID after his time at Gallaudet. He had great influence on the group of actors who established the National Theatre of the Deaf, people like Bernard Bragg, Patrick Graybill, our colleague, and Phyllis Frelich. His influence continues. That influence of a powerful mentor and the sense of generation is very strong and something we need to nurture as teachers.

Harry Lang:

I remember when I was a deaf college student majoring in Physics, I considered myself somewhat fortunate. Although I didn’t have interpreters, it happened that the chair of my physics department had come from China, and he struggled to communicate in English. He wrote on the blackboard so much that the entire class benefited from that. But for me, there was a special bonding. And I think for deaf college students who are mainstreamed in hearing colleges that bonding is so important, as it was important to me. Having a teacher who struggled with communication issues himself really helped that happen. That bonding could be critical to retention of our students in college.

Bonnie Meath Lang:

In addition, we found in this research that our students value *diversity*. Perhaps one of the most important things we can do in the service of fostering diversity and diversity education and demonstrating the respect for diversity that we hope students will take with them into their lives is connecting them with some of the many powerful deaf people who belonged to the Deaf community, but also to other cultures and other communities as well. A few of them include John Lewis Clark, artist, sculptor, Native American; Glenn Anderson, deaf African-American educational advocate and first rehabilitation education chair from Michigan; and our director at NTID, Robert Davila, who is the son of a Mexican migrant family in California, who later became the highest ranking deaf officer in the United States government.

Harry Lang:

Another research study we conducted at NTID related to communication in the classroom. It also related to the use of technology. The study involved 144 deaf students and focused on reading in science. There were three different abilities of reading, as measured by the California test. One group of deaf college students studied text only. Another group studied text and content movies. A third group studied text and sign movies. A fourth group studied text and adjunct questions. The fifth group received all of these stimuli.

It is interesting that we found that deaf students with low reading abilities who were asked

the adjunct questions as they read, performed on a test of immediate factual recall equally well as students with high reading ability who had text only. What made that possible was the interactive element. As they read, they had to think about what they were reading. The adjunct questions apparently encouraged this cognitive activation.

We plan to do more research in that area. Right now we know that for a science lesson as we used in this study, it is really important to have mental engagement as part of the reading process. In this study, the sign movies and the content movies were passive activities. The students would just watch them and not think about them. They had to interact more with the adjunct questions.

Signs could be helpful. We saw some improvement, but it wasn't statistically significant. And we saw some improvement with the content movies, but that also was not statistically significant. These adjunct aids with instructional prose may make a difference in learning under other conditions, such as more technical content. Only additional research will help us understand the roles of various multimedia adjunct instructional aids.

Now, imagine that before I began talking about effective teaching if I had asked every one of you to take one minute and write down which characteristic, from your perspective, was the most important. The traditional way to teach is to ask a question and identify one student to give a response. By having everyone of you take a minute to think about my question, we have mental engagement. In the mainstream classroom, we have interpreters or real-time captioning. But what we also need to optimize learning is to develop more effective teaching strategies that directly involve students, whether or not we have support services and high-technology assistance.

We cannot assume that "technological advances" are automatically good for people. Historically that has not always been true. If you look at the telephone, deaf and hearing people had equal access to long distance communication before the development of the telephone. And after the invention of the telephone, it took 90 years for deaf people to catch up with the mainstream. Movies with sound tracks also had a negative impact. In the 1920s, deaf people loved to go to silent movies. Then after the "talkies" arrived, it took 40 years before deaf people had access through captioning again. In regard to the development of computer

technologies, I think we need to conduct research to make sure that deaf people don't end up lagging behind with that technology as well.

What are the implications for you? We have been talking about direct communication between teachers and students. We currently provide different media for access to communication—interpreters, CART, C-Print, speech to print, notetaking. But the ideal situation, as research is showing, is direct communication between teachers and students, active involvement of the students, and interactive processes, especially dialogue. So there are some critical research questions we need to address over the next few years. How do we optimize these elements for learning in the classroom?

Bonnie Meath Lang:

In fact, what does *all* of this mean? I think if Harry and I want you to take anything from this presentation, it would be three areas of emphasis.

First, we need to conduct research continually to support our efforts. In that research process and in the associated processes, we need to involve deaf people. All of these research studies, and all of this life history work, have involved deaf people and their own creations and their own making sense of the world.

Secondly, we need to find ways to network and to pass on the stories and the research results to students and professionals in K-12 and even earlier environments. In this regard, Harry is still advocating the metric system when he says, "A gram of prevention is worth a kilogram of cure" (He won't give up that battle yet). We need partnerships between postsecondary programs and K-12 programs. We need to get our work out and to invite young students into the college setting to see how college people work together, and to see how young people in college create art, create their futures, and research for themselves the questions that they need answered to make sense of their lives.

And finally, the life stories, the awareness of the accomplishments of other deaf people and the ability to connect deaf people with each other and with powerful deaf and hearing mentors is a way to foster potential. We believe this honors the lives of deaf people as we create better lives for deaf and hearing people working together in education—the exploration of human knowledge and in the exploration of what is important in life.

Thank you.

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Office of Special Education and Rehabilitative Service (OSERS), U.S. Department of Education: Funded Programs and Projects, Past, Present and Future¹

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Abstract

The panelists will provide background information regarding funding of significant programs and projects in research, demonstration, and service areas that have made an impact on the lives of children, youth and adults. In addition, the panelists will discuss ongoing activities; talk about future programs and projects that are needed; and discuss how consumers with hearing loss and their supporters can help shape the direction that ED/OSERS takes in developing priorities to address the needs of consumers with hearing loss.

Ramon Rodriguez:

It is not very often that the Department of Education allows four staff members to leave town. It might be possible if they were going to various parts of the country to address different organizations, but to come to PEPNet and meet in one room is unheard of. So, it required a great deal of leadership on the part of the PEPNet directors to get this panel here. I am sure you will be interested in what the panel has to say. They represent the three major offices that comprise the Office of Special Education and Rehabilitative Services.

Dick Johnson is senior member of the firm, the longest serving person in the department. He is with the National Institute on Disability and Rehabilitation Research (NIDRR) office. He will tell you a little bit more about himself in a few minutes.

We are fortunate to have Annette Reichman join us. She is chief of the Deafness and Communicative Disorders Branch (DCDB) at the Rehabilitation Services Administration (RSA) office.

We also have Ernest Hairston, who is with the Office of Special Education Programs. He is Deputy Associate Director of National Initiatives Program. Let us begin with Annette.

Annette Reichman:

Hello, everyone. I'm very honored to be here with you this evening. I'm the new kid on the block and have been with RSA for only a few months.

Let's begin with what I'm going to share with you this evening. The mission of our branch is to promote improved and expanded rehabilitation services for individuals who are deaf, hard-of-hearing, or deaf-blind. I want to make clear that our

¹ This is an edited transcript of the panel presentation.

branch, the DCDB, is under the Rehabilitative Services Administration (RSA). My position is to oversee all the states and ensure that they are providing effective vocational rehabilitation (VR) services to clients with disabilities. Our office specifically focuses on individuals who are Deaf or hard of hearing.

Those of you who are working in postsecondary institutions may have many students who are also VR clients or consumers. So VR and PEPNet have developed a collaborative relationship. We are working together to ensure that appropriate training, services, and education are available and that the ultimate goal of employment can be achieved.

Perhaps some of you here this evening are state coordinators of the deaf or rehabilitation counselors for the deaf. Perhaps you're curious as to what's taking place in postsecondary institutions that are serving your clients. Perhaps that is your reason for attending the conference. What is required to achieve employment for consumers? That means that your students and your clients need to get gainful employment. In my opinion, there are two things that need to occur for that to take place. First, they need to have qualified and adequate VR personnel. Second, they need to have access to training.

Let's briefly touch on statistics for a moment. It was mentioned earlier that there are over 20,000 students in postsecondary institutions who are Deaf or hard of hearing. This evening, I'd like to share with you some statistics and some information I discovered since I've been working in this office for the last five months. Last week, I went to a workshop at Gallaudet University regarding VR. About four weeks ago I went to Philadelphia to the Region III conference held for VR counselors who work specifically with Deaf and hard-of-hearing people. Since most of you haven't heard this information, I'd like to share it with you.

In 1988, VR noted that 9.1 percent of all deaf and hard-of-hearing clients were either successfully employed or had their cases closed during that year. According to the data I have, in 1998, that number has decreased to 7.6 percent. So the number of individuals who are Deaf and hard-of-hearing who have gained successful employment seems to be declining. If you consider VR as a whole and all the clients that they serve, the number of general VR clients who are getting employment or achieving successful outcomes has increased, whereas the number of successful

outcomes among the Deaf and hard-of-hearing population has decreased.

So, last week when I was at Gallaudet, I asked the 40 people who were in attendance about their theories as to why this has occurred. I did the same thing during my trip to Philadelphia four weeks ago, and I'd like to share with you some of the theories that I received at these two different locations. One of the theories is that the economy is good; we're booming, and deaf students or deaf individuals don't need VR services any longer. The second theory was that more severely disabled individuals are more difficult to place than those who are Deaf or hard of hearing. Another theory was that there are fewer manufacturing jobs out in the workplace. The world has changed; therefore, there are fewer opportunities in that job market. Another theory was that more jobs are requiring individuals to have literacy skills as well as math skills.

In the last five years, there have been several research studies that have addressed the issue of how individuals gain employment. The researchers discovered that individuals who want gainful employment must have an 8th grade reading ability as well as 8th grade level mathematical abilities. This is required for successful placement in a competitive work force.

So the question becomes: What does that mean for an individual who is Deaf or hard-of-hearing? For those of you who are VR counselors and are working with students, this becomes a critical point. What about the Rubella bubble and the increased numbers ten years ago? There seem to be fewer deaf people now than compared to ten years ago. I'd like you to ponder this issue: Why has there been a decrease in the number of clients served by VR counselors? And what is the impact upon postsecondary institutions? If you are depending on VR and its system to support your students in the institutions, what is the impact nationally?

Before I conclude my presentation, Ramon asked me to share some more information regarding some of my other job duties. One of my major responsibilities is with regard to the RSA interpreter training programs. There are ten different regional interpreter training programs and two national programs that we are focusing on now. We are also trying to promote employment. That is another one of the tasks that I am charged with.

Regarding services to clients, there is a publication out of our office that reports the re-

sults of the recent Institute on Rehabilitation Issues. This was recently disseminated, and what it discusses is that we are not serving our clientele very well. It is available on the web at <<http://www.uark.edu/depts/rehabres/publications.html>>. In preparing this presentation, I asked Ramon if any SCDs or RCDs would attend this conference. If there are SCDs or RCDs in the audience, I would love to get together to have a forum on these issues. I would like to meet all of you personally and discuss these issues with you. I'd like to find out what it is you're facing on your jobs and how we can better serve consumers. I will bring that information back to my office.

I'm going to turn the floor over now to Ernest Hairston.

Ernest Hairston:

I used to work with the captioning media branch, so I worked with a lot of closed circuit television, closed captioning, video description, and those sorts of things. Even though I work with technology, I don't really have a lot of fancy modern technology that Annette used. So I can't entertain you with any video or slides. I use the old-fashioned methods: paper and literature. *(laughter)*

However, this particular document that I have with me is IDEA. It is from 1998, and includes various activities under IDEA. Some of this information came out in 1999. There is a lot of information in this document, and it's also on the Department of Education website. They have a very comprehensive website at <<http://www.ed.gov/offices/osers/bosp>>. This website has many, many links, including one to our captioning center. The captioning center has a lot of information and materials that I'm sure all of you will be interested in.

There have been some changes over the years related to the use of technology and providing materials in accessible formats. Many years ago, I was a strong advocate of captioning films, and now we are working on captioning videos. It used to be that deaf people applied for funding for special projects by sending in written applications. Now that is something that can be done on-line through links at that website. From our site, you can link to the OSEP website or the PEPNet website.

The Office of Special Education Programs (OSEP) funds several discretionary programs or projects. In 1998, we funded about 1,800 differ-

ent projects, so I couldn't possibly mention all of them. However, I will give you some of the topics or highlights. There are state grant programs for children with disabilities. We have a preschool grant program. We also have projects related to infants and toddlers with disabilities. We fund programs for all ages, from birth to 21. There are special study projects and evaluations. One very interesting study is a national research study that focuses on the disproportionate representation of minority children within special education. You find that there are a large number of minority children in comparison to others. In the general population, that's not true.

We also have several other research projects as well. One of the largest programs that we have is the personal preparation program, formerly known as the teacher training program, in leadership at the Ph.D. or advanced studies level. Those grants were given to historically black colleges and universities but are not limited to them. We also have personal preparation in low incidence. Low incidence population programs include educational interpreter training programs. The support for that program proved to be necessary because there are many mainstream programs that use interpreting services. We now have a nationwide study that will provide research to verify the need for educational interpreting. We just simply cannot give money because we believe the need is there; we have to have research basis to substantiate that need.

I'd like to focus on technology and media, which is indeed my "baby." I have been involved with closed captioning for television. You often see "Captioning Sponsored By the U.S. Department of Education" at the end of a program. But only 40 percent of the closed captioned television programs are paid for by the Department of Education. We caption a wide variety of programs, including sports, educational programming, daytime programming like *Oprah*, for example, and the soaps. We also have descriptive video for blind individuals. People who are blind are able to hear, so they should be able to understand the television. But that's not necessarily true. They get the sound, but not the activity or actions on the screen. Descriptive video gives a description of what's taking place, and they are able to enjoy while they listen. During the silence or the pauses, they can get information like "there is a woman wearing a red dress, walking through a meadow," or that kind of thing.

We also have selective captioning. It used to be 35-millimeter films or certain types of videos, but we don't do that any longer. Now the focus is captioning educational videos and placing them in our school depositories, like video libraries, within many of our schools for the deaf.

We have educational videos and materials. After the reauthorization of IDEA, it stipulated that after the year 2001 the Department of Education could only pay for closed captioning for programs that were informational, educational, or related to the news. That means that the Department would not caption daytime programming, sports, and other programs. Since they didn't tell us what is considered educational, it was left up to us to define that.

We put out a public notice last December, asking people in the field to define what is considered educational and what is not. We received over 4,000 responses. From all of the comments that I've seen, they said that everything is educational. Many of them commented that deaf parents have a right to see what their children are listening to on television or watching what their hearing children are partaking of. There are a lot of innocent children out there and there may be a lot of undesirable language that you don't want your children to be exposed to, but the general response was "everything is educational."

We don't know what will take place when the year 2001 comes around. The FCC regulations state that 100 percent of television should be captioned. But the regulations say over a period of time – 5 percent, 10 percent, 25 percent, 50 percent, and so on. It will be done in phases.

I think my time is up, but I'll be happy to entertain any questions. I will leave information about where you can get all of the educational materials, including application forms and other publications. Thank you very much. *(applause)*

Let me introduce to you now Richard Johnson, who is from NIDRR, the National Institute on Disability and Rehabilitation Research.

Richard Johnson:

Thank you. I'm not sure if you can hear me okay. If you can, fine. If not, try to understand the sign language. I have a problem. I can think and I can talk. I can think and I can sign. But I have a problem trying to think and talk and sign at the same time. *(laughter)*

Ernie gave you his e-mail address: slash, slash, slash, slash, slash, slash. I brought some of these

brochures. They are over there on the table. Here on the back is our e-mail address with slashes. *(laughter)*

I want to tell you the story of my life—in a professional sense. We have NIDRR, the National Institute on Disability and Rehabilitation Research. That was founded through legislation in 1978; it really began operation in 1980. I've been with them since the day they opened the door. It's really an unusual agency in that we do almost applied research and not much experimental research.

In experimental research, you try to figure out what the number on the next ping-pong ball will be or the next number on the lottery. We don't do that. Rather, we fund over 50 centers nationally. The centers work with a variety of disabilities. Literally, we cover everything from brains to feet and everything in between. We have a big, big traumatic brain injury research program. We have a really neat prosthetics development program up in Chicago. In fact, maybe you followed the Disabled Olympics a couple years ago. A young man came close to the world record for people without disability in running the dash, and he was wearing a leg designed at one of our centers. It has special spring toes to give him a boost; it's really neat. These people are dedicated to their work and they are always coming up with new ways to use new material and improve designs. They are very innovative.

We also have a number of other programs. For example, everybody uses computers, but computers don't always come in one size. They come in little sizes and big sizes and so forth. We work with a variation of that, trying to find new applications for people with different kinds of disability.

We have, for example, a program at Smith-Kettlewell Eye Research Center in San Francisco. Among other things, they are looking at how to use little inserts in the eye for blind people to help them see. I know you are interested primarily in hearing loss, because that's your field. I'll try to get into that a little bit. But before I do, I want to mention some of the other aspects of the program that may be of interest to you.

First of all, we are not only national, but we are also international. We have a lot of affiliated programs overseas because disability, as you know, is not limited to any one country. People get a funny expression on their faces when they talk about it, but I have landmine program. Yes, a landmine program. We are working right now in what used to be Yugoslavia. There are a tremen-

dous number of children and adults who step on landmines almost every day. So we work with a lot of that kind of physical damage.

We have developed technology for early identification of hearing loss in newborn infants through our program at the Lexington Center in New York. We worked the bugs out, and then we went to the National Institute of Health. They picked it up and administrate it. Now it's used widely in delivery rooms. If the profile is not in the normal range or if there seem to be some abnormal spikes, then they have the child examined more closely. They also have digital hearing aids that were originally developed at our center in Lexington.

We have a lot of assistive technology, with different kinds of devices to get people who have hearing difficulties or visual difficulties more into the mainstream. And on that note, if you are a computer nerd, you may be into Windows '98. If you are, you may be aware that the special section on built-in assistive devices in that software came from our center in Wisconsin, the Trace Center. The Trace Center also works closely with Gallaudet in the area of telecommunication, which is another area that is booming.

We also fund rehabilitation research and training centers, including two in the area of deafness. Doug Watson, who hopefully is here, runs the Rehabilitation Research and Training Center for Persons who are Deaf or Hard of Hearing at the University of Arkansas in Little Rock. You may also be familiar with the Rehabilitation Research and Training Center for Persons who are Hard of Hearing or Late Deafened that is at the California School of Professional Psychology in San Diego.

In addition to the centers that I mentioned around the country, NIDRR also funds other kinds

of research. "Initiated research" is something that we decided we need. You send in an application and a group of experts reviews it. We make decisions about awarding funding. A typical three-year grant will provide about \$160,000 to \$170,000 per year to a successful applicant.

We have other kinds of programs that involve other kinds of grants. For example, you may be familiar with the ADA Disability and Business Technical Assistance Centers (DBTACs). There are ten of those centers located around the country, and we support them.

We also have fellowships, which is the only program that provides funding to individuals. If you are interested in pursuing a research topic that is of special interest to you and important to the field, you can apply for a fellowship to fund the research. It's very popular to take a sabbatical or otherwise leave your work for one year, but there's a lot of competition for those fellowships. *(laughter)*

I brought some brochures that explain some of this information in more detail. I will also be around for the next couple of days and would be more than happy to sit down with you and explain any part of our program that you may be interested in.

Thank you very much. *(applause)*

Ramon Rodriguez:

Annette, Ernie and D.J., thank you very much for your sharing information from your offices. All three of the panelists will be available here throughout the conference. Please feel free to visit with each of them if you are interested in finding out more about what their offices do. Thank you very much for your attention. Thank you. Good night. *(applause)*

PEPNet Then, Today (Now) and Our Hope for the Future¹

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Abstract

As many of the members of the audience have probably experienced, students who are deaf and hard of hearing are attending colleges and universities at a higher rate than ever before. This presentation will provide an overview of the Postsecondary Education Programs Network (PEPNet), including a review of the initial goals and activities of the regional centers, a description of current projects, and a discussion of plans for the future. Key to the success of the project are the establishment of a network of regional postsecondary education centers for outreach and technical assistance that focus on individuals who are deaf and hard of hearing, the use of new and emerging technology, traditional and non-traditional approaches, flexible and interactive learning settings, and low-cost resources to provide increased opportunities.

Ramon Rodriguez: We have been looking forward to this conference for the past two years, ever since we met in Orlando, Florida. I would like to

present greetings from Secretary Riley of the Department of Education; from Judy Heumann, Assistant Secretary for the Office of Special Education and Rehabilitative Services; from Fred Schroeder, who is the Commissioner of RSA; and from the new guy on the block, Ken Balick, who is the Director of the Office of Special Education Programs. This is the program that funds PEPNet, the four postsecondary regional centers for the deaf. On behalf of the directors of our regional centers, welcome to PEPNet 2000.

I'm very happy to be here. I'd like to share with you where we have been. Before PEPNet was developed, there were four very independent regional centers that developed model demonstration programs to serve Deaf and hard-of-hearing students in the four regions of the country. These programs provided direct services to students. Around the time of the last grant competition, there was a lot of discussion within the department: Is this an effective way of really reaching many, many more Deaf and hard-of-hearing students who were beginning to attend

¹ This is an edited transcript of the panel presentation.

mainstreamed programs? Until that time Gallaudet College (and later Gallaudet University) and the National Technical Institute for the Deaf at RIT were two national programs that provided wonderful programs for the students who wanted them.

However, PL 94-142 mandated that all children with disabilities should attend their neighborhood schools, changing the educational opportunities for Deaf and hard-of-hearing students across the country. Since that time, a vast majority of students who are Deaf and hard-of-hearing are attending mainstream programs. In a recent survey by the Department of Education, published in March 1996, it showed that there were about 20,000 students who were Deaf and hard-of-hearing in some 1,850 institutions around the country. It was interesting to note that there were about 7,500 students who reported themselves as being deaf and about another 7,000 students said that they were hearing-impaired or hard of hearing. The remaining number indicated that they had a hearing loss.

Today we project that there are between 25,000 and 30,000 students out there that you are serving or not serving. There is also a population of students who are hard-of-hearing; many of these students have severe needs and may benefit from services that you can provide. But, unfortunately, they have not identified themselves to you yet. Hopefully, we will be able to serve that group over the next several years.

This evening, the four regional center directors will share with you what is happening today, including what PEPNet is doing and some of the things that are happening within each region. So, I present to you Don Ashmore from the Postsecondary Education Consortium, who will provide us with a history of how PEPNet came to be.

Don Ashmore: Hello. It's good to see you all today. I'm a mile high, and I lost my voice in the process. After PEPNet '98 in Orlando, we reviewed the evaluations from the participants, and one of the strongest comments was that the participants wanted to know more about PEPNet. They felt that it was important that we explain it to the group. So our panel is here to share with you who we are, what we do, and how we might impact or affect you.

Today, PEPNet is five years old. That includes the pregnancy. (*laughter*). There are four of us. In 1995, California State University Northridge, the National Technical Institute for the Deaf, Saint

Paul Technical College, and the University of Tennessee at Knoxville all submitted proposals to become regional centers for postsecondary outreach and technical assistance. As Ramon said, we had four very independent regional centers. He challenged us to work together to provide a national impact and enhance postsecondary educational opportunities for students who are Deaf and hard of hearing.

In the fall of 1996, the regional center directors and their staff all met in Washington, DC. The question that was before us was: How shall we work collaboratively together and coordinate our efforts for a maximum national impact? It was a very interesting process. During that time, we identified 14 different areas that we should be addressing.

Several months later, the regional center directors met on the campus of California State University Northridge to develop a mission, vision, and goals for PEPNet. At that time we also developed a preamble, which served as a guideline about how we would work and function together as a team.

The mission of PEPNet was to promote coordination and collaboration among the four regional centers. You have to remember, this type of collaboration was something we had never experienced before. It was something new. And what would it mean? Where would it lead us? Our thought at that time was that the four centers wanted to work in collaboration and cooperate with one another. The directors decided to strive for being the best model for networking for all other professional organizations. We wanted others to be able to learn from us. And we are currently in that process.

We developed four goals during that meeting. The first goal was to improve postsecondary access for students who are deaf and hard of hearing. This does not include only those individuals going to college, because it also includes those participating in other postsecondary training programs. The challenge was to serve that broad spectrum.

The second goal was to develop a national design for technical assistance and outreach. We weren't sure at that time what would happen or what would be developed, but that became one of our goals.

Our third goal was that we really wanted to expand the knowledge and skills of all of the professionals working at different institutions all over

the country. But how could four regional centers accomplish that?

Our fourth goal was to increase the networking. I think that's a very key word, and it's been very successful.

Finally, with the goals that we had established, we wanted to increase postsecondary enrollment, retention, graduation, as well as employment rates. All of these needed to be increased for Deaf and hard-of-hearing students who were attending postsecondary programs.

When PEPNet was three years old, we got tired of the baby food. (*chuckles*) We realized that we had to get back together to carefully consider our future, how we would plan, how we would expand, and what kind of impact we would like PEPNet to have across the country. This time we met in Knoxville. It seemed that after that strategic planning meeting, we started a family. We recently met in Rochester at NTID, and it wasn't just the directors and the staff of the regional centers. We also included personnel from our outreach sites. Suddenly, there were 70 of us. And we were growing, and we still are. During that particular meeting, we had a "train-the-trainers" workshop. It was an opportunity for all of us from across the country to exchange information. We needed to show the different training models to one another that we had developed with the intent of training others across regional lines. We affectionately called this group the "PEPNet family."

Now we are in the year 2000, and we have developed a hunger for more knowledge. We need to know what really works, what's effective, what truly increases enrollment, retention and graduation as well as employment. What does that? We feel that that the research conducted in the past might not have specifically addressed our issues. So we decided to develop a framework for a national research agenda. To do that, we wanted to be all-inclusive and invited representatives from NTID, Gallaudet, several Rehabilitation Research and Training Centers, and PEPNet to come together to provide a framework. We will share some of this framework with you during the course of the conference. We will have external reviewers—reviewers from your institutions—to advise us, because we need to know if this is really what you agree that we need to study.

So that's where we are right now. Now, I'll turn it over to Ray Olson from the Midwest Center for Postsecondary Outreach.

Raymond Olson: Thank you, Don. I'm Raymond Olson, and we are live on the Internet at the PEPNet website right now. Tonight, you can see what PEPNet has to offer. I feel it is a privilege to stand before all of you to share this information, because you helped make this successful. I'm going to show you what's happening here in PEPNet, via what's included on the website. Many of you have already surfed the net and have looked at the PEPNet site. Later, I will share some statistics that will probably surprise some of you regarding what has transpired through <pepnet.org>.

This is our first page. It explains who we are. When we want to look for information from one of the four regions, we go to this page to access the news from each of the regions. This is our linkage between each one of us. So, technology here has really brought us closer together. I don't think any of us could have done as much as we have without all the technology that we have seen in the last five years.

There are links to each of the regional centers as well as other kinds of information that can be helpful. One link that has been very popular is the one that lists job vacancies. This is a good resource to find out what positions are available across the country.

We also have a link regarding grants information. We are linked up to many sources of grants that are available, and we are planning to enhance this to include information to help people develop grants and find out where they are.

There is a link to the PEPNet listserv. The address for it is <pepnet@rit.edu>. Members of the listserv are from all of the regions of the country.

Many of you have accessed the on-line orientation to deafness. This is an on-line training activity that has really developed since last April.

Many of you went to the PEPNet biennial conference link to find out more about tonight. *Innovation in Education*, is truly happening. We include information about the teleconferences, such as the one we just finished. Two more teleconferences are being promoted and will take place within the next year. Those are very successful activities.

We included the schedule for the live PEPNet chats. Although we had a few glitches last year, we plan to continue live chats on the Internet. We had some glitches with the chat software and not many people could log on, but we have solved that problem and there will be other chats in the

future. By the way, we have had successful chats between the PEPNet regional center directors and Ramon, as well as between the trainers and coordinators. We have been really happy with them, especially since we don't have to take notes. We can take the notes right off the chat room transcripts!

There is a link to the PEPNet Resource Center (PRC) where you can access some of the materials and products we've developed. When I discuss the statistics for website use, you'll be able to see how frequently people access this site.

After looking at the information we've gathered, we learned that not all of you sign in the guest book when you visit our site. I know that we have a lot more visitors than we have guests that have signed in. But that's alright. Our site map shows you more of what's included in the website.

We've just completed a live tour of the PEPNet website and we're back home. While I didn't go into all the links, you can start to better understand the depth that you will find on the website.

I'd like to share some statistics with you about the PEPNet website. First of all, we had 51,000 site visits. Any time you have made a contact with the website, it's counted. We have had 12,000 visits from the website to each regional site. This is the number of times that you went from <pepnet.org> to one of the regional sites.

We have had 3,000 visitors to the PEPNet news link since June 1997. The on-line training link has had 2,300 participants since April 1999; 348 participants decided to take a certificate for completing the training. Of the participants, 1,226 are from postsecondary settings. And of that group, I have broken it down for you:

- | | |
|----------------------|-----|
| • Administration | 21% |
| • Faculty | 14% |
| • Professional Staff | 30% |
| • Students | 12% |

We have had 2,100 people visit the job page, looking for work. I didn't know there were that many jobs out there! There have been about 2,000 visitors to the interagency agreement site. In the future, you will see interagency agreements on each of the sites, reflecting the status of the development of them in the states in each region. There have been 1,647 visitors to the grants page, just linking you to other grant locations. Since January 2000, there have been 700 visitors to the PEPNet

teleconference to find out about our most recent broadcast.

There have been 16,808 items that were sent out from the PRC. While our data indicate 1,300 visitors to the PEPNet listserv from <pepnet.org>, I'm sure there are more people who contact it directly.

This gives you a picture of what the technology has done and how it has enhanced our efforts. I don't think we could have done that through the mail. PEPNet.org has been a part of this, including the listservs, the contacts with the PRC, and all of this technology. There is much more being done, but I'm just sharing with you all of the linkages we're able to create through the PEPNet web page. Now I would like to turn the microphone over to Karen Hopkins from the Northeast Technical Assistance Center. She will share information about each of the regional centers and state outreach sites.

Karen Hopkins: I'm Karen Hopkins from the Northeast Technical Assistance Center, and I have the privilege this evening of introducing you to the PEPNet family. Yes, we are four regional centers. We are each set up in a little bit different way because we established our structure based on what works best within our own region. I am going to miss a few names tonight, because we would be here until long after 9 o'clock if I introduce every member of the PEPNet family who is in the room. So I'll recognize some key players.

I'm going to start with WROCC. We have both hubs and affiliates within the WROCC site. We will start with the hub representing Utah, Wyoming, Nevada, and Montana: Kay Fulton and Linda Marie Allington. Cheryl Davis represents Alaska, Idaho, Oregon, and Washington.

Our hostesses are Lindsey Antle and Paula George, representing Colorado, Arizona and New Mexico. Coming from Rochester, New York where they had to de-ice the plane this morning, it's a pleasure to be in sunny Colorado where it's 76 degrees. Wonderful weather!

Because the State of California has so many postsecondary institutions to serve, they have an affiliate in the north and an affiliate in the south. In the north, we have Angela Funke Koetz. In Southern California, we have Audrey Parker and Lucinda Aborn.

You can see that the WROCC site is set up with representatives for every state, and in the State of

California there are two institutions working with WROCC. Also, from the WROCC Central Office, there is a team of several people who are here tonight, including Gary Sanderson, Allisun Kale, Jennifer Olson, Tony Ivankovic, Jim Macaluso, and Terri Goldstein.

When we move to the southern region, Don's team in PEC is set up a little bit differently in that each state, for the most part, has a single institution and a single representative. There are a few states that are being served by the PEC's Central Office.

From Alabama, Dan Miller and Cindy Camp are here. Arkansas' representative is Sharon Downs. From Florida, we have Harriet Clark and Rebecca Herman. Georgia's representatives are Lisa Fowler and Katherine Bruni. In Kentucky, Vicki Brashear provides outreach. Louisiana's representative is Jennie Bourgeois. Carol Kelley and Jamy Dickson serve Mississippi. From North Carolina, Peggy Brooks is here. Oklahoma's representatives are Don Hastings and Shelli Dismang. Nancy Lane is South Carolina's representative. Virginia is served by Lucy Howlett. Tennessee, Texas, West Virginia, and the Virgin Islands are served by the PEC Central Office team, including Marcia Kolvitz and Kay Jursik.

Because of the regional center concept, we were each encouraged to set up our centers in ways that worked best within our region. So MCPO established sites that would serve postsecondary institutions within their specific states, but then also sites that would serve community-based programs. Serving colleges and universities in Ohio and Indiana is Claudia Bergquist. Tom Thompson and Denise Kavin provide outreach in Illinois and Missouri. Postsecondary institutions in Wisconsin, Michigan, and Iowa work with Ginny Chiaverina and Bambi Riehl. Serving community-based programs east of the Mississippi River are Diane Jones and Steve Sligar. Serving community-based programs west of the Mississippi River is Sharaine Rawlinson from the MCPO Central Office. Also, here from the MCPO Central Office are several staff members, including Debra Wilcox Hsu, Dave Buchkoski, and Patty Brill.

Finally, the group from the snowy northeast, the NETAC team, the Northeast Technical Assistance Center. From Connecticut is Elaine Taylor. Delaware is currently served by the NETAC Central Office, in a similar way that PEC is serving a few states. The District of Columbia is served by

Sylvia Walker, who was not able to be here this evening. From Maine, Barbara Keefe is here. Maryland's representative is Flo Clooney. From Massachusetts, Jane Nunes is here. New Hampshire's representative is Cate Weir. Josie Durkow is from New Jersey. Because of the size of New York State, we have an upstate person and a downstate person. Desiree Duda is serving the New York City area, and Charley Tiggs serves upstate New York. Charley is from the NETAC Central Office. Pennsylvania is represented by Lori Hutchison. Juanita Rodriguez-Colon represents Puerto Rico. Brenda McGill is here from Rhode Island. Joe Panko is the representative from Vermont. We also have several members of the NETAC Central Office team here, including Pat Billies, Mary Lamb, Charley Tiggs, and Pam Francis.

So you can see, we are a diverse structure, but we are making it work. We have done, we think, a very good job pulling together services all across this country. We not only take what we developed within each region, but we take that and share it with everyone else in the other regions. We try to share it with you through the PEPNet Resource Center. We are here to make your lives easier in the future. We know that there will be more and more Deaf and hard-of-hearing students entering your programs.

At this point, I want to turn it over to Merri Pearson from WROCC, who will be talking about some of the changes that we expect you will be seeing in the years ahead—the vision of the future.

Merri Pearson: Hello. I'd like to talk briefly about what's happening in terms of the future of education, the future of the United States, and the future of deaf education. First, as you can see, we have what is called in today's business terms a "loosely coupled organization" here, which means all four centers have very different organizational structures. They have very different ways of doing things, and yet we still work together. I think that's exciting. I think we are right now ready for the future because the future will demand organizations that are capable of handling change. These organizations must be flexible enough to deal with the rapidly changing economy, the job market, and education as being impacted by technology.

So, in brief, you've heard from Don, Ray, and Karen. And now you're stuck with me. This is my

first year with PEPNet. I am amazed at the work that all of you are doing. Wow! It is so impressive. Because on a national level, data is a commodity. Like it or not, the future jobs will be either in data or in service. The people who can manipulate data and the people who can provide a service will have jobs. So that influences what we should be doing in postsecondary education, right?

Did you know we're moving toward a global economy? We're not just the United States anymore. We have to think in terms of global economy. We have to think about jobs. We have to think that the graduates of today will have, on average, seven career changes. This means that the kids in your classrooms are going to need to understand that learning does not stop when they finish their bachelor's degree or their associate's degree or their technical certificate. It means we're talking about lifelong learning and change. It's a little bit frightening, but think about the things we as community colleges, vocational schools, technical colleges, and universities can do. We should be busy forever.

The community colleges are no longer focusing on educating students for transfer into universities. Some of you have already noticed this. You know that students finishing technology programs in community colleges can go out into the world and get a job and earn more money than most of you. *(laughter)* Students in technical and vocational schools can graduate from programs and not necessarily want to continue their education right now. So we're seeing some changes there as well.

Colleges, universities, and other postsecondary institutions must become institutions for lifelong learning. We have to change our mindset. Right now, we see some personnel shortages. There are not enough teachers of the deaf. This is true not only in K-12 schools, but also in postsecondary institutions. Where do we find the people? I was talking with Al Pimentel, the superintendent of New York School for the Deaf in White Plains. He is desperate to find good teachers of the deaf. I was talking with Ramon, and he was explaining that even NTID is looking and looking and looking for qualified teachers of the deaf. We are desperate. We need good educators who understand the needs of Deaf and hard-of-hearing people.

I talked a little bit about the national things that are happening. I talked a little bit about the

postsecondary institution issues. Now I want to talk about the population that we are serving. Did you know that by the year 2002, one-third of our students will be "ESL." That means that English is not the primary language in the home. And I'm not talking about deaf kids of deaf parents. I'm talking about Deaf and hard-of-hearing children of hearing parents. One-third. We need to be ready for that. There are cultural, social, and other issues in addition to language that we have to be ready for.

Did you know that 20 years ago we could only identify 70 percent of the babies who were born with hearing loss? Now, with technology and the new tests they have, we can identify 90 percent. There are significant implications. Some parents may choose technology enhancements, cochlear implants, and other assistive listening devices that can help with language acquisition.

Did you know that schools, with all of the legislative and regulatory requirements, are continuing to move toward inclusion? Now, for deaf kids that can be scary. You may know and understand the concept of critical majority, or critical mass, but some of the school districts and states may not understand that. So we need to be ready for that.

Poverty is another issue. If you look around, the United States seems to be richer and richer and richer and richer, and you hear about the stock market and technology. Understand that some of the deaf people in our country do not have access to the growing economy. And, in fact, in most of the reports that I've read the deaf children of deaf parents are becoming more impacted by poverty. That will influence what we should be doing.

Lastly, think about this concept of transition. You know that federal legislation now requires transition planning for all children with disabilities, right? But how many of the plans consider the trends toward the global economy, the changing job market, and the educational changes that are happening? We need to do better. We need to be thinking not only of high school to college transition or community college to university transition, but we also need to be thinking about transitions in elementary school and middle school. We need to recognize transition issues not only into community colleges and universities, but also computer schools, vocational schools, and other types of training programs. We need to think about where

the jobs will be and the training programs that students need to enter these jobs.

So to conclude, we should be very proud of what's happened in the past five years through PEPNet. We have brought together four very different organizations. We have been successful at collaborating with national level goals and ideas and concepts and dreams. But now, as we look at the research agenda and as we look at the next step, don't forget about what's happening out there in the world, in the economy, and in education. And I think that knowing all of you, we're going to do really well.

It's an exciting time. So now, I turn it over to Ramon Rodriguez. He will talk a little bit about what's happening at the federal level. Many of you know that we're in our last year of the current funding cycle, and we will have to compete again to get money from Congress to continue our work. Ramon?

Ramon Rodriguez: Thank you, Merri. Thank you, Ray, Karen, and Don, for your presentations. Let's talk a little bit about the future. By the way, we are in our fourth year of your grant, and we have one more year to come.

I think this is a very exciting program. If you have not read my welcome letter in your program book, you will note that this program is authorized under the Individuals with Disabilities Education Act (IDEA). That Act includes a statement that the Department of Education will fund postsecondary regional centers. It does not say four nor does it say that the country is divided into regions. But the appropriations authority says there will be four regional centers. The program is up for competition in 2001, which will be the final year of this grant. We are optimistic that the program, as you know it now, will continue. We're looking for a focus in areas that we did not ignore, but—because of lack of time and resources—we could not address.

We have tried our best, and I think it has been quite successful, to set up an organization that cuts across the four regions, resulting in coordination and collaboration of services and activities. The purpose was to avoid duplication, and I think we have done that very well. However, there are areas of our population that are not being served. If they are being served, they are being served in a very limited way.

I would also like to share with you that through the directors and their leadership, two very, very important outcomes resulted. One was through RSA and the Institute on Rehabilitation Issues. PEPNet sponsored a meeting in Washington, DC, about a year ago and expressed concern that individuals described as low-functioning were not being served. As a result of that, OSERS through RSA commissioned a study on this issue. That report is out, and I hope that that it is well-disseminated throughout the country. We would hope that in the near future you will be able to take some leadership in providing services to that population.

The second very important area that resulted from the PEPNet leadership was a national policy forum on deafness. It had to do with federal funding—past, present, and future. A report has been out, and recommendations are forthcoming. So those are two very important issues. And that is the future; we will act on those issues.

The work of the regional centers in addressing the federal priority has exceeded our expectations. That's the work we're doing right now that will continue through 2001. So I look forward to your continued support and your interest. As some of us said while working on our national research agenda, we invite your input. Think out of the box. Think the unthinkable.

And with that, I want to thank you very much for your attention this evening.

Equal Access for Deaf and Hard of Hearing Students — The Evolving Nature of the Dialogue

Jo Anne Simon
Adjunct Staff, Fordham University School of Law
and Private Practice Attorney
Brooklyn, NY

Merri Pearson: Good morning. You've had enough coffee so you're going to stay awake? I see very little movement. (Laughter.)

Maybe they will fall asleep. I don't know. Well, it's my honor to introduce a wonderful advocate of ours. This individual has supported Deaf and hard-of-hearing people for years. She has assisted NETAC with many projects. And she herself is one of the best attorneys that I know. She is a friend to PEPNet and has been and will continue. So she is going to talk for about an hour, and then we have the opportunity for questions. If you have a question that comes up in your mind while she's presenting, please write it down, hold it until the end, and then when she's finished with her presentation, if we can make a line right near the microphone, right there, we will have interpreters set up so that both the audience and anyone sitting up here can understand them. We will have signing and voicing interpreters available and ready for all of you. Okay? So I would like all of you and myself to provide a warm welcome to Jo Anne Simon, Esquire. (Applause.)

Jo Anne Simon: Thank you.

As many of you know, I do sign, but for today's purposes, I've elected to utilize the interpreters. The interpreters are free to tell me to stop and slow down. I am from New York, so I do talk fast.

I also want to note that you can get RID CEUs from listening to my speech and from attending this conference. Ironically, I just recently got a letter from the RID saying—because I hadn't done my CEUs—I was no longer certified. So I just lost my certification, but you can keep yours by lis-

tening to me! My lapse was totally intentional; I had no intention of keeping it up because I don't sign often enough to inflict myself upon anyone as an interpreter. (Laughter.) But I think it's just a little ironic.

My remarks today are going to be fairly broad in nature and focus more on policy and advocacy issues than specific case law. I'm not necessarily going to tell you about what different cases in higher education said. I will refer to a few cases, but on the whole that's not the purpose of my discussion. I want to talk about where we have been, where we are going, and what we are going over again in some cases, and what kinds of things we may be able to do as we move into the future.

I'm not the first person to have said this, but past is prologue. When I started in graduate school at Gallaudet in 1974, which is a hideously long time ago, there was great excitement about the hearings going on on Capitol Hill. We learned about the Babbidge Report from the '60s that talked about how deaf children were undereducated, particularly in preschool, and how we didn't get them into education soon enough and that we needed to focus on the specific needs that were unique to them as children who were Deaf and hard-of-hearing. Throughout the hearings on what is now the IDEA and what we referred to at the time as P.L. 94-142, none of the states objected in any way to the passage of federal legislation requiring them to provide special education, because federal dollars were going to accompany that. Most states didn't have much in the way of laws requiring education of students with disabili-

ties. Some of them did have laws, but those that did, didn't do very much education. They had laws on their books and they didn't enforce them; they didn't provide much in the way of educational programming, and they certainly didn't provide much in the way of choice.

One of the ironies now is that the U.S. Supreme Court is taking aim at all of these kinds of statutes on the grounds that the states already have statutes. The states can apply the statutes and enforce them themselves, they don't need the federal government to tell them what to do. And I propose that we do need the federal government to tell the states what to do, because the states weren't doing it. Since P.L. 94-142, they have been doing it kicking and screaming, and if we do not have that big stick that is the federal government and the federal government's money, we are going to find ourselves in a great deal of difficulty. And we are going to find ourselves right back in the '50s and '60s when our students weren't being educated at all.

I want to talk about three basic things. One is the promise of the ADA, whether it has been fulfilled, and where we are in what I think is going to be a long course of fulfillment.

I want to talk about a few recent legal decisions and connect legal trends, one of which I just referred to. And finally, I will talk about some things that we can do and things that I suggest you do as service providers in your institutions to make sure that we do fulfill the promise of the ADA.

One of the things that I find the most disheartening about what's happened since the ADA was passed is that if you look at the purposes of the statute, it says that decisions with regard to the abilities of persons with disabilities should not be made on the basis of stereotype, myth, presumptions, ignorance or fear; and yet that's exactly how these decisions are being made in many cases. The ADA has not led to the public education and public awareness of the civil rights notion of disability, as it was supposed to. We still have courts, service providers, employers, and testing agencies making decisions about what's a reasonable accommodation or whether or not you have a disability, based on a very antiquated and, I submit discriminatory, notion of what disability is all about.

And I'll give you an example. I have a case now in another state in which a woman who has

Attention Deficit Disorder and a learning disability was diagnosed late in life. She struggled and utilized a lot of informal accommodation, with friends and family helping her and reading to her and checking her work throughout her education, she managed to graduate from Veterinary School. She has now taken the veterinary exam 7 times. The first few times, she didn't have accommodations because she didn't have a formal diagnosis. She went back and got that formal diagnosis by a very good organization which is, in fact, fairly conservative.

The examination agency then provided her accommodations — and this is the key to our case. She needed a reader and additional time. So they provided her with a reader who couldn't read the words on the test. And I have argued that the notion of a qualified reader, which the law does not define with the specificity that it does for a qualified interpreter, should be analogous to the qualified interpreter definition. If you are reading to someone and you cannot pronounce the terminology, if it's jargon or medical terminology or just your having difficulty pronouncing words because you yourself are not familiar with them, then you're not a qualified reader.

This State essentially said, you asked for a reader, and we gave you one. In other words, we didn't guarantee that the reader could actually read. Now, since we deposed those readers who really couldn't read, they had no way of winning this case, except to challenge that my client does not have a disability. So now they are arguing she's not really disabled because she got through veterinary school. In other words, she can't be disabled, because if she were disabled, she wouldn't have been able to succeed.

This notion of one-size-fits-all accommodations, as in this person has a Master's degree in elementary education, so they can read; therefore they can read for any purpose, is like saying that this interpreter, who has never interpreted in a computer course or has no knowledge of that area, can interpret for that particular course or this person who has no knowledge of the legal system would be a good legal interpreter. We know that is not the case. And yet we are subjecting people with disabilities to those kinds of one-size-fits-all services based on ignorance. There is a reason why separate qualification is needed. That, in fact, a veterinary licensing exam is not the same

as a cosmetology or plumbing exam in terms of the reader's ability and knowledge. That access to legal interpreting is not the same as access to interpreting on the stage.

One resource I can refer you to, which is an excellent resource in general for people in higher education, is the Office for Civil Rights decision last summer in the San Diego Community College case. It's fairly lengthy. It talks a lot about interpreter shortages. It talks a lot about the need to assess interpreters and how to select which interpreters for which courses, interpreters who might sign in certain ways for students who use certain types of sign language, or possess the ability to use realtime captioning, and it outlines some best practices.

I think that best practices is the next key point. One of the things we have done since the ADA came into being, much more so than under 504, was overfocus on the law. And you may think that is strange, coming from an attorney. But the fact is people are overfocusing on this shifting line in the sand. And if you are really following the law, the law says to make these determinations on a case-by-case basis. So that means what works for Johnny over here may not work for Susie, not for reasons that you necessarily anticipate or understand, and it may not be effective. You can't insist that Mary use Johnny's accommodations if they don't work for her, if they are not effective.

You can and should use the law and legal decisions as guidance, but the law will not make your decisions for you. You're going to have to do the analysis and think it through yourselves and make your own decisions. And if you over-rely on prior case law, you might just make a mistake as to where that line in the sand shifted in that particular matter. And if you go to court or if there is an OCR complaint, OCR really isn't going to care whether this accommodation worked for someone else. They will care if it worked for the student who filed the complaint.

So, I suggest that you follow a best practices approach, and I refer you again specifically, in terms of interpreter policies, to the San Diego Community College case. I think it did a very good job of outlining how the school went about dealing with a lot of these very, very difficult problems of interpreter shortages, a very large population of deaf students, deaf students with different communication needs, a lot of the misunderstandings on the part of the faculty as well as the administration, and

some misunderstandings of their rights on the part of the students. And so I again refer you to that decision. It is posted on the AHEAD website at <www.AHEAD.org>.

I further suggest that we not stand on ceremony as much as we have in some cases. I know from talking to people, that one of the contentious issues that has come up is who gets the transcript, or do they get a transcript, when CART or realtime captioning is being used. I honestly don't understand why a transcript can't be provided. I honestly don't understand why a student would want to read the thing again and again and again. It's not effective as notes for most purposes. Nevertheless, you've got a transcript. The accuracy of the transcript could be a problem, but even if it's accurate, students who are using CART are not students who are interacting with the information in the same way as you would with a sign language interpreter. And interacting with information is key to education. It's key to really learning. So if you are reading on a screen, you are just reading words, not necessarily interacting.

One of the things I'll talk about later is how deaf students read and why this may or may not be an appropriate accommodation. But if it's appropriate — let's say, for someone who becomes hard of hearing due to old age, and is 60 years old, has a terrific English background, and is reading realtime reporting for a play or something. It's a very different kind of function for most students who are deaf from birth or shortly thereafter. That means you are relying on the reading skills of a population of students who have, in many cases, not very good reading skills. Even if they are fairly well developed compared to a lot of deaf students, they are not well developed in relation to most hearing students. So we are asking these students to do a much more difficult task than we realize.

There is nothing legally that says you shouldn't give or can't give transcripts. I know that some people object to having to pay the extra money to have that transcript edited. That may be a resource issue and you may be able to negotiate that with the student. The student may prefer to have the unedited transcripts. I know that a lot of times the transcripts are on disk. The student can have them on disk. The student can edit them for notetaking purposes. And the faculty members often like having the transcripts for their reference.

The other issue is overfocusing on the law. No, it's not a copyright violation for you to tape a faculty member's lecture or for you to have it put into a transcript through realtime reporting. Every word that comes out of the faculty member's mouth is not copyrighted, number one. If they are reading from copyrighted material, then that material is already copyrighted. But taking that information and putting it into a usable media for a person with a disability is an exemption to the copyright laws. So whether they are correct that every pearl that drops from their mouth is copyrighted, which I dispute, but let's say, assuming for argument's sake, that they are correct, it doesn't matter. There is an exemption, okay? So don't let them tell you that it's copyrighted. They may think so, and they may give you academic freedom reasons; academic freedom has nothing to do with this whatsoever.

Another problem that I'm seeing is the elevation of the definition of disability itself to become a barrier to access. And, again, this is that antiquated notion of disability meaning incompetence. As we say in New York, it's almost as if people think if you're not in the gutter, you are not really disabled. And the two things that have become key in the definition of disability are a substantial limitation to a major life activity.

There has been a lot of jockeying about what constitutes a major life activity. The regulations list certain illustrative examples, such as breathing, caring for one's self, hearing, speaking, walking, that kind of thing. But the courts have found other major life activities, and they have upheld reading as a major life activity. They have upheld sleeping as a major life activity. There is one court that is well-known for saying that paying attention and concentrating is not a major life activity. I'd like to see how you do any of the other ones without the concentration or attention—learning, for example.

Some courts have agreed although I must say that the only court I know that has done it was in the *Bartlett* case, that test taking is a major life activity. Because today test taking is a critical activity, it can dramatically affect the course of your life. And so can studying and spelling and other skill areas. So we are searching to articulate more major life activities that the courts will actually be able to adopt.

Recently, courts have found that concentration, attention, and thinking are major life activities. The Supreme Court upheld reproduction

as a major life activity. As an aside, the other thing about the ADA is that the defendants have no shame whatsoever. They will argue anything. They don't embarrass easily. And in the *Bragdon* case, two years ago in the Supreme Court, the defense argued that reproduction was not a major life activity because you didn't do it in public. (laughter.) Now, I know people who have done that. (laughter)

But, you know, a lot of things you don't do in public are fairly major, like caring for one's self, sleeping. So the Supreme Court upheld the notion that the list in the regulations is only illustrative. Reproduction is a major activity, whether you choose to engage in it or whether you choose to engage in it in public, and opened the doors for other activities. Courts have since held that things like engaging in sexual activity, and communicating or interacting with others are major life activities.

Of course, these are not the primary major life activities you think about with regard to deafness, but deafness affects other major life activities besides hearing. It can affect speech. It can affect cognition to some extent, depending on the person's circumstances. It can certainly affect reading. It can certainly affect writing. So those are major life activities that people don't necessarily think of right off the bat, yet we in deafness understand to be affected by deafness.

The other issue that comes up here is substantial limitation. What is "substantially limiting," and what does that mean? The regulatory guidance tells us that a substantial limitation is a significant restriction in the condition, manner or duration under which the person with a disability performs major life activities, compared to the way most people do them. So that raises the question, what about all these people who are hard-of-hearing and wear hearing aids? Are they substantially limited? How substantial is substantial? How significant is the restriction? Every time you turn around a defendant has raised the bar or lowered the bar in the sense of how much more restricted one has to be than most people? And they apply, of course, their own sense of that, not based necessarily in any particular knowledge of the disability or what the true impact of that condition might be.

And so now defendants may say: Well, I don't dispute that you have a hearing loss, but I don't

see that it's really all that limiting for you. You know, you seem to be fine by me. You know, you seem to understand what I'm saying. And in the legislative history, the committee reports always refer to, as an example of a mitigating measure, an adaptive device, such as medication or hearing aids. Well, if a hearing aid is a mitigating measure, you use one, and it improves your hearing, how much can it improve your hearing that you'll still be considered to have a disability and still be protected by the law? These are questions we don't really know the answers to.

There is a case right now that has been petitioned to the Supreme Court on that. And I'm not sure how that's going to work out. But I think that one of the ways that this affects people who are Deaf and hard-of-hearing is this notion of well, you don't seem to have it so bad to me, so therefore you are not substantially limited. And there isn't really a good way, scientifically or legally, to split those hairs at this time. One of the things I think that will be developing out of the case law is some mechanism for analyzing and articulating what is a substantial limitation, but we really haven't arrived there yet.

One of the other problems which has arisen is morphing one disability into another. You are all looking at me saying, what does that mean? Well, we know that people are making a lot of these decisions based on ignorance. And we also know that they don't understand a lot of the terminology we use in this field. And I will give you a classic example. Last summer I represented a young deaf man who is a graduate of an excellent university, has a severe to profound hearing loss from the age of one, and wasn't diagnosed until he was three, therefore, he lost a lot of language learning years. He is very, very bright. He worked very hard. He has very attentive, educated, intelligent parents who were very supportive of him. He went through a major university with realtime reporting and extended time because he read very well, but very slowly, because he is duking it out with the language, with the double meanings, with the idioms, with the passive voice, with all of those language issues that are so hard for prelingually deaf people to grapple with.

He applied to take the LSAT, law school admissions test, with extended time. He said he needed the time because he read slowly, because of his deafness, and because his deafness affected the way he processed written language. And the

LSAT then refused to provide this, because he is just deaf. As soon as he raised the word "processing," they insisted that he have an LD evaluation. They wanted him to have a neuropsychological assessment.

Now you know that the LSAT has been sued for doing this with students with CP. And one of the people that joined that suit later was a young man who was a quadriplegic, and they again didn't understand why he would read slowly. And they insisted that he needed to have neuropsychological evidence of slow reading.

With my client, I thought I'd show proof of impact, as a matter of good faith. I had him take a reading comprehension test, administered by an appropriately licensed clinician, timed and untimed. Timed, his comprehension was in the first percentile. The reading speed was obviously slow. With the extended time norms, he was at the 9th percentile. When she gave him all the time he needed, which was slightly more than double-time, he was in the 98th percentile of comprehension. So this is obviously a young man who can read, who certainly has the ability, but couldn't do it fast enough to take this test. That wasn't enough for them. I had to give them IEPs from third and fourth grade. I had letters from teachers that all his life, he read slowly. Well, who gives timed reading comprehension tests to deaf children? Anybody here know who gives deaf children timed reading comprehension tests? They don't. So all of the data from school was untimed anyway. So what was the point? Simply to harass, in my view.

They finally gave him time and a half, even though I substantiated a need for double-time. But since he had originally requested time and a half because he didn't know better, they gave him time and a half, one time only. And they made it clear that if he decided to take it again, they would once again challenge his documentation.

Now, this student does not have a neuropsychological problem. He is not learning disabled. The person who is the service provider at his college, who is very familiar with the student, is a licensed psychologist, who happens to be very familiar with learning disabilities. The student does not have a learning disability. But the LSAT insisted, apparently because the word "processing" was used, that it was now a neurological disability. And that is the way they are defending that other lawsuit I mentioned. But, again, it's based on *their* notions of what "pro-

cessing” means. And, of course, if you know anything about language, there are language processing issues that are language issues, not neurological issues. So we are not talking about learning disability here. We could be, and there certainly are students who are deaf and who have learning disabilities, but that clearly was not the case for this student.

So here we see then the student’s disability being morphed into another disability, and then the determination to accommodate is based on an entity’s own uninformed notions of what a learning disability is. They knew that this was a well-heeled parent that could sue, so maybe that’s why they gave in. But we are seeing this happening again and again. We are seeing more of the testing agencies requiring additional documentation, documentation we can’t get because we don’t have the tools, or documentation that is really inappropriate for the disability at issue. And deaf students will become more susceptible to that type of challenge.

It’s happening at all levels of standardized testing, not just the professional exams. If you have a student in a Community College and he wants to take an exam to be a fireman, a plumber, or anything else, those kinds of problems are going to arise.

Now I want to talk a bit about the recent cases. Many of you probably know about these cases; one is called *Sutton v. United Airlines*. One is called *Murphy v. United Parcel*. And the other is called *Albertson’s v. Kirkingberg*. *Albertson’s* is a grocery store. *Sutton* involved twins who had 20/200 vision correctable to 20/20. They were both pilots. They applied for a job with United Airlines as a global airline pilot. They were told their vision wasn’t good enough. They were corrected to 20/20, but United wanted uncorrected vision of 20/100. The standard appears to have come from the fact that military pilots in World War II were required to have 20/100, and it’s just evolved from there.

Obviously, there is a strong sense of a safety issue here. And when there is a safety issue, employers will be given a certain amount of deference. But there is also this question: was the ADA meant to cover people who had myopia that was correctable to 20/20? A lot of people didn’t think that that was the population that was meant to be covered. On the other hand, there was this contradiction, as in are we going to deny you a job based on your uncorrected vision because — when corrected you don’t have a disability?

And it went up to the Supreme Court, asking: When you make a determination whether someone has a disability, do you include the effect of a mitigating measure like eyeglasses, medication, hearing aids, or do you make that analysis without the glasses, without the hearing aid, without the medication? Now, the legislative history and all the regulations said you do it without the mitigating measures. Why? Well, there are some classic examples in the legislative history. People with epilepsy who are medicated and may not have had a seizure for years have been denied jobs, will continue to be denied jobs, based on people’s assumptions that they might have a seizure. And they might. But, how likely is that? Is that really an imminent threat? Now, if someone with epilepsy takes their medication, according to the Supreme Court, and if they are just like everybody else, so to speak, just like the most people out there, the mythical average person with their medication, then they don’t come under the protections of the ADA. And employers are now free to discriminate against them based on their misunderstandings, their ignorance, their fear, and their stereotypes about people with epilepsy. That is the sum total of the Supreme Court’s decision in *Sutton*.

The same thing holds here for *Murphy* and *Albertson*. Murphy had high blood pressure, and the Albertsons plaintiff, Kirkingberg, had monocular vision. Kirkingberg was a truck driver. He passed the vision screening tests twice, and then he later failed the vision screening, and the defendant said ‘oops, you can’t see.’ But, he had been driving for Albertsons for 18 months, doing just fine, but apparently now he couldn’t. Again the court said if he does well enough, and drives well enough and hasn’t substantiated any substantial limitations on the record, we can’t determine that, *per se*, the use of a mitigating measure should not be considered. If he can see as well as other people by using subconscious brain adjustments, then he is not going to be found to have a disability.

In reality, in that case, the Court found that they just didn’t have the record to support finding a disability. They used some wiggle words, and I like all those words I can get these days — to the effect that monocular individuals would ordinarily qualify under the ADA, but they would still need to demonstrate what limitations they had. So the law is forcing people with disabilities to really focus on the negative, focus on the prob-

lem, and focus on the limitations in a way that they may never have actually perceived them, because if you never didn't have that disability, you don't know how other people do things. So how do you articulate how substantial your limitation is when you don't know how substantial it is, because you never have not had that condition?

It puts plaintiffs in a very difficult position in terms of how to articulate their disability. And it also then encourages and forces people to look at their limitations and not look at their abilities, which the ADA was supposed to do. The ADA was supposed to make society focus on people's abilities and accommodate the disabilities so that the disabilities didn't become barriers to someone taking their rightful place in society.

On a factual basis, there were a lot of reasons why these cases could have gone the way they went. But the Supreme Court set up what I believe to be a very, very bad policy for future decision-making. And it has led to a number of quirky decisions. There is one case out of Texas where a guy with epilepsy who was having a seizure once a day and who also clearly needs a better doctor. Nevertheless the court said that since the seizures last about five seconds, that's not such a big deal. The rest of the time he does just fine. That is not a substantial limitation. The court also noted that it would have found for the plaintiff before the Supreme Court decisions, but now it couldn't. Well, that Judge has no real idea what he is talking about. Just think of the continual damage to this person's brain by seizing every day. It's wrong, and it's tragic.

There is another case where a man with post-polio syndrome who used crutches and a brace, was found to have a substantial limitation. So that was a good analysis.

There was a recent case out of the fifth circuit, which is again located in and covers Texas, the Southwest, where a woman who is hard-of-hearing took a job as a telephone rep for a collections company. And that is the *Finical* case. If I remember the facts, when the trainer hooked into the conversation, it altered the signal so that the plaintiff wasn't able to hear well enough and she couldn't respond to the directions of the trainer. And one time I think they called to her down the hall, and she didn't hear them.

The company alleged both that she was not qualified and that she wasn't substantially limited. You know, the whole point from the

defendant's perspective is to get you into this box where you're too disabled to be qualified, or you're not disabled enough to be substantially limited. Here, the plaintiff won on the district court level. They won in the Circuit Court level, and I understand that the employer is now appealing this to the Supreme Court.

So while people who are hard-of-hearing probably didn't think of themselves as being particularly vulnerable to these decisions about somebody wearing glasses because of myopia, you may very well be. We need to think, how do we articulate the effect of being hard-of-hearing to someone? What are the substantial impacts? A lot of people don't know how to quantify them or how to articulate them.

The other part of this issue says you are to be compared to most people or the average person. We find that defendants argue that if you got to veterinary or medical school, then you are not substantially limited in learning compared to the average person, because you obviously learned more than the average person who never gets to medical school. And what they don't look at is the part of the regulation that requires that you look at the condition, manner or duration in which that person learns; that they learn, but they learn in a significantly and fundamentally restricted manner.

And there are several courts taking that line. It's an easy analysis. It's a very attractive analysis; they don't have to think, and they don't have to learn anything about these disabilities to make those kinds of determinations. And we are seeing that happen again and again and again. Don't let anybody kid you. The standardized testing groups have all banded together. They are all sharing information. It's a huge network. In my veterinary case, they were willing to—they even admitted to me, this is not going to be a disability issue. This woman clearly has a disability. They couldn't believe how severely impaired this woman was, until they called up the National Board of Medical Examiners and got advice. Well, now of course she is not disabled at all. And they hired the routine expert witnesses, who come in to rediagnose in absentia and determine that you don't have a disability, and they hold a certain set of assumptions which most often are not true. This is a very heated battle, and it's going to be fought again and again and again. And eventually this issue of substantial limitation, what it really means, and

how we really analyze—that is going to go up to the Supreme Court.

The other thing that the defendants have been doing is raising constitutional challenges. Right now, if you're in the 8th circuit, and you work for or go to a state school, you have no rights to sue for money damages in federal court under the ADA. The ADA was unconstitutionally enacted in the 8th circuit and now, as of about 2 weeks ago, the 7th circuit as well. Why? Well, the argument is that the Congress did not have the right to exercise this power under the 14th amendment; that the powers under the 14th amendment to remediate violations of civil rights don't extend as far as the ADAs provisions.

There are issues about people with disabilities, such as, are they in fact a "suspect class?" Are they entitled to heightened or extra scrutiny? And from a defendant's point of view, with all the nonsense about reasonable accommodations that cost us money, we have to *do* something different. We have to actually do something to provide equal rights for people with disabilities, unlike other classes of people, such as people who are African American or people who are women or people who are religious minorities. All we have to do is refrain from discriminating against them. But we don't have to do anything else. It's a pocketbook issue.

So many of the states have now banded together to do this. Last year in the *Olmstead* case that was in front of the Supreme Court—that was the case about whether or not Georgia had to provide care to developmentally disabled people in the community or whether they could just put them in an institution, even though the people wanted to be located in the community, in the most integrated setting. A number of states joined in a brief defending the State of Georgia. And this past year there were two cases that the Supreme Court was taking on the constitutionality of the ADA; one out of the 8th circuit and one out of the 11th. One went one way and said the ADA was constitutional—that is the 11th circuit case from Florida, or *Kimel*. The other was *Alsbrook*, out of Arkansas. Well, they settled after they got to the Supreme Court, and there was a lot of pressure on the states by people with disabilities to not sign on to the Amicus briefs supporting this. And in New York the community was able to get the Attorney General to just not do anything, which was better than doing the wrong thing.

Ultimately, these two cases settled. Its very unusual for cases to settle at the Supreme Court level.

Why might this have happened? Well, who is the Governor of Florida? Who is running for president? Whose signature piece of legislation was the ADA? President Bush. Do we really, in this election year, want the sons of President Bush, who pushed through the ADA, to challenge the constitutionality of the ADA? And the Republican Governor of Arkansas probably did not want to stick his foot in his mouth, either. So those cases settled.

Nevertheless, there are other cases. One out of the 11th circuit, called *Garrett*, is going up. And that raises similar employment-based ADA questions. One of the ways that the court makes the analysis is what kind of congressional hearings were there? And what was the evidence that Congress intended to do what it did? Well, the Court just struck down the Age Discrimination in Employment Act, as it applied to states. So if you are over 40 and you work for a state entity, you have no federal rights to be protected against discrimination on the basis of age at least not for money damages. End of discussion.

Supreme Court did away with them. Now, if your state law gives you those rights, that's fine. This is a very states-rights-oriented Supreme Court. They argued was that there really wasn't any evidence that Congress had looked at or had any evidence that the states were, in fact, guilty of age discrimination. They had evidence about employment in general, but not that state employers were guilty of discrimination. So, therefore, the Court found no basis for Congress decision.

Well, we certainly have plenty of evidence about the ADA and had plenty of hearings for years on the ADA. But how many of them were people who complained about discrimination on the part of the states? Well, if it's an employment case, state employers are included in many of the references to discriminatory practices. But you know the states do more than just hire people. The states provide services that are unique to states in many respects, for example transportation, access to voting, access to other state services, access to benefits, et cetera, et cetera, and so I think that there is a very real possibility that if the ADA is scrutinized as to whether it is constitutional as applied to the states, the Court has to look at areas other than employment discrimination and look at what else the states do and how states are,

themselves, unique entities with unique powers and unique responsibilities to all of their citizens, including citizens with disabilities.

On the other hand, they might split the baby in half and find that there wasn't enough evidence to show discrimination in employment by the states, but the states nevertheless have to comply with regard to other kinds of services. There are many different ways that the Court could go on that. But there are now four or five cases on their way up to the Supreme Court that are seeking certiorari, and we don't know how that will go. The Court will make a choice on constitutionality some time soon.

Now, 504 has a similar problem. If you remember, it was originally envisioned as an amendment to the Civil Rights Act and President Nixon vetoed it. So they sneaked it into the Rehab Act. And the problem with that is there's little or no record of hearings about all of these problems for 504. So, 504 has the same problem as age discrimination in that respect. But the thing that 504 has that the ADA doesn't have, that the age discrimination statute doesn't have is federal dollars. Under the spending clause, 504 could still survive, because once the Civil Rights Restoration Act was passed in 1987, the states then knew that if they took federal financial assistance, and those strings were attached, they waived their rights to be immune from suit in federal court by taking that money.

The Supreme Court has consistently upheld that knowing waiver with regard to obligations other than those under 504. So, my sense is that on a spending clause issue alone, 504 should survive. The 8th Circuit, however, has determined that the spending clause was superseded and nobody knew what an excessive burden this was going to be; therefore even under the spending clause, it's an unconstitutional exercise of Congress's authority.

They have also, in the 8th circuit, undone the IDEA as well. They are just really active, aren't they? But they are not activists. You know, the activist judges are only the liberals. The conservatives are not activists. They are not acting. They are undoing 30 years of law, but they are not acting. The case that held that Congress did not have the authority to enact the IDEA was recently reargued, and there has been no decision yet. So it's possible they could backtrack, because I think they may have taken a lot of flack for it.

But that's where we are as a country in terms of where we are going with the ADA. We are finding more and more challenges being mounted. We are finding challenges to whether or not you have a disability, and challenges to how disabled you really have to be. The thing that is eating away at the civil rights notion of disability is this notion that disabled people are incompetent. And if you are not incompetent enough, you'll not have protections and you'll have to fend for yourself, which is where we started off in the first place.

You may think I seem a little negative, and you'd be right. I am a little negative about where things are going.

So what to do? My first suggestion is educate, educate, educate—the public, your administration, your elected officials, your faculty. Write responsive articles, and write letters to the editor, not just about deafness, about other disabilities as well. Because hidden disabilities, in particular those that people don't see, are very much under attack and very vulnerable. And as you know, this has been an issue for people who are Deaf and hard-of-hearing all along, the notion that people don't realize what the situation is, that people just don't see the deafness so they don't pay attention to it and they don't understand.

Second, dispute the myth of mildness, which could go like this: 'You're hard-of-hearing, it's like a mild problem. I don't see it. It's not such a big deal.' Well, regarding this notion of substantial limitation, I have seen brief after brief after brief from defendants saying 'well, they only have a moderate disability. They need to be substantially limited,' inferring that substantial means severe. Well, when you look at the ADA as a whole, it clearly was never meant to mean you had to be severely disabled in order to be protected by the law. But that's the way defendants are arguing these cases. And defendants hire the big firms and spend the big bucks on a defense and are making a lot of inroads with that notion. So the concept of what is substantial is coming back to haunt us.

And, in fact, you know, I don't know how to quantify it precisely. I don't think that anyone does yet. But I envision defenses for example, where somebody has an 80 percent speech discrimination score. A defendant may argue that may not be substantial enough. You know why? Because it might be argued, the speech discrimination score should be below 50 percent in order to be substantial. I don't know. Maybe I am imag-

ining the worst. But someone, somewhere, will come up with that kind of purely quantitative, but ridiculous, analysis at some point and then you'll have to disprove it. How do you do that? Therefore, one of the things we have to think about is how to do that kind of thing, how to articulate the concept of substantial limitation. How do we establish a paradigm for that? I also suggest that we be careful about our sound bites. I recall, for example, a sound bite by King Jordan. Now, I'm not being critical of him; I worked with him for years, I love him dearly. He is a wonderful man. But one of the things he said when he became president of Gallaudet University was: "The only thing that deaf people can't do is hear." And the fact is that other people believe that to the extent that they think that means that deaf people don't have any problems reading or writing or any problem speechreading, because of course, King can speechread well. Deaf people don't have any problems with English proficiency.

Well in fact, people who are Deaf and hard-of-hearing do often have those problems, and those are things that they really need to have accommodated. And so, unfortunately, the advocacy statements we make to highlight our abilities will come back to haunt us. And I can tell you that from an evidentiary point of view, every single one of my clients who worked around their problem, got their families involved, got help, and didn't go to some third-party in authority, and make demands, but instead, worked out the arrangements themselves, has had that used against them. Okay? It's evidence against them. Defendants argue that plaintiffs are not really disabled if they didn't get accommodated formally from some higher being in authority.

Third, support research in establishing these functional impacts. We need to start thinking about major life activities, and we need to start thinking about how people read who are deaf—not just that they have comprehension difficulties, but how is it that they read? For example, a lot of deaf students that I know read very slowly, because they are tangling with the language in a different way. That doesn't mean they have a learning disability, but it means an impact of deafness may be slower reading. And some of the research that has been done, even with second language learners who are not deaf, is that when reading in the second language, there is always a

delay of some sort, and it's always a slightly slower process. And these are hearing people who have second language proficiency. And so I think that we have to be aware of those kinds of impacts.

Ask things like; do your students have integrated, automatic skills in speaking, in reading, in writing? Are they able to write fluently or are they struggling with the writing process? As you know, a lot of students who are Deaf and hard-of-hearing struggle with these skills. Again, explore how to better articulate these things.

Fourth, support each other. One of the problems that inevitably arises is that we will have different views about things, and we sometimes criticize each other, or the running of each other's offices. In a speech last year, I recall using a quote from a German minister shortly after World War II, and the quote is basically this: First, they came for the socialists, but I wasn't a socialist so I didn't speak up. And then they came for the trade unionists, but I wasn't a trade unionist, so I didn't speak up. Then they came for the Jews, but I wasn't a Jew, so I didn't speak up. And then they came for me, but there was no one left to speak for me.

I think that we have to be very careful that we don't divide and conquer ourselves; that we support each other and that we support our efforts to learn more. We have a lot of people who are doing these kinds of jobs without the benefit of some of the education and training that others of us have. They are new to the field, they need to be supported and educated in a way that is collaborative and conducive to their learning. They shouldn't be trying to make these decisions based on a seat-of-the-pants analysis.

Fifth, support the development of interpreter standards, training and state licensing. I think that the states who are trying to get off easy by relying on the RID are making a big mistake. First of all, it's the state's responsibility. Second of all, the RID is a trade organization. And they have been running this certification process for years. They don't really have the resources in many respects. They have done a very good job in some ways. While there is certainly a lot of criticism of the RID and what it has done and how it has done it, the RID really shouldn't be doing it in the first place. The state should be doing it, whether or not they want to use the RID as a consultant to develop their programs, the states need to be doing this. We

need to have evaluation and we need to have training so that people can improve their skills on a continual, evolving basis.

We also have to be careful that we don't overpaper the field, in the sense that someone who may be qualified may not be certified on paper. This is one problem with the RID. For example, if you don't pay your dues, your certification is dropped. Well, that doesn't mean you lost your skill. That simply is a function of whether you paid your dues. Now, state licensing could do that as well, but the states generally don't drop you for a while. But you have to be careful with the RID. If you don't keep paying your dues, you're not going to be certified, and it will have nothing to do with whether you are a qualified interpreter. So that's one reason why I think we have to find different ways of determining whether someone is qualified and whether they are qualified for a particular position or assignment.

Finally, you have to be proud of what you do and the mission that you serve, and not apologize for that mission. I think a lot of times we feel very beleaguered and we equivocate on whether we are doing the right thing and whether we should be doing this or that — and gee, do we give the students too much? There are always a few students that will try to pull the wool over our eyes, but there is no real harm if we give most of them an inch more than we have to give them. That is education.

So I leave you with these words, *illegitima non corborandum est*. That's Latin for "don't let the bastards get you down." I thank you very much. And I'll be happy to take a few questions. (applause.)

Audience: My question is related to the settlement of cases compared to decisions being made. Over the past few years it seems to me that settlements are turning out better than the decisions are, supported by the point of view for people with disabilities. So that is what seems to be happening to me. But it seems like maybe we don't need the settlements, because case law is becoming more important.

Jo Anne Simon: Well, it's a very good point. When parties settle, they are the maker of their own bargain. And you can settle for things that you would not get from a court, certain kinds of remedies, for example.

About a year and a half ago I had a client who challenged a grade for very legitimate reasons. But there is no court in the country that is going to change a grade; it's just not going to happen. They won't do it. But in settlement, I could get that grade changed to a pass, so that it didn't affect his grade point average. So you can do things in settlement that you will not get from the court in terms of remedies.

The other thing is that once a defendant has invested the money of going to trial, it gets its back up and it digs in its heels, and you are always taking a chance with the Judge. There are some wonderful judges out there. The greater percentage of federal judges, however, are still Reagan/Bush appointees and there are a lot of judges who simply don't understand this stuff and are not necessarily interested in learning about it. They have full dockets. They want to clear the cases. And if some defendant comes to them with what sounds like a reasonable argument, they may go that route.

I mean, in my case in Georgia, we had a third reader interviewed who read much more smoothly than the first two, and still made a lot of mistakes, but the other lawyer doesn't know the mistakes were made because they are medical terms. He would say well, 'this is a reasonable reader.' Well, the jury doesn't know what the medical terms are, either. So of course, I had a veterinarian listen to this videotape of the deposition, and he made 23 mistakes in 12 questions. I've now got evidence to say he really didn't do a good job. But he could sound like he is doing a good job. And courts are just as vulnerable to that kind of argument as other people.

The problem with settlements is that we are not guided by settlements. They are out of court. We don't know what happened. We don't know what kind of dirt somebody may have had on the other party that encouraged that settlement. And so we are stuck with case law. And most cases don't go to court.

Also, with the ADA, we have a lot of people filing cases *pro se*, meaning they are representing themselves, and they have no idea what they are doing. They make a lot of strategic mistakes and they also misunderstand the law, and so they are doomed from the beginning. And that is a problem. One study found that 92 percent of employment cases under the ADA have been lost by plaintiffs. And a great percentage of those are *pro se* plaintiffs.

Any other questions? There is a microphone over there.

Audience: You had mentioned about the one person who was taking the LSAT test, and he used the word “processing,” and they thought—because of that—he was LD. What do you suggest a person would use in the future to avoid that? Instead of saying “processing,” how should they address themselves?

Jo Anne Simon: I don’t know. I mean, I’m trying to find the words myself. In that case, a neuropsychologist who had a deaf son who was very familiar with this young man wrote a four page letter about what she meant by the impact of deafness on language and how it affected reading. And they didn’t buy it. They don’t care. You know, they believe that their own thinking is more important than anybody who is an expert. And I don’t really know what the best way to articulate that is.

I would like to try and find a different way of saying “processing.” But, you know, I’m not sure how to explain to someone who has no background the difference between language processing and neuropsychological processing. And they are in different centers of the brain, and there are people who have articulated that. But a request for accommodations shouldn’t have to get to that depth of technical information. It’s ridiculous. You know, you shouldn’t have to submit enough evidence for a request for accommodations that would be sufficient at trial. That is not what this was supposed to be about. So, you know, while I want to respond to these concerns, I also object to responding to these concerns at a certain level because I think it’s outrageous. They keep raising the bar. So I’m happy to take any suggestions on how to articulate it.

Audience: It follows the same line. We have got several discussions going on about testing, extended time for deaf students throughout this conference. But in an age where we keep hearing documentation, documentation, documentation based on an audiogram, which is the documentation basically we use, are we able legally to provide extended time?

Jo Anne Simon: Of course. There is nothing in the law that says you can’t provide extended time

based on an audiogram or the student’s word, for that matter. The law says nothing about it. The people who say this are the people who are trying to get all this excess documentation so they can weed out as many people as possible. That has basically been the position raised by a lot of the testing groups who are firmly wedded to the notion of standardized testing and standard people. And they don’t want nonstandard people to be taking these tests or joining these fields. And I have heard some of these people say: ‘If nobody else will keep them out, I will. So, there really is intent to discriminate.’

Don’t believe any of the bologna you hear. Their function at some level (licensing exams) is to weed out to some extent, but not to weed out what it is they are weeding out. This focus on documentation, arises from having to provide test accommodations, and the people who are doing the provision of accommodations don’t necessarily understand enough about the disability to make those judgment calls themselves. So they are going to rely on expert evidence, i.e., a report from someone, to help them make that determination.

Also, many of our students don’t really know what they need depending on the circumstances. I always encourage trial and error. I know of a student with a panic disorder in the law school where I taught, and I wasn’t responsible for the accommodations, but I was consulted about it. And of course one of the things that set off the panic was the time limit itself. So I suggested that they give him unlimited time and wean him back once he found out how long it took him to do a law school exam. Well, the law schools don’t ever want to give unlimited time. It’s heresy. And as it happened in practice, he used double-time. The school had given double-time to a lot of people, so it was no problem. But the student would get panicked by knowing it was double-time. So, we held his hand through the first year. And he was a very responsible young man; he never overdid it. He was grateful to have the opportunity to not have the time limit, to give him the opportunity to find out how long it would take him to do this, and he never abused that. He was happy to deal with a double-time limit after that point. So, you can negotiate this. You can use trial and error. The law encourages that. The law requires an interactive process and encourages discussion.

There are higher ed cases that talk about the nature of the interactive process. Accom-

modations are not just an edict from on high. We don't have to be wedded only to the Holy Grail of documentation. Certainly, with something like deafness, your documentation is an audiogram, which tells you nothing about how that person functions. And we don't generally do functional assessments for deafness. You might if you go to VR: they will give you certain types of functional tests for some kinds of training programs. Otherwise, we don't generally do that kind of assessment. And the law doesn't require you to do it.

It's really just people wanting to protect themselves, wanting guidance, and wanting to make sure they are not giving away the farm; whatever crisis would be engendered by giving away that farm, I'm not sure, but that is what is propelling a good deal of this problem.

Audience: I have a job for you.

Audience: Talk about tutoring. We are told that it's a personal service, and —

Jo Anne Simon: It is.

Audience: And our funding comes for accommodations. How can we get around this? Because in many cases students need tutoring in order to succeed in college. And it does speak to their limitations.

Jo Anne Simon: Unfortunately, when the Department of Education passed the regulation about what would be a personal service, and included tutoring, they didn't ask me. (chuckles.)

The only argument I think you could make and at this point, I think, is probably premature in terms of where we've evolved in our understanding of this and our acceptance of these

things. That is the notion that if tutoring is provided to other students, real access to tutoring requires specialized tutoring. Access to tutoring — and this presupposes that there is a level of tutoring provided on campus to everybody — is not simply providing an interpreter for a deaf student. This is a common problem for students with learning disabilities as well.

For example, having an upper classman who is good in math is not the kind of tutor that a student with a learning disability or a deaf student needs, and therefore it's really not access, it's not really tutoring that is provided. In many cases, it's a waste of time.

So, I think you can argue that meaningful access requires additional training and somebody with knowledge of the disability. But, I don't think you'd win on that at this point in time. I think if a case like that went to court we would lose hands down. I don't think anybody is ready for it. Tutoring is key for a lot of students. It's the key access service that many students need. But who knows what they were thinking of when they promulgated that regulation. Probably they were not thinking of deaf students and they probably were not thinking of LD students. Also, many visually impaired students need tutoring, particularly in subjects like math. And they are not able to get it. I think it's a real gap in the regulatory mechanism. But, unfortunately, that is the regulation.

Okay. That's it. I see my time is up. (applause.) Thank you very much. (applause.)

Merri Pearson: Thank you, Jo Anne. We appreciate your comments. I think you will be here for awhile, so maybe we can get you individually if we need to. The next meeting has begun. So enjoy yourselves. We will see you at lunch or dinner tonight or something. Thanks. (End of session.)

Section II
Professional Development

Learning to Grow and Change: Using Action Learning to Inspire Effective Professional Development Within Deaf/Hard of Hearing Support Service Programs

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Abstract

It has become cliché to refer to the lightening speed of change happening in the field of postsecondary deaf/hard of hearing services. However, it is a fact that professional development is mandatory in order for the field to stay abreast with these ever-present changes.

This article will encourage deaf/hard of hearing program staff to rethink traditional approaches to professional education and explore some truths about how professionals really learn. The article will introduce strategies called action inquiry technologies that can be powerful tools based in the critical approach to professional development. One particular action inquiry technology, action learning, will be outlined and suggested as an educational strategy that could benefit postsecondary deaf/hard of hearing staff's professional growth.

Introduction

Peter Senge's *The Fifth Discipline* (1990) outlines the importance of an organization becoming a "learning organization," that is, becoming an organization that is open to transformation through shared vision and learning. In our field of postsecondary deaf/hard of hearing services, in order to move forward and continually grow to meet the needs of our customers, we must model ourselves after this learning organization concept. Therefore, it is important that the professional development activities offered to program staff foster the critical skills of visioning, personal growth, and taking risks.

Successful continuing professional education programs need to be grounded in a basic philosophical frame. A framework involves analyzing the profession's role in our society and establishing a philosophical perspective regarding the goals of the continuing professional education (CPE) program.

This paper will explore three philosophical frameworks of CPE and will then propose that professional learning for postsecondary deaf/hard of hearing staff members could be most effective when developed from a critical perspective. The discussion will primarily focus on two groups of professionals that comprise these program staffs: sign language interpreters and real-time captionists. The article will suggest that using action inquiry technologies and, in particular, action learning will provide not only effective CPE from the critical perspective, but also would begin to produce a new body of research and establish a repertoire of "best practices" for the benefit of this emerging profession.

The Functionalist View of Professions

A dominant perspective on a profession's place in society has been that professionals possess an expertise to solve well-defined problems. This expertise is drawn from a technical body of knowledge derived from scientific research. This functionalist viewpoint, sometimes coined the "Marcus Welby approach," sees the professions as service-oriented occupations that maintain the status quo (Cervero, 1988).

If, as the functionalist viewpoint supports, a profession possesses a fixed body of knowledge, then a professional education program must emphasize the mastery of this knowledge base. When designing a continuing profession education program to prepare for mastery of this knowledge base, the focus is on a traditional behaviorist approach to learning. The behaviorist approach focuses on ensuring “that learners attain previously defined learning objectives, many of which are specified in terms of clearly observable, behavioral outcomes” (Brookfield, 1986, p.202).

In his discussion of the functional framework’s emphasis on technical expertise, Cervero (1988) discusses the issue of “whether educational programs should always be related in some fashion to the improvement of performance” (p. 25) and states that particularly those that employ professionals often strongly support this position. The postsecondary institutions that employ interpreters and captionists would most likely support this behaviorist approach because the institution must satisfy the legal mandate of providing services to students who are deaf that are delivered by “qualified” staff (ADA, 1990). This idea of “qualified” has traditionally been defined as a staff member’s ability to score at a prescribed level on a performance test. Thus, continuing professional education offered to interpreters and captionists at postsecondary institutions is likely to be based in a behavioristic, performance-oriented perspective.

There is a general agreement that there is certainly a place for the behaviorist approach to learning in every professional education program (Cervero, 1988), but it is unfortunate that this behaviorist approach is often offered as the only learning method. Certainly, for example, if one counts the training opportunities for working sign language interpreters, a majority of the workshops and classes offered currently are geared towards the objectives of technical skill improvement. Among postsecondary sign language interpreters, there are certainly some core performance skills that every interpreter must possess, but the current offering of CPE programs often fails to address the other linguistic, institutional, and ethical issues that this group of professionals face.

Brookfield (1986) addresses this issue by explaining that the behaviorist paradigm “is seen most prominently in contexts where the objectives to be attained are unambiguous, where their

attainment can be judged according to commonly agreed upon criteria of successful performance, and where a clear imbalance exists between teacher’s and learner’s area of expertise.” (p. 202) In a developing profession without an established “best practices” such as postsecondary sign language interpreting, the objectives are often very ambiguous. There are no existing experts who are looked up to as possessing core knowledge, attitudes and skills, but instead, there are practitioners who are inventing modes of practice for themselves through their daily work.

Brookfield critiques the behaviorist approach by contending that “the paradigm (behaviorist) is far less suited to contexts in which learners are trying to make sense of their words, to develop self-insight, to scrutinize critically the assumptions underlying their thoughts and actions, or to interpret and to find meaning within their experience” (p. 203). This need to critically reflect and find meaning in their daily experiences is a crucial need of postsecondary interpreters and captionists. In order to effectively develop their profession, these professionals need to go beyond mere skill development to understand how to find their place in institutions that have understanding of their profession. In developing CPE for these postsecondary staff members, institutions must offer programs that go beyond the technical, behaviorist paradigm.

The Conflict View of Professions

The conflict viewpoint challenges the functionalist view that professionals possess a technical expertise that rightly affords them special status. The conflict viewpoint sees this technical expertise as putting professionals in “conflict with other groups in society for power, status, and money” (Cervero, 1988, p. 26). A further conflict perspective critique of the behaviorist approach is that the behaviorist model “ensures that knowledge is never created by, but rather transferred to the worker, ...management can use this learning design to instill within its employees the skills and attitudes necessary to maintain production, thus reproducing the capitalist ideology” (Vincere, 1994, p. 29). Proponents of the conflict viewpoint argue that, unlike the behaviorist focus on an individual’s acquisition of skills, educational intervention must be at the social level. The conflict perspective views CPE programs as perpetu-

ating a system of oppression in that the programs continue to support the status quo and not strive towards affecting fundamental changes in our social structure.

Relating to postsecondary deaf/hard of hearing programs, issues of power and oppression are found on two levels: the power relationship between the deaf student and the interpreter or captionist and the power relationship between the interpreting or captioning professional and the postsecondary institution. In the interpreting profession, deaf consumers of interpreting services have been seen as a historically oppressed minority. Interpreters have been criticized because it has been perceived that they do not challenge the system of oppression but instead are often themselves part of the oppressive system (Baker-Shenk, 1986). Deaf students often enter postsecondary institutions with minimal self-advocacy skills as a result of paternalistic K - 12 educational systems. Often the student's interpreter is the only professional on campus with which the student has regular communication and the only person in the institution that has an understanding of the student's background.

Interpreting and captioning professions have very specific Code of Ethics detailing these professionals' roles in the college classroom. The Code of Ethics for interpreters dictates that interpreters "shall not counsel, advise, or interject personal opinion" (Solow, 1981, p. 81). The interpreter's role in a postsecondary institution can become quite confusing because the interpreter is often in the middle of situations where the deaf student is rendered powerless, but the interpreter feels constrained by the profession's code of ethics.

The sign language profession has historically been dominated by women (Humphrey, Alcorn, 1995). This characteristic of the profession contributes to power issues between the interpreters and their employing institutions in that these interpreters have not been traditionally socialized to maneuver through the political maze of the institutions. This group, being relative newcomers to postsecondary institutions, has not formed the coalitions necessary to affect the decision-making processes of the institutions (Bolman and Deal, 1991, p. 190). This lack of access to decision making limits these professionals ability to gain status from which they could affect policy changes affecting their daily practice.

Working from a conflict perspective, CPE for postsecondary deaf/hard of hearing professionals would focus on exploring these professional's ethical obligation towards changing the oppressive system for deaf students. CPE programs would also need to begin to address some of these power and status issues between the professionals and the institutions. A CPE program developed around the conflict perspective could assist the deaf/hard of hearing staff to better understand how many of the linguistic, ethical, and institutional issues faced by these staff members are a result of the unequal distribution of power in our society.

Bolman and Deal's exploration of the political framework discusses how conflict over power issues can also be used in positive ways. They state that "there is clearly a need for both organizations and individuals to develop constructive and positive ways to master organizational politics" (p.200). They also see conflict as "a means of creating visions and collective goals" (p. 206). A problem with a CPE program based solely on the negative side of power and conflict in an institution is that learning to use power in a constructive way can be easily overlooked.

Another problem with a CPE program that embraces only the conflict perspective is that while it can raise a professional's consciousness about power issues, it often does not leave room for a critical analysis on some of the basic assumptions on which the conflict view is based. It is important that CPE programs for postsecondary deaf/hard of hearing staff not be developed solely around the ideas of power and control, but rather these ideas be one component of an approach that teaches the skills of critical analysis.

Also related to power and control in CPE programs is the question of who has the power to create and disseminate knowledge. The traditional gatekeepers of the research and instruction in professional education settings have been white males (Bailey, et al. 1994). Because postsecondary sign language interpreters, for example, do not have an established postsecondary interpreting practices knowledge base, it is very important that this group of traditionally female professionals understand the power and control issues around the creation and dissemination of professional knowledge. This paper will later suggest that action inquiry technologies can be educational strategies and at the same time allow the

practitioners to themselves control the development of a body of professional research.

The Critical View of Professions

While the functionalist and conflict views differ greatly in their perspective on how professionals should use their expert knowledge, both viewpoints are alike in their acceptance that research-based knowledge can be used to solve well-formed problems (Cervero, 1988). The critical viewpoint does not accept this assumption that problems are well-formed but instead views professional problems as messy and unique. This viewpoint perceives the process from problem setting to problem solving as non-linear, often ambiguous, and most successfully undertaken by relying on the practitioner's own experiences and not on a formal, research-based knowledge.

Recent literature related to organization theory underscores the importance of an organization encouraging its members to develop the learning skills necessary to challenge accepted organization's assumptions and values. Senge (1990) emphasizes the importance of an organization becoming a "learning organization," a concept that he defines as "an organization that is continually expanding its capacity to create its future" (p.14). Bolman and Deal (1991) stress that members of an organization must learn to view issues through a variety of frameworks and that the organization must give the members the tools to match the correct frame to each situation (p.12). In order for organizations to achieve both these goals, CPE programs that teach the skills of critical reflection must be offered.

If postsecondary sign language interpreters and captionists are to transform their emerging professions into established professions on par with others found in postsecondary institutions, they must have access to CPE programs that foster these critical thinking skills. Especially for postsecondary sign language interpreters who are without an existing body of research, this critical approach to CPE is especially imperative in that it would allow these professionals opportunities to develop their analytical skills and at the same time take on responsibility for establishing a professional body of knowledge from which to further form their profession.

Action Inquiry Technologies

One approach to professional development that is grounded in the critical perspective is action inquiry technologies (AIT). AIT is an umbrella term for several related strategies that all have the common focus of combining practice and reflection (Brooks, Watkins, 1994). Some of the AIT related strategies are action learning, action-reflective learning, action science, collaborative inquiry, participatory action research, and popular education (Brooks, Watkins, 1994).

The focus of the various AIT strategies are to allow "practitioners to work collectively in solving practice related problems but at the same time develop individual and group competence in the process of problem solving" (Tolbert, Reason, Heron, 1995, p.13).

Brooks and Watkins (1994) discuss the common characteristics of AIT that appear most often in the work of AIT researchers. These researchers found that action inquiry technologies are:

- 1) collaboratively conducted and participatory
- 2) enhance the overall learning capacity of individuals as they work to solve problems
- 3) focus on change and empowerment
- 4) create a body of research that comes from the "local" practice not "expert" knowledge

This paper will frame its discussion as to why AIT could provide effective CPE strategies for postsecondary deaf/hard of hearing program staff by exploring how each of the previously listed characteristics of AIT would be beneficial to this profession.

Action Inquiry Technologies are Collaboratively Conducted and Participatory

One practice common in many postsecondary deaf/hard of hearing programs is the amount of informal discussion around professional issues that takes place among staff members. Interpreters in particular, explain that this need to "debrief" often is due to the fact that during the interpreting process, an interpreter makes

constant linguistic and ethical choices without opportunity for feedback from either the information source, the class instructor, or the information target, the student (PIN, 1997).

AIT would be quite effective for these interpreting professionals because there already exists a tradition and culture of group reflection. In teaching the interpreters the skills involved in AIT, these informal “debriefing” sessions could be transformed into a more systematic form of critical reflection. In this way, AIT could be incorporated into the daily practice of the postsecondary deaf/hard of hearing program staffs.

The skills of working collaboratively that are promoted by AIT are skills that are vital to the success of any postsecondary work team. If these teams are to realize the goals of being able to navigate through the power structures of their institutions, establish a body of professional knowledge, and deal with the everyday challenges of their jobs, the team members must first be able to successfully work together as a cohesive team.

Action Inquiry Technologies Enhance the Overall Learning Capacity of Individuals as They Work to Solve Problems

Although practitioners in many professions traditionally experience collective learning through group reflection, what distinguishes AIT from mere group discussion and dialog is that while the group members are reflecting on specific problems, they are also reflecting on the learning/research process itself. By working on real work-related problems, group members are collaboratively solving problems and at the same time become better skilled in the process of problem solving (Brooks, Watkins, 1994).

Mezirow's theory of critical reflection differentiates between problem “posing” and problem “solving” (Brooks, Watkins, p.22). Many traditional professional educational activities focus on this problem solving, but AIT—with its roots in the critical perspective—focuses on the framing of the original problem. In the professional development of postsecondary sign language interpreters, this work on “setting the problem” could give structure to the common “debriefing” sessions explained previously. AIT could give postsecondary teams the tools with which to critically analyze the basic assumptions on which issues and problems are originally presented. By learn-

ing to focus their energies on the original setting of a problem, interpreters could avoid some of the pitfalls of assuming that all are viewing a problem from the same perspective.

AIT could also assist interpreting and captioning professionals in viewing their professional issues as learning opportunities. This more positive approach can foster a “learning organization” attitude such as supported by Senge.

Action Inquiry Technologies Focus on Change and Empowerment

Not only is AIT a process by which practitioners collaboratively reflect on and research their practice, but it is also a process that can assist practitioners in finding their place within their larger organization. As relative newcomers to postsecondary institutions, interpreters and captionists need to learn the skills of successfully navigating through their organization's traditional constraints.

AIT strategies have been described as cycles of action and research. This continuous nature of the technologies is quite a different approach to CPE as compared with traditional educational interventions. This ongoing, cyclical nature of AIT makes it a flexible learning method that is well suited to the ever-changing nature of postsecondary environments.

Reason and Heron (1995) explain that there is no exact methodology in developing AITs but that the ideas and method should be used as stimuli for the creative development of a form of collaborative inquiry which suits the purposes and opportunities of the situation. Unlike traditional CPE, the research encouraged by AIT promotes “reflection on action” as a basis for the generation and testing of informal theory (Brooks, Watkins, 1994, p.6). AIT could provide empowering experiences as the deaf/hard of hearing program professionals learn to value their own observations and informal theories as valid contributions to the profession.

Create a Body of Research that Comes from “Local” Practice not “Expert” Knowledge

As was discussed in relation to the conflict perspective, knowledge production and research should not remain solely in the hands of researchers and schol-

ars, but instead should be the responsibility of those who work in the daily practice (Brooks, Watkins, 1994). AIT is an especially useful CPE strategy because as it develops a professional's capacity for critical reflection, it also synthesizes a body of research that is situated in the professional's daily practice (Reason, Heron, 1995).

Because postsecondary sign language interpreters and captionists do not have a body of research on which to base their practice and because, at this time, there are few scholars who focus on this unique group of professionals, there is much merit in allowing the practitioners themselves to develop this body of knowledge. Part of the CPE process would need to focus on teaching interpreters and captionists the skills necessary to cultivate this body of research, but the benefits of a research tradition generated in the field make this a worthwhile goal of a CPE program. This body of research could have a positive influence on the systematic development of a more formalized practice for these emerging professionals.

Action Learning

Action Learning is one example of an action inquiry technology. Action Learning stresses small groups working on real problems and at the same time, focusing on what they are learning about themselves and their organizations. Many corporations around the world are currently using action learning to encourage organizational learning, improve self-awareness and self-confidence, and improve teamwork.

Action learning is composed of the following six distinct interactive components:

1. The set: A set is a group composed of four to eight members.
2. The facilitator
3. The problem: A set is structured around an issue or challenge that does not have one clear solution. It is important that set members work on true problems and not waste time trying to solve puzzles. Puzzles are contrasted to problems in that puzzles have one clear solution that already exists.
4. Insightful questioning (IQ): The art of asking good questions is at the heart of action learning. The purpose of IQ is to encourage fellow set members to ques-

tions each other's assumptions that, if left untested, could block the discovery of truly creative solutions.

5. The commitment to learning. In an action learning set, personal and organizational learning are as important as solving a problem. Stopping periodically for personal and group reflection as to new insights and changes in perspective, and also to analyze the group process in general, is a vital part of the action learning process.

6. The commitment to taking action. Every action learning set ends in the formation of an action plan. The action learning set will then meet again at a later date after set members have had opportunities to carry out this action plan. The success of the action plan is the basis for insightful questioning during the next action learning set. (Marquardt, 1999)

Action learning is cyclical; that is, it must take place over a period of time during which sets regularly meet to focus on a problem, frame and reframe the problem through insightful questioning, develop alternative solutions, and set-up action plans. The action plans will be the basis for the next meeting during which the set will evaluate and question the action plan, identify new problems and then start the process again. Ultimately this cyclical process benefits an organization in that members are taught critical thinking skills, set members control their own learning, groups are strengthened, and problems are solved.

Summary

This paper has explored the functionalist, conflict, and critical viewpoints of professions and the implications of each viewpoint for the development of CPE programs. The paper specifically discussed each framework as to its implications for CPE programs for the new professions that are emerging in the area of postsecondary deaf/hard of hearing services. The critical paradigm was depicted as the most appropriate approach to CPE for deaf/hard of hearing program professionals, and action inquiry technologies were examined as educational strategies that effectively fit this critical framework. These technologies, and

specifically action learning, not only could teach the skills of collaboration and problem solving and provide a mechanism for empowerment, but also could provide the tools to research professional issues and establish a base of “best practices” on which to develop professional standards.

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Wearing Two Hats: Things Educational Interpreters Need to Know When They Tutor

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Abstract

The greatest demand for interpreters is in education; however, many graduates of interpreter training programs are not specifically prepared for educational interpreting and have little or no training in tutoring. This presentation will focus on the requirements, qualifications and skills needed by interpreters who tutor. Tulsa Community College, through PEC funding, has developed a tutoring course/workshop that addresses the basic theories, guidelines, principles and practices of tutoring. The presentation will examine learning styles and metacognitive theories as they apply to tutoring. Emphasis will be placed on preparing students for three types of tutoring sessions: studying content, preparing for a test, and writing a paper.

Course Development and Administrative Considerations

Identifying the Need

Tulsa Community College (TCC) has a relatively long history of program development for students who are deaf and hard of hearing. The Resource Center for the Deaf and Hard of Hearing (RCDHH) was established in 1979 and has subsequently grown to include eleven full time staff members serving approximately 40 students on four campuses. Our experience, like that of many other post-secondary programs that serve students who are

deaf or hard of hearing, indicates that tutoring can make an enormous contribution to student success. Although programs differ in the ways in which they recruit tutors, many use interpreters as tutors at least some of the time. However, a highly qualified and skilled interpreter, even one who is familiar with the course material, may not be well prepared as a tutor. As a result, we decided to look into what we could do to help our interpreters enhance their tutoring skills.

Addressing the Need

Since Tulsa Community College has an interpreter preparation program in addition to RCDHH, it seemed natural to ask that a tutoring course be added to the curriculum. TCC has a fairly simple mechanism to allow courses to be added on a provisional basis, so we opted to go that route. However, we realized that many of our working interpreters would not be able to attend a formal, sixteen-week or even eight-week course. Therefore, we decided that any curriculum we recommended needed to be flexible enough to be offered as either a credit course or as a workshop, preferably one that earned continuing education units for the interpreters.

With those decisions made and with PEC's funding support, we turned our attention to staffing and curriculum design. To develop the curriculum, we contracted with Teres Brawner, a nationally certified interpreter and Tulsa area educator for the deaf with experience on both secondary and postsecondary levels.

Implementing the Solution

Our main goal for training interpreters as tutors was to improve the quality of our tutoring service. To further that goal we looked at several factors beyond the actual training itself. We checked our policies and procedures to make sure they were easy to understand and follow and that no unnecessary policies were in place. In addition, we evaluated our working conditions for tutors. We are very fortunate in that our department has a large open work space as well as several private tutoring rooms for part time tutors and a private office for each of our four full time interpreters. In addition, over the years we have found a number of ways to obtain free or low cost textbooks for interpreters and tutors; we checked to make sure these methods were working as well as we thought they were. We also checked to make sure our part time tutors have access to the Learning Resources Center and to the computer labs.

Evaluating the Solution

Since Tutoring for Fundamentals is a new curriculum, we do not yet have significant feedback on it. Our plan is to use the college's usual course and workshop evaluations in order to obtain information on tutors' perceptions of the curriculum. However, we believe that a more interesting and important side of the equation will be to determine whether or not the training makes a difference in student performance. In other words, we want to know if tutors who receive this training really are more effective than tutors who do not. We hope the evaluations we ask the students to complete on their tutors will give us some insight into this.

Tutoring Fundamentals Curriculum

In response to the established need for training in tutoring, TCC, with PEC, contracted with Teres Brawner (MS, CI & CT, CED), an experienced educator on both the secondary and postsecondary levels, to prepare a curriculum to meet the needs we identified. We asked that the curriculum be flexible to be used as three hour for credit course, as an independent study, or as a workshop. Ms. Brawner developed a curriculum entitled "Tutoring Fundamentals: A Course for Potential Tutors."

Tutoring Fundamentals is divided into six units of study: Learning Styles, Metacognition, Writing and Reading, Tutoring Theory, Tutoring Practice, and Tutoring Resources.

Unit One: Learning Styles

A quick Internet search for "learning styles" yields a variety of instruments from very sophisticated tests which require training to administer to snappy pop-psychology questionnaires. We needed an instrument that was relatively reliable but simple and inexpensive to work with so our tutors could administer it themselves at a time and place that was convenient to them and to their students. In addition, we needed it to be self-scoring and able to yield scores that would be readily understandable by our tutors and students. We wanted something that a tutor and student could sit down with together and use to work out learning strategies for a specific course.

Tutoring Fundamentals recommends the VARK, an on-line instrument developed by Neil Fleming and Charles C. Bonwell. Because the VARK is available free at <www.active-learning-site.com>, tutors and students do not need our permission or help to use it, may use it as many times as they feel is appropriate, and can take it whenever and wherever they have Internet access. Administering the inventory is simple and straightforward, and the Active Learning web site includes a variety of tips and strategies for using the results in real life learning situations. In addition, the VARK is specifically designed to initiate the kind of discussion about learning that we hoped to encourage between students and tutors.

Unit Two: Metacognition

Conversation between a tutor and a student about the student's personal learning process can be an important step toward developing the metacognitive awareness that so many students lack. Tutoring Fundamentals gives tutors specific questions to ask students to help them think about the ways in which they think and learn. One of the biggest frustrations tutors report is that students misrepresent their level of understanding. We found that students themselves are often unaware that they do not fully understand material that has been presented to them. As a result, tutors have difficulty evalu-

ating the effectiveness of tutoring strategies until a test or graded project reveals the lack of mastery. Responding to simple questions such as, “How do you know if you understand something?” can spur a student to a new level of metacognitive awareness and help circumvent this kind of unnecessary poor result. In addition, Tutoring Fundamentals offers strategies to help students improve their ability to break an assignment into smaller tasks, to attack each task effectively, and to monitor their own progress. This curriculum shows tutors ways to model these strategies and to discuss them with students so the students can eventually learn to use the strategies independently. Finally, the curriculum helps tutors work with students to link prior knowledge and experience to new knowledge in order to formulate a context for further learning and personal growth.

Unit Three: Writing and Reading

Although Tutoring Fundamentals was primarily developed with students in interpreter preparation courses in mind, we recognize that other tutors also work with our students. As a result, the curriculum includes a brief treatment of the effects of early language deprivation, age of onset, and level of hearing loss on reading and writing. Students in interpreter preparation courses most likely have already been exposed to this information, but for other tutors the information may be unfamiliar.

In addition, the curriculum discusses basic strategies for talking about writing, for critiquing writing fairly but sensitively, and for working with instructors of writing courses and other courses in which writing is important. Potential tutors discuss various factors that may contribute to a deaf or hard of hearing student's discomfort with writing and academic factors that may help determine the kind and level of intervention appropriate for the class. For example, writing instructors may need to see the student's rough draft in order to diagnose and prescribe remediation. In these courses, the tutor probably needs to work closely under the instructor's guidance. However, many other instructors are not particularly interested in the student's writing difficulties and evaluate papers solely on content. In these courses, stu-

dents and tutors may be able to work back and forth between signing and writing to get the content down on paper.

The bulk of this part of the curriculum uses a wide variety of actual student writing samples for practice in determining how much intervention is appropriate, identifying errors, and working with students to correct errors.

Unit Four: Tutoring Theory

This unit discusses expectations which tutors and students bring into the tutoring session. In doing so, it establishes a minimal threshold of responsibility on both sides. When both sides meet this threshold, the tutoring session is much more likely to be successful than if one or both sides fall short. Tutors should be able to expect that students will seek help before they become hopelessly confused, will schedule reasonable time to accomplish academic tasks, and will make small accommodations in communication styles, if necessary to make the session run smoothly. On the other hand, students should be able to expect that tutors know the material, are available at times which meet the students' own schedule, and will make small accommodations in communications styles if necessary to make the session run smoothly.

In the ideal tutoring session, the student takes responsibility for his or her learning. He or she should arrive with specific concerns and with basic background knowledge. Moreover, the student should have made an independent attempt to resolve the identified concern. Additional characteristics of the ideal tutoring sessions are clear communication, a well prepared tutor, realistic expectations on what can be accomplished in a single session, and satisfaction with the outcome on both sides.

At the beginning of a student's academic career, many tutoring sessions will probably be far from ideal. The tutor may need to assume a high level of responsibility for the planning and outcome of each tutoring session. However, as the student progresses academically, he or she should begin to assume more and more responsibility until finally many tutoring sessions approach the ideal with the student assuming all or most of the responsibility for determining the course of each session.

Unit Five: Tutoring Practice

Tutoring Fundamentals identifies three basic types of tutoring sessions and discusses strategies for achieving good outcomes for each type. The types are studying for content, preparing for a test, and writing a paper. The curriculum discusses ways in which to tap into learning styles, stimulate metacognition, and move students toward accepting more responsibility for their own learning in the course of each type of session.

For example, during a session in which the student needs to study content, the tutor may ask the student to briefly recall learning strategies most appropriate for his or her learning style and help the student plan a strategy for the task at hand. The tutor may use the metacognition questions to help the student discover his or her level of background knowledge and consider ways in which the information at hand may be useful or important. Finally, the tutor may model SQ3R or another basic study method for the first part of the lesson and gradually encourage the student to take over more and more responsibility for tak-

ing and organizing reading notes, compiling vocabulary lists, developing study guides and other study aids, and so on.

Unit Six: Tutoring Resources

The final unit of the course is a listing of print and on-line resources for tutors. This list will require frequent updating as new materials are continually published both in print and on-line.

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Other Duties Not Yet Assigned . . . Urban and Rural Interpreters Taking the Initiative

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Abstract

In today's budget-driven institutions, a change in Deaf and hard of hearing student populations can mean the loss of a job. When interpreting hours decline, interpreters in educational settings are assigned a variety of tasks that often are mundane and unrelated to our profession. Repetitive motion injury can prevent interpreters from interpreting on a temporary or permanent basis. To provide greater job security and increase opportunities to improve their skill and knowledge in a variety of areas, we suggest that interpreters become pro-active partners in their offices and recommend to their coordinators or directors other activities which they can coordinate, organize, and implement that will improve their Deaf and Hard of Hearing programs or the Disability Services Program.

Lisa and Gerri are both interpreter coordinators at very different institutions: Lisa works at a small community college in Cheyenne, Wyoming. For nine years, Gerri worked for both a large university and a large college in the Denver metropolitan area. Both positions have evolved a great deal over the course of their employment, largely due to their actively requesting additions to their responsibilities that fit with their personal and professional goals.

Changing role of interpreters. . . why??

Working in a budget-driven environment may drastically affect the number of employees retained when the number of students declines. This is especially true for interpreters when there is a change in the population of Deaf/Hard of Hearing (D/HH) students. Post-secondary institutions often consolidate duties to make efficient use of all available staff.

Interpreters, hoping to increase their job security, should consider further professional development. They can enhance not only their interpreting skills, but additional training can help them achieve a variety of personal and professional goals. Types of additional training will be discussed further in this presentation.

What 'other duties' are we assigned?

To "enhance" job security at the post-secondary level, interpreters might volunteer to assist in the Disability Services Office during downtime. However, without training for more advanced duties, interpreters are frequently assigned menial tasks around the office, i.e. the "yucky ones", such as: copying, filing, grading papers, running errands, shredding papers, an-

swering phones. These tasks may keep an interpreter busy while ingratiating themselves to the office staff; however, these are probably not the skills they want to develop and be permanently assigned in the event the D/HH student population experiences a serious decline.

What 'other duties' do we
WANT to be assigned?

Preferably, interpreters seek duties that are more interesting and use the vast skills that all interpreters inherently possess or can acquire with training. Institutions may well benefit from using interpreters to:

- Tutor or assist with coordinating a tutoring program for D/HH, as well as students with disabilities,
- Develop & present faculty /staff in-service workshops on working with D/HH students, Interpreters, Notetakers, Captionists, and Assistive Listening Devices,
- Develop a faculty/staff handbook on working with D/HH students and interpreters through your office,
- Develop and present workshops for community members and employers involving ADA as related to Deaf individuals,
- Work with junior high and high schools or community resources to recruit more D/HH students,
- Develop transition and/or summer preparation programs for D/HH high school students,
- Coordinate a workshop for area interpreters,
- Develop and coordinate an interpreter mentor program on your campus or in your area,
- Coordinate a workshop for D/HH students to develop skills such as: leadership, job interviewing, making presentations and working with interpreters prior to formal presentation, requesting interpreters, coordinating assistive listening devices, teaching sign language classes, and providing direct services or training for the use of C-Print in the classroom.

Moving Beyond D/HH Services

To investigate these options further, what is the next step? Initially, it is advisable for interpreters to seek additional training from the members of the office staff and become involved with services for students with other disabilities. From office personnel interpreters can learn to coordinate accommodations and provide assistance with notetaking / C-Print services, test accommodations, and books on tape. If interpreters have computer experience, they can be trained in the use and benefits of adaptive computer technology. These newly acquired skills can be made use of to train students with disabilities.

Further, because of their experience in working with faculty and students, interpreters can use their skills to advocate to faculty on behalf of students with disabilities and present faculty and staff workshops regarding accommodations for all students with disabilities.

When an interpreter shows interest and initiative, acquires proper training, and can secure support from the administration, hourly interpreters may find opportunities for advancement within the department. An hourly interpreter can be promoted to staff interpreter with other duties as assigned, advance to Interpreter Coordinator, Disability Specialist, Associate Director of Disability Services Office, Director of Disability Services Office, Dean of the College, and finally retire with full pension and benefits! With proper training and initiative, the personal and professional goals are limitless.

How do we become qualified
for those 'other duties'?

A college education is essential in today's global market. Most postsecondary institutions require interpreters to have at least an associate's degree in interpreting. For further advancement it is advisable to have a bachelor's degree in Interpreting, Deaf Studies, Human Services, Education, or a related field. For administrative positions, interpreters should seek a masters degree in Public Administration, Education, Interpreting, Leadership Training, or Counseling. A doctoral degree may not be necessary unless you wish to become

a Professor, Dean, or Executive Director of a post-secondary institution.

There are also many resources available in the community from which to gain additional skills, knowledge and training in various services for persons with disabilities. PEPNet Conferences/Workshops and the National and Local Registry of Interpreters for the Deaf (RID) Workshops provide training in the areas of interpreting and Deaf services. The Association on Higher Education and Disability (AHEAD) and ADA seminars provide training in all post-secondary services for students with disabilities. "Closing the Gap" and the CSUN Assistive Technology Conference provide training in adaptive computer technology. For business-oriented advancement, there are organizations such as Career Track who offer seminars to improve administrative/supervisory skills.

How do we get our
supervisors to buy in?

Administrators are unlikely to ask interpreters if the interpreters are interested in career advancement. Therefore, as interpreters we must take the initiative! Make yourself known (not notorious!). Volunteer to help, even if it means doing the menial, "yucky" tasks. Don't wait around to be asked. JUST DO IT! Make yourself indispensable. Show more initiative. If you see a gap, fill it! Make your supervisor aware that you are continuing your education, so when you become indispensable, and the program flourishes, your name will be first on the list when they discuss hiring another permanent administrator.

Presenting Your Plan

If a position or program does not exist which meets your needs, look for missing components in your program, investigate what works in other programs, develop a plan and write a proposal. Make sure you have all the details well thought out. Be sure to include the cost/benefit analysis. Then take the plan to the supervisor. Sell yourself and your ideas. Be ready, willing, and able to implement your plan.

You are on your way!

It is easier for a supervisor to implement a new program, if the details are taken care of and the staff is available. Make sure the details come from you and your supervisor knows you are the right person to execute the plan.

More Questions? Give us a call or contact us!

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Section III
Access to Programs and Services

EnVision: Connecting Students Coast-to-Coast and Face-to-Face

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The Rocky Mountain Connections Center (RMCC), a hub of WROCC, housed at Salt Lake Community College, set connecting Deaf and Hard of Hearing postsecondary students in rural areas as one of our primary objectives within our grant cycle. Postsecondary institutions and population centers in the district we serve, including Montana, Wyoming, Nevada and Utah, are spread out geographically. Oftentimes, Deaf and Hard of Hearing students exist in isolation at their college or university campus and sometimes within their towns. Nationally, and in our district, Deaf students often do not stay through to completion of their programs. We know from talking to many of these students that they feel socially and academically isolated, even when provided with accommodations. Many of these same students, as with their hearing counterparts, are non-traditional students, balancing school and supporting families, and they are often not in a position to move to population centers with greater numbers of Deaf and Hard of Hearing students to satisfy their social and academic needs. In looking for ways to connect students across these distances, we found a new technology, known as desktop video conferencing (DVC) which was developing into a way to connect students, face-to-face across distance, using whatever communication methods they preferred.

Within the last year, DVC cutting-edge technology has greatly improved in terms of its ability to keep up with individuals who are signing in real time. The best system we could find in

terms of speed and clarity for signing purposes was EnVision, a system designed by Sorenson Vision, Inc. This system consists of hardware and software which, when installed on a reasonably current PC with Internet or phone access, can allow people to see and hear each other in real time. In addition, this system allows collaboration by sharing application files, such as word processed documents, web page, e-mail, or graphics, while talking (or signing) to each other.

There were three reasons that we chose to use the EnVision product: 1) Price and practicality; 2) quality; and 3) our relationship with the Sorenson Company.

In terms of price and practicality, EnVision costs a great deal less than the competition, and it uses a standard PC/Windows platform. Some of the systems that we looked at were more than twice as expensive, and some of them required purchasing different platforms. The quality of EnVision was higher because Sorenson has invented a unique compression technology, which allows for sufficient speed and clarity under ordinary conditions to sign naturally. Many other vendors have not looked at the needs of Deaf individuals, and since hearing people rely more on the sound, they have not felt that slow-speed video was a concern for most of their business clients. Finally, we had previously purchased the prototype of EnVision, called VisionLink, from Sorenson Vision. VisionLink was a pilot video-conferencing unit (video only) made specifically for Deaf and Hard of Hearing individuals. In work-

ing with Sorenson, we found a “Deaf friendly” attitude in their staff who understand the needs of our students. EnVision’s speed was developed with Deaf users in mind. Additionally, Sorenson is a local Utah company with a demonstrated history of responsiveness to our needs as they have incorporated much of our input in EnVision’s development.

EnVision has limitations. It does not have television or movie quality, which comes across the screen at 30 frames per second. EnVision comes at 15 frames per second, which is still faster than the human eye processes. This is to allow data sharing to take place in the same bandwidth while being able to continue to talk. Some postsecondary institutions are using satellite systems fed into ISDN lines with extremely high picture quality; however, they have to pay extraordinarily high fees per minute. We are not suggesting that these could be replaced, because they are often used for multipoint teaching and training purposes. However, if contact from one person to another is desired, EnVision use is virtually free after initial purchase. There is no additional bandwidth cost except the standard Internet Service Provider fees or phone lines, which are likely already in place. Most college and university computers are already tied to a LAN, and EnVision works well through LANs. The result is that institutions can have students or others using this system at the campuses where it is installed without any fee for use. This is not yet perfect technology, and Internet traffic can sometimes interfere with quality; however, generally our experience with the quality has been good. In addition, EnVision complies with the H.323 standard for desktop videoconferencing units, so people with other types of systems can communicate with those using EnVision; however, data sharing may not work and picture quality and speed may vary.

There are a number of companies developing multipoint technology. This is not yet available with EnVision, except with an application where multiple users can take turns. This is still limited, but engineers are working on developing multipoint multiuser capabilities.

RMCC has placed 15 EnVision units at various sites within our district, and there are plans to place additional units soon.

Applications of Desktop Videoconferencing with Deafness in Postsecondary Education

We have experimented with a variety of uses of EnVision serving three general postsecondary groups: 1) Deaf and Hard of Hearing Students; 2) Interpreters or Transliterators, and 3) Administrators, Faculty and Staff. Some of the uses we have found are as follows:

Deaf and Hard of Hearing Students

- Establish student-to-student mentoring over distance
- Connect students to academic tutoring, especially for English, using ASL
- Promote social connections with students at other colleges to end isolation
- Provide distance instruction and tutoring
- Provide means for job interviews
- Provide means for interviews with potential colleges or universities prior to selection and transfer
- Provide remote video interpreting whether there are insufficient numbers of qualified interpreters (still in experimental stages)

We have had some interesting successes connecting Deaf and Hard of Hearing students. When we first demonstrated EnVision at our annual Connections Student Leadership Conference, Deaf students were really excited with the technology. However, we did not realize the potential benefits for Hard of Hearing students. One Hard of Hearing student in attendance was able to hear through the headset, and when she expressed her excitement, the other students cheered for her. Since, we have tested EnVision plugging an FM loop directly into EnVision with the T-Coil setting on hearing aids, and this seems to work well. In addition, having the visual face-to-face contact, rather than depending upon a phone, seems to work better for Hard of Hearing individuals. The “chat” box allows individuals to type to each other and to get clarification if any confusion exists.

We have had an interesting experimental project where several Salt Lake Community College students, taking the Deaf English course, were partnered with Sheridan College Interpreter Training students in their practicum semester prior to graduation. Sheridan, Wyoming, has very few Deaf individuals, and many of their interpreter training students had not yet met a Deaf individual. Through EnVision, the Deaf students in Salt Lake tutored the interpreting students at practicum sites in Sheridan and Cheyenne Wyoming, helping them become comfortable with Deaf individuals, Deaf culture, and helping them improve their ASL and interpreting skills. Some of the Deaf students took this very seriously, even designing interpreting experiences for the students. In return, the Sheridan students tutored the Deaf students with English vocabulary and idioms they were studying. This was a real “win-win” experience. Carly Flagg, director of the Interpreter Training Program at Sheridan College, was pleased that she could use EnVision to stay in touch with her practicum students placed in different towns, and the students were able to stay in touch with each other and share their experiences and concerns. Students additionally had an assignment to interview a certified working interpreter, and they conducted these out of state interviews through EnVision.

Other experiences included having Deaf students receive subject tutoring from a tutor in a different college or in a different state. A Utah Deaf student interviewed a Wyoming Deaf student majoring in the same area as the class the students were taking for a college project and videotaped it. A Deaf student in Montana had a job interview with a company in New York, and the same student received some assistance with course work from a peer in New Jersey. Another Deaf student in Montana received tutoring assistance with some college papers from the Deaf English teacher in Salt Lake. For having the network in place only five months (one semester), this shows real promise.

RMCC has experimented some with remote interpreting, and we believe that once the new version of EnVision is released, allowing for EnVision use with phone lines and portable computers (expected around Spring 2001), that this will become a reality. Communication Services for the Deaf in Texas is providing video relay interpreting services commercially right now using

EnVision. This service works on the same principle as a telephone relay service: a person calls in from EnVision and they either relay a phone call, or they may relay interpret a staff meeting or other type of contact for the Deaf individual. For postsecondary purposes, there are a number of rural areas where insufficient numbers of qualified interpreters exist. This may be a way to ease the shortages, drawing upon the resources of larger colleges to ensure access to the classroom, no matter which college the student is attending. DVC may also provide more opportunities for interpreters to work, utilizing their available hours between classes where they work. It might also eventually provide better quality in interpreting, allowing students access to better qualified interpreters with subject expertise, from remote locations.

Interpreters/Transliterators

- Establish a professional postsecondary network
- Provide assistance with technical signs
- Evaluate, train, and mentor interpreters
- Create a distance mentorship network
- Provide distance education opportunities
- Provide remote video interpreting opportunities

There have been two mentorships going on that we know about between Montana and Utah. There have also been some consultations between institutions on technical signs. We hope to really utilize this more to connect interpreters.

Administrators, Faculty & Staff

- Provide face-to-face training in all aspects of coordinating services for Deaf and Hard of Hearing (D/HH) students
- Provide equal access to Deaf, Hard of Hearing, and Hearing administrators for networking and training
- Establish networks of service coordinators for Deaf and Hard of Hearing students
- Allow collaboration through sharing and discussing in real time

- Provide resource sharing alternatives to enhance access where resources are limited
- Allow advisors to do intakes/interviews for remote distance learning sites or extension campuses

Administrators, faculty, and staff serving Deaf and Hard of Hearing can have improved access to one another, meeting communication needs. In addition, the data sharing feature in EnVision is a powerful tool. This article has been written in collaboration across states through EnVision, as well as the PowerPoint presentation used at PEPNet. Two faculty colleagues, one in Colorado Springs and one in Salt Lake, recently collaborated on a conference proposal and agenda over EnVision. Web pages can be developed collaboratively over EnVision. Training on use of EnVision and other technical assistance has been given over EnVision. Utah State University (USU) has been using EnVision to do intake interviews and advising for their distance learning sites and extension campuses, some of which are over 200 miles from the main campus in remote areas. These represent a great savings of time and travel. Diane Hardman, Director for the USU Disability Resource Center, reports that this is working so much better than trying to conduct these interviews through phone calls, TTY, or through an interpreter. The communication is much clearer, and it greatly reduces costs for these contacts. Institutions providing extension courses or distance learning courses for students in prison might benefit from using this type of system to discuss accommodations with inmate students.

There have been challenges, of course. This is cutting edge technology, and sometimes we find that we have computer software conflicts, a particular computer that has glitches, and occasionally we run into problems with campus Internet firewalls. Technology keeps changing, and it takes time to get a new release of EnVision to fit the new operating systems and platforms. For example, when EnVision was released, it worked on Windows 95/98 platforms, but not NT. However, most campuses we dealt with had NT. When we got the release for NT, Windows 2000 was released. However, the

first release of Windows 2000 has some inherent bugs, so meeting that challenge also takes time. Sorenson expects to have EnVision compatible with Windows 2000 by Spring of 2001.

Another challenge has to do with many colleges having policies prohibiting having anyone open the computer who is not with their IT department. Because disability service offices are often not on the "high priority" list, institutions have to wait for their technicians to install the system. We still have one institution who has had a unit for seven months that is not yet installed, awaiting technical support from their campus. However, Sorenson plans to release a "plug and play" version in Spring 2001 that will be less reliant on campus technical support. This should overcome that particular difficulty.

One additional challenge that is more difficult to overcome is the general attitude and fear of using this technology. It sometimes takes students, faculty, staff, and administrators time to "warm up" to the idea of using DVC. However, once they do, most love it. The EnVision interface is quite user-friendly and easy to learn. However, we depend upon the Internet, and sometimes traffic interferes a bit. Sometimes fixing this is easy, and sometimes the call needs to be placed again later. This takes a little patience, but generally contacts go smoothly. The best way to overcome this challenge is through education and developing flexible attitudes.

How We "EnVision" the Future

The Rocky Mountain Connection Center hopes to see an active network of users within PEPNet. This technology is only as good as the contacts available on the other end. We hope to see many Deaf and Hard of Hearing students connecting through this network, as well as professionals involved in postsecondary education.

Sorenson has established a meeting place online, ils.DeafOnline.com, which is accessed through the EnVision "Call Center." Through this, we can see who is online and call each other. It is hoped that the Deaf Community will start coming online and setting the trend. It is possible that in the future, desktop video conferencing could replace less satisfactory technology, such as TTYs. The RMCC staff hope that technology companies

will increasingly look to the needs of those who need visual access to language to communicate and pioneer new trends in connecting people who have historically lived or worked in isolation. We believe that this technology is just a beginning which will become a springboard to exciting technologies ahead.

For further information on how to join the DeafOnline network, please see our website, <www.slcc.edu/connections> and click on "EnVision Project," or contact the authors at the e-mail addresses listed below:

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Innovations in Postsecondary Education and Training: The Case for Community-Based Rehabilitation Centers¹

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Abstract

This paper presents the results of a national assessment of the technical assistance needs of community-based rehabilitation centers that provide employment services to persons who are deaf or hard of hearing. The study was designed to parallel the Postsecondary Educational Program Network's (PEPNet) national needs assessment of college programs providing training to persons who are deaf or hard of hearing. The purpose of the study was to identify and prioritize the types of resources, support, and technical assistance required to enhance services delivered by community-based agencies to persons who are deaf or hard of hearing. Recommendations for future technical assistance strategies based on the study are presented.

Most service providers who work in rehabilitation or postsecondary training understand that the world of work has significantly changed. The 21st century is here! Productivity is up, the stock market is up, and the workplace has exploded with new technology that demands a new breed of future worker. Workers must be skilled in many areas: literacy, adaptability and problem solving,

communication and teamwork, leadership, and technological sophistication.

Many of these areas present major challenges for deaf and hard of hearing persons preparing for a career. Reading and writing are primary in that only 15 percent of deaf students reads at a 6th grade level. Manufacturing and physical labor jobs, areas where this population has been traditionally successful, are no longer readily available. In fact, many of these jobs have been replaced by technology. People need to be adaptive and respond to these changes as well as become skilled in problem solving which includes communication and teamwork. Leadership skills and the ability to be self-directed is important. Deaf and hard of hearing workers have to be prepared to succeed in this rapidly changing workplace.

The key to success is training, training that is provided in a broad range of settings that go beyond the rehabilitation center or the postsecondary program. We all have to work together with deaf and hard of hearing individuals to assist them in having an equal shot at success. We need to expand access to a full range of postsecondary training opportunities. Analyzing 1997 data on education of deaf and hard of hearing persons, we find that persons vary in terms of their need for special-

¹The research leading to this publication was conducted by faculty of the University of Arkansas Research and Training Center for Persons who are Deaf or Hard of Hearing, which is funded by the National Institute on Disability and Rehabilitation Research of the U.S. Department of Education under grant number H133B6002. The opinions contained in this publication are those of the authors and do not necessarily reflect those of the University of Arkansas or U.S. Department of Education. Portions of this paper were previously published (Boone & Watson, 1999).

ized training. For example, 2,300 benefit from postsecondary training defined as college and university programs. Approximately, 3,500 are more qualified for vocational training. Finally, 2,000 benefitted from community-based employment training. Unfortunately, much of this training occurs in programs that lack significant resources to serve these individuals.

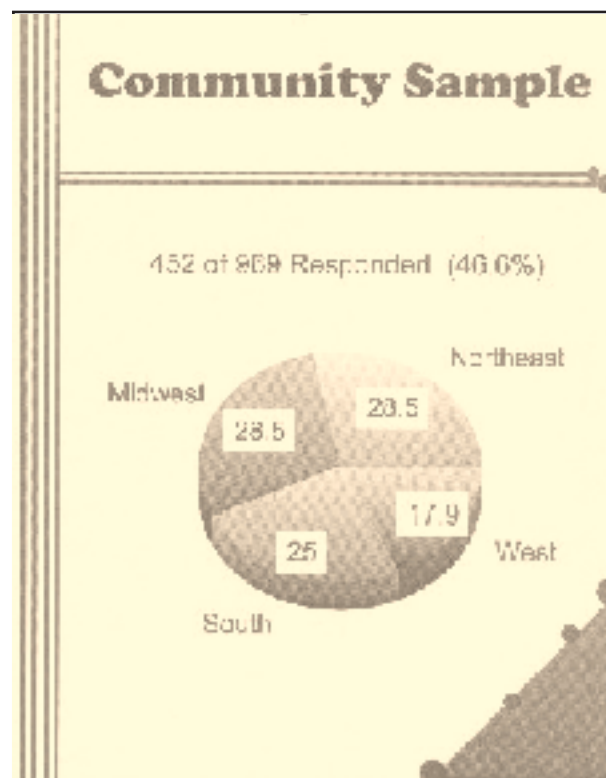
A great deal of information has been collected recently to look at the needs for technical assistance and resources needed by traditional postsecondary programs. Previously, PEPNet conducted a national survey that targeted almost 10,000 colleges and proprietary schools (Hopkins & Walter, 1998). By design, this study did not assess the needs of community based employment training centers. To complete the picture, the University of Arkansas Rehabilitation Research and Training Center for Persons who are Deaf or Hard of Hearing was asked to conduct a parallel study to the PEPNet national needs assessment. This survey targeted around 800 centers using a data collec-

tion instrument that was similar to the one used by the national PEPNet survey.

The rationale for this study is that a large percentage of the population do not go to college. For those who do start college, an estimated 75% of deaf college students drop out without completing a degree (Stinson & Walter, 1997). They obtain needed employment training from a variety of community-based employment training programs. Yet, little is known about these programs and their needs for technical assistance. We asked what kind of employment related services were provided. We asked about the resources used to provide these services and the numbers of individuals served. Equally important is the employment outcomes achieved by individuals served by these programs. Do they obtain jobs — *good* jobs with benefits, opportunities for promotion, and long-term employment? Finally, we wanted to determine the types of resources and technical assistance that would be helpful to these programs.

The study started with a total of 968 programs, of which 452 responded (46.6%). As may be seen in Figure 1, the programs that responded were geographically distributed across all four PEPNet regions. However, proportionally fewer survey responses were received from community-based programs located in the West.

Figure One: Community Sample.



Results

The sections that follow present snapshots of some of the key findings. For more in depth analyses, readers can obtain the web-based technical report (Boone & Watson, 1999).

Overall, these programs served large numbers of persons with various disabilities. The mean number of persons served was 1,972.3 (SD=7512). However, this large standard deviation indicates these programs are varied in size. Of the programs that responded, almost all indicated that they currently serve or plan to serve persons who are deaf or hard of hearing (97.7%). Only 2.3 percent of the programs did not have current plans to serve this population. This is a very positive finding. There are significant opportunities for service available. Yet, when we begin to assess the number of deaf or hard of hearing individuals served, these numbers decrease to an average of 528.6 persons (SD = 2187.4). While significant in size, there is clearly room for more services, given the size of the popu-

lation of individuals who could potentially benefit.

In general, it is important to state that if served, many persons, almost 40 percent, complete their program of services. Another 40 percent obtained positive employment outcomes including competitive employment (39.7 %), supported employment (13.7%), or sheltered employment (10.9%). Almost 20 percent were seeking employment. Very few (16.2 %) were not employed and not seeking employment. Clearly, a large proportion of those persons who received employment-related services succeeded. Given more resources, programs could positively impact more persons.

What types of support and resources do they need? We presented a list of 50 areas and asked the programs to rate their priority needs. Reported in Boone and Watson (1999), programs indicated that needs were high across all areas with average

ratings of between 3 and 4 for most items. Even more importantly, the needs identified were similar to those identified by college and university programs. Table One illustrates how some of the key areas compared.

Furthermore, respondent programs prioritized a number of specific resources as areas of high need. These included resources for employer development, workplace literacy, problem solving, job maintenance/advancement, and job accommodations. Since some of these training resources are available, it is clear that programs are unaware of their availability and could benefit from a network of expertise to help find resources, match them to need, and provide technical consultation in their use.

Programs were asked about their preferences in strategies to obtain these materials. These results, again similar to those obtained in the PEPNet survey, are presented in Table Two.

Table One: Mean Priorities¹

Needs for Technical Assistance	RT-31	PEPNet
Funding/Grant Writing	3.89	4.07
Ways to Improve Services	3.83	3.93
Advocacy Resources	3.66	3.35
Technology for Access	3.46	3.93
Staff Development	3.38	3.76

¹The scale ranged from 1 (low) to 5 (high).

Table Two: Mean Preferred Strategies¹

Strategy	RT-31	PEPNet
State or regional seminars	3.75	3.58
Workshops for service providers	3.75	3.44
Collaborations with colleagues	3.74	3.61
Faculty/staff in service training/development	3.74	3.54
Resource materials center	3.65	3.60
State or regional networks	3.64	3.54

¹The scale ranged from 1 (low) to 5 (high).

The desired technical assistance strategies are very much parallel to those desired and preferred by college and university programs. Furthermore, the mean ratings of need were higher. Is this indicative of more need?

These data highlight the need for on-going attention to developing these community-based programs at the state and regional level. Overall, we need to assist these programs in their efforts to better serve individuals who are deaf or hard of hearing. By doing so, we will enable more students to obtain the quality of services they need in order to obtain employment and succeed at work. Our efforts should focus on the entire deaf and hard of hearing population, not just the 29 percent who go to college. At the state level, we need to implement interagency agreements between rehabilitation, education, and community-based programs to provide more employment training opportunities. We need to identify and organize existing expertise, resources and materials to implement these agreements and to expand the state funding and resources needed to further develop these employment training programs.

At the regional level, we should encourage existing networks like PEPNet to expand their outreach to target community-based employment

training programs. These efforts should identify and organize expertise, resources, and materials to implement needed agreements to encourage these programs to grow and serve more individuals. Finally, on the national level, there is a clear need to fund and bring resources together to help develop and improve employment training programs at all levels, not just for colleges and universities.

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Students with Acquired Hearing Loss – Huh?

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Abstract

Students who acquire a severe to profound hearing loss face a difficult adjustment psychologically, socially, and vocationally. They frequently are unaware of other deaf or deafened people and the services available to them. Communication is the first issue a deafened student must address. This paper provides a description of adjustments experienced by deafened adults (Zieziula & Meadows, 1992), as applied to the personal experiences of the presenters.

Students with Acquired Hearing Loss – Huh?

We would like to open with the following definition from the Devil's Dictionary, 1991 ALDAcon version, written by Karen Graham. ALDA is the acronym for Association of Late Deafened Adults.

Huh? - The most utilized word in the ALDA vocabulary. It can be interspersed anywhere in a sentence. Often means: "Rephrase the question, please." May also mean: "I don't sign," or "I don't read lips," or "Even if I could understand you, I wouldn't know what you're talking about."

This definition was written to be humorous. We wanted to start with this definition because it is important to understand that deafened students often do not have effective receptive communication, especially if the hearing loss is recent.

The loss of receptive communication is one of the most difficult losses for an individual to encounter. When an individual is no longer able to listen to the radio, use a regular telephone, or have

casual conversation with friends, family, and children or grandchildren, the psychological impact is enormous. People who are born with hearing loss do not have to make adjustments in communication as deafened persons do.

In this presentation, we will explain the impact of being deafened from two perspectives. My experience involves sudden onset hearing loss as a young college student who is male and single. Mary will provide her perspective with progressive hearing loss as a married female with children.

Persons who acquire a severe to profound hearing loss frequently are unaware of other deaf or deafened people. Deafened individuals tend to experience difficulty at work, withdraw from social events, and suffer inwardly as a result of the loss of receptive communication.

Communication is the first issue a deafened individual must address. The myths and realities of lipreading, hearing aids, and other assistive listening devices must be addressed. Sign language is an option but it does take time to learn. Professionals who work in the field of deaf services often see learning sign language as "the answer" to problems encountered by deafened individuals. It is important that professionals understand that sign language may be part of the solution but, by itself, is not the solution for deafened individuals. Psychological issues need to be addressed and coping skills need to be developed.

Zieziula and Meadows (1992) developed a series of adjustment themes based on their study with deafened adults. We will discuss these themes based on our own personal experiences and hope that you can apply these experiences to

situations you encounter. The five stages of adjustment as identified are:

- Spectrum of Emotional Responses
- Secondary Losses
- Confusion of Identity
- Acceptance
- Need for Competent Professional Assistance

Steve Larew: The spectrum of emotional responses includes disbelief, shock, anger, guilt, and other emotions. I became deaf at age 18 years due to a viral infection and high fever. For approximately one week, I recall having a “bad cold” with runny nose, cough, sore throat, headache, and other related symptoms. I did not go to a doctor but chose to drink lots of juice and use aspirin. While having this cold, I noticed some difficulty hearing but assumed it was related to the head cold. One week later, the cold was gone, but I was still having difficulty hearing. I thought my radio was broken, the TV in the lounge seemed to be broken, and other students were mumbling. I refused to believe that I could not hear. I chose to become more isolated and less involved with student events.

I was angry that I had become deaf and felt guilty about not going to the doctor while sick and possibly not taking care of myself. The only other person I had met who was deaf was almost 90 years old. It is okay to be deaf if you are 90, but it was not okay to be deaf while I was 18! I had never met another young person who was deaf and had no idea of services available.

Mary Clark: My hearing loss was different than Steve’s as it was a gradual loss. Interestingly enough, individuals who experience a gradual loss also go through a spectrum of emotional responses. Each time the loss is experienced, we go through the emotions again. Despite my hearing loss, I was able to function as a hearing person until thirteen years ago after the birth of my second child. I was first diagnosed with a hearing loss in tenth grade. From tenth grade until my senior year of college, I did pretty well. In my senior year of college, I went from a 45 db loss to a 75 db loss and was labeled “legally deaf” a few months before I graduated. I was scared but still was not addressing grief issues and remained very positive. This may have been due to how I was raised. I still used the telephone, used hearing aids well, and

did not know other people with hearing loss. I had majored in an oral Deaf Education program at Ball State University, so that fit in with my hearing loss.

The entire time I was at Ball State, I was unaware that there was a disability coordinator who could have assisted me and that services were available. I finally told a professor about the hearing loss when I felt I was starting to go through some depression, and she helped me greatly by just talking with me and letting me know my feelings of sadness were very normal. She supported me by coming with me to the speech and language clinic to have my hearing tested. It was very comforting to have a “friend” or someone who supported me through this time, and I think this is important for those students like me who are enrolled in a regular college curriculum. I also had severe vertigo at various times during my college years. I knew it was related to my hearing loss, but I kept it to my myself and suffered through it. I was unaware there was medication that would have helped had I gone to a health center or a doctor. The vertigo was very depressing.

After the birth of my second child, I lost all the hearing I had left within a sixteen month time period. I went through these emotional responses once again and to a much greater degree.

Steve Larew: Secondary losses include relationships, social and work activities, and loss of environmental cues. Having become deaf, it was difficult to maintain friendships I had developed during the first semester of college as well as friendships from high school years. Using the telephone to stay in touch was out of the question. This was 1971 so the technology was not available to assist as it is in the year 2000. E-mail, TTYs, and pagers would have eased distant communication. Face to face communication would have remained difficult.

I became more of a “loner” and did not involve myself in college activities. My grades began to decline as I was not able to hear class discussion or lectures. I had always been dependent on auditory senses for learning, and now it was necessary to depend on visual skills and reading. I had a hard time making this adjustment.

Mary Clark: I had the same problems with friendships when I became deaf. I was the only student I knew of at Ball State that had a hearing loss. My closest girlfriends were supportive, but I felt very

different from everyone wearing the hearing aids and having a hard time at social events. I could still do a lot of “hearing” things like talk on the phone and talk one on one with friends, but going to a party or something was difficult.

Dating was hard. I never told my dates I wore hearing aids and if I couldn’t hear, I would bluff. I remember the hearing aids, used to have feedback noise if I hugged anyone, so I was always careful not to do that. I never dated anyone with a hearing loss because I did not know of anyone with a hearing loss. My world was all hearing friends and family members so I just dealt with the situation I was in the best I could. In noisy places I learned how to sit next to the person so that my “good” ear was closest to the sound. If it was noisy, I sat in the noisiest area and turned down my aids a bit. I found this to be helpful as others would have to speak up a little louder due to the noise, and the hearing aids would not pick up the background noise but pick up the people close to me talking loudly. Regardless, it was not really fun to go out and try to meet and talk with people. It was more of an anxious situation.

The way family get-togethers used to be and the way they became after my hearing loss was another secondary loss for me. My family is the kind of family where dinner time is a ritual that involves sitting at the table having lively discussions for hours on end. It was and still is a very tiring situation to continue to do this, as much as I enjoy being with them.

Confusion of identity involves deciding which social group an individual is comfortable with. At first, the deafened individual only knows he or she cannot hear. The person is not always aware of the Deaf, deafened, or hard of hearing organizations and groups. Once the individual is aware of these groups, the person needs to decide which is most comfortable. The individual is not limited to being involved in only one group but, most often, will find a higher comfort level with a certain group and become more involved with that group.

Steve Larew: My personal experience involved meeting Deaf people at Gallaudet College (now University). When I first arrived at Gallaudet, I had taken a six-week sign language class. My sign skills were basically limited to “My name is S-t-e-v-e”. Obviously that was not enough to interact

with 900 of the 1,000 students at Gallaudet who were fluent in American Sign Language.

I learned at Gallaudet that sign language was my most effective method of receptive communication. Hearing aids did not increase my speech comprehension.

My lipreading skills were and still are mediocre. Sign language worked for me. It was awkward for the first year, but I became friends with people who were patient with me. I use Signed English rather than American Sign Language (ASL) but people are able to understand me, and I understand them most of the time.

While I was a “think hearing” person at Gallaudet, I became more comfortable with Deaf groups than hearing groups. I was never able to fit in with hard of hearing groups. In 1990, I became involved with the Association of Late-Deafened Adults (ALDA) and found a group with whom I felt more comfortable than Deaf people. In simple terms, I found I identified with a group of people who were my peers and who had similar experiences.

Some of these deafened friends also attended Gallaudet at the same time I was there. At that time, in the mid 1970’s, we did not really discuss our onset hearing loss. If we did, it was not a lengthy conversation because I have no recall of those discussions. There were attempts to set up deafened groups before ALDA was established, but none of them had the success of ALDA. Now many ALDA members go to professional or consumer conferences, and we have become a clique. You can usually find us sitting at a table in the corner of a bar using our basic sign language skills and other modes of communication.

Mary Clark: Since my hearing loss was progressive, my family had some time to adjust in their own way. Through high school and college, I was identified by my family as a person with a “little bit of a hearing loss.” I described myself this way until 13 years ago. In college this was not really an issue because there was no real need for me to identify myself with regard to my hearing loss. I didn’t talk to people about it.

My crisis with identification happened after I became functionally deaf. I was taking my three-year-old daughter to day care one morning it hit me that I was no longer a person with a “little bit of a hearing loss.” Lauren was sitting in the back of the car and said something to me.

Normally, I would have heard her, but I could not understand her that day. I tried to bluff and she started crying. I bluffed the other way and she became hysterical. I then said, "we will wait until tonight and ask Daddy to help us" and that did not work either. She was hysterical and I had no idea what she was saying and could not fix it. It was a moment I will never forget, I asked another mother to tell me what my own child was saying. I realized I had to swallow my pride and do that for her sake. I then went out to the car, smiling and waving bye after we got it resolved, and then I fell apart. I realized I was not going to be able to hear her again and I had to figure out how to fix it. That night, as I was tucking her in, I told her that my ears were broken inside where she could not see them, and I could not hear her anymore but that things would be ok. We hugged and cried a bit. I think that episode had to happen for us to accept the fact that I could no longer hear.

Steve Larew: **Acceptance** involves not only accepting hearing loss for oneself, but acceptance by family and significant others as well. This acceptance involves identifying an effective method of communication. When an individual can understand other individuals, the road to acceptance is smoother. The individual learns how to function at home, at work, and in social situations.

I have met other deafened persons with family members who are not able to adjust. This is a difficult situation.

Assistive technology makes acceptance easier. TTYs, fax machines, visual alert devices, close-captioned television, Communication Access Real-time Translation (CART) and other devices makes communication much more accessible. Deafened individuals are very interested in cochlear implants. The improved technology with implants offers a cure to hearing loss that was not available in past years.

Mary Clark: I want to comment about family members being able to adjust. This is crucial to late-deafened persons adjusting themselves. If there is no support system, he or she is not going to accept himself/herself because no one else is accepting them. At Hearing Loss Link, one of the things we try to do is get family members or friends into a workshop or counseling with the deafened person and teach them about grief and

loss and help them develop coping and communication strategies.

Students need this kind of support system when they go home or when they are at school so that there is a feeling of some kind of control and respect for who they are, regardless of the hearing loss issues.

Steve Larew: The **need for competent professional assistance** involves you people in the audience as well as speech, hearing, and medical personnel. I can still remember my first visit to an Otolaryngologist in 1971. He could not find anything wrong with my ears so he asked if I was worried about the military draft, implying that maybe I was psychologically deaf. He then asked if I had been smoking bad marijuana! There was no useful information provided.

My parents were determined to find a cause for my hearing loss. I went to the hospital and other sites for numerous hearing tests and examinations. It was approximately one year later we met a social worker who informed us about vocational rehabilitation. I met with this counselor who informed me about Gallaudet, National Technical Institute for the Deaf (NTID), and a few other programs. In 1971, there were not many options available.

I chose to attend Gallaudet, learned sign language, and later decided to pursue a master's degree in Deaf Rehabilitation Counseling at Northern Illinois University. Graduate courses in counseling and audiology helped me to learn about myself. However, it was aggravating that I had to wait ten years to learn that my experiences were normal reactions.

It is important for service providers to be aware of the resources available for deafened persons. Effective therapy involves identifying an effective method of communication. How can you assist an individual if you cannot communicate? Use of text communication is important. With the widespread use of computers, it should not be too difficult for the therapist to type rather than use sign language or speak.

The number of resources available to assist deafened individuals is growing. The Association of Late-Deafened Adults (ALDA) hosts an annual conference. In Illinois, Hearing Loss Link is available to provide assistance to deafened persons in the Chicago area and can provide technical assistance to professionals across the country.

Mary Clark: Steve and I give presentations for people who work with students and it is obvious that students need to know about the disability coordinator, and the disability coordinator needs to know how to provide support for late deafened students. I think an in-service for ALL staff is vital, considering so many late-deafened students are in regular college curriculums and like I was then - probably not talking about it. Most late-deafened people are not assertive or do not know what kind of help they need.

At the Hearing Loss Link, we begin with communication. For me to tell clients to learn sign language when they have no one who signs to them is obviously not going to help their situation. Consumers and students tend to come to the Link through family members or because another crisis has happened. We use a laptop or listening device to help the person understand. The first time we see them we practice, and we have to be the communication specialist because the individual may not be able to address what is needed for communication. We try to include them in

social events or a support group that deals with acquired hearing loss. It would be beneficial to students to hook them up with another late-deafened person who lost their hearing as a student themselves. To hook them up with other students with hearing loss would be ideal.

In addition to what Steve said about resources, we have some books that ALDA sells—an ALDA reader and conference proceedings. They are helpful to lend out to consumers with acquired hearing loss issues and are helpful to professionals that deal with this population group.

Resources

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Effect of Postsecondary Education on Reducing SSI and SSDI Payments to Deaf and Hard of Hearing College Graduates¹

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Abstract

This report describes the impact that postsecondary education for deaf and hard-of-hearing students has on reducing dependency on federal Supplemental Security Insurance (SSI) and Social Security Disability Insurance (SSDI) payments. The National Technical Institute for the Deaf (NTID), a college of Rochester Institute of Technology (RIT), is used as a case study. The effects of gender, degree attainment and year of exit are key independent variables used in this study.

Thirteen percent of the deaf and hard-of-hearing sample received SSI, including 15% of the females and 11% of the males. The more advanced the degree, the less likely it is that a person will collect SSI. Most recent graduates (1992-1996) received SSI payments at a rate greater than those exiting between 1980-1991. For all degree levels the percentage receiving SSI decreases with age. Between 1980 and 1989 the rates for males and females were similar. However, female graduates between 1989 and 1996 were more likely to receive SSI than males.

Twenty percent of the cases received SSDI, including 25% of the females and 17% of the males. Rejected and withdrawals were 2-3 times more likely to receive SSDI than deaf bachelor's graduates. The older an individual the more likely he or she will receive SSDI. The percentage of females and males receiving payments was similar during

the first few years after graduation but female participation increases significantly over time.

Acknowledgments

The authors wish to acknowledge the assistance of Dr. Robert Bowen of Rochester Institute of Technology's Office of Institutional Research and Planning for his invaluable assistance in creating the data sets and developing the matched sample of cases from the RIT Student Record's System.

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Finally, we thank Richard Burkhauser, Sarah Blanding, Professor of Policy analysis and chair, Department of Policy analysis and Management at Cornell University, for providing us with valuable counsel regarding this research.

Introduction

The United States has a history of public policy focusing on "...increasing the ability of disabled workers to overcome their impairment through rehabilitation and job training" (Burkhauser & Haveman, 1982: p. 96). Federal disability policy provides education, training, and job-placement

¹The research reported in this document was conducted in the course of an agreement between Rochester Institute of Technology and the U.S. Department of Education.

services to assist disabled workers in gaining workplace access and accommodation. In recent years, competition for public funding to support education and training programs for working age disabled persons has increased, forcing programs to document and communicate the outcomes and benefits of their efforts. Programs need to provide constituencies with "...a better sense of what is being achieved with public resources" (Ruppert, 1994: 2).

Disability programs resulting from public policy and supported by federal and state funding are being challenged to see . . . whether the programs comprise the most efficient and equitable means of providing protection and social adequacy. [The evaluation is being spurred by a sense that]. . .the costs [of] these programs and taxes required to finance them are greater than necessary to provide a socially acceptable safety net (Burkhauser and Haveman, 1982: 96).

While it is assumed that programs for the disabled facilitate career enhancement and improvement in one's quality of life, public officials also view the venture as a strategic investment. "From this perspective, accountability becomes less a question of equitable and efficient operations than documenting a concrete return on investment" (Ewell, 1991: 14). One measure of return on investment is the extent to which postsecondary education that prepares disabled individuals for employment reduces dependency on SSI and SSDI payments. The National Technical Institute for the Deaf (NTID) is a federally funded postsecondary education program that prepares individuals for employment. As such, NTID needs to docu-

ment the return on the public investment, including reducing the dependency of its graduates on SSI and SSDI payments.

In assessing impact, leaders should be proactive and not wait for a crisis to occur before documenting benefits.

Administrators who want to strengthen the position and image of their agency...can emphasize to...stakeholders the contributions and benefits to the agency that the stakeholders value. It is especially important to emphasize these contributions and benefits on an ongoing basis and not wait until budget cuts or other problems arise (Knox, 1991: 245).

One question related to return on investment that educational programs for disabled individuals should address concerns the impact education has on reducing dependency on Federal Supplemental Security Income (SSI) and Social Security Disability Insurance (SSDI) payments. Reducing program participation is critical since both SSI and SSDI tend to be programs that result in long term participation on the part of disabled persons once they begin receiving these entitlements (Burkhauser and Havemen, 1982). Professionals working in the rehabilitation and education of deaf and hard-of-hearing persons have, for a long time, indicated that many individuals are made dependent by their reliance on funds available through Federal SSI and SSDI. Yet there is no research to indicate whether such dependence exists and what variables impact receipt of payments. This paper focuses on the effect postsecondary education has on reducing this long-term dependency on SSI and SSDI transfer programs. To determine this dependency, NTID addressed the following questions:

Table 1 Number of cases sent to the SSA by gender and attainment level.

Gender	Sub Bachelor	Deaf Bachelor	Hearing Bachelor	Rejected	Withdrawal	Total	Percent
Male	1146	414	409	748	1688	4405	57%
Female	856	305	299	696	1112	3268	43%
Total	2002	719	708	1444	2800	7673	100%

- What are the effects of degree attained on receipt of SSI and SSDI payments?
- What are the effects of gender on receipt of SSI and SSDI payments?
- What are the effects of year of age on receipt of SSI and SSDI payments?

Methodology

To determine SSI and SSDI payments, the authors collaborated with the Social Security Administration, (SSA) Division of Research and Statistics. The project goal was discussed with SSA representatives, and a contract was negotiated for their services. SSA recovered full costs under the agreement. Information from SSA followed strict confidentiality guidelines. No data about individuals in the pool of subjects were reported. Individuals were not required to furnish any information, and no personal information was used in the data submitted by NTID.

NTID forwarded a data file of 7,673 cases to SSA. The file contained the following variables for each case: social security number, year of exit (1980 to 1996), gender, and degree attainment. The degree attainment variable had five categories: hearing with a bachelor degree from RIT; deaf with a bachelor's degree from NTID/RIT; deaf sub-bachelor's graduate from NTID; attended NTID / RIT but withdrew prior to receiving a degree; and applied to NTID but who were rejected (denied admission). Withdrawals and rejected students were studied in order to measure the effect of not completing college. The assumption could be made that the rejected students are a reasonable proxy for students with no college experience.

The sample was retrieved from the Student Record System at the Rochester Institute of Technology (RIT). This study is intended to measure the impact of education on NTID students and is not meant to be representative of deaf and hard-of-hearing persons in the United States.

Table 2

Number of cases sent to SSA by year of exit and attainment level.

Year of Graduation	Sub Bachelor	Deaf Bachelor	Hearing Bachelor	Rejected	Withdrawal	Total
1980	139	35	34	131	144	483
1981	155	31	31	103	123	443
1982	119	31	31	69	127	377
1983	138	26	26	115	181	486
1984	135	40	40	152	174	541
1985	129	39	39	118	204	529
1986	174	28	27	100	200	529
1987	156	30	29	90	196	501
1988	101	42	42	79	175	439
1989	127	45	43	70	126	411
1990	113	37	36	61	180	427
1991	100	48	48	45	155	396
1992	92	48	48	72	141	401
1993	83	52	51	57	168	411
1994	107	58	59	80	167	471
1995	69	66	65	38	137	375
1996	65	63	59	64	202	453
Total	2002	719	708	1444	2800	7673

SSA matched the 7,673 subjects with national records of individuals receiving SSI and/or SSDI payments in July 1998.¹ Table 1 presents information regarding gender and degree attainment of cases in this study.

Fifty-seven percent of the cases were male and 43% female. The number and percentage of males exceeded females at all attainment levels. The data file also contained information on year of exit. (Table 2). In this study, year of exit refers to the year an individual completed a degree, was rejected (denied admission), or withdrew from NTID before receiving a degree. As seen in Table 2, the percentage of cases was evenly distributed across all years of exit.

Disability Payments

Supplemental Security Income (SSI) and Social Security Disability Insurance (SSDI) provide disabled individuals with income support to facilitate career enhancement and improvement in quality of life. Approximately 60 percent of U.S. students receive SSI payments while attending NTID (Clarcq and Walter 1998). One outcome measure, then, is the extent to which postsecondary education that prepares deaf and hard-of-hearing individuals for employment reduces dependency on SSI and SSDI payments in a national environment where the numbers of disabled individuals receiving benefits is increasing (Mashaw, Reno, Burkhauser and Berkowitz, 1996: 119).

Supplemental Security Income

Supplemental Security Income (SSI), a federal entitlement program established in 1972, is for disabled individuals with little or limited resources. This program is an important part of this country's income support policy. General funds from the U.S. treasury finance the program. To be considered disabled for SSI an "...adult must have a physical and/or mental problem that keeps them from working for at least 12 months..." (Social Security Programs Can Help, 1995: 1). To be eligible for SSI a person must be a U.S. citizen or legal resident. Previous research by the authors (Clarcq and Walter, 1997) indicates that approximately 60 percent of all U.S. students attending NTID receive SSI benefits while enrolled. This 60 percent figure can be used as a baseline against

which to judge the effect of college graduation on reducing dependence on SSI entitlements. These funds, averaging approximately \$400 per month, are intended to provide a security net for individuals with limited resources. It is interesting to note, (Table 3 and Figure 1) that students applying to NTID and who were subsequently rejected received SSI payments at levels similar to students attending NTID. NTID students typically use these funds to defray the individual costs of their education.

Table 3 presents information—by age and education level—about the percentage of subjects who collected SSI benefits during July 1998. While this is a one-month snapshot, the figures obtained match those from earlier research (Clarcq and Walter, 1996) and therefore, will be used as representative of SSI rates. Age has a significant impact on receipt of SSI payments. Those exiting most recently (24 to 28 year olds) received SSI payments at rates greater than those who exited 16 to 18 years earlier (36 to 40 year olds). It is noteworthy that, for all groups, the percentage decreases with age. As a point of reference, by age 40 approximately nine percent of male and female withdrawals continue to collect payments, while for graduates the percentage is zero.

As indicated, on average, 60 percent of students attending NTID collect SSI while enrolled. This percentage represents approximately the same rate of SSI participation as for 20-year-old students rejected for admission. However, after graduation, the rates decline rapidly to the point that they are almost zero within ten years after graduation. Students who did not graduate maintain relatively high levels of SSI throughout the period of this study.

Social Security Disability Insurance

Social Security Disability Insurance (SSDI) is a federal social insurance program established in 1956 for disabled workers who are eligible for Social Security coverage (Social Security Disability Programs Can Help, 1995). "A person will be considered disabled if she or he is unable to do any kind of work for which they are suited and their disability is expected to last for at least a year..." (West, 1995: 2). A Social Security Administration priority is to help beneficiaries become independent and to take advantage of employment opportunities. SSDI is not intended to be a perma-

Table 3
Percentage of subjects receiving SSI benefits by age, degree, and gender.

Age	MALE					FEMALE				
	Hearing BS	Deaf BS	Sub BS	Withdrawn	Rejected	Hearing BS	Deaf BS	Sub BS	Withdrawn	Rejected
20		45%	63%	57%	60%		59%	67%	64%	72%
21		45%	63%	57%	48%		59%	67%	64%	57%
22		45%	63%	57%	41%		59%	67%	57%	49%
23		45%	63%	42%	36%		59%	67%	44%	43%
24	0%	45%	19%	33%	32%	2%	59%	29%	37%	38%
25	0%	45%	14%	27%	28%	1%	59%	22%	32%	34%
26	0%	6%	11%	24%	26%	1%	13%	17%	28%	31%
27	0%	4%	9%	21%	23%	1%	10%	14%	24%	28%
28	0%	3%	8%	18%	21%	1%	8%	12%	22%	26%
29	0%	3%	7%	16%	19%	1%	6%	10%	19%	24%
30	0%	2%	6%	15%	18%	0%	5%	9%	17%	22%
31	0%	2%	5%	13%	16%	0%	4%	7%	15%	20%
32	0%	2%	4%	12%	15%	0%	4%	6%	14%	18%
33	0%	1%	3%	11%	13%	0%	3%	5%	12%	16%
34	0%	1%	3%	9%	12%	0%	2%	4%	11%	15%
35	0%	1%	2%	8%	11%	0%	2%	3%	9%	14%
36	0%	1%	1%	7%	10%	0%	1%	2%	8%	12%
37	0%	1%	1%	7%	9%	0%	1%	2%	7%	11%
38	0%	0%	0%	6%	8%	0%	0%	1%	6%	10%
39	0%	0%	0%	5%	7%	0%	0%	0%	5%	9%
40	0%	0%	0%	4%	6%	0%	0%	0%	4%	8%

ment source of income. Rather, it is meant to improve a person's economic condition. However, nationally, fewer than 10 percent of disabled individuals receiving benefits will leave the SSDI roles (Mashaw, Reno, Burkhauser, and Berkowitz, 1996).

SSDI is funded with Federal Insurance Contributions Act (FICA) taxes paid by employers and workers. Eligibility for disability benefits is based on a person's work history and the benefit amount depends on one's earnings. Individuals must have worked and paid FICA tax for enough years to be covered under Social Security, and some of the taxes must have been paid in recent years. The SSDI payment amount is based on a worker's life-

time average earnings covered by social security. At the time of this study, to be eligible for SSDI a disabled person must not be working or working but earning less than the Substantial Gainful Activity (SGA) level (\$500/month). In essence, SSDI is an unemployment benefit for a person with a disability. The benefit doesn't stop until the person finds a job that exceeds the SGA level.

Table 4 and Figure 2 provide information—by degree attainment and age—about the percentage of males and females receiving SSDI. It should be noted that almost no one attending NTID collected SSDI. This is because most students do not meet SSDI participation requirements before enrolling. In contrast, immediately after exit significant num-

Figure 1
Percentage of males and females receiving SSI payments by age and education level

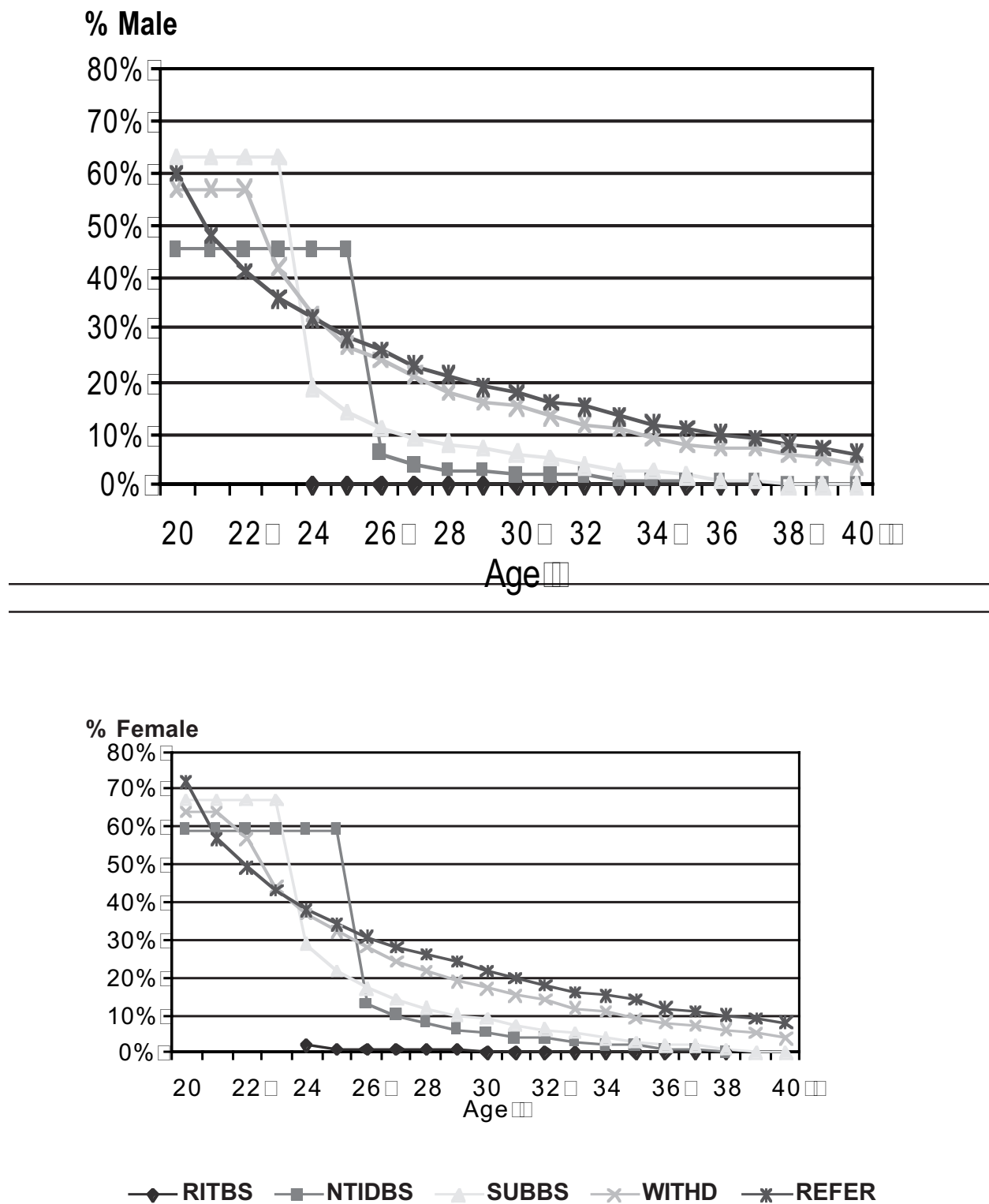


Table 4
Percentage of subjects receiving SSDI benefits by age, degree, and gender

Age	MALE					FEMALE				
	Hearing BS	Deaf BS	Sub- BS	Withdrawn	Rejected	Hearing BS	Deaf BS	Sub- BS	Withdrawn	Rejected
20					7%					19%
21					12%					22%
22				23%	15%				21%	24%
23				23%	17%				24%	25%
24	1%		14%	23%	18%	3%		21%	26%	26%
25	0%		13%	23%	20%	2%		23%	28%	27%
26	0%	17%	13%	23%	21%	2%	5%	24%	29%	28%
27	0%	15%	13%	23%	22%	1%	10%	24%	29%	28%
28	0%	14%	13%	22%	23%	1%	12%	25%	30%	29%
29	0%	13%	13%	22%	23%	1%	14%	25%	31%	29%
30	0%	12%	13%	22%	24%	1%	15%	26%	31%	30%
31	0%	12%	13%	22%	25%	1%	16%	26%	32%	30%
32	0%	11%	13%	22%	25%	0%	17%	26%	32%	30%
33	0%	11%	13%	22%	26%	0%	18%	26%	32%	31%
34	0%	10%	13%	22%	26%	0%	19%	27%	33%	31%
35	0%	10%	13%	22%	27%	0%	19%	27%	33%	31%
36	0%	10%	12%	22%	27%	0%	20%	27%	33%	31%
37	0%	9%	12%	22%	27%	0%	21%	27%	34%	32%
38	0%	9%	12%	22%	28%	0%	21%	27%	34%	32%
39	0%	9%	12%	22%	28%	0%	21%	27%	34%	32%
40	0%	9%	12%	22%	28%	0%	22%	28%	34%	32%

bers begin collecting benefits. This is probably because numbers of students have worked while in college, either at part time jobs or in cooperative education positions, and become eligible for benefits. On average 15 percent of all male graduates and 20 percent of female graduates collected SSDI benefits one year after graduation.

As with the percentage of subjects reporting earnings, there are significant differences between males and females. For both males and females the percentage of cases collecting SSDI benefits who withdrew or were rejected at admission was greater than for students who graduated. The percentage of male graduates collecting SSDI gradually decreases with increasing age, while the rate

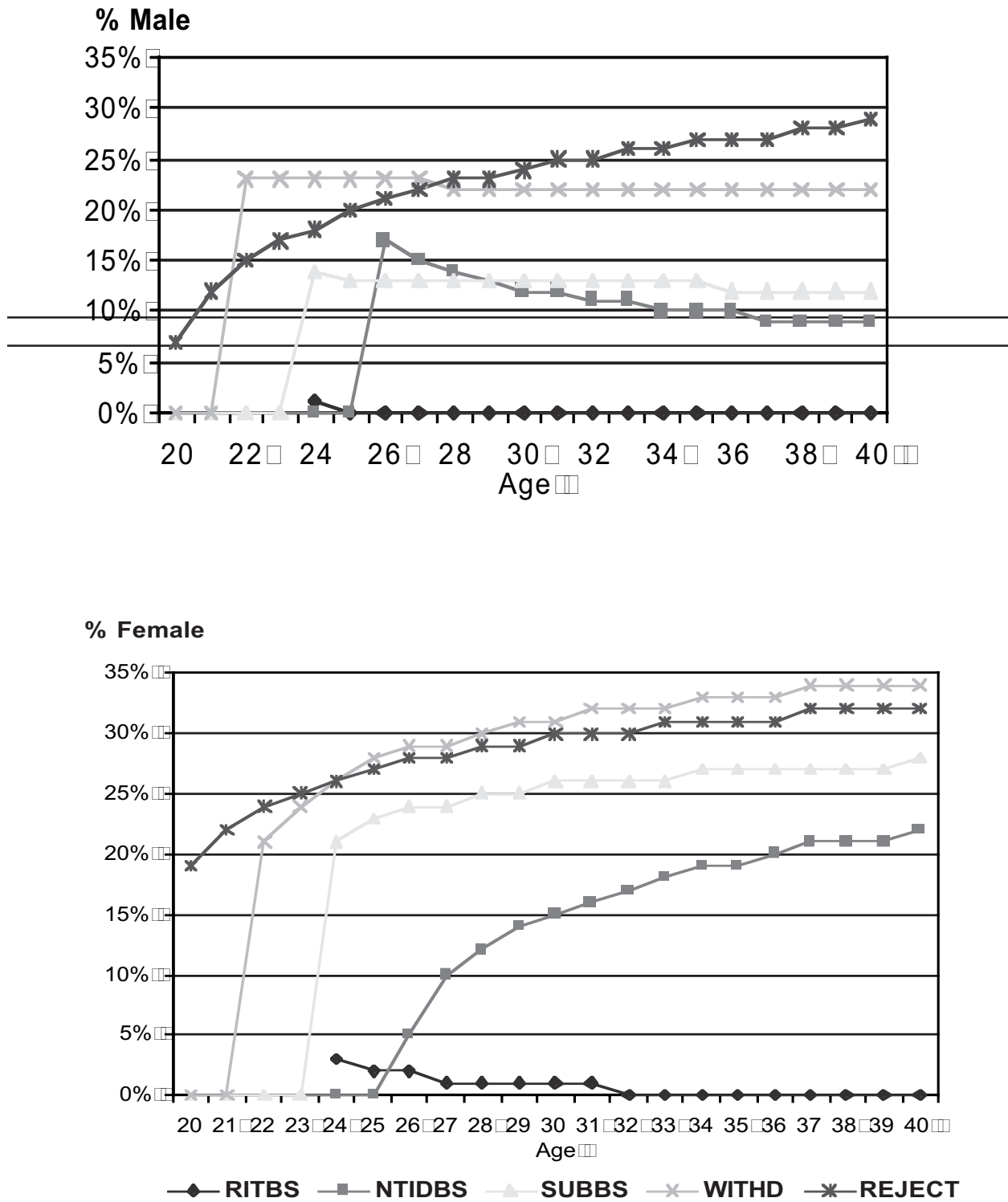
increases for females. By age 40 approximately 10 percent of male graduates collected SSDI benefits, compared with approximately 30 percent of females who did not graduate. Over time, graduation from NTID reduces dependency on SSDI, especially for males. For females, graduation reduces the numbers receiving SSDI payments.

Summary

Completing college certainly reduces the probability that a deaf and hard-of-hearing person will collect SSI or SSDI. By age 40 no graduates are collecting SSI while five percent of non-graduates continue to participate in the program. This re-

Figure 2

Percentage of males and females receiving SSDI payments by age and education level.



duction is especially noteworthy when one considers that approximately 60 percent of graduates were receiving SSI benefits while enrolled as students.

SSI contrasts with SSDI in that, while they were students, virtually no graduates were participating in the SSDI program, but by age 40 about 10 percent of males and 25 percent of female graduates are collecting SSDI. These rates compare to approximately 30 percent for non-graduates. It also appears that individuals graduating with sub-bachelor's degrees have higher rates of SSDI participation than individuals graduating with bachelor's degrees. These higher rates are probably the result of increased unemployment on the part of sub-bachelor's graduates, and might be indicative of employability problems of some persons graduating at this level.

While SSDI rates for males are relatively flat over time, rates for females increase with time. It appears that females use SSDI as an income support during their child rearing years. One unanswered question is whether these individuals will return to the workforce after their childbearing years. Mashaw, Reno, Burkhauser and Berkowitz (1996) indicate that, nationally, fewer than 10 percent of individuals collecting SSDI are ever removed from the roles. If these national statistics apply to deaf women, then it can be expected that an increasing number of highly educated deaf and hard-of-hearing females will collect SSDI throughout their life.

Policy Implications

The findings suggest that federal funding of post-secondary programs such as NTID reduces continued dependence on SSI and SSDI programs, especially for graduates. However, there are differences between these two programs.

An earlier study (Clarq and Walter, 1997) found that approximately 60 percent of students attending NTID were receiving SSI. Ten years after graduation less than one percent of these graduates are collecting SSI, while ten percent of non-graduates continue to receive benefits even into their 30s. Training programs have a significant impact in improving overall income levels to avoid continued dependence on the income supports provided through the SSI program.

The findings are not as clear for SSDI, since there is a relatively high percentage of graduates

who are receiving SSDI benefits well into their thirties. The issue to be addressed is whether the reported levels of 18 percent for sub-bachelor's and 13 percent for bachelor's graduates are acceptable. Certainly these levels are lower than the 30 percent (30%) reported for those who do not graduate. While college graduation reduces the probability that individuals will collect SSDI, significant numbers of graduates (12 percent of male and 30 percent of female) are receiving payments 10 years after graduation. As long as U.S. disability policy permits deaf and hard-of-hearing persons to qualify for SSDI there will be a certain percentage of people taking advantage of the benefit.

The high percentage of females collecting SSDI deserves special note, though it is not possible from this study to assess whether the relatively higher percentage of female participation is based on income need or on the fact that SSDI is a social benefit of which deaf and hard-of-hearing women of childbearing age can take advantage. Findings from this research indicate that many deaf and hard-of-hearing women who were previously employed begin collecting SSDI by the time they are in their early thirties. The policy issue raised is whether this is an intended use of SSDI.

Another question raised for further study is whether there is any relationship between major area of study and the probability of collecting SSDI. The results of this study poses the hypothesis that programs whose graduates seek employment in areas where the salary levels are only slightly above minimum wage (i.e. less than 10 dollars per hour) and for which there is little opportunity for job advancement, are prime candidates for SSDI. It makes economic sense, since the difference between the SSDI benefit and the wage potential is relatively narrow. The question NTID must address is whether there are such programs and whether these programs are responsible for the higher than desired level of graduates collecting SSDI, especially at the sub-bachelor's level.

The findings discussed in this report suggest that further research must be conducted which evaluates the relationship between major area of study and relative earnings level of persons collecting SSDI at a point in time. Research of this nature would offer reason(s) for collecting SSDI. For example, it is possible that some sub-bachelor's graduates have difficulty enhancing their technical skills and thus need SSDI payments

as part of the process of developing new skills necessary to function in the workplace. Such findings could provide information concerning levels of earnings and participation in SSI and SSDI programs to be expected from graduates of majors offered through the college of NTID.

Endnote

1. We use the July participation rates as representative of average rates across a year. While the authors recognize there may be monthly variations in the numbers of individuals collecting SSI and SSDI, a study conducted in 1996 with NTID alumni as subjects (Clarq and Walter, 1997) indicated similar overall rates of participation as the current study.

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Improving Rehabilitation and Employment Outcomes for Postsecondary Students Identified as Deaf and Low Functioning (LFD)

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Abstract

This paper provides an overview of newly published national guidelines for improving rehabilitation and employment training services for non-college bound students who are deaf, particularly those described as “Low Functioning.” The overview starts with a brief description of the population and the problems these individuals present to postsecondary training efforts on their behalf. Ways and means for improving school to work transition services, employment training, and placement efforts are then presented. The need for hiring skilled and knowledgeable personnel and the importance of planning and implementing statewide postsecondary employment training and service delivery systems for “LFD” and other non-college bound individuals are highlighted. The paper concludes with a series of programmatic recommendations encouraging PEPNet programs and personnel in the various states and regions to foster collaboration among state VR agencies and postsecondary training and education programs in order to better provide employment preparation training for non-college bound and “LFD” individuals.

Federal/State VR Program’s Institute on Rehabilitation Issues

Each year, the Rehabilitation Services Administration (RSA) program within the federal Office for Special Education and Rehabilitative Services (OSERS), funds three Institutes on Rehabilitation Issues (IRI). These institutes are conducted through

grants to RSA Regional Rehabilitation Continuing Education Programs (RRCEPs). During 1998-1999, one of the three designated topics for the 25th IRI was entitled: “Improving Rehabilitation Services and Employment Outcomes for Individuals who are Deaf and Low Functioning (LFD).” A national ‘Prime Study Group’ of experts drawn from the Federal/State VR agencies and the field of deafness rehabilitation were convened to collaborate in the development, writing, and dissemination of guidelines describing ways and means that the states can address major issues confronting the rehabilitation community in their efforts to serve deaf individuals described as “LFD.”

In this paper, key members of the “LFD IRI Prime Study Group” present an overview of the materials and recommendations generated by the LFD study group. The focus of the paper is to provide an overview of the published 25th IRI report (Dew, 2000) and encourage PEPNet programs and personnel in the various states to become active players in shaping ways and means that their own state VR agency implements the recommendations developed by the “LFD IRI Prime Study Group.” A national call for improving postsecondary education and training efforts on behalf of “LFD” and other non-college bound deaf persons is an integral part of the report’s recommendations.

Readers who are not familiar with the “IRI” program need to know that: the State/Federal VR program uses the annual “IRI” process to lay out programmatic expectation for state VR agencies to utilize as a document to guide their efforts to improve the delivery of rehabilitation

services and programs for persons in their respective states. Contemporary issues and challenges related to rehabilitation efforts on behalf of “LFD” persons will obviously impact upon and shape the way the rehabilitation field goes about the business of serving persons with multiple and severe disabilities, including those individuals who are deaf or hard of hearing and have been identified as “LFD.”

The goal, accordingly, was to provide a forum in PEPNet 2000 which would provide the information that educators and rehabilitation personnel involved in postsecondary education and training programs designed for students who are deaf or hard of hearing need in order to be informed of the issues and processes involved. In other words, the goal was to empower deaf education and rehabilitation professional and consumer representatives to play productive roles in the process of defining and implementing meaningful changes to improve the nation’s rehabilitation system for individuals who are deaf or hard of hearing, especially in the areas of postsecondary education, training, and related employment preparation services.

Organization of the “25th IRI for LFD Persons”

The 25th IRI guidelines for improving vocational rehabilitation efforts with deaf persons described as low functioning are organized into six chapters. These include:

- 1) Understanding Individuals who are Deaf and Low Functioning,
- 2) Assessment and Casefinding,
- 3) School-to-Work Transition,
- 4) Achieving employment Outcomes for the LFD Population,
- 5) Human Resource Management, and
- 6) Assessing Services and Making a Commitment.

Time and space constraints limit us to providing only an overview of selected highlights from the 25th IRI on LFD. We will focus our presentation on describing the population and reviewing selected challenges these individuals present to the states as they attempt to plan and implement programmatic service delivery and postsecondary training programs for LFD individuals. Recommendations are

then provided for ways and means that the states and nation might better approach the postsecondary training and employment training for these individuals. The interested reader is encouraged to access the actual IRI publication (Dew, 2000) which is available in both print and electronic format from various sources listed in the References section of this paper (e.g., an electronic PDF file from the University of Arkansas at <www.uark.edu/deaftrc>, or the Oklahoma Clearinghouse at <www.nchtrm.okstate.edu/>).

Characteristics of the Population

Deaf people who are eventually described as “low functioning” are identified as such because of a diagnosed secondary disability or because of problems in behavior, academic achievement, language use, development of independent living skills, employment, or some other major life functioning with no known etiology. Research and practice have identified and agreed on six characteristics that seem to describe persons who are LFD. These include, but are not limited to (Dew, 2000, pp 3-4):

1. Inadequate communication skills due to inadequate education and limited family support. Presenting poor skills in interpersonal and social communication interactions, many of these individuals experience difficulty expressing themselves and understanding others, whether through sign language, speech and speech reading, or reading and writing.
2. Vocational deficiencies due to inadequate educational training experiences during the developmental years and changes in personal and work situations during adulthood. Presenting an underdeveloped image of self as a worker, many exhibit a lack of basic work attitudes and work habits as well as a lack of job skills and/or work goals.
3. Deficiencies in behavioral, emotional, and social adjustment. Presenting a poorly developed sense of autonomy, many exhibit low self-esteem, have a low frustration tolerance, and have problems of impulse control that

may lead to mistrust of others and pose a danger to self and others. Because they experience difficulty in normal social interactions, many are avoided or rejected either because of socially unacceptable behaviors or because of societal attitudes and discriminatory actions toward them.

4. Independent living skills deficiencies. Many of these individuals experience difficulty living independently, lack basic money management skills, lack personal hygiene skills, cannot manage use of free time, don't know how to access health care or maintain proper nutrition, and have poor parenting skills.

5. Educational and transitional deficiencies. Most read at or below a fourth-grade level and have been poorly served by the educational system, are frequently misdiagnosed and misplaced, lack a supportive home environment, are often discouraged in school and drop out, and are not prepared for post-school life and work. Approximately 60% of those deaf students who leave high school cannot read at the fourth-grade level.

6. Health, mental, and physical limitations. Many have no secondary physical disabilities, but a large number have two, three, and sometimes more disabilities in addition to that of deafness. In fact, 30% of deaf high school leavers had an educationally significant additional disability. These secondary disabilities range from organic brain dysfunction to visual defects. These problems are further compounded in many instances by a lack of knowledge on how to access health care and/or self-care.

In addition, the IRI Task Force estimated that approximately 25-30 percent of the nations' deaf population has other disabilities in addition to deafness. The combination of these set of six significant factors often result in significant educational deficits among many deaf students. There is also a consensus that 'inadequate communica-

tion and language skills' are among the defining characteristics and directly hinder educational and rehabilitation efforts on their behalf.

Unfortunately, the bulk of our nation's postsecondary training resources for students who are deaf are best suited to the college-bound student. As a result, many of the non-college bound students (which include LFD) exiting secondary educational programs each year are not receiving the attention and resources (e.g., on-the-job training, job coaching, and related community-based employment training) they need for obtaining other types of postsecondary job training and assistance in preparing for employment. Yet, a look at recent national statistics available from the Rehabilitation Services Administration for Fiscal year 1997 shows that among the 35,209 deaf and hard of hearing persons served by the Federal/State VR program that year, 14,824 were closed successfully (employed). Of those 'closed successfully,' 13 percent had received support for college/university training, while 31 percent received community-based employment training (See Table 1), precisely the programs that are not currently targeted by most PEPNet programs!

Table 1
VR Training Outcomes -
RSA 911 Data for 1997

	Frequency	Percent
Applied for Services	35,209	100
Closed Successfully	14,824	42
College/University Training	1,917	13
Employment Training	4,626	31

Transition from School to Work or Postsecondary Training

Among other priorities, the IRI Task Force recommended that the states need to more aggressively identify and enroll LFD students in school-to-work transition programs. They also proposed that a person-centered ecological

planning approach can be an effective tool for assessment of individual abilities and potentials in all critical areas. It is recommended that school and VR personnel should place an emphasis on a goal-oriented approach using “mapping,” discrepancy analysis, and trial work assessment strategies such as job prospecting and on-site job coaching in order to obtain assessment data that looks at the whole person across all relevant environments where he or she will function.

Furthermore, it was emphasized that: State VR agencies need to become involved with students who are LFD at earlier age. In 1997, as a national average, only 15 percent of consumers of VR services in active status were under the age of 22, indicating we are not reaching and serving students with disabilities who are of school age. A 1994 study of deaf youth found that 49 percent of non-college bound youth under the age of 23 were unemployed; even more alarming, 39 percent of those OVER the age of 23 continued to have no job/work. VR and schools need to use best practices models for transition efforts with LFD students.

Among other initiatives, school and VR personnel should cooperatively design as many strategies as possible to introduce the student who is LFD to concepts of self-care, independent living, and work experiences, including on-the-job training, supported employment, and related activities.

If VR providers are to maximize the employability and job retention skills of LFD consumers, they must design programs and interventions that circumvent risk factors by focusing their attention on a specific applicant, identifying his or her talents and abilities, and then locating the most appropriate job for that person.

It should also be emphasized that a key factor to the success of the consumer who is LFD will be provision of postemployment and long-term follow-up services that foster development and use of natural supports within the workplace as well as job coaches and ongoing follow-ups to ensure job retention over time. All levels of the VR system — administrators, direct service professionals, clerical support, and contractors — must embrace the concept that employment goals and quality employment can only be realized with the employer as our customer and eventually as our partner.

Qualified Staff with Appropriate Knowledge, Skills, and Abilities

The Rehabilitation Act Amendments of 1998 emphasize in Section 101 (a) (7) that the states establish and support qualified rehabilitation staff, mandating a comprehensive system of personnel development (CSPD) that focuses on training “to ensure an adequate supply of qualified State rehabilitation professionals and paraprofessionals” and to establish standards for such staff. The 1998 Rehabilitation amendments further require, in Section 101 (a) (7) (c), that the state plan: “contain standards to ensure the availability of personnel within the designated State unit, to the maximum extent feasible, trained to communicate in the native language or mode of language of an applicant or eligible individual.”

Provision of VR information and services “in an appropriate mode of communication” is specified throughout the Act from the point of intake to participation in closure decisions. Plainly, it is intended that communication accommodations be provided to the person who is deaf throughout the VR process, either directly by the counselor or other service providers or through interpreters and technology that result in understandable two-way communication. In addition to the need for commitment at the top administrative level, it is critical to have an administrative staff person — such as a State Coordinator of Services for Individuals who are Deaf or Hard of Hearing (SCD) — who has knowledge and skills in the area of LFD and is empowered to provide direct support to field staff.

The IRI recommended that states identify or establish a statewide network of State VR direct service delivery professionals (Rehabilitation Counselors for the Deaf - RCDs) and allied professionals who are qualified to provide equal access for individuals who are LFD in VR, independent living, and supported employment extended services. Counselors and other staff providing services to LFD must either be skilled or develop prerequisite knowledge, skills, and abilities (KSA) in the three distinct areas of: Professional Discipline KSAs, Communication KSAs, and Knowledge of Deafness KSAs. The states can implement and use Comprehensive State Personnel Development (CSPD) and other HRD training and development strategies to enhance and improve the KSAs of the agency's personnel (Table 2).

Table 2
Development Required for Different Types of Applicants

Level of Readiness	Development Needed
Discipline-ready, with KSA with individuals who are LFD	<ul style="list-style-type: none"> • Continued honing of skills through use of mentors and peer contacts
Discipline-ready, with no experience	<ul style="list-style-type: none"> • Communications skills • Deafness knowledge
Communication-ready	<ul style="list-style-type: none"> • Professional discipline • Deafness knowledge
Deafness-ready	<ul style="list-style-type: none"> • May need manual communication skills • Discipline-related training (rehabilitation, job placement, etc.)

Figure 1
Model Assessment of Current Agency Status

Assessment of Current Agency Status & Assessment Plan	<i>Where are we?</i> <ol style="list-style-type: none"> 1. Level and distribution of current services 2. Quality of current services 3. Counselor assignments and accessibility 4. Office accessibility 5. Policy and practice analysis 6. Projected unserved numbers 7. Available pre-service programs 8. Available staff training programs and consultants
State of the Agency Report Development of Strategic Plan	<i>Where do we want to be?</i> <ol style="list-style-type: none"> 1. Statewide staffing plan 2. Recruiting/assigning counselors 3. Accessibility compliance 4. Policy, standards, and practice 5. Pre-service training plan 6. In-service training plan 7. Continuing education plan
Plan Implementation and Monitoring, Evaluation, Revision	

Assessment and Strategic Planning

Key Points for State-Federal Assessment & Strategic Planning are outlined in Figure 1. Details for following this assessment model can be found in “Rehabilitation of Individuals Who Are Hard of Hearing and Late Deafened: Administrator’s Guide” (University of Arkansas, 1993), of which this is an adaptation. The guide is available through the Oklahoma Clearinghouse.

When assessing current service level, it is important to look at both the current numbers served and the quality of services provided to this population. Analyses of projected unserved numbers and unmet need statewide is equally critical since many individuals who are LFD may have slipped through the cracks.

Making the Commitment: State and Federal Recommendations

State Agency:

- Conduct a formal assessment of the agency’s current quality and scope of services for individuals who are LFD and develop a strategic plan that will ensure equal outreach, access, and quality of postsecondary training and employment services for this population.
- As new programs are developed, including one-stop centers established through the Workforce Investment Act, consider how individuals who are LFD will be accessed and accommodated. Provide technical assistance as needed.
- Consider the needs of individuals who are LFD in the development of cooperative interagency agreements between state VR and postsecondary education and training programs.
- Address holistic needs of persons who are LFD (such as independent living skills training, basic education, and communication and language training) through policy modifications or collaborative efforts with other agencies so that these individuals are enabled to achieve a successful employment outcome.

- State VR agencies that prohibit out-of-state referrals should develop a process to allow justification for use of out-of-state postsecondary education and training programs for persons who are LFD.

OSERS:

- Encourage RSA to conduct a national forum of State Coordinators for the Deaf and State Coordinators for the Deaf-Blind or designated staff to be held biennially. These forums would provide opportunities for collaboration, networking, and sharing information about model programs and services. The first forum should focus on implementation of findings of this IRI document on improving VR services and employment outcomes.
- Encourage RSA to establish appropriate disability coding (911 data) for the purpose of collecting and tracking data related to VR services and this population.
- Encourage OSERS to fund a minimum of four regional service centers to provide specialized direct services for individuals who are LFD.
- Encourage NIDRR to again fund a Research and Training Center for LFD or to increase the funding to RT-31 at the University of Arkansas to enable that group to appropriately address this population in their priorities.
- Encourage NIDRR to develop a priority, either within a research and training center or in research-related competition, for the development of an ASL assessment method for use with adults to establish a baseline functioning level and identify specific language-related deficits of adults who are LFD.
- Encourage funding of a training and technical assistance network to assist professionals and programs serving individuals who are LFD that parallels the PEPNet structure and regions.

- Recommend that each PEPNet geographical region designate 25% of funds and resources to development of voc-tech and employment training programs.

Challenges to PEPNet, Deaf Education, and Deafness Rehabilitation Field

To play a productive role in this process, postsecondary programs and personnel skilled in deafness will need access to the kind of first-hand information this presentation was designed to provide regarding the IRI related to rehabilitation efforts on behalf of “LFD” persons in the various states. The fields of deaf education and postsecondary training will need to become familiar with the IRI publication for improving VR services for “LFD” persons. Deaf education, postsecondary education and rehabilitation professionals, along with deaf and hard of hearing consumer representatives, can then be better prepared for a more active and productive leadership role. Among other goals, we recommend that PEPNet programs and affiliates help foster productive postsecondary training and education programs and services for LFD individuals by working in partnership with their home state VR system to implement the following kinds of interagency and interdisciplinary collaborations.

A National Network of Voc-Tech and Employment Training Centers

- Identify, organize, & coordinate a consortium of programs.
- Develop teams of trainers.
- Deploy expert team to coordinate and support.
- Expand PEPNet outreach to better target voc-tech and employment training programs in the states, including programs that provide job coaching and on-the-job training for LFD.
- Identify and organize expertise in area of LFD to assist/staff of PEPNet regional and state program affiliates in developing and operating a national network of training programs.

State-by-State Network

- Assist states in planning and providing comprehensive voc-tech and employment training.
- Develop a statewide network to include local employment and support systems.
- Coordinate and collaborate on development and establishment of needs- assessment and related research activities related to interagency efforts by state VR, IHEs, and PEPNet programs.
- Implement interagency agreements that include voc-tech and employment training programs for LFD and other non-college bound persons who are deaf.

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Contacts and Sources

University of Arkansas Research & Training Center for Persons who are Deaf or Hard of Hearing at: <www.uark.edu/deafrtc>, click on “Publications” and then download the PDF files for “25th IRI.”

Douglas Watson: <Dwatson@comp.uark.edu>
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National Clearinghouse of Rehabilitation Training Materials (NCRTM) at OK State University:
 1-800-223-5219 <http://www.nchtrm.okstate.edu/>

Section IV

Best Practices

Job Placement Services Enhancement Model

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Abstract

The following is a description of a Job Placement Services Enhancement model program that the Program for Deaf Adults at LaGuardia Community College, City University of New York, developed to serve students who are deaf or hard of hearing. It is hopeful that this model program will help to improve the employment outcomes of deaf and hard of hearing students who attend mainstream institutions. This model project was funded through a three-year federal grant from US Dept. of Education (OSERS).

This model project involved the collaborative efforts of two departments: The College's Job Placement Office (JPO), whose database includes over 2000 companies; and Program for Deaf Adults, which serves nearly 45 degree Deaf and hard of hearing students annually. Together a Deafness Specialist and a designated Job Placement Counselor created a series of training workshops for deaf students; adapted a handbook to include accommodative information for deaf and hard of hearing students; created a resource manual for the job counselors; and developed a handbook and a videotape for the prospective employers of deaf and hard of hearing individuals. They also modified the mainstream office to meet the job placement needs of deaf and hard of hearing students by making the office physically accessible and by orienting the JPO staff members to deafness-related issues. In the second year of the three-year grant activities, a second workshop was also

given to JPO counselors, due to the turnover of staff. It is important to note that we continue the orientation from time to time. The Deafness Specialist was able to assist JPO in identifying and recruiting potential staff who were well-versed in Title 1 of the American with Disabilities Act, who understood the various communication modes used by deaf individuals, and who were fluent in the use of ASL.

A reference manual was developed for the use of JPO counselors, which covered different information pertaining to the interviewing and hiring of deaf and hard of hearing students. A TTY has been installed in the JPO and still is being used in good condition. The JPO handbook, modified to include deaf and hard of hearing students to be used as a guide to the JPO services, also included disclosure guidelines and accommodations available to these students.

The Deafness Specialist and the JPO counselor have met on a regular basis to review progress of project activities, which included preparation of students' surveys, conducted in year one, and follow-ups of the questionnaire responses. A focus group of Deaf and hard of hearing students was also formed in the second year to address the concerns and issues that the students have raised.

The major indicators preventing students from using the JPO services, as cited in the survey and focus group outcomes, pertained to the JPO's lack of communication access and a limited awareness of issues related to working with deaf individuals as well as the concerns related to the employers who are seeking applicants. The survey also showed the need for these students

to attend a series of workshops, which covered the range from job-readiness skills to self advocacy to entitlements (SSI and other fiscal incentives).

The questionnaire was also sent out to the employers who are selected from the JPO's database files, and a handful (approximately 5%) have replied requesting for more information pertaining to the communication tips, accommodation and strategies to meet the needs of Deaf and hard of hearing job holders.

The handbook and videotape, targeting the employers, have been developed in the third-year of the grant for the purpose of aiding the employers who are scheduled to interview Deaf and hard of hearing students. This effort was a result of the employers' and deaf students' response to the questionnaires, which stressed the need to educate and sensitize the companies who may be hesitant to hire this group. The videotape portrayed three different deaf employees communicating and interacting with hearing supervisors and colleagues as well as an expert on the reasonable accommodations in the job setting. In this packet, possible employers' barriers to employment of deaf and hard of hearing students have been noted and addressed in the following areas:

- Attitudinal barriers and fears
- Lack of understanding regarding Deafness/Culture
- Potentially biased pre-employment testing procedures
- Concerns regarding phone usage on the job
- Concerns regarding safety on the job
- Negative first impression of Deaf job seekers in person, on the phone via Relay Services, TTY, or phone interpreters.

At the end of the funding period a significant increase in the number of students/graduates who were seen by the JPO counselors (by 50%); and an increase of these students being placed in the competitive market (66%) was noted. A majority of these students who visited the office were seeking part-time work while attending classes here at LaGuardia. The College students are required by their majors to be placed in the Cooperative Education internship. This is usually beneficial, as the companies hire a majority of our students who they interned with them. Some of the students continued their education after their graduations by transferring to a four-year college.

The JPO Director who was appointed during the funding period has been instrumental in these project activities and stated that he wishes to continue the work that has been begun as his staff has learned a great deal about the deaf culture and the "mistrust" many students have about the office. He agreed it is critical to develop a method to integrate the JPO into the minds of the students/graduates.

If you are interested in the packet of the Employers' handbook and videotape, please feel free to contact me at <Katb@lagcc.cuny.cuny>.

The Liberated Learning Project:¹ Improving Access for Persons with Disabilities in Higher Education Using Automated Speech Recognition Technology

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Abstract

The Liberated Learning Project, an international research effort spearheaded by the Atlantic Centre at Saint Mary's University, Nova Scotia, Canada promotes the use of automated speech recognition (ASR or speech-to-text) in the university classroom as a tool to improve access to lecture material for students with disabilities. This paper discusses some of the different techniques that have been proposed for ASR in the classroom, reviews several recent investigations related to real-time ASR, and provides an overview of the Liberated Learning Project's role in developing this unique application of speech-to-text technology. ASR has positive implications not only for students and professors, but will also undoubtedly have a significant impact on a much broader scale.

Introduction

Accessibility to higher education for persons with disabilities has been a cornerstone of the philosophy of Saint Mary's University in Halifax, Nova Scotia, Canada for over 30 years. In 1980, the University's first deaf student was accommodated and in 1985 the Atlantic Centre of Research, Access and Support for Students with Disabilities began a formal program of support services to students with a wide range of disabilities. The Centre has since then developed an international reputa-

tion as a leader in providing support services for students with disabilities at the post-secondary level. Its programs and individualized support services include individual academic counseling, ASL/English interpreting, academic support, a volunteer note-taking program, alternative examination accommodations, adaptive technology and training in its use.

The introduction of true continuous speech recognition (speech-to-text) products with large, expandable vocabularies engendered a commitment from Saint Mary's University to explore the concept further in connection with increasing accessibility to lecture material for students with disabilities. It was clear that problems existed with both immediate intake of the material and with notetaking for later study purposes. For example, students who were deaf or hard-of-hearing usually required interpreters or assistive listening devices, and relied upon notetakers. As well, students with certain learning disabilities found it difficult to process information presented orally, and other students were physically unable to take their own notes. Finally, the notetaking skills of non-disabled students *were* often far from satisfactory. These shortcomings with both the teaching and the learning processes became the impetus for investigating the use of ASR in the classroom.

Techniques and Recent Investigations

In this section we discuss some of the different techniques that have been proposed for ASR in the classroom and also review several recent investigations related to real-time ASR. We should note

¹A Project of the Atlantic Centre of Support for Students with Disabilities, Saint Mary's University, Halifax, Nova Scotia, Canada.

that these techniques and investigations are very closely tied to the introduction of several consumer oriented ASR software packages in 1997. These software packages (e.g. IBM Via Voice and Dragon Systems NaturallySpeaking) were the first products featuring large vocabularies and continuous speech recognition made available to the general public. For the first time researchers had easy access to the tools needed to investigate the use of ASR for classroom lectures and other real-time applications.

Three different ASR real-time techniques have been proposed by various groups. In the direct input technique the instructor speaks directly into the ASR system microphone, and the text is displayed in real-time and also saved for post-lecture notes. This technique requires that the instructor be trained in the use of the ASR system and feel comfortable using a wireless microphone during the lecture. The verbatim shadowing technique uses an intermediary (referred to as a 'shadower') to repeat the lecture verbatim into the ASR system. The shadower uses a mask to dampen the speech sounds so that the other people in the room are not disturbed. Because current ASR systems are not always capable of performing adequately when the speech rate is over about 150 wpm, it has been suggested by Ross Stuckless of NTID that an abbreviated shadowing technique may be more useful. In this technique, the shadower would repeat only the essential information in the lecture, producing readable and accurate text. This technique resembles the NTID C-Print technique in many ways.

Several groups have begun to investigate these techniques but overall the field of ASR for deaf applications is still in the very early stages of development. There has only been one conference which has focused on this topic in depth: the Frank W. Lovejoy Symposium on Applications of Automated Speech Recognition for Deaf and Hard of Hearing People held in Rochester, New York in April 1997. This symposium explored the potential of using ASR for automatically converting speech to text for deaf people in a variety of settings, including the classroom environment. This symposium was held before researchers had an opportunity to investigate the ASR software products mentioned above so it does not include results from the more recent software. An electronic copy of the proceedings of this conference is available at www.isc.rit.edu/~ewcnpc/Lovejoy.html.

In the Fall of 1998 Saint Mary's University in Nova Scotia, Canada, initiated the first trial using ASR in the classroom. Three professors used ASR systems in the classroom to display the text of the lecture in real-time and also provide post-lecture notes for students. In this trial the professor spoke directly into the ASR system using a wireless microphone and the text was displayed overhead for all students to view. This study concluded that the technology was promising and warranted further investigation and development. This trial established the groundwork for the Liberated Learning Project described elsewhere in this paper.

In the Spring of 1999 Sprint, IBM, and the University of Texas collaborated in a trial at the University of Texas at Austin using the verbatim shadowing technique. The objective of this trial was to investigate the feasibility of this technique for classroom applications and identify the critical elements of the system that needed improvement. This study found that the rate of speech for normal classroom lectures (180-220 wpm or higher) was too fast for the current ASR systems and that extensive training of the shadower was critical to the success of the system. In both of Saint Mary's and UT trials the ASR system was used to augment rather than replace the usual support systems for deaf students. Ross Stuckless at NTID also performed a series of tests in 1999 using the verbatim shadowing technique in simulated classroom conditions. He found that the error rate was unacceptably high even when the shadower was a court reporter who had been extensively trained in verbatim re-voicing of speech in the courtroom. Stuckless concluded that abbreviated shadowing might be a more feasible approach for the classroom.

In the Winter of 1999 Sprint and Ultratec initiated a six month trial of ASR in the Maryland relay service. Although this trial was not held in a classroom environment the relay ASR technique is very similar to the verbatim shadowing technique, and the results have some important implications for classroom applications. In this trial the relay agent re-voiced the spoken telephone conversation in real-time rather than typing it as is normally done. This trial used commercially available ASR software that had been modified so the agent could edit the text before it was sent out to the deaf caller. This editing feature allows the agent to correct the ASR errors so that the agent has more control over the error rate. Although an

official report on this trial has not been released to the public, several beta testers (including the author D. Coco) found that ASR did not provide a significant improvement in the speed of transmission compared to regular relay. In addition, the error rate for the ASR system varied widely from excellent to unacceptable depending on type of conversation and the skills of the agents.

Although ASR has an enormous potential for automatically converting speech to text for deaf people, all of these initial trials have demonstrated that simply asking an untrained speaker to use an off-the-shelf commercial ASR product does not produce acceptable results. These trials have indicated that speaker training is probably the most critical issue in the implementation of this technology. This is not unexpected because the ASR software used in these trials was not developed specifically for real-time applications but rather for dictation applications. This is an important point because there are significant differences in these two applications.

An ASR system designed for dictation can set limits on the rate of speech and on the type of speech that is allowed to provide optimal system performance. The dictation user can usually adjust the rate and content of his speech to meet these requirements. In a real-time application, however, it is usually rather difficult for the user to limit the rate of speech or specify the content of the speech. In addition, the effect of the ASR errors on dictation and real-time users is quite different. The dictation user knows exactly what the output from the ASR program should be (after all, he is doing the talking!), so errors are easily detected and corrected. However, the deaf real-time user has only a vague idea of what the output should be (in a math class the text is expected to be math related) so errors will be more difficult to detect and correct, especially in real-time.

Even if the error rates were the same for the two users, which is highly unlikely, the *effect* of the errors on the real-time user would be much more significant. The dictation user can simply correct the error and move on, whereas the real-time user may completely misunderstand the meaning of the sentence or paragraph. Simply looking at word count error rates may not be the best approach for evaluating real-time ASR systems. An evaluation of the comprehension of the user may be required.

Can speakers be trained to use ASR dictation products effectively for real-time deaf related applications? This is the key question to be addressed. One proposed approach is to train the instructors themselves (the direct input technique), whereas another approach is to train intermediary speakers who might modify or summarize the original speech (verbatim or abbreviated shadowing). No conclusive answers have been provided as to whether any of these approaches will actually work. However, the potential for using ASR to improve access for deaf students in the classroom and in other settings is tremendous, and further exploration in this area is certainly warranted.

The Liberated Learning Project

As mentioned earlier, the Atlantic Centre's pilot project in 1998 found the initial testing of this application for ASR to be enlightening. Brief exposure to the concept suggested it could indeed provide an alternative to conventional note taking for students with disabilities. Serendipitously, it was also noticed that non-disabled students were using the instantaneous display of the lecture as a reference check for their own notes: ASR technology gave students access to both auditory and visual learning channels, helping them better integrate the lecture content. They could also use the software-generated notes to augment their own notes. Therefore, the successful application of ASR technology was seen to have valuable implications for every student in the classroom.

Saint Mary's University received major funding in 1999 from a Canadian foundation, The J. W. McConnell Family Foundation, to further research and refine the unique application of ASR technology to assist students with disabilities in the university classroom. Saint Mary's University is now heading a consortium of Canadian and international partners, both universities and industries. These strategic alliances will help develop, test and evaluate multiple applications of ASR technology in the classroom and its implications for pedagogy and learning.

Project Concept

- Professor develops a personalized voice profile by "teaching" speech recognition software to understand his/her speaking style.

- Professor uses a wireless microphone 'connected' to a robust computer system during lectures. A computer running speech recognition software (project is using IBM's ViaVoice products) receives digitized transmission of professor's speech.
- Using professor's voice profile and acoustic information, the software converts spoken lecture into electronic text.
- Text is displayed via projector for class in real time: students can simultaneously see and hear lecture as it is delivered.
- After lecture, text is edited for recognition errors and made available as lecture notes (electronic or hard copy format) for all students.
- Professor's individual voice profile is continuously updated and expanded through intensive system training.

Project Objectives

The main objectives of the project are to develop and evaluate a model for using automated speech recognition in the university classroom and to focus global attention on this concept as a method of improving access to learning for persons with disabilities. During the three-year period, the project will thoroughly develop and test multiple applications of speech recognition in university classrooms. Global discussions of speech recognition as a tool to enhance teaching and learning will be stimulated. An effective model for using speech recognition in the university classroom will be developed and refined. Finally, an international conference on the importance of speech recognition in the university classroom will be sponsored.

Project Partnerships

Saint Mary's University has recruited several implementation and research partners that are essential to our success, including IBM, Maritime Tel and Tel, and individuals from universities in Canada and around the world, including England, Australia, and the U.S. This team will collaboratively forge the project's development, from the initial planning stages through to the in-class trials and beyond. The project

has a mandate to pursue further partnerships and interested parties are invited to make contact regarding potential involvement in this international research consortium.

Partner universities will share a philosophical commitment to addressing issues of accessibility, inclusion of qualified persons with disabilities in academic programming, and providing support services to students with disabilities. They will designate an individual to lead the initiative on site and represent the university at the project level. Partners will attempt to provide resources to enhance the project's overall mission and assist in achieving objectives. Partner universities will be dedicated to implementing the Liberated Learning concept in university classrooms and will share a commitment at a research, technical, or consultative level.

Project Challenges

The Liberated Learning Project involves an intricate interaction of technological and human resources. As with any technological application in its infancy, there are obstacles to overcome before the Liberated Learning concept is more universally applicable. A few of the more pressing project challenges are:

- Improving recognition accuracy. As a professor delivers a lecture, the displayed text must be accurate and convey the intended message.
- Reducing the occurrence of errors. Errors affect the overall conceptual understanding of the lecture and thus remain our primary focus.
- Integrating non-obtrusive punctuation markers. Currently, speech recognition software requires the speaker to actually say the marker in order to have it appear (i.e., speaker says "period" or "new paragraph"). One challenge is to find a nonobtrusive way of integrating these markers to enhance readability and thus comprehension.
- Developing a model capable of effecting better learning and teaching. Professors must be able to learn the software quickly and use it easily. The project will be looking specifically at

the efficiencies of editing a lecture transcript produced via speech recognition software.

- Determining the right mix of associative technologies: sound card, operating system, microphone technology, memory, storage, etc.
- Customizing IBM's ViaVoice speech engine for lecture use.

Conclusion

It was 120 years ago that Alexander Graham Bell, who had strong ties to Nova Scotia, began experimenting with voice recognition to help

deaf persons. It seems fitting that a Nova Scotia university is assuming a major role in advancing speech recognition to help persons with disabilities in the classroom. Speech recognition technology may potentially revolutionize the way students and professors interact in a university environment. It has the potential to spark exciting and unprecedented outcomes for both students and faculty. It is the hope of project participants that this innovative concept will be a stepping stone in developing and nurturing an educational environment free of boundaries, where all students have equal opportunity to pursue their educational aspirations.

Effective Tutoring Practices with Deaf and Hard of Hearing Students

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Abstract

In part due to the Americans with Disabilities Act, deaf and hard-of-hearing individuals are obtaining postsecondary educations in a wider variety of programs. However, many programs are new to providing services to deaf and hard-of-hearing individuals and may not be aware of special needs that can arise. This paper targets tutors who may be working with deaf or hard of hearing individuals for the first time. It covers basic communication information, as well as tips and techniques that other tutors have found work well with deaf and hard of hearing students.

Hearing Loss and Communication Preferences

Deaf students and hard-of-hearing students have two very distinct groups of needs. While it is true that both groups have a hearing loss, they tend to deal with the loss in very different ways. Students who are hard of hearing tend to depend upon amplification, speech reading, and print to accommodate the hearing loss. Students who are deaf tend to use sign language. Deaf students may use speech reading to supplement the visual sign language input, but rarely depend upon speech reading alone for communication. They may also identify themselves as members of the Deaf culture. Hard of hearing students typically identify with the hearing culture.

Late-deafened students are those who have lost their hearing after they have acquired speech,

often as adolescents or adults due to illness. These students sometimes learn English sign systems in addition to developing speechreading skills. They generally identify with the hearing culture, not the Deaf culture. They may be more dependent on print communication than students with other hearing losses.

Some students you tutor may have a cochlear implant (CI). CIs do not return hearing to normal. You will need to talk with the student who has a cochlear implant to find out if he or she has any special communication needs. Oftentimes, their communication needs will be similar to those of hard-of-hearing students, as they will still use speech reading to supplement what they pick up auditorily.

Communication methods depend upon individual preference, not his or her audiogram. The best thing you as a tutor can ever do is to ask the student what will work for her in a given tutoring situation, and continue a dialogue with the student.

Communication tips. Many people feel uncomfortable when a deaf or hard-of-hearing student approaches them because they are anxious about how communication will occur. In general, though, deaf and hard-of-hearing students expect that you will not know what to do. Keep in mind, some students will be better at communicating their needs than others. Whatever the case, be courteous. This will go a long way toward keeping communication open.

Many people use humor to get through uncomfortable situations, to loosen up new students,

or to get the session going. While a sense of humor is very helpful, telling puns and jokes that are based on sound and plays-on-words may fall flat. While not considered offensive, they simply may not accomplish your objective. Even using an interpreter may not ease the situation. Few of us are aware of how often we use idiomatic language or language that is tied to a context such as television programs (e.g., “Danger, Will Robinson! Danger!,” or “Where’s the beef?”). Older programs and commercials are not generally captioned, and the student simply may not have had access to them and they will not carry any significance for them. These phrases can and should be explained if the student does not understand, but it is a trade off. Does the phrase add to the tutoring session, or is it superfluous? Does the student catch on with explanation, or does it confuse and detract from your goals?

A nod does not always mean that you are understood. Sometimes, the individual is just trying to keep a positive feel to the communication and will nod in encouragement, recognizing that you are trying. Additionally, when working with interpreters, the student may be nodding to the interpreter as a way to let her know that she has his attention. Always double check that the student understood important information, such as dates and times, by asking him to repeat or write down the information.

Also, be aware of alerting the individual to noises in the environment. If you are chatting with someone and your phone rings or someone walks by and calls your name, let the individual know with an ‘excuse me’ before turning your attention away and responding. Otherwise, you may come across as abrupt or rude, since the deaf or hard-of-hearing person will not know why you are suddenly distracted or looking away and talking.

Always remember, if you do not have eye contact, you do not have communication. This is very important to remember throughout the tutoring session. Avoid breaking eye contact in mid-sentence (for Deaf students, this is a cultural point and may be interpreted as a lack of interest on your part). Similarly, you may be accustomed to writing or demonstrating and explaining at the same time. The student will not be able to watch the demonstration and ‘hear’ the explanation (i.e., watch the interpreter or read your lips) at the same time. Instead, remember to do one thing at a time.

This may be the most difficult habit you must change!

Gestures can be used to help get a point across. Facial expressions and body language assist in communication. You may find it helpful to establish a particular sign or action for high-frequency words and concepts.

Finally, if the other techniques you are using just are not getting the point across, grab a pen and paper and write it out. It may be a key word that the person is not getting or the entire sentence. Just remember to keep the language simple—write only enough to get your point across. Remember the language needs and skills of the student you are tutoring. If a computer monitor is visible, you might try typing out the message, too. Setting the font to a larger size will make it easier to read at a distance. Hard-of-hearing and deaf individuals greatly appreciate it when someone is willing to take the time to communicate, no matter what medium is used!

Speechreading. After you have gotten the student’s attention, then what? Speaking up helps. Enunciating by making a clear separation between words helps. Yelling does not help. Misunderstandings may occur because you look tense, when you are actually trying to talk louder.

You should continue to speak at a normal pace. Be aware of words that may be more difficult to speechread or that may be unfamiliar to the interpreter (e.g., jargon, words that look alike on the mouth).

Speechreading is a skill much like playing the piano: it can be improved with practice, but you might not ever become a virtuoso. At best, only 33% of English phonemes are visible on the mouth. As much, if not more, information is gained through context, facial expression, and body language. Other variables may interfere with speech reading as well, including glare, facial hair, accents, and noisy environments.

You should not expect speech reading to be 100% effective. When the student indicates that he did not hear something you said, you might first try repeating it. If this does not work, do not keep repeating yourself. It may be that that word is not very visible on the mouth or that the student cannot hear the frequencies in that particular word. You might try spelling or writing the word or saying the word or phrase in a different way.

Also, it is very helpful to you if the student indicates what part of what you said he did understand, instead of just saying 'what?' For example, if the student says, 'You want me to look on *what* page?' then you know exactly what you need to clarify instead of struggling through the whole sentence. Not all students will be aware of this useful communication technique. You may need to ask the student to phrase his questions this way.

Using an interpreter. Sign language interpreting is a dynamic process, requiring the interpreter to facilitate communication between two language modes and cultures. Interpreters follow a code of ethics. For example, they are not allowed to participate other than to say what is signed and sign what is said impartially. They often have access to many situations involving deaf individuals, and thus must keep information gained while on the job confidential. There may be some period of adjustment in working with an interpreter to ensure that communication is satisfactory to all participants.

You should remember that most hard-of-hearing individuals do not use sign language. When they do learn sign, it is more likely to be a signed English system rather than American Sign Language (ASL). What may be very useful, though, is an oral interpreter. Oral interpreters use special techniques to mouth everything that is said for the deaf or hard of hearing individual. They are aware of words that are difficult to speech read and words that look the same on the mouth (e.g., bomb, mom), and may paraphrase so that the word or phrase will be understood. Oral interpreters are especially useful so that the hard-of-hearing person will have continuous access to the interpreter's face to ease speech reading, whether or not the speaker has turned his or her head or is looking down.

In group situations, the interpreter will indicate who is speaking and when speakers change, and also noises in the environment, such as laughter, sirens, and alarms. If you are working in groups, you must play 'communication cop.' That is, do not let people talk over each other. It helps to regulate the pace if the student first says his or her name before speaking. Remember, the hard-of-hearing student will not hear what she does not see. If the students cannot be seated facing each other, the hard-of-hearing student will either need an oral

interpreter or need all comments repeated by you. Also, the speaker will need to visually identify himself, by raising his hand, for example, so that the student will know where to look.

Many people feel awkward when they first attempt to communicate through an interpreter. You should sit so that you are facing the student, with the interpreter positioned so that the student can see both of you without a lot of back-and-forth movement. In a lecture situation, the interpreter would be next to the speaker. In tutoring situations, however, the interpreter may need to be able to maintain the proper line of sight with the student while at the same time be able to see print materials the student and/or the tutor may be referring to. This in itself may take some adjustment to work out.

Avoid saying, "Tell her..." as this is talking to the interpreter, not the student. Just talk to the student, and let the interpreter take care of the communication. Also, if you want information about the student, ask the student through the interpreter. Do not leave the student out by asking the interpreter "Does she..." The interpreter may or may not have the information; indeed, the interpreter is bound by the Code of Ethics and should not respond with this kind of information.

After the session, check in with the interpreter to see if she has any issues or concerns related to the communication process. Again, avoid talking about the student, instead focus on communication.

Assistive Listening Devices. Many hard-of-hearing students, including those with cochlear implants may find assistive listening devices (ALDs) beneficial. ALDs are portable electronic devices that help hard of hearing individuals hear better by bringing the sounds they want to hear directly to the ear. The tutor speaks into a microphone. The student picks up the sound through a receiver with a volume control and listens through a head set or some other device to get the sound to the ear, depending on whether or not the student uses hearing aids or has a cochlear implant. (Note, the student does not have to wear hearing aids to benefit from the devices.)

Depending on the student, you may still need to maintain visual contact. Nonetheless, ALDs are very beneficial. They help reduce background noise, which can be very intrusive for hearing aid

users (hearing aids amplify everything, not just speech sounds). They also amplify only what is coming in through the microphone, so they help the student to focus in on your voice. This allows the student to attend to the content, and reduces the strain of simply decoding the message. For more information, a paper by the author entitled “Demystifying Assistive Listening Devices” is located elsewhere in these proceedings.

A Note on Notes

Deaf students usually have notetakers for their classes. The reason is simple: to look down to take notes would mean missing the next piece of information, with the end result being the student becoming completely lost during the lecture.

One unavoidable disadvantage of using notes written by others is that these students are missing numerous opportunities to practice writing that students who take their own notes get daily. Without a concerted effort, it may be that the only time the student sits down to write in English is when she must write a paper or answer essay questions on a test. It may be useful to review these notes with the student. Check that the student satisfactorily benefits from what is written and can relate it to the class lecture. As you go over the notes, focus on the content. Have the student tell you what it means. Having the student take notes from the notes is a very useful exercise. It not only helps the student to firm the information in her own mind, but also provides practice in writing.

English Usage Issues

People often, without realizing it, equate English language skill with intelligence. You may assume that students who can speech read (or speak more clearly) are more intelligent than students who cannot. **YOU SHOULD AVOID MAKING THIS ASSUMPTION!** Especially for Deaf, sign language using students, English language skill level tells you one thing—English language skill level. In these cases, it may help to think of the student as using English as a second language, with American Sign Language being his first language. Hard-of-hearing individuals simply lack the auditory cues to help them evaluate their speech clarity.

It is often said that English is best learned by listening. Think for a moment how much auditory exposure a person with no hearing loss has to the English language. TV, radio, movies, and conversation (even those overheard) contribute to our language learning. Deaf and hard-of-hearing students do not have the same exposure to this incidental learning. In order for the deaf or hard-of-hearing person to ‘overhear’ something, they must be focused on it visually.

ASL is a three dimensional language separate from English, with its own grammar and syntax. It is a signed language, not a written language. Visually, many things can be communicated simultaneously. A simple example of this might be ‘The woman walked by slowly.’ The way the woman is walking, and the information that she is walking by would be indicated by a single moving handshape.

You may notice writing problems that resemble the problems of students using English as a second language, such as missing articles, problems conjugating verbs, difficulties with comparatives and absent referents, and misuse of words. Sometimes you may notice that the words are written in an unexpected order. The student may be applying the grammar rules of ASL to English.

The passive voice that is used so often in academic writing and newspapers is absent from American Sign Language. Homonyms can cause confusion for deaf students. Take for example, **run**: run out, run off, run up, run down, run against, run into, run around, run (in stockings). The dictionary lists two columns of uses of the word ‘run’. ASL is highly contextual. Each conceptual use of the single word is signed differently in ASL.

You will probably find that understanding the structure of ASL will enhance your ability to explain English. The student must grasp how elements that are expressed simultaneously in ASL are realized linearly in English. It is very difficult to explain in English how to use English. If the student does not have a strong background in either language, it may be that skills in *both* languages need to be strengthened, instead of only focusing on English.

Make sure that the student understands that hearing students must write, edit, and rewrite papers, too. No one writes a paper perfectly the first time. The first draft is usually done to get the

information down on paper. Revisions focus on clarity and grammatical structure. Students often believe that others do not have any problems in writing. The student should understand that everyone's writing is improved with editing.

Reading

Vocabulary. Due to lack of auditory exposure, deaf and hard-of-hearing students may need to spend more time studying new vocabulary. Students should practice, practice, practice: practice spelling the word, practice writing the word, and practice reading what they have written.

Where possible, break down the word into its root, prefix, and suffix so that the student might apply this tool on her own later (e.g., the French 'mort' or 'death' is the root of mortician, mortuary, mortal, mortify). Also, watch for situations where overgeneralization might be a problem (e.g., mortar). Having students use words in context and in sentences that they make up will help you identify problems the students might have in understanding so that you can help them understand the limits and exceptions to the rule.

Suppose a student has a list of vocabulary words she must memorize. One way to do this is through a 'fold and compare' technique. The student would first list all the words in a column on a piece of paper. The student would then write definitions for each word in another column. Then the student would fold the column of words so that it is hidden, and write the correct word next to the column of definitions. Then the definition column would be hidden and the student would rewrite the definitions in yet another column. Other techniques include fingerspelling or writing the word until memorized, and using flash cards.

Advance Organizers. Students who have difficulty with reading may need a great deal of support pulling information from reading assignments. For example, some students may not be fully aware of how to use headings and other advance organizers to help them navigate through a reading assignment. Knowing what you are about to read can aid comprehension as you move through an assignment.

One helpful method that teaches the student to be very interactive with the reading material is

called SQ3R. It involves surveying the materials, questioning what you are about to read, actively reading it, reciting information from the reading, and then reviewing that information. If you are not familiar with SQ3R, more information is available on it from the Tutoring and Writing Links website at <http://www.wou.edu/nwoc/tutorlinks.htm>.

Study questions. Research has been conducted showing that deaf students who are poor readers, when given study questions to guide their reading, performed similarly to skilled readers given text only in tests of immediate factual recall. See Dowaliby and Lang (1999) for more information.

Check for Knowledge. When you are checking for understanding with a student, avoid asking yes/no questions. Students may be reluctant to admit they do not understand the content, or may nod in agreement to keep the interaction feeling positive rather than to indicate their level of understanding. Do ask open-ended questions that require the student to respond with the content. If the student is having difficulty pulling the concept together, ask the student how he would explain it to someone else, such as a friend or a child. Always have the student use new concepts and vocabulary in a sentence or paragraph. Examples of these probes include: compare, contrast, criticize, define, describe, discuss, evaluate, explain, illustrate, interpret, justify, list, prove, relate, review, summarize, and trace. Using these types of probes with students to check their level of understanding on the subject will also teach the student critical thinking skills they can use for life.

Writing

Grammar. Make sure that students not only know the rules of English, but also are able to apply them. Some students find that it helps to actually sign the sentence instead of just reading it when they are looking for errors.

Provide many opportunities for practice. If relevant, have the student keep a journal or communicate with you through e-mail so that writing becomes an everyday task for him. Explaining English grammar using English can be very difficult. Make your explanation, but follow it up with many, many examples. Help the student to

experience the information for himself. It will be remembered much better than the interpreted message. Some exercises are conducted by filling in the blank.

Use as many visual cues as possible. For example, use colors to indicate pluralization, nouns vs. verbs, articles, etc. Using the same color for the same part of speech each time will help the student to identify to what category the word belongs. Students can use pens with 4 colors in one for some of these assignments. It may help students if they do not erase their mistakes, but write the corrections above their original answers.

Finally, be sure the student is able to generalize from examples given by the professor. The student may only be able to give back examples identical to those provided in the classroom. Practice with generalization helps to firm conceptual grasp, as well.

Organizing Information. When the student has information that he needs to organize, such as writing a paper, developing a mind map is a useful technique. This graphic representation of the topics to be covered often helps the student to develop the topics more fully. One computer program that is very useful for this purpose is Inspiration. Examples of mindmaps can be found on the Inspiration website <http://www.inspiration.com>. The main idea is placed in the middle, and the related ideas are placed around it, with arrows to show the connections between ideas. Mapping out ideas is such a successful technique, that many educational programs have students write papers totally using programs such as Inspiration. These computer programs make it easy for the student to manipulate the relationships between ideas, allow for easy editing, and can convert the map to an outline, and vice versa.

What if the student does not have access to this kind of a program? Students can also write out ideas on separate cards. These can be moved around until an appropriate fit and order is found. Colors can be added to indicate subordinate levels.

While maps and charts are very visual and graphic, outlines are very linear. Word processing programs such as WordPerfect and Microsoft Word make outline construction much easier than in the past. Ideas can be easily moved around until the desired order is found.

Style. While tutors must avoid proofreading papers, there are several things he can do to help the student improve her writing. Watch for patterns in the student's writing, and help the student to identify these patterns. Strategize with the student about ways to resolve negative writing patterns. For example, the student may use the same transitional phrases repeatedly. Point this out to the student, and help the student brainstorm other possible transitional phrases. Maybe the student uses a particular word repeatedly. Word processing programs can provide help in choosing alternates, but the student must be wary of nuances in meaning.

Help the student with the flow (remember, the student can't hear how it sounds). Ask the student what he is trying to say. You may need to help the student break the paper into sections (mapping and charts can be very useful for this). Identify problems within each section, and help the student evaluate quality: Is the introduction clear? Is the idea well developed? Are there transitional sentences? Is there a closing or summary for the section?

All papers can be improved with proofreading and rewriting. The student should try trading papers and getting feedback from friends. Finally, students must plan ahead when writing papers. They cannot be put off until the last minute. You may need to help the student develop an organizational plan or time line for writing the paper that would include gathering research, reading resources, developing an outline, writing the draft, revising it, and finalizing the paper.

Math and Sciences

Math is a subject worthy of strategically planned tutoring steps for deaf students. Problem-solving strategies are key to success in math. Students' problems in mathematics vary. He may tend to work quickly and make errors; be unable to identify and sort out relevant features of a problem situation; or misunderstand the problem goals.

Always have the student write out every step until he is firm in his understanding of the process. When you are talking through steps, especially if you are working through an interpreter, be sure to pause between each step to give the

interpreter a chance to finish conveying the message and the student a moment to process the information. As with English, it is helpful to use color to identify different operations. It also may help to indicate that you are moving on to another step if you draw a line or change colors. If you are working with formulas, talk through the formulas, and then show with an example. Again, students will remember things much more easily when they have understood it for themselves than when they are decoding an interpreted message. Teach by using many different examples. This will help the student to make the connection.

Talk strategy before attempting the problem. Research has shown that modeling and discussing problem-solving strategies does help students learn how to approach problems. Explain to the student how and why a problem should be solved a particular way. Then when the student is preparing to solve problems, have the student explain, in his own words, how he would approach a problem and why. Always have the student convey to you *what* he is doing (this helps to firm the information in his own mind) and *why* he is doing it. Help the student massage less complete statements into more complete statements (e.g., 'We're doing LCD' into 'We're combining algebraic fractions and using common denominators'). Asking students reflective questions about their problem-solving procedures using the evaluative probes listed above can be very enlightening for the student.

Find out if the student is allowed to use calculators in solving problems, and then use them to their fullest, including fractions and graphing calculators.

With word problems, extra care must be taken to be sure that the student understands the English, and then understands the math that would solve the problem. Where possible, keep it functional. Relate the information to something the student might need to do. This will help keep interest high and maintain motivation.

Graphing out or sketching the information can be very helpful in getting the student to visualize the problem. A drawing of 'A person heads

north for three miles, then turns east' or 'A line is tangent to a circle' is immediately understood.

Students may benefit from developing a 'cheat sheet' that lists the variety of vocabulary found in word problems and their symbol equivalents. For example, in a word problem the subtraction symbol might be communicated by phrases such as 'decreased by,' 'less than,' 'difference,' 'diminished,' 'remainder' or 'reduced.'

Summary

Ultimately, students are responsible for their own education. Tutors are responsible for helping students learn which study skills work for them so that they can survive on their own. Many new students do not understand this and will have unrealistic expectations of tutors.

Set up ground rules at the first session and let the students know what to expect. Taking the student through a series of quick questions at the end of each session will help him review his progress and reinforce the idea that he is the one doing the work and making the progress. Simply asking the questions that review progress will help the student who may have never thought about the process apply the information to other tasks he encounters.

Especially in tutoring around English writing skills, realize that the student may have had many negative experiences. Face resistance with a positive attitude. Encourage the student to try. Help them to develop a positive attitude. Regularly remind the student of the progress she has made.

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Make A Difference: Tips for Teaching Students who are Deaf or Hard of Hearing¹

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Abstract

Teaching college students who are deaf or hard of hearing can be a unique challenge, especially for faculty who have little or no experience in this area. A strategy for training faculty efficiently and effectively is the focus of a video “Make a Difference: Tips for Teaching Students Who are Deaf or Hard of Hearing,” covering topics such as classroom setup, interpreters, technology, academics, communication, and specific teaching methods and strategies that other faculty have found successful. This video is now accompanied by a handbook designed to be used during training sessions with the video. Both the video and handbook are available on the PEPNet Resource Center.

Make A Difference

Project PEC (Arkansas’ Statewide Outreach and Technical Assistance Center) at the University of Arkansas at Little Rock has developed a 15-minute teacher training video for faculty entitled “Make A Difference: Tips for Teaching Students Who are Deaf or Hard of Hearing.” This video is an integral part of a strategy to train faculty members who are teaching these students at the postsecondary level and who have little or no experience working with this

population. Although this video was intended for postsecondary institutions, it could be used effectively at the secondary level as well. It is an efficient and effective training tool for faculty who are already inundated with students, classes, and departmental responsibilities. Faculty may have little time to concentrate on the unique challenges of teaching college students who are deaf or hard of hearing. Because the success of these students is based not only on appropriate support services but also on effective instruction techniques, innovative training tools for faculty are critical.

Using a mock classroom and a host who brings expertise and experience to the role (she is deaf, a teacher for deaf students, and attended mainstream schools), this clear and concise video incorporates a comprehensive range of topics and situations related to teaching students who are deaf or hard of hearing. Topics include physical aspects of the classroom, communication, using interpreters, using assistive listening devices, notetaking, reading materials in the classroom, technology, visual aids, difficulties students may have with reading and writing, teaching math courses, and helpful tips from other faculty members.

This video was written and produced after surveying secondary and postsecondary faculty of deaf and hard of hearing students. Several skilled deaf educators reviewed the script before production.

Through the development and dissemination of this video nationally and internationally, it became apparent that written guidelines supporting the information provided in the video would be a useful tool for faculty as well

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as those using the video to present inservices and workshops. A detailed "Make A Difference" handbook has been developed that supplements the video. The handbook provides more in-depth information and includes additional resources available nationwide. The video and handbook combination provides training that should enhance the classroom experience and improve opportunities for success of students who are deaf or hard of hearing.

Not only are the video and handbook helpful for teachers, but they are also an excellent tool for inservice presenters. The video is divided into six major categories with a place to pause the video after each one. The script from the video is provided at the end of the handbook, and it includes information on where the tape can be paused. By

being structured in this manner, the video and handbook complement each other and can be readily used to provide outreach and technical assistance in at least three ways:

1. Individual faculty members can use them autonomously,
2. School administration can use them during departmental meetings, or
3. The video and handbook can be used as part of an inservice training, permitting discussion and question/answer time after each major topic.

The handbook and video are available for distribution nation-wide on the PEPNet Resource Center web page located at <www.pepnet.org>.

Mentoring: A Pivotal Support Service

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The concept of mentoring and the role of the mentor are as old as Greek mythology and as new as today. Over the centuries it has been recognized that the novice in any area of endeavor has the need of an expert, a seasoned veteran in that field to provide him or her with the guidance and incentive to succeed in a sometimes-unfriendly world. Daloz (1986) has put it in almost-poetic terms:

Mentors are guides. They lead us along the journey of our lives. We trust them because they have been there before. They embody our hopes, cast light on the way ahead, interpret arcane signs, warn us of lurking dangers, and point out unexpected delights along the way. There is a certain luminosity about them, and they often pose as magicians in tales of transformation, for *magic* is a word given to what we cannot see, and we can rarely see across the gulf. (p. 17)

Not everyone can say they have had a true mentor in their career, but virtually everyone has been mentored by someone, somehow, somewhere along the way. In the field of education, mentoring has often been considered as synonymous with advising. But, as Daloz points out, this idea is only partially true.

Mentors generally have a wider role than conventional faculty advisors. They may or may not teach classes, but

they are inevitably engaged in one-to-one instruction and are consequently more concerned than regular teachers with the individual learning, needs and styles of their students. What makes the difference is their willingness to care - about what they teach and whom. They know they exist as teachers only because of their students; they know they are part of a transaction, a relationship. (pp. 18-19, 20)

Whether or not a person has an official mentor, the practice of mentoring is an important one in fostering the growth and success of college students (Campbell and Campbell, 1997). The student who becomes lost in the crowd, regardless of the size of the college or university, rarely has a profitable educational experience and seldom succeeds to the full extent of his/her capacities. Research on student retention (Tinto, 1988) has clearly shown the need for students to establish links with significant persons in the college environment within the first few weeks, even days, of their arrival, if they are to stay in the school.

What does mentoring mean or require when dealing with students with special needs, especially deaf and hard-of-hearing, students? This paper will briefly explore the implications of this question in several ways. The role of mentor and the practice of mentoring will be distinguished from one another with the emphasis on mentoring. Also introduced will be

the notion of group mentoring, and how it can fulfill the role of mentor, differently than that of the single individual. As a concrete example, the monitoring, as it is carried out in support departments at the National Technical Institute for the Deaf (NTID) at the Rochester Institute of Technology (RIT) will be examined. The literature which is reviewed in this paper contains few references to mentoring for disabled students, specifically, and none in regard to deaf and hard-of-hearing students. Therefore, the field is ripe for investigation and thinking about this crucial support we provide to these students.

Background

The importance of mentors and mentoring is well recognized in the research literature. Success in a profession, in business, and in pursuing an academic career can be strongly influenced by the relationship between a mentor and protege (Gasorek 1998; Hansman 1998; Madison and Huston, 1996; Shea 1994). These and other studies have shown the benefits of the relationship between a novice in the field and an expert, experienced, and knowledgeable individual who takes that novice "under his/her wing." Mentoring has also become an important part of the effort to work with youth who are disadvantaged or considered to be at-risk for a variety of reasons (Dollarhide, 1997; Woodlief, 1997; O'Connor, 1995). Publications such as Kaplan/Newsweek's *How to be a Great Mentor* (n.d.), special programs, handbooks and other materials (Takahata, 1993; Lees and Carruthers, 1997; Windham, 1999) as well as the use of the internet (Aune, et al., 1997; Sumner, 1998) all demonstrate the current interest and acknowledged benefits to this practice.

In studying further education and higher education, a number of studies have shown how a faculty/student mentoring system can improve student achievement, retention, and satisfaction with their academic programs and with university life (Campbell and Campbell, 1997; Wood, 1997; Canton, 1995; Ross-Thomas and Bryant, 1994; Smith, 1995; Turney, 1998; Wallace and Abel, 1997). Programs may even extend to working with alumni in some situations (Jackson, 1998). The effect of mentoring

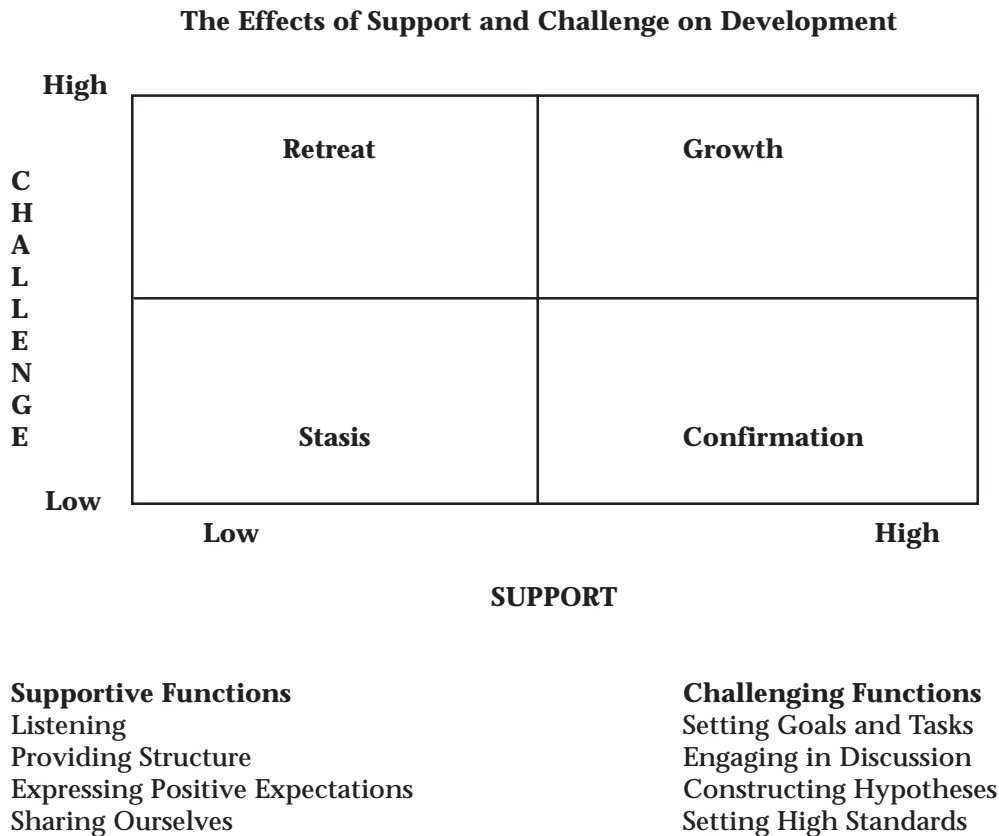
on the learning process has also been studied, and this focus is not a recent development (Daloz, 1986; Heuer, et al., 1996-97; Highsmith, Denes, and Pierre, 1998; Ricks and Van Gyn, 1997; Salerno, 1998). Students also see benefits to mentoring relationships (Karje, 1996; Tuckman, 1996; Turney, 1998). It is also recognized that students who have special needs benefit from mentoring (Aune, et al., 1997; Wolfe, 1991).

Successful Mentoring

Components of Successful Mentoring. Successful mentoring depends on developing good relationships with students. A number of key components have been identified (Goodwin and Munt, 2000) as aspects of mentoring success. These components include:

1. **Engendering Trust.** This means meeting the student where he/she is at the moment by listening and being non-judgmental. It means offering praise and encouragement and creating the confidence that mentor and mentee can work together.
2. **Providing Support.** This factor means "being there" for the student. Listening and providing positive expectations and structure are important aspects of support. Support is often difficult to balance with the next one, Issuing a Challenge. Both are needed to foster growth and independence. Too much support merely reinforces existing behavior if there is no challenge. Too little support in the face of high challenge, however, leads to retreat and failure.
3. **Issuing a Challenge.** This means constantly raising the bar while acting as an ally and advocate. Set high standards, but check their reality and relevance. Start small, making minor changes and demands rather than demanding too much too soon. The relationship between effective support and effective challenge is shown in the diagram below (Goodwin and Munt, 2000).

Figure 1. Mentoring



Adapted from Daloz (1986, p.214)

4. Providing a Vision or Context. This requires that the mentor be a role model who shares his/her own processes and experiences. It means being a mirror for the mentee and providing feedback.

Mentoring deaf and hard-of-hearing students. At least three issues come to mind in considering work with deaf and hard-of-hearing college students. The first of these is somewhat self-evident. This is an awareness of the need for effective communication along with a knowledge of deafness and its educational implications. But, it is also important in this regard that the needs and requirements of individual students be considered carefully. Certainly, not all students are alike! The second issue is concerned with having a place for students, a home base of sorts. A support office

or department is in business to serve students more than it is there to manage services, however necessary that function may be. This means it is a place where students are comfortable and want to “hang out”. It becomes a place where students can be themselves and actually mentor one another. The third issue is staff morale. It is important to “take care of the caretakers” or “mentor the mentors”. People who work with special needs students in general, and deaf students in particular, have very little status or recognition in the college setting. How can a department or institution provide the kind of support that is necessary for people to thrive in their support function? This is not an easy question to answer but one that needs careful consideration in the overall picture of providing mentoring and support services.

The Team Approach. Mentoring mainstreamed deaf students requires many different skills and areas of expertise. Therefore, a team of individuals can be the most effective in dealing with student needs. This team may include faculty, staff, counselors, and access providers even if one individual deals with the student most directly and might be viewed as the mentor. The mentor/team approach means that the student has many avenues available to handle various challenges in his/her academic career but also has the benefit of establishing a strong relationship with one individual.

How does the mentoring team approach work? It depends, first of all, on having close and frequent communication among its members. In the second place, it requires that all members of the "team" have knowledge of and a relationship with each student. Team membership, thus, will vary depending on a particular student and that student's needs. Membership may also change as a student progresses through his/her academic career and needs change. The word "membership" is used very loosely in the present case denoting an informal rather than a formal set of relationships. For example, a student's support advisor may confer with several of that student's tutors in order to determine needs in academic programming. Or, an advisor may work with a career or personal counselor who helps the student select an appropriate academic program or deal with a roommate problem.

In the third place, the student is really a part of the team as well. Activity does not really go on behind the student's back. The student may not be actively included in every discussion but will be aware of the network of support he/she has available. The mentoring team is a group that literally follows a deaf or hard-of-hearing student along from freshman entry to graduation and sometimes beyond as well.

The NTID Experience. Deaf and hard-of-hearing students supported by the National Technical Institute for the Deaf (NTID), who are mainstreamed in the other college of the Rochester Institute of Technology (RIT), graduate with a bachelor's degree at a rate comparable to their hearing peers at the institute. This rate is well above graduation rates for deaf students at other educational institutions across the country. It is true that many of these students are highly qualified and receive

excellent access services for their classes as well. However, many students who go through these programs enter through NTID not fully qualified to be accepted to a baccalaureate program. The success with which NTID has taken these and other students through to completing their degrees can be attributed in part to the diligent efforts of the faculty and staff who work with them in support departments.

The versatility and dedication of one who mentors are key factors in their success, because the position is one that demands that the individual adapt constantly to new situations and needs. Support faculty at NTID/RIT provide advising, tutoring, classroom instruction, and the like. Other staff help students to obtain access services and to negotiate their way through the system. True, not all students may take advantage of mentoring. However, most students benefit from these relationships to whatever degree they use them.

Faculty mentors in support departments at NTID/RIT have some characteristics in common. They are highly qualified in a content area, are knowledgeable regarding deafness, and are able to communicate directly with deaf students. Although the support faculty may initially work with the student, the college program advisor may be or become the student's mentor. The faculty member in the support department will assist in supporting that relationship, continuing to provide a form of mentoring.

It is not only faculty members who serve as mentors, however. Interpreters and interpreting managers, notetaker coordinators, and secretaries also serve a mentoring function in support departments and contribute significantly to the network of support that helps to ensure student success.

How can the mentorship concept be used in institutions with few deaf students and no support faculty available? Mentorship can exist on many levels. A trusted relationship with one individual is certainly the most desirable. A support provider can fulfill that role using all available resources. However, mentorship with program advisors can be fostered through careful negotiation and may ultimately be of the most benefit to students. The goal of mentoring is clearly to help students to fully access the opportunities available to them in their academic careers.

Conclusion

The intention of this paper is to offer background, give examples, and begin to raise issues and concerns regarding mentoring for college students who are deaf or hard-of-hearing. There are many questions yet to be raised and investigated. Clearly, there is a need for research in this area. But, there is also a need for practitioners in the field to share their experiences and to create a body of knowledge that will aid all who work with these students. Being deaf or hard-of-hearing in higher education is a daunting, challenging situation. Beyond good access and educational support mentoring can help to foster student retention, graduation, and success.

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Statistics is NOT for Dummies! Getting the Mean, the Mode, the Median... and Everything In Between!

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Abstract

The project described in this article was initially designed to address the needs and unique learning styles of deaf and hard of hearing students in lower division General Education Math classes. At California State University Northridge (CSUN) these classes include Math Ideas (Math 131) and Introduction to Statistics (Math 140). Although the research was conducted at Cal State Northridge, our findings lead us to believe that the project is replicable in other postsecondary institutions.

Background

The initial investigation of students' success in these lower division courses led to the findings that from Fall '96 through Fall '97, 27% to 50% of deaf and hard of hearing students received grades of D or F in one of the two lower division GE math courses. This led to the questions:

- Where is the problem?
- Are the students not capable of learning this level of mathematics?
- OR is the instructional methodology flawed in some way?
- OR do additional classroom and tutoring support make a difference?

A brief review of research in math by Dietz (1991) showed that communication as well as computation in mathematics is a critical determinant of success. In addition, students who write/discuss concerns, questions, and points of confusion become more confident in their math abilities.

Learning to communicate mathematically allows students to become mathematical problem-solvers.

Our analysis led us to compare the receptive modalities of hearing students and those of students who are deaf or hard of hearing. Hearing students receive information auditorily/directly; furthermore, they are able to engage in dual tasking. In other words, students are able to listen and watch simultaneously. This allows them to ask questions immediately and receive closure where gaps exist. Students who are deaf or hard of hearing, on the other hand, depend on visual reception (sign language interpreter or realtime captioner) and receive information asynchronously. Potential discrepancies between instructor and interpreter exist (e.g., "move this here"), as well as delayed opportunities to ask questions. Additionally, hard of hearing students may receive distorted information.

Table 1 below presents the summaries of performance by deaf and hard of hearing students in Math 140 for the Fall '96 through Fall '97 semesters. As can be seen in this table, 58% of deaf and hard of hearing students were successful in math classes; in other words, they passed with the grade of C or better. The research assumption is that the gap in communication and the discrepancies in information presentation are the primary factors in the low achievement (grades of D and F) for the remaining 42% of deaf and hard of hearing students in these two lower division, General Education Mathematics courses.

Table 1.

Academic Grade	Fall '96 (n=15)	Spring '97 (n=11)	Fall '97 (n=10)	Total (n=36)
A	0.00%	0.00%	0.00%	0.00%
B	6.70%	9.00%	20.00%	11.00%
C	46.70%	64.0%	30.00%	47.50%
D	13.30%	27.00%	40.00%	25.00%
F	33.30%	0.0%	10.00%	16.50%

Project Objective

As a result of this background analysis, the objective for the project developed as follows: Specialized instructional components and teaching techniques will enable students to complete Math 140 (Introduction to Statistics) with a passing rate of 75% or better and no dropouts. The innovative element was the idea of a "Class Assistant." The Class Assistant would have a background in mathematical statistics, in the mathematical learning process, in the learning styles of students who are deaf or hard of hearing, and the sign language skills necessary for direct communication. It was determined that the Class Assistant would develop a partnership with the Course Professor and would also provide supplemental instruction through group tutoring, individual tutoring, and in-class support. The Class Assistant was not to be the Course Professor for the deaf and hard of hearing students. Additionally, the course was to be staffed with an interpreter.

The proposed impact of this experiment was that students who successfully complete this Math 140 course will have met their General Education requirements and will be better prepared for other upper division mathematics courses which might be required in the undergraduate or graduate level majors.

Project Implementation

Personnel for the project were selected in the Spring of 1998 so as to get the course listed as being offered by the Math Department. Dr. Mark Schilling, a professor with more than fifteen years of experience in teaching Statistics and Mathematics, was asked to teach the course. Art Caplan, an interpreter and Math tutor at the National Center on Deafness, was offered the position of Class Assistant.

Why was the Statistics class selected over the Math Ideas class? Math 140 (Statistics) satisfies both the Math requirement in General Education and the Statistics requirement of several majors in the university, such as psychology and sociology. It was determined also that Math 140 would prepare students for other statistics courses required at the upper division or graduate level.

The project was undertaken during the Fall '98 semester with 28 students enrolled in Dr. Schilling's Math 140 course. Seventeen were deaf or hard of hearing students and eleven were hearing students.

Findings

To reiterate, the project objective was that specialized instructional components and teaching techniques will enable students to complete Math 140 (Introduction to Statistics) with a passing rate of 75% or better and no dropouts. Table 2 shows the grades received by the deaf and hearing students in this Fall '98 class.

The results of the Project, as shown in Table 2, suggest that:

- There is clearly evidence of successful achievement by students who were deaf or hard of hearing;
- This project can be replicated in other math classes;
- This design is applicable to courses with smaller populations than the Fall, Math 140 course; and
- This support is relevant to any student with disabilities.

At the end of the semester students were asked for their comments and feedback. Their responses included the following statements:

"I liked the fact that most of us students were motivated to learn more about statistics. People

Table 2.

Academic Grade	all students n=28	deaf students n=17	hearing students n=11
A	7.14%	5.88%	9.10%
B	32.00%	35.30%	27.30%
C	28.60%	41.20%	9.10%
D	21.40%	11.80%	36.40%
F/U	10.70%	5.88%	18.20%
Dropped		0	
Summary			
Passing (A-D)	89.30%	94.00%	81.80%
Failing (F)	10.00%	5.88%	18.20%

look at me a little strange now when I say that I enjoy statistics.”

“Art was a fantastic tutor. I entered the class very unmotivated and unsure of my ability to grasp concepts. But after a few sessions with Art, I ended up loving the class. I ended up surprising myself.”

“I think that direct communication and contact are essential, especially in a math class setting.”

“I loved how the professor was very patient and the tutor, Art, was very motivated to help us. I also like that there were a lot of deaf and hard of hearing students, because we all studied together and it helped for test preparation.”

“I liked best the pace, Dr. Schilling’s availability and understanding to meet my needs.”

“I would suggest more in-class activities and more sample problems to help with preparing for tests.”

“The special tutor [allowed for] direct communication through ASL.”

“I liked best the times when I was finally able to understand the math problems.”

“Everything in the class was fine. If I were better prepared, I’d have gotten a better grade, but I am satisfied with the ‘B’ I got.”

Summary

What follows is a summary of the statements made by the presenters at the PEPNet Conference. **Dr. Schilling:** Teaching this class was a great experience, much because of the support services pro-

vided. I don’t know how many of you noticed, but not just the lower end of the grade curve but the upper end of the grade curve showed great improvement. In previous semesters there were 11% As and Bs, while there were 40% during the semester we ran this project. In the past I’ve had deaf students, but never more than three or four at once. The large number of students in this class emphasized the fact that we were dealing with three languages: there is sign language; there’s mathematics; and there’s the primary challenge for students, all students, language. That language not only contains technical terms, but also various symbols, Greek letters, and letters with funny marks on top of them. Dealing with these three languages was quite a challenge.

One surprised me at first. I guess I was trying to be even with everyone, when a couple deaf students said, “Can we all sit on this side, please, so we can see the interpreter better?” So immediately the class was segregated, deaf students on the right, hearing students on the left. This was fine, but it was unexpected.

I give a lot of prompts when I lecture. I wait for a student to fill in an easy answer for a quick response, and you can probably guess what happened. When I would give such a prompt, immediately the hearing students would call out an answer, or possibly raise their hand, but in either case they would answer before my prompted question was even completely signed to the other half of the room. So this was a situation where I had to learn to hesitate and ignore any response until the signing was completed.

A particular issue that came up in this class was the use of computers. We used the computer lab for about ten days of the total 45 class meetings, and the computer lab presented an additional challenge. In that environment, the students have to look at the the board and the computer monitors. Throw in the need to watch the interpreter as well, and the deaf students were frustrated. Furthermore the monitors are big and tall, so students couldn't even see around them. So this was a particular problem that was difficult to control and forced me to considerably slow down my presentation.

My course is an activity based course as opposed to the traditional textbook course which requires a significant amount of reading. The text we used required more in-class activities. The reading skills of all students at Cal State Northridge are pretty weak, and this is a particularly acute problem for the deaf and hard of hearing students. So I felt that this model worked better in getting students on task with activities in class. It certainly resulted in dramatically improved performance for everyone! I would walk around and check on student work. With deaf students it is not effective to just look over their shoulders and say "Good" or "Do this a little differently," because I want to be able to do this quickly and move on. But I had to have an interpreter follow me around in order to do this. We were in a very small room, and it was hard enough to weave in and out with two people and sometimes three with Art there.

Another issue was that sometimes we had different interpreters on different days. When we had our regular interpreter, things went well. But on days when we had substitute interpreters, it was a big, big problem. In mathematics courses especially interpreters need to know the symbols. Not having the background, the substitute interpreters would have to spell out "hypothesis testing" and "confidence intervals" and all these words. The result was that they would fall behind and not quite understand what I was talking about.

The hearing students in the class adapted to the environment of having a large number, really a majority, of deaf students quite well. I think part of that was the fact that they realized that the pace of the class was somewhat limited. And they were happy to have a nice, even pace, not a rushed pace for themselves as well. So it worked quite well. But I didn't give them any overt advice, like "Hold up" or "Don't answer until everybody has a chance."

Does the project design influence the course process and outcome? I would say it does limit the pace a little bit in terms of how much can be covered. Is this a bad thing? I don't think so. I think a number of faculty have talked for some time about the fact that all of our courses cover too much material too fast. We should probably knock it down to 70% of the material, and let the time dictate what you could cover. But I was still satisfied with what we covered.

The course did not require much more planning time than is normal. The additional time involved meeting with Art and making sure that we were "on the same page." We did that on an "as needed" basis. One thing I would do in the future is to make up some sort of a glossary, a list for interpreters at the beginning of the semester, with the technical terms and the symbols, so that they know in advance that these are the things they are going to have to sign. Maybe the students can work out some sort of quick signs for specific vocabulary so interpreters don't have to spell out everything.

I think that one of the most important features of this model is to have someone who is a very capable tutor. Art was really wonderful. He's really an expert in statistics. It's a difficult subject, so having someone convey exactly just the things that I was trying to say was truly essential. I think that group tutoring and the fact that there was such a large group of deaf students who were able to meet as a group was a good model. A lot of times one student will stipulate what another student hadn't thought of or couldn't even express. So those are just some of the experiences I've had teaching this class. I really enjoyed it, and I saw it as a success.

Mr. Caplan: I guess I'm batting "clean up." Who understood what I just said? Batting "clean up?" This is kind of a simple sports analogy. This is a cultural point, the kind of example that comes up in classes over and over again, and causes an amazing amount of confusion for a simple statement with a simple meaning. Culture, culture of all kinds, comes up in statistics because that's the application of statistics. It's applied to culture, it's applied to politics, it's applied to everyday activity. Gaps in cultural awareness often show up in students' experiences, whether they're hearing or deaf or hard of hearing.

In keeping with my role as Class Assistant, I did go to every class meeting. I took notes, and I

watched very carefully what Dr. Schilling was presenting; I wanted to be able to emphasize the same points and use the same examples in the out-of-class sessions that I set up. I call this “supportive teaching.” I know that it is usually called “tutoring,” but it felt different than just regular tutoring sessions. I was borrowing the direct ideas from the classroom and coming up with a good deal of additional material to emphasize the same concepts. I offered about seven hours a week, sometimes up to ten or twelve depending upon which week students needed the additional support. The students would come singly, sometimes two or three, sometimes up to eight or nine typically before a test.

So, what did I notice? Would you be surprised to hear that one of the biggest problems in a statistics paragraph is not statistics vocabulary but some of the English vocabulary and culture which is mixed in with it? Take, for example, the phrase “term limit restrictions.” Does that mean there’s a restriction on the limit? Or the term? This may seem very confusing, but it is typical in the statistics book. So this type of problem would cause vocabulary questions not related to statistics at all. And much of my time in my supplemental instruction was really involved with translation: translation of culture, translation of English, and of course, translation of statistics.

In terms of tutoring strategies, I particularly like everyday examples. I used material that the students could relate to, ideas from their experiences, so there was no confusion with culture outside their experience, no confusion with any other English related problems. Just direct, simple examples to emphasize the statistics. Of course, I answered many questions about homework; that’s kind of normal for any kind of tutoring. But more than that, I brought in and made up many examples of some problems using the formulas, using the concepts from the class, specifically those concepts that Dr. Schilling was using that week. Prior to the test I brought in many sample problems and study guides, true/false questions, fill in the blank questions, calculations, and explanations of the answers. What is required in statistics is the ability to comprehend what you have observed. Students would practice writing an English sentence, explaining what they just found.

All our communication was direct sign communication. I required students to solve problems on the board. I would ask them questions to make sure they understood the point, not just show them how to solve it, but make sure they could explain it back

to me. So I really was pulling out the information more than just trying to build it in.

If you went to the Plenary Session this morning, you may have heard Harry Lang describe the characteristics of effective teaching, characteristics that fit our model. Direct communication. An interactive approach, such as when we pull out answers and the students communicate ideas back to me. Participatory learning, where students talk with each other, support each other, and answer questions in front of me and each other.

Let me say a word about interpreting in a Statistics class. When Harry Lang mentioned effective teaching, one of the important criteria he emphasized was knowledge of content for teachers. He emphasized that point. I would suggest that that’s equally important for the interpreter in the classroom. If the interpreter doesn’t know what’s going on, then the deaf students are not being served with a clear picture of a very complicated topic. It’s like the teacher is leading them through the dark forest of Statistics at night time. The interpreter only brings this to light if they can understand what’s going on.

Notes are another issue that gets easily overlooked. It’s a struggle for deaf students to take notes themselves because that means they’re looking down and up, and it is a struggle to receive all the information. Often what happens in the classroom is that another person is taking the notes, and the notes are given to the deaf students later. That is fine, except the teacher often expects that as lessons progress, definitions, formulas, explanations, and examples that are in the notes are in front of the student during that class period. And they’re often not. Several deaf students have expressed the frustration of having the information go right past them. They say that they just expect that they’ll “get it” later when they get the notes at home. So they are essentially blocked from that first opportunity to interact with the material in a meaningful way.

Ms. Treiman: In regard to the financial support for this project, we were able to secure funds through the Judge Julian Beck Grant that is offered at our university for innovative teaching strategies. The grant sum of \$5,000 paid for almost all of Mr. Caplan’s time in class and outside of class and accommodated one unit of released time for Dr. Schilling.

When we initially conceptualized the idea for this project, I met with the chair of the Math De-

partment. Having taught deaf and hard of hearing students, he was aware of the discrepancy issue that we were targeting as the problem, the time lag, and the different kinds of presentation (visual/symbolic as contrasted with linguistic information). After less than ten minutes of discussion, he said, "You've got my support!" He actually had to do a little more work than we did. He had to switch around professors' schedules to accommodate our needs.

Conclusion

We began our project with the belief that the below-average achievement of deaf and hard of hearing students in statistics classes

could be significantly reversed with an approach that focused on the unique learning styles of the students. By addressing communication and information processing issues in a new way, our goal of 75% (passing the experimental course with a grade of C or better) was surpassed. Our collaborative approach, with a professor responsive to the unique needs of deaf and hard of hearing students and a class assistant employing direct communication for supplemental instruction, can be replicated in whole or in part by other institutions. This project has been one successful step toward our broader goal of providing deaf and hard of hearing students with the opportunity to achieve their true potential.

Creating an ASL Study Aid for Introduction to Psychology: Meshing Four Constituencies to Make a Video Tape

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Abstract

This paper examines the process of making a videotape study aid for a university level Introduction to Psychology course with the eventual goal of transferring the material to a searchable CD ROM disk. The project was done as part of a Western Region Outreach Center and Consortia grant awarded to Salt Lake Community College and the Utah Consortium, a group of post-secondary institutions and other agencies that serve Deaf and Hard of Hearing clients. Four different groups were involved in the making of the videotape: Psychology Department consultants, Deaf consumers and actors, video production staff, and coordinators. Two coordinators worked with the other three groups to negotiate the material selected, how it was expressed, and the details of how the final video would look.

The rationale for making the video is that Deaf students face unique problems in classes that use extensive technical terminology. A Deaf student typically uses an interpreter during lectures, but may have to break his/her concentration on the lecture material to discuss with the interpreter how to sign various terms.

This videotape was conceived as a way to let Deaf students preview terms and concepts in ASL before they had to deal with them in lectures. It was also seen as a way to help Deaf students connect the ASL versions of technical terms to their written English equivalents, hopefully improving exam performance. It is expected that interpreters will want to study the tape ahead of time, making their preparation more efficient.

Three Deaf actors were used on the tape, signing in ASL from a script developed in consultation with the University of Utah Psychology Department. For the first one-hour tape, three sections of Introduction to Psychology which beginning students find most difficult—Abnormal Psychology, Physiological Psychology and Cognitive Psychology—were videotaped.

Extensive meetings with Psychology Department representatives, Deaf students and recent graduates, the Deaf actors and the video production people were needed to arrive at a product that took into account the requirements of the various constituencies. The paper discusses this process.

Creating an ASL Tutorial for
Introduction to Psychology:

Meshing four constituencies to
make a videotape

Funded by The Rocky Mountain Connections Center which is sponsored by a sub-grant from the Western Region Outreach Center and Consortia (WROCC) National Center on Deafness at California State University, Northridge in a contract with the US Department of Education, Office of Special Education and Rehabilitative Services

(The first speaker is Rusty Wales; he is Deaf utilizes an ASL-to-English interpreter)

We have seen numerous Deaf people succeed in their colleges and in their careers as well. Few of them went on to successfully complete Ph.D.s.

There has never been a question in our minds in our professions in the field of deafness that Deaf people have equal ability to achieve anything in their ventures, as their hearing counterparts do. Deaf individuals exhibit the same range of intelligence as hearing people do; we know that. Likewise, Deaf people do have shortcomings and so do hearing people, you and me. How well Deaf students are prepared prior to their first year in colleges may be more unique than in any other groups. It is our job to examine this uniqueness and explore various ways to help Deaf students overcome this deficiency.

It is a fact that most local public educational systems leave Deaf students ill-prepared for the demands of vocational or college programs. One area of particular concern is English literacy skills. No matter if some Deaf students have worn hearing aids/cochlear implants and have had excessive speech training in their first 18 years of life, Deaf youths will *always* think and process language visually. Some students may have been more or less exposed to American Sign Language (ASL), the natural language of Deaf people. Others may never be exposed to ASL, yet they have shown some of the same struggles in mastering writing/reading and employing English. With this logic in mind, ASL is the language most readily understood by visual thinkers (Deaf individuals). ASL is a complete language that functions the way the visual mind functions. English, on the other hand, is an auditorally processed language that functions in the manner suited to the hearing mind. Written English is based on the way English *sounds* and is *spoken*.

The intent here is not to beat a drum advocating ASL but to help you to think like a Deaf person as if you have been deprived of thinking, processing, and articulating auditorally in your lifetime. When you open a college-level textbook in your first year at a college, you might find nothing but wordy or verbose text without pictures. You would want to peruse through many pages looking for some pictures to help you think visually. "Help!" may be a natural reaction of a Deaf student as a visual thinker on the first day at a college.

In a transition from a high school to a college, Deaf students are thrust into heavy verbal lectures where professors blah-blah, using big and nonsense vocabulary, all auditorally. Those Deaf students are expected by their parents, rehabilitation counselors, professors and everyone else to pick up big vocabulary as naturally as their hearing

classmates. This is not always the case. They really need direct interaction from their teachers or professors. Although interpreters play a vital part in college learning, a direct interaction between a Deaf student and his/her professor cannot happen even with an interpreter. A professor would have to sign directly to the Deaf student before this student can process information visually. Deaf students need instructors who can communicate with them directly in their language, understanding the linguistic and cultural differences of Deaf students in order to get the concept across. If instructors or the textbooks could share the same language (ASL) their students use, they would be empowered to create visually-accessible methods to help Deaf students understand the class subject much better.

We the staff of this Utah grant team have identified this issue and after some lengthy brainstorming and experiments, came up with this video project. It can be said that video is visual enough and very essential for a Deaf person to think and process a concept, particularly in a college setting. This video project may also be of benefit to an interpreter in a particular class to become familiar with certain high-technical signs used in interpreting. The goal here is obvious and is to help Deaf students be better prepared for studies on a college level. Keep in mind, this project is best suited to the early part of a semester, such as the first week of a class, *not* one night before a final exam!

(Karen Wales, who is hearing, is speaking this next part. She utilizes an English-to-ASL interpreter).

We decided to start with Introduction to Psychology as our pilot class for the video because it is a requirement or elective for many majors, because it has a large body of technical terminology, and because some of the technical terminology resembles everyday language but is used in very specific ways which confuse students. To begin, we interfaced extensively with a professor of psychology at the University of Utah who is very concerned about the quality of undergraduate education. He, along with advanced graduate students in the department, reviewed the scripts for the video to ensure psychological accuracy.

The scripts were written by a staff member at the University of Utah whose graduate degree is in Psychology and who has frequently taught Introduction to Psychology. This team of people

was consulted often as the script was written for three topics in Psychology 101, Abnormal Psychology, Physiological Psychology, and Cognitive Psychology.

After extensive research of available similar types of learning materials (video), we discovered and found only one series of videos that were of technical terms directed mostly toward interpreters (an NTID series of five videotapes). These tapes only displayed signed vocabulary (to create consistency for interpreters) and spoke the technical terms, rather than defining or giving examples. Therefore the purpose of the video was two-fold—first, to make something that would benefit and be useful for Deaf college students prior to and during the studying of the Psychology 101 course and second, for interpreters to assist them in their skill level for the benefit of interpreting to Deaf students and to increase consistency in technical signs used in psychology.

Once the script was written on paper in English it was time to find a group of Deaf consultants who would review the written script and agree with the signs and definitions in ASL. We also decided in the beginning of this process that Deaf individuals would be the “actors” for the visual video presentation. The Deaf consultants were crucial in the process of revising, editing and reviewing the written English script for the ASL presentation to be taped. We chose five Deaf individuals who had taken psychology, used their psychological backgrounds in their professions, were college graduates (with MA or BA degrees), and had excellent usage of English as well as being culturally Deaf. Of course, they were all fluent in ASL.

In the course of many meetings among the Deaf consultants, a strong consensus emerged about how to handle language and translation issues. One point of agreement about language was that if a given piece of technical psychological vocabulary was not in common use in ASL, it would be fingerspelled; new signs were not created for the purpose of this tape. All the Deaf consultants were in agreement with language, translation, and definitions into ASL. The Deaf consultants would consider in length how to express the precise meaning of a term in ASL. This “linguistic clarity process” evolved due to the concern they showed in truly understanding the original script material. The script was reviewed and changed three times before it was approved by the Psychology department.

The Deaf consultants were wizards at rethinking English psychology terms into ASL. Gross changes like eliminating examples that were more understood by “hearing” people were easy to achieve. The Deaf consultants prompted a number of changes, interpretations, and subtle nuances that improved the finish product. Specific examples were used more often to clarify concepts and helped the video work more like a narrative than a set of isolated definitions. The face to face interaction between the Deaf consultants and the script writer was a crucial part of the process.

The three Deaf actors in the video were chosen from our group of Deaf consultants. We consulted with them as to color of clothes and background colors, listened to their suggestions as to what would make the video as easy on the eye as possible. This greatly helped once the “shooting” of video began since they were involved in the translation of the script. Each Deaf Actor has their individual signing style, something we knew would be of value for the audience. The common thread was that all three actors were culturally deaf and were fluent in ASL. Their signing styles are unique which makes for ease and interest when watching this video. These Deaf Actors make the audience feel like they are being taught by professors. They beauty is that the material is being presented in ASL by the individual not a third party.

Communication, communication communication was the key to the success of this video.

(The final section is spoken by Anne Vinsel, who is hearing. She utilizes an English-to-ASL interpreter).

Rusty and Karen have explained the part of our process that included recruiting the actors. I will begin where Karen left off by repeating “communicate, communicate, communicate” and add “then do it some more and don’t assume anything!” I thought I would use my time to provide you with some concrete examples of what I mean, and don’t worry—I’ll be sure to leave time for questions.

In a way, none of us had any background in doing something like this, but in another way we all had some connection to learning a large set of “big and nonsense” vocabulary. The first Introduction to Psychology class I taught was in 1975, and some things haven’t changed. My own motivation in this project was to help Deaf students get beyond a point where many students, hearing or Deaf, become stuck. They feel like they know the terminology, and they’ve looked at the book and

maybe memorized a few things, so if you just ask them “do you understand this concept”, they nod yes. But they don’t really understand the terminology enough to work with it, even to the level of an Introductory Psychology text. So that was my goal: to let students get beyond that nodding stage to where they understand something in at least a basic way, and can express that on an exam.

When I wrote the script, I tried to include lots of examples that would help students remember the concepts but that were still accurate from the psychology point of view. This was especially important in the section on Abnormal Psychology. It’s one thing to define what a delusion is in the abstract, but it is more helpful to give an actual example of a real kind of delusion somebody might have. If you just have the part of the definition that says “false thoughts,” you could get all hung up thinking “what’s false to one person might be true to another,” and you don’t really get the feel for what a delusion is. However, if you have an example such as “the person thinks she’s the Virgin Mary and is being persecuted by being put in this hospital because the government is trying to silence the mother of God,” that gives you a truer picture. Also, I’m a visual person, a painter and sculptor, and it always helps me to have a visual image to remember something. So, it was easy for me to understand that Deaf students would want something to visualize instead of a lot of cold “blah-blah.” All our actors were really concerned about conveying meaning, communicating to students, and they helped make the scripts better that way.

At the same time it was also my job to worry about keeping definitions and examples accurate from a psychological point of view. There was a lot of back and forth consultation between myself, Karen, the Deaf consultants, and the Psychology consultants. Karen counted three versions, but from my standpoint it was more like 800 e-mails and lots of meetings. One thing that was interesting and also a little funny was that the parts that the Deaf consultants found boring and suggested minimizing or eliminating were the exact parts that the Psychology Department consultants had expanded from my original draft.

One example was the *DSM-IV*, the *Diagnostic and Statistical Manual*, version 4, affectionately known as the Bible of Abnormal Psychology. Deaf consultants thought the section on the *DSM* was way too long and boring, and the Psychology Department thought it needed expansion. There were many compromises, needless to say.

Because I came into the project totally ignorant of ASL, I had originally assumed that the “translation” part would be straightforward, and the actors would just plug ASL signs into the technical terminology (yeah, yeah, I know better now). Rusty, Karen, and the Deaf consultants were very persistent (tactful, but persistent) in letting me know “it’s not that easy, we have to get together and figure this out, ask you questions about what you meant, etc.” My first clue was when one of the Deaf students got confused about how I was using the term “commitment” (as in “commitment hearing”). “Isn’t commitment a good thing? What all the girls want, you’re a serious person?” His question made me realize that I needed to clarify that part right away, but also cleared up a real mystery created by many generations of Introduction to Psychology students! “Oh, THAT’S what they were thinking commitment meant!” The problem with an introductory class is that if you’re in the field, you use jargon all the time in your everyday life, and you forget that the same English words mean something else to most people. The Deaf consultants were very good at spotting when that was happening and making me fix it. Working so hard for clarity was a part of the process I hadn’t even visualized at the beginning but was most valuable to the quality of the final product.

As we continue to do the rest of the Introduction to Psychology tutorial, that part will become more important. For me, it was very important to try to be flexible and learn as I went, even though I was juggling three different groups (Deaf, Psychology, and TV Production) and was coming from a third group (trying-to-be-helpful Advisors).

Another happy surprise for me as I learned a little about ASL was how efficient it is in terms of time. Having four dimensions to work with instead of one lets you put a lot of information in each unit. We discovered that a script that would take about 2 1/2 hours in spoken English took less than 90 minutes in ASL.

Working with consultants from the Psychology Department

The Psychology team needed to understand that ASL and written English are not the same; it’s a genuine translation need; also that the usual organization of information in textbook English might be inefficient or boring in ASL.

We operated through a professor who is very concerned about the quality of undergraduate instruction. He has been a connection to the Disability Services office for several years as a dual appointment with Undergraduate Studies, so a working relationship with our office was already in place. The professor contacted other professors and all-but-dissertation graduate students who specialized in the topics we were videotaping. These consultants reviewed the first draft of every section, and in one instance also reviewed two more drafts. We asked them to concern themselves with the following issues:

- accuracy and up-to-date quality of the information.
- appropriateness and clarity of the examples.
- representativeness of the terms for an introductory course.
- appropriateness of the level of explanation for introductory class.
- should there be more or less information for a given term.

Working with TV Production People

It was obvious to me that our production and editing staff had never produced an ASL video before, but I was very mistaken in thinking it would be easier for them. Because no sound is needed and the remaining production should be the same, I thought it would be easier. There were quite a lot of things about the shooting that were new and different for the production people. For the shooting, although it was easier for the TV production not to have an “official” audio track, we wound up recording an unofficial “trash” audio track so that the editors could divide up the tape into coherent segments and properly insert the text (many thanks to Karen).

The set needed some experimentation, as well as the lighting. The production crew was only familiar with shooting situations where focus is needed on the upper body, such as a news anchor person.

In standard video production, medium and longshots are not “read” by a viewer for close detail, so although the camera people were accustomed to shooting a person from the waist up, they were not accustomed to shooting someone with rapidly moving hands where clarity of hand movement was critical. This required adjustments of positioning of the Deaf actors, adjustments in lighting and very exacting work by the camera operators.

One of the actors, Penny, who did the physiological section, had a naturally large signing space, and was also working with a large model of a brain some of the time. The production crew had to ask her to restrain her signing a little to leave room on the tape for other elements.

When the teleprompter was set at a speed appropriate for speech, the signing became ve..r...y.....s...l.....o.....w. ASL is so much more efficient than spoken English; the teleprompter operator had trouble keeping up with the script when it was run at the speed that worked for signing. Because we taped Rusty first, he was experimented on the most, but he was very patient and we only had to reshoot one section at the very beginning of the tape.

The biggest problems we had to work out when putting all the elements together were what sections to include in what proportions, and how fast to run things by the viewer.

All of our Deaf consultants were very clear that they wanted the actor large on the screen; then we had to juggle other elements. Originally, we made one giant mistake and asked the actors themselves how much information they wanted on the screen with them. Whoops! Since they had lived with the script for quite a while, they already knew this stuff and preferred a format where the text was on the screen at the same time they were. The WROCC site visitors and anybody who was viewing the tape “fresh” found that format too hard to follow. Luckily, this is one of the things we could fix in post production; so the tape you see here is the changed version and people think it is much easier to follow.

An interesting generational difference was that younger Deaf consultants expected to interact with the video more and were confident of their abilities with freezing text and taking notes from there. The somewhat older consultants wanted the text on the screen longer, not wanting to interrupt the flow of visual information. We compromised with ten seconds of screen time for text.

Shooting the Video

Because we are hoping to eventually put this video onto a searchable, indexed CD, we realized early that we would need extremely high quality video. This was also the case because viewers would need to clearly discriminate among very subtle hand and finger actions, not ordinarily a major concern in video. We also needed to include a time code,

so that students could match the video to a written text index, thus saving them a lot of time if they just wanted to look up certain terms.

My original concern that there was too much information even in these three sections proved to be unfounded; ASL's spatial economy meant that material took a shorter time to sign than it would have taken to speak.

The actual shooting created unfamiliar situations for everybody. It is apparently more difficult to read from a teleprompter, watch for a floor director's signed directions and sign than it is just to read English aloud from a teleprompter. The speed at which it makes sense to set a teleprompter for spoken English is too slow for ASL signing. The (hearing) director was also dependent on a signing floor director to pass instructions back and forth. Camera operators are more accustomed to focusing on a person's face than on their signing space, and lighting that area is more critical than usual. Luckily, everybody in the process was patient and had a sense of humor. We were limited to one day of shooting, with about an hour of reshooting time available. Any other difficulties had to be fixed in post production.

One thing we found critically important for later editing was to have a "trash" sound track, narrating what the signing actor was saying. Because of the diversity of the actors' signing styles, there was a range of speed, pausing between terms, etc. This variability, while providing something for every viewer, did create difficulties in the post production. Most mistakes were corrected on the spot by reshooting; they were the usual kinds of video bloopers—the occasional snuffle, signing "is" instead of "is not", signing too slowly or too quickly. Only four significant errors snuck into the tape, and three were correctable.

Post Production and Beyond

The biggest difficulty in postproduction (currently wrapping up) is one that is inherent in having a hearing person who does not sign edit ASL material. Editors are accustomed to having the sound track coincide exactly with the visual of the speaker on the screen; this was obviously not possible. The editor had several sessions with two different ASL users, one hearing and one Deaf.

These two ASL consultants noticed difficulties that had slipped by in the shooting, and were very creative in suggesting corrections. One problem

was solved by cutting and pasting from another signed sequence, a section that remained too slow was sped up by increasing the frames per second, text that had landed with the wrong signed sequence was corrected, and several quite complicated technical problems were fixed by the editor working with an ASL user. The major lesson for all of us was that postproduction is more complex than you think and that not everything is easy to fix after shooting. Working with ASL visuals was also a new experience for the editor; everyone involved needed to be flexible and creative. In the end, everything was correctable except for one stray non-dominant hand "shoo-ing" gesture that was impossible to reshoot because the actor had died shortly after the footage was made.

There were several limitations in this first video, including the fact that only the video production staff had made instructional videos before. If we had it to do over again, several changes could improve the final product:

- work more on making both form and content ASL friendly, while retaining accuracy.
- put actors' ASL glossed scripts on teleprompter if they'd rather, instead of using the English version.
- separate the functions of providing a trash audio track and watching for ASL errors; two ASL-using floor directors rather than one.
- insert a narrator to comment on structure (idea thanks to Deaf colleague hired after the taping was over) such as the mice in the movie *Babe*.
- pull in video examples from other sources that are accurate, for example clips from *Girl Interrupted*, *One Flew Over the Cuckoo's Nest*, for abnormal psychology. It might be impractical to get permissions, but worth trying.
- build reshooting-after-reviewing-the-original-tape into the budget, even though it means resetting the stage and lighting and recalling the actors.

Brief Autobiographies:

William "Rusty" Wales was born Deaf and attended the oral day school for his first six years. He then transferred to California School for the Deaf, Riverside, and six years later he gradu-

ated. Four years later he received a BA degree in Sociology from Gallaudet University. Rusty has been a teacher, curriculum specialist and project coordinator with the California State Department of Education for 16 years. In these years he has been involved in both types of educational settings, a residential school and mainstreaming program. He moved to Colorado to become a rehabilitation counselor where he was actively involved in coordinating school-to-work transition as well as preparing clients for college. Ten years in this business was long enough for Rusty, and so he moved on to becoming a Training Supervisor with a Telecommunication Relay Services center. Currently, Rusty is the Administrator of Utah Division of Services to the Deaf and Hard of Hearing and he manages the Utah Community Center of the Deaf (UCCD) in Salt Lake City (see elsewhere in this paper about more information on UCCD). He has won a number of awards including the TV network/newspaper's Teacher Who Makes a Difference and the Colorado Rehabilitation Counselor of the Year awards. His short story, "Back to the Star" was published in *Deaf Esprit: Inspiration, Humor and Wisdom in the Deaf Community*.

Karen Wales has a MA degree from Gallaudet University in Rehabilitation Counseling. She has extensive experience in working with people who are Deaf and hard of hearing both as a classroom teacher and vocational rehabilitation counselor and placement specialist. Ms. Wales is currently the Program Director for BOOST, a customer service/computer skills training program for individuals with challenges and disabilities. She has been involved on a cooperative agreement with Salt Lake

Community College and the WROCC Grant to teach English as a second language to Deaf students and to assist in the development of our ASL Video for Introduction to Psychology.

Anne Vinsel has an MS in Psychology from the University of Utah. She has taught a variety of psychology courses at the college level since 1975. She had a career change, and is presently a painter and stone sculptor, and does free lance work in computer imaging. She presently works at the Center for Disability Services at the University of Utah as her "day job", and was asked to help with the WROCC video project by writing scripts, coordinating with the Psychology Department, and assisting with the video production and post-production.

About Utah Community Center of the Deaf (UCCD)

The Division of Services for the Deaf and Hard of Hearing provides services designed to increase education, independence, and community integration of individuals who are deaf or hard of hearing. It is housed at the state-owned facility affectionately called UCCD and it includes a 25,000 square foot building housing offices, classrooms, meeting spaces, lounge, kitchen, library, bookstore, gymnasium and technology center. The Center's services and activities include information and referral, educational classes and workshops, counseling services, recreation and leisure activities, equipment repair and installation services, interpreter program with training/certification/services, senior citizen activities, deaf youth and family activities, recreational activities for deaf/multiply disabled individuals and an independent living program.

Section V
Using Technology

Demystifying Assistive Listening Devices: The Devil is in the Detail

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Abstract

Assistive Listening Devices (ALDs) have been described by users as technology that has changed their lives, something that they would never be without again. Yet, many individuals who have a hearing loss have never used them; service providers may be unfamiliar with them as well. Personal ALDs are relatively easy to use, as long as the user is familiar with a few tips and tricks. Unfortunately, without this information, the user may think that problems that occur are due to his hearing loss and not the equipment. This paper covers basic information about the workings of the major ALD systems and provides troubleshooting tips to make ALD use a successful experience for all.

Oftentimes service providers do not understand why individuals who are hard of hearing need any accommodations in classroom settings. The student may have been able to communicate very well with the service provider on the phone or in her office. Some people believe that hearing aids and speechreading together are adequate for classroom communication. Others may think that only those with profound losses are really in need of assistance. Still others may not understand why the student seems to hear well in some situations but not others, or understands one individual and not another. This article will help the reader to understand how these seeming inconsistencies can exist and will focus on how assistive listening devices can be extremely useful in classroom settings, even for those with milder hearing losses.

Why use ALDs?

People who are hard of hearing are not just hearing speech that is softer. Because some speech sounds are softer than others, such as s, f, and th, these individuals hear softer speech with parts of words completely missing. Students who are hard of hearing depend both on what they can see (for speechreading) and what they can hear for their receptive communication. However, as they are students, they will be in many situations where much of the vocabulary is new to them. It is even more difficult to speechread unfamiliar words.

Sound is measured in frequency (high and low) and intensity (loud or soft). Hearing aids help individuals by increasing the volume in the range of frequencies in which they have trouble hearing. Unfortunately, hearing aids cannot discriminate between the sounds one wants to hear and those one does not want to hear. Classrooms and other group settings are extremely noisy situations. It is not just that the teacher may not be speaking loudly. There are 50 other students in the room moving about, tapping pencils, getting books out, and shuffling papers. The heating or air conditioning system and the fan on the overhead projector add to the noise. Although newer hearing aids with directional microphones have improved listening in noisy environments, most students will not have this technology. In addition, this technology is less effective when the person you want to hear is farther away. Hearing aids typically amplify all sounds within the prescribed frequency range within about 20 feet of the student, making hearing in noisy environments extremely difficult.

To make matters worse, acoustics are usually poor in classrooms. Research has shown that students with normal hearing can hear clearly if what they want to hear is 6 dB louder than the background noise (Signal to Noise Ratio or SNR). Students with a hearing loss need not a 6 dB SNR, but a 15-25 dB SNR to achieve the same results (Blair, 1990). Hearing aids do nothing to improve the signal to noise ratio; in fact, they can make it worse by amplifying everything.

People who have a hearing loss lose both volume and clarity of speech. Hearing aids help get the sounds one might be missing to the ear, but the individual must still spend extra effort processing what she is hearing (information coming from both the ears and the eyes). For all these reasons, a student with a hearing loss may still need assistance to achieve effective communication in the classroom.

How do ALDs help?

ALDs consist of a microphone, a transmitter and receiver system, and a coupling device, such as headphones. The instructor speaks into the microphone. The microphone is attached to a transmitter, and the transmitter sends the signal to the receiver that the student has with him at his seat. The only sounds that are being transmitted are what comes through the microphone. The student's receiver picks up the signal and sends it to the coupling device, such as headphones. There is a volume control on the receiver so that the student can turn it up or down as needed.

What do ALDs do? ALDs help minimize background noise and maximize the target sounds you want to hear. The instructor speaks into a microphone, and the student can turn up the volume. In effect, ALDs help the student to "turn down" the background noise and to focus on what they want to hear (that is, the instructor's voice). It's that simple.

Who would benefit from ALDs? People with mild to profound losses can use them. The benefit received depends on the severity of the loss. ALDs aid in speech reading in more severe losses and help reduce dependence on speechreading for milder losses. For more severe losses, ALDs may only help the individual pick up voice inflections. However, this helps the individual interpret meaning. Individuals with and without hearing aids and individuals with cochlear implants may also

benefit from ALDs (those with cochlear implants would need to use the appropriate patch cords to be able to take advantage of them with the implant, or they may use the ALD with the aided ear). Finally, because ALDs help bring the target speech directly to the ear and thus help reduce auditory distractions, they may also help certain individuals with learning disabilities and attention deficit disorders. The bottom line is that educational settings are communication-intensive environments. ALDs will be extremely beneficial to individuals with a wide range of hearing loss.

Assistive Listening Device Systems

There are three major ALD transmission systems. This variety is useful, because each system has its own advantages and disadvantages. There are large area versions and small, personal versions available for each transmission system. Range varies with the system from under 100 feet to more than 500 feet. The receivers generally run off batteries, as do personal FM transmitters. With the *appropriate* coupling device, each system can be used with or without hearing aids.

FM. The personal FM transmitter is about the size of a pager and has an on/off switch and a jack for a microphone. The instructor plugs in the microphone and clips it close to her mouth, turns the transmitter on, and begins speaking. The FM receiver looks very similar and, like other receivers, has an on/off/volume control and a jack for headphones or another coupling device. The student wears the receiver, which intercepts the signals, and plugs in headphones or another coupling device to transmit the sound from the receiver to the ear.

FM uses radio waves to transmit the signal across the distance. It helps to think of the system like a radio station. The receiver and transmitter must be tuned to the same frequency to work. It provides the greatest amount of decibel output, and so it may be preferable to those with more severe losses. FM allows for a great deal of freedom of movement. In fact, you can leave the room and still pick up the signal. (Instructors should be aware that, unless they turn off their microphone, they, too, can leave the room and still be transmitting the signal.)

FM systems are susceptible to interference from other devices using FM radio waves within the same frequency range, such as pagers and

walkie talkies. Similarly, in order to be used in two rooms that are side-by-side, there must be at least one free frequency between the two transmission channels, or there may be some bleedover of the signal between the two rooms. If you pick up traffic from other devices, ask the manufacturer to recalibrate yours (or the ones causing the interference) to a different frequency. If you will be using this type of equipment in a high traffic area, purchase equipment that is narrow band or super narrowband. These transmit on different frequencies and are much less susceptible to interference from other traffic.

There are hearing aids that have a built-in FM receiver. Others can be fitted with an FM boot that fits over the bottom of a behind-the-ear aid. These will come with microphone and transmitter systems that are to be used with them.

Infrared. Infrared uses infrared light to transmit the signals, similar to remote controls and VCRs. While you must have a direct line of sight with remote controls, infrared systems have a wider area of coverage than this. Some older systems will require a more direct line of sight than the newer systems. Light does reflect off surfaces, so the signal can often be picked up from a variety of directions.

There are a variety of styles of infrared emitters; some look like panels and some look like pyramids. They are all identifiable, though, by the rows of diodes or eyes covering them. Infrared transmitters must be plugged into a power source. Most of them are plugged into an existing PA system (although there are home versions that are used with television sets).

There are also several different versions of IR receivers. All will have a light-intercepting diode on them. This diode must not be covered or the signal will be blocked. (So, unlike FM receivers, the student would not be able to put the infrared receiver in her pocket or clip it to her belt like a pager.) Some are worn like headphones and have the diode on top; others are worn like a stethoscope and the diode hangs under the chin. Still others look similar to the receivers described above for personal FM systems (except that they have a diode) and can hang around the neck or be placed on the desk. This last type is the most versatile. Individuals who wear hearing aids often have problems wearing headphones or the stethoscope-type headsets. When you purchase receivers, make sure that a variety of coupling devices can be

plugged into them (such as neckloops or headphones). Some come with the extra jack; others do not.

Because infrared light is used to transmit the signal, this system is considered secure. That is, others passing by outside with infrared receivers could not 'tune in' and pick up the signal as they could with FM. Light does not pass through walls. Infrared may be susceptible to interference from high frequency lights or direct sunlight (although indirect sunlight does not usually cause problems). Check with the manufacturer about systems that work with high intensity lighting. Infrared has the best sound reproduction across the broadest range of frequencies and is, therefore, the system of choice in theaters and concert halls. Also, many multiplex movie theaters use the system because the signals do not pass through walls and therefore, can be used in adjoining rooms.

Electromagnetic Induction Loop. This is the only system that is properly referred to as 'a loop'. The system consists of a loop of wire that is powered by an amplifier and a microphone. The amplifier must be plugged into a power source. The wire loop transmits electromagnetic waves that carry the signal, not unlike stereo or telephone speakers. An area as small as a table or as large as a room can be looped. Professionals should set up large areas, as dead spots (areas where no sound is picked up) can result.

If the user's hearing aid is fitted with a device called a telecoil, he will not need an external receiver. He would enter the looped area and flip his hearing aid to "T" to pick up the signals. Unfortunately, only about 30% of hearing aids sold in America today contain telecoils. In order for those without hearing aids (or those whose hearing aids do not have telecoils) to use the system, you should also have a supply of induction receivers on hand. These receivers look like the FM receivers described above, and headphones can be plugged into them. (These receivers are also useful to service providers in other troubleshooting situations described below.)

Unfortunately, everything that is powered by electricity gives off some electromagnetic energy that causes interference in the form of static or a hum. Some sources of interference are noticeable, while others are not. This is not the system to use in a computer lab. With some sources of interference, such as lighting ballasts, simply changing seats helps.

Application

The systems are relatively simple in concept. Application to real-life situations may require some troubleshooting. One person speaking is easy to set up, because you have only one person to mic.

What if there are questions from students in the class? The hard of hearing student would not be able to hear the question because it was not spoken into the microphone. The teacher should repeat questions into mic, or pass the mic to the student for long comments. **What if there is not just one speaker, but, for example, a panel?** If the speakers are taking turns, you could pass the microphone to each speaker. However, if it is more of a discussion, you should have multiple microphones. People just do not reliably pass a microphone when discussions are fast paced or heated. Side comments are always lost, causing the hard of hearing student to miss out on the flavor of the interaction. Check with your audio-visual department to help with setting up multiple mics and plugging the transmitter into PA systems. Otherwise, check with manufacturers to find out about other options. The Northwest Outreach Center maintains a website that lists companies selling assistive equipment along with their websites and phone numbers. It can be found at <http://www.wou.edu/nwoc/ald.htm>.

What if the teacher shows a video? For the best quality use a patch cord to plug the transmitter into the auxiliary out on the TV or VCR. If this is not possible, place mic next to the television speaker. If the student is watching the video alone, the transmitter could be plugged into the headphone jack. However, this will cut the sound off for anyone not wearing the receiver and headphones. Finally, you can't speech read an off-screen narrator, so the video should still be captioned. The website listed above also lists suggestions for post-production captioning.

What if the student does not want to wear or cannot wear headphones? If the student does not have hearing aids or if he wears hearing aids but the hearing aids do not have telecoils, the student is limited to headphones or earbuds. Earbuds are single-ear versions of headphones. Some clip on; others must be held up to the ear.

If the student has hearing aids with telecoils, there are two other options. One is the neckloop: It is plugged into the receiver in the same place as the headphones (make sure your jacks are the same size by checking with the manufacturer) and

is worn around the neck. It can even be worn under clothing, depending on strength of telecoil and severity of loss. As with the induction loop system, using the neckloop requires that the student flip his hearing aid to "T."

Some students may find themselves holding the neckloop closer to the hearing aid. These students may want to try using silhouettes. Silhouettes look like flattened, behind-the-ear hearing aids, and they hook behind the ear (just like a BTE hearing aid). (They will work with either BTE or in-the-ear hearing aids that are fitted with telecoils.) Because they are closer to the hearing aid than a neckloop, they provide stronger signal for more severe losses.

Using the telecoil further reduces room noise, because you can turn off the hearing aid microphone to flip the hearing aid to telecoil. Now you only pick up what is coming across the teacher's microphone. With the hearing aid microphone off, you will not be able to hear the room noise or anything that is not said into the microphone.

Notice that the neckloop and silhouette are *coupling devices*, not methods of transmission. They can be plugged into infrared or FM receivers. Just like with the loop system, though, telecoils may pick up electromagnetic interference. Just as you would experience problems using a loop in a computer lab, you would experience problems using a neckloop in a computer lab, even though the transmission system might be FM or infrared. In both cases, you are using your telecoil, and the telecoil would pick up the interference.

Some students will not be able to wear headphones with their hearing aids because covering the hearing aid causes it to squeal or feedback. In these cases, the student will need to remove the hearing aids to wear the headphones. Alternatively, the student may want to consider having his hearing aids retrofitted with telecoils (or direct audio input) in order to take advantage of assistive listening systems.

One final note about coupling devices. Silhouettes, neckloops and headphones can be used to deliver sound to both ears instead of just one. Many people find that this greatly helps with comprehension.

What if the hard of hearing student is called on to respond? This is a problem, because on some hearing aids with telecoils, you can use the mic or the telecoil but not both at the same time. This means the student may not be able to hear

his own voice because his hearing aid mic is turned off. He is only picking up what comes into the teacher's mic. A receiver that has two jacks, one for the coupler (like the neckloop) and one for another "environmental" mic, is the answer. This mic will pick up the student's voice. This mic also allows the student to hear comments from neighbors. It also works well if the class is split into small groups. Be sure to comparison shop for these items. There can be a \$150 difference in prices between catalogs on this item.

What if students are reluctant to use ALDs, even though you feel certain they would receive some benefit from them? Many times students who are unfamiliar with ALDs will be reluctant to use them. Encourage students to try out the equipment in safe environments outside of the class—for example, in a meeting with you in your office. Once they understand how helpful they can be, they will be more willing to use them. Also, explore with students to find out their fears. Provide them with the coping skills they need to gain confidence so that they can handle any problematic situations that may arise. Support groups are great places for students to get used to the idea of using ALDs and great places for students to learn more about how to live with hearing loss from others in the same situation. Self Help for Hard of Hearing Persons (SHHH) and the Association for Late Deafened Adults (ALDA) are two such groups. If there are no SHHH or ALDA groups in your area, or if the student is uncomfortable or just too busy, e-mail lists may be the perfect option. The website mentioned above includes a list of related e-mail lists and how to join them, including two excellent ones: Beyond Hearing and Say What Club.

What if the student complains of getting interference? How do you evaluate it if you do not wear hearing aids? In general, plug the headset into the receiver and see if you can hear any problems. You should be able to tell if there are any problems. If not, it may be the student's hearing aid. (In fact, some automatic room controls, such as those for heating and lighting, can cause hearing aids to hum and deplete the batteries. See Cederbaum [1996] for more information.)

If the student is using telecoils and a neckloop instead of headphones or if the room is looped, what do you do? This is where the induction receiver described above comes in handy. Plug headphones into the induction receiver, and have

someone speak into the microphone of the system. You should be able to hear what the student would be hearing coming across the loop system. You might try this in rooms even if they are not looped. You can turn on the receiver, walk around, and pick up areas of static around the room. If you hear static, this may be what the student is picking up through his telecoils in using a neckloop. You may notice that some areas of the room are static free—for example, away from the light fixtures. Let the student know where the good areas are. In some cases, you may need to change rooms, transmission systems, or coupling devices.

You can also use the induction receiver and headphones check to see if a neckloop or silhouette is working properly. Just place the receiver next to the loop while it is plugged into the system. Have someone speak into the mic. You'll pick up whatever is coming across the neckloop and be able to listen to it over the headphones.

One final question people often have about students using assistive equipment is this: **Is it ever appropriate to provide ALDs and notetakers or ALDs and realtime or C-print?** The answer is absolutely. ADA requires that you look at each individual case to make a determination about appropriate accommodations. Notetaking is almost always appropriate, because you cannot take your own notes and read lips without missing something. Speechreading is still vital. Notetaking alone, though, may not be enough for *communication* access. Notes do not provide you with the information you need to be able to join in the discussion or to ask questions for clarification.

How do you, as a service provider, determine if a speech-to-print accommodation is appropriate? You cannot judge by severity of hearing loss, since speechreading skill will also be a factor. You cannot judge by how clearly a person speaks. It is not necessarily true that students with less of a hearing loss will have better speech. So, what should you be looking at? Is the course in a large room with many students? The student may not be able to sit close enough to speech read. Does the instructor have an accent or facial hair? These both make it difficult to speechread. Likewise, does the class require that the instructor is providing demonstrations and looking down, or is the instructor's speaking style such that she does not face the class much of the time? Does the

instructor speak rapidly? Is the class heavy in vocabulary, such as biology? Unfamiliar vocabulary is difficult to speech read. Is there a lot of interaction or class discussion? The student cannot use sound to locate the speaker, and therefore will not be able to follow the discussion. In any of these cases, it would be entirely appropriate to provide C-Print or Realtime support in addition to ALDs. (See the PEPNet website <http://www.pepnet.org> for more information about C-Print and realtime captioning.)

Tips for Success

It is very important to understand that technology does not take care of all the communication access issues. The student may still need a notetaker, because he will still be using speechreading to get the complete message. Special arrangements will need to be made if more than one person is speaking. The instructor will need to repeat questions or comments from the class into the microphone. Sometimes the only way to eliminate interference is to change rooms. Because students are still using speech reading, they may still want to avoid instructors with accents or facial hair. Give the professor and student time to practice with the equipment. Make sure the professor knows in advance and has a chance to talk with the student and be comfortable using it. Finally, it may still be appropriate to allow the student to take a reduced course load due to eye strain and auditory fatigue.

People who use ALDs often describe the impact they have had on their lives as 'life altering.'

The most common reasons people do not use ALDs are that they have never used them before and/or that they do not know how to use them to get the most benefit. More information about ALDs for faculty, students, and service providers can be found on the NWOC website training module entitled "Demystifying Assistive Listening Devices." PEPNet also has a two-page Teacher Tipsheet and a full-length paper on this topic and many others. These can be found on the PEPNet website in the PEPNet Resource Center. Be sure your students know how to make the best use of this equipment to get the most out of their educations and to increase their employability.

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Distance Learning Opportunities for Deaf Learners

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Abstract

Various models of distance learning are being used with deaf learners at postsecondary levels. Web-based distance learning that enhances classroom instruction, synchronous videoconferencing that supports staff development, admissions and recruitment efforts, and desktop videoconferencing are valid for deaf learners. Included are recommendations for innovative uses of distance learning with deaf students and the opportunity for continuing this discussion through the use distance learning technologies.

Distance learning offers new and continuing educational opportunities for students throughout the world. New technologies are modifying traditional delivery systems of distance learning by offering new means of communication and interaction. Sometimes students can access this type of education readily with equipment and software they already own or can readily locate. It is important that deaf students who may be potential distance learners become involved in the development of these learning materials and make use of the increasing distance learning opportunities. Students, developers, and faculty need to insure accessibility and ease of use of distance learning technologies by deaf learners. For this to occur, we should become familiar with examples of how various distance-learning approaches are being used at post-secondary levels and have in place a forum to share our experiences with one another.

In this presentation, we focus on two approaches to distance learning and their relationship to deaf learners: (1) web-based distance learning that enhances classroom instruction, (2) synchronous videoconferencing that supports staff development, admissions and recruitment efforts.

What is Distance Learning?

The USDLA (United States Distance Learning Association) uses the term *Distance Education* to include *Distance Teaching*, the instructor's role in the process, and *Distance Learning*, the student's role in the process.

Distance Education takes place when teachers and students are separated by physical distance, and technology (e.g., voice, video, data, graphics, print), often with face-to-face communication, is used to bridge the instructional gap. Distance Learning (DL) can provide education for a variety of populations, who may not be otherwise served, such as:

- students disadvantaged by limited time, distance or physical disability;
- adults needing a second chance at a college education; and
- workers needing to update their knowledge base at their places of employment.

Distance learning can complement or supplement other learning opportunities. Distance learn-

ing is an evolving process. Four key features of DL can be summarized as follows:

- Separation occurs for a significant portion of the instructional process and for teacher and learner in space and/or time.
- Media is used to unite the teacher and the learner, and to carry content.
- Communication occurs between teacher and student and among students.
- Control is often determined by the students and not by the distance instructor.

Web-based Learning and the Deaf Learner

Web-based Distance Learning Can Enhance Classroom Instruction.

The advantage of web-based distance learning is its “friendliness.” Many students and teachers are already familiar with the Internet and already use it to keep in touch with friends, family, and/or colleagues. For these people, it is a natural extension to use these same tools for teaching and learning. For example, when teens and young adults go to conferences, their email addresses are centrally posted so they can continue their conversations on Internet chat areas or through IMing (Instant Messaging) when they return home after the conference.

The hardware/software for Web-based DL is commonly found in homes today. About 70 million homes in the U.S. are equipped with personal computers and Internet connections. Additionally, students have access to this equipment at public libraries and schools in most communities.

The exception is access to a web cam. However, these units are relatively inexpensive, ranging from about \$50 to \$175 [or the Sorenson EnVision for \$800, which includes a PCI card with processors]. Most require a USB port; however, a computer purchased within the past two years is likely to have one. The quality of web cams at present is typically restricted to a resolution of 640x480 pixels and under 30 frames per second under optimum conditions. They are currently suitable for slow signing but do not provide sufficient information for high intelligibility of normal-paced sign conversations. Furthermore, real-

time display is further limited by the speed of the computer processor and the Internet connection.

Distance Learning on the web, when interaction is provided, may incorporate person-to-computer interaction and/or person-to-person interaction. Person-to-computer interaction is between learners and a software program. The learner (user) interacts with a computer program. Person-to-person interaction occurs when the learner has an opportunity to interact with other learners and/or moderators (leaders).

Person-to-computer is preprogrammed interaction that occurs between learners and a software program. Examples include web forms, on-line course outlines/notes, and on-line quizzes.

The learner interacts with a computer program and receives feedback from a computer. The learner may or may not receive periodic feedback from a teacher. At this point, the interaction moves beyond preprogrammed interaction. Person-to-person interaction brings familiar features of the classroom to the Internet. Examples include conferences, chats, and online group projects. Key features of person-to-person interaction are:

- The users (students) interact with moderators (leaders or teachers);
- The moderators may serve as models;
- The users (students) interact with other users (students);
- Everyone can be an equal.

In this presentation, we focus on person-to-person interaction. These interactions can occur whenever it is desirable for the participants or at prearranged times.

How Should You Introduce Web-based Distance Learning?

Another component in planning is to determine the computer skills and comfort of your students so that all students can access distance learning confidently and comfortably. Some students will benefit from an introduction to DL in which the parallels between classroom learning and DL are clearly modeled. These students will profit from a teacher-led transition between a low-technology classroom and a high-technology classroom.

Most students will find DL more comfortable when a self-learning environment is modeled. This type of scaffolding enables students to make the move from supervised or guided

learning to independent or volitional learning with greater confidence.

How Can You Achieve Person-to-person Interaction in Web-based DL?

Asynchronous communication can occur at any time; the participants do not all need to be present at the same time. Therefore, asynchronous communication accommodates students in different time zones, as well as students with different study schedules and job responsibilities. Asynchronous communication is possible through: email, mail lists, newsgroups (Usenet), and message boards.

Synchronous communication requires concurrent participation of all parties involved. Typically, the communication is available to participants only as it occurs. The participants need to be attending to the conversations or they will miss information. This form of communication more closely resembles the classroom environment. Visibility is crucial because information is not repeated unless a participant specifically asks for repetition. Synchronous communication can be achieved by text, audio, and video. It can occur for a group or on a one-to-one basis. Synchronous communication is possible through chat rooms, instant messaging, net conferences, and net phone.

Distance Learning teachers should consider the purposes of the different synchronous and asynchronous interaction possibilities in order to select that which can best meet their particular needs (see tables 1 and 2). For example: a discussion board can be used to:

- provide a discussion area for homework, tests, reading, conversing with the professor;
- provide information about course materials; or
- achieve both of the above purposes.

There are further considerations Distance Learning instructors might wish to determine when implementing synchronous interactive web sites. These include:

- Does the instructor have the necessary time out of class to devote to live-person synchronous interaction?
- Are the students able to get together (log on) at common times?

- Can the server handle all of the anticipated users concurrently?

Some online examples of interactive technologies for courses include:

Web Forms:

- Using web forms and email for assignments: HtmlResAnchor <http://www.rit.edu/~kecnpc/leaders.htm>;
- Using MS Word forms for research projects: HtmlResAnchor <http://www.rit.edu/~kecnpc/160/cc-part-1-2-research.doc>;

Message Boards at NTID:

- Message Boards are being used in several courses for Deaf students at NTID. I have found them very useful for short writing assignments and for stimulating peer review of students' work. College Writing — HtmlResAnchor <http://www.rit.edu/~kecnpc/discus> (moderated by KEC)
- Other professors have put them to use for job interview practice situations and for art seminar discussions. Job Search and Freshman Art Seminar — HtmlResAnchor <http://www.rit.edu/~jfknc4/discus> (moderated by J. Kelly)

Chat Rooms General Audience:

- Chat and Newsgroups are online for English second language learners. <http://esl.about.com/education/eslmsub1.htm?iam=mt&terms=%2Bchat+%2Brooms+%2Bfor+%2Blearning+%2Benglish>
- One-on-one software is available from ICUII and from MS Netmeeting. These work adequately for slow signing when each user is seated near a webcam. However, this technology is advancing rapidly; we can expect to see significant improvements soon. HtmlResAnchor <http://www.microsoft.com/netmeeting>
- Group chatting software is offered by iVisit and SeeMeHearMe.

To make intelligent decisions about which web technologies to incorporate into DL can be confusing. The development team needs to consider a variety of factors. It seems reasonable to

Table 1. Advantages and Disadvantages of Using Online Interaction

Advantages	Disadvantages
<ul style="list-style-type: none"> • Interaction provides positive group support. • There is an authentic context for interaction. • Users can decide which issues to initiate and when to participate. • A positive evaluation is achieved when other participants understand you. • Motivation is fostered when understanding is achieved. • Self-confidence results when participants have common interests. • These positive outcomes promote a desire to continue learning. • Independence in learning is rewarded. • Users become familiar with questioning strategies for clarification, correction, and expansion of ideas. 	<ul style="list-style-type: none"> • Interaction requires an ISP that is up and running. • Users need basic computer skills. • Computers do crash from time to time. • New users and learners may feel threatened when topics are too far outside of their knowledge areas. • Sometimes users' questions and comments may get few or no responses. • The moderator's role can be time consuming.

Table 2. Similarities and Differences for Synchronous and Asynchronous Online Interaction

<p style="text-align: center;">Similarities</p> <ul style="list-style-type: none"> • There is a variety of software; much of it is free and relatively easy to set up. • Users may never get a direct response to your comment. • Users may contact many or few suitable conversational partners. • Users need to know appropriate etiquette and learn some netspeak terms. <p style="text-align: center;">Differences</p>	
<p>Synchronous</p> <ul style="list-style-type: none"> • Time-bound conversations. • Must arrange a specified time to participate. • Can interact only with those presently online. • Fast and free-flowing conversation may be hard for second language learners to follow (much chat is very informal and relaxed). • Multiple conversations occurring simultaneously may be difficult to follow. • One-to-one (IM) allows for individual conversation. • Messages are <i>fleeting</i>; can't be referred to later except if saved. 	<p>Asynchronous</p> <ul style="list-style-type: none"> • On-going conversation. • Can drop in any time. • Can interact with people not presently online • Slow paced conversation allows more time for understanding and formulating thoughts (more opportunity for formal, thoughtful discussion). • Conversations are usually arranged by topics • Private conversation on a one-to-one basis is impractical. • Messages are permanent for later reference.

first weigh the advantages and disadvantages for the first decision, that is: Should you use online interaction for your DL project? Once the decision has been made to go with online interaction, the team will need to consider whether to incorporate synchronous and/or asynchronous interaction features. Tables 1 and 2 present some considerations you will need to evaluate in making these decisions.

Videoconferencing and the Deaf Learner

What is Videoconferencing?

Videoconferencing is the transmission of image (video) and speech (audio) back and forth between two or more physically separate locations. This is accomplished through the use of cameras, video displays, microphones, and speakers. Videoconferencing can be point-to-point (between two endpoints) or multipoint (combining two or more endpoints into the same "conversation"). Videoconferencing is live, synchronous, and closely resembles a traditional classroom setting. It uses compressed video over T1 or ISDN lines to send and receive audio and video signals.

Why Use Videoconferencing?

Videoconferencing could be applied in two general situations: a) those where you are already able to communicate with someone who is not physically nearby but wish that communication could be richer, and b) those where you wish to access or communicate to an area that may or may not be nearby but is limited by situational or physical restraints. In these situations, communication is already occurring but could be made more effective or less expensive via videoconferencing.

General Uses of Videoconferencing in Education

For meetings that already regularly take place and require face-to-face communication, videoconferencing can substitute for the actual physical presence of remote participants. This reduces travel costs as well as travel time and makes meeting attendance more convenient and likely to occur. Videoconferencing provides remote participants with face-to-face familiarity that comes with physical presence, including facial expression,

body language, and eye contact. Other examples of videoconferencing in education are: collaborating with documents and applications over a network, large and small class lectures, presentation planning, proposal preparation, student projects and scientific research.

What Basic Hardware Is Needed For a Videoconferencing Setup?

Videoconferencing terminals must have a few basic components: a camera (to capture local video), a video display (to display remote video), a microphone (to capture local audio), and speakers (to play remote audio). In addition to these components, a videoconferencing terminal also includes a codec ("Compress /Decompressor"), a user interface, a computer system to run on, and a network connection. Each of these components plays a key role in determining the quality, reliability, and user-friendliness of the videoconference and the videoconferencing terminal's suitability to particular purposes.

What are the cost factors?

A basic videoconferencing setup as described above would cost approximately \$55,000 for the hardware. Other costs to be considered would be the monthly rental of an ISDN Line, toll charges for individual calls (the party who places the call, pays for the call), and an annual warranty plan. Costs for technical service and instructional personnel would also have to be figured into the cost of videoconferencing.

Videoconferencing Scenarios at NTID

NTID has been exploring the use of videoconferencing for the past three years. The following are some examples of how videoconferencing technology has been applied:

- An NTID panel of students connects with the Greater Los Angeles Council on Deafness (GLAD) and Gallaudet to learn about admissions and recruitment
- Japanese faculty from Tsukuba College of Technology connect with NTID as part of a grant that explores software applications as applied to deaf education (Figure 4). In Japan, ISDN technologies are more

popular, are often found in the home, and are used for Internet access and telecommunications.

- A French student attending RIT for a degree in fine arts uses videoconferencing capabilities to connect with students and teachers in Paris at SPEOS for progress reports.
- An NTID faculty member teaches interpreting students in eight different states.
- The Director of Product Development Program at RIT conducts all day conferences with MIT (Boston) and University of Detroit to collaborate on the design of new courses in Leadership and Product Development.

Conclusion

Is Distance Learning Effective?

Distance Learning can be as effective as traditional instruction when the methods and technologies used are: 1) appropriate to the instructional tasks, 2) designed to include student-to-student interaction, and 3) able to provide timely teacher-to-student feedback.

What Should Educators of Deaf Students Do To Prepare For Distance Learning?

Educators of Deaf students have a definite advantage when it comes to Distance Education in that they already know how to adapt teaching for visual learning. When these teachers adapt a course for distance learning, they already have a large collection of visual presentations, such as tables, figures, and illustrations to depict concepts. This greatly simplifies the development effort. When planning for distance learning educators of Deaf students should plan to: (1) focus students' attention on visual presentations, (2) illustrate key concepts using tables, figures and other visual representations, (3) encourage interactivity, (4) allow for student group work, and (5) be prepared for technical problems.

However, educators of Deaf students may work in environments where they do not have many colleagues who also teach Deaf students. The last part of this presentation was devoted to sharing ideas for distance learning among the par-

ticipants. An online Distance Learning network for these educators would allow them to share their ideas and experiences, ask questions, and get information from their colleagues. As a follow-up to this presentation, we propose to establish a web site for such a network and have collected names of interested participants.

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A Practical Application of Technical Assistance in a Community Based Rehabilitation Program

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Abstract

Technical assistance is a process that simultaneously involves a personal relationship and program development. This is a case study of an organization that received technical assistance, Diversified Personnel Services (DPS), and the agency that provided technical assistance, the Center for Sight and Hearing (the Center) an Outreach Site of the Midwest Center for Postsecondary Outreach at St. Paul Technical College, St. Paul, Minnesota. The initial contact was made by DPS for assistance to expand their existing job placement program to include persons who are Deaf or Hard of Hearing. The process began with a needs assessment that provided DPS with a picture of available resources and additional resources needed to establish the program. DPS approached the Center and, after an initial consultation, accepted technical assistance. As the personal relationship among the authors of this case study developed, so did the trust necessary to maintain this process of technical assistance. The end result of this partnership was a successful expansion of the placement program and improved services for individuals who are Deaf or Hard of Hearing.

Technical assistance is a process that simultaneously involves a personal relationship and program development. This is a case study of an organization that received technical assistance, Diversified Personnel Services (DPS), and the agency that provided technical assistance, the

Center for Sight and Hearing (or the Center) an Outreach Site of the Midwest Center for Postsecondary Outreach at St. Paul Technical College, St. Paul, Minnesota. The initial contact was made by DPS for assistance to expand their existing job placement program to include persons who are Deaf or Hard of Hearing. The process began with a needs assessment that provided DPS with a picture of available resources and additional resources needed to establish the program. DPS approached the Center and, after an initial consultation, accepted technical assistance. As the personal relationship among the authors of this case study developed, so did the trust necessary to maintain this process of technical assistance. The end result of this partnership was a successful expansion of the placement program and improved services for individuals who are Deaf or Hard of Hearing.

Technical assistance, as practiced in PEPNet, is a peer to peer process with the goal of establishing or expanding services for persons who are Deaf or Hard of Hearing. The term *technical assistance* may be defined in a rather fuzzy way as advice or information provided on or off site to direct service delivery staff, support personnel, or administrators to meet the broad goal of improving services. One way to explain technical assistance is to look at an example in-depth from both the perspective of the agency requesting assistance and that of the provider. This case study examines the relationship between Diversified Personnel Services (DPS) and the Center for Sight and Hearing (the Center), an Outreach Site of the Midwest Center for Post-

secondary Outreach at St. Paul Technical College, St. Paul Minnesota. The process of technical assistance may occur as follows:

- Assessment of the needs of the consumers, funding source, and agency;
- Determination of available resources from the consumers, funding source, and agency;
- Identification of needed resources to institute the program or service;
- Development of a proposal for technical assistance to include details of what is to be done and the expected outcomes; and,
- Delivery and receipt of technical assistance.

The relationship between the two agencies is examined as it developed along the lines as listed above.

Agency Description

Diversified Personnel Services is a division of Opportunities, Inc., with offices in Fort Atkinson, Watertown, Waukesha and Oconomowoc, Wisconsin. The agency employs 90 personnel and has an annual operating budget of \$12 million. In operation since 1966, Opportunities Inc. has multiple funding sources including the Division of Vocational Rehabilitation, Special Education, the sale of various prime manufactured items and subcontract work with local business and industry. Opportunities Inc. served 900 persons with disabilities in 1999 and placed 150 into competitive employment. DPS is an employment service for business and industry in central Wisconsin and places both disabled and non-disabled people into the workplace.

The Center for Sight and Hearing is a community rehabilitation program located in Rockford, IL. In operation since 1962, approximately 400 persons with a hearing and/or vision loss are served annually in a variety of programs ranging from job placement to low vision examinations to an after school program for children who are Deaf. One part of the Center's services is as an outreach site for the Midwest Center for Postsecondary Outreach at St. Paul Technical College in St. Paul, Minnesota. Outreach activities include dissemination of information about serving students who are Deaf or Hard of Hearing, professional development activities for faculty or staff, and technical assistance as requested.

One of the most important elements of the technical assistance process is the relationship developed between the persons giving and receiving technical assistance. The four persons involved in this process wrote this case study and while the organizational affiliation is used to indicate the elements of implementation, it is equally as important to recognize the relationship aspect of technical assistance.

The Technical Assistance Process

Because the request was initiated by DPS, the process started with them and began with two concurrent events. First, a vocational placement specialist with experience serving persons who are Deaf was hired by DPS in May 1996. The specialist began providing limited placement services to the Deaf population in the counties surrounding the DPS office. Next, the vocational rehabilitation counselor for the Deaf and members of the community approached DPS and asked them to expand their existing job placement services. Specifically, the request was for DPS to become more intentional in their efforts to serve persons who are Deaf or Hard of Hearing by establishing a program.

Assessment of Needs

DPS conducted a needs analysis through informal discussions and formal meetings with Deaf consumers, personnel from the Division of Vocational Rehabilitation (DVR), and internal staff. Three distinct needs were identified:

1. Individuals who are Deaf or Hard of Hearing needed a service within their mostly rural, underserved community;
2. DVR needed the service to meet community demands; and,
3. DPS was providing traditional job placement services, and these were not adequate to meet the needs of Deaf individuals referred for assistance with job placement.

Determine Available Resources

As part of the needs assessment, DPS also looked at resources currently in place. Within the organization, one skilled deafness professional was on board and functioning within an already established placement program for both disabled and

non-disabled workers. There were also existing administrative supports (management, business office, established offices in three towns, etc.) and an organization that was well known in the community. DPS was already connected with the Workforce Development Center and numerous public and private sector organizations. In addition, upper management was supportive of the idea to establish a program for persons who are Deaf or Hard of Hearing.

Another important factor was the very strong ties DPS had with the potential funding source, DVR. The adult DPS programs are outcome-based so payment is only for services that are successful—such as, a person is placed on a job for at least 90 days. The DPS/DVR relationship was strong, because DPS had a proven track record. In addition, DVR had a potential to fund the project with a combination of state and federal funds.

Identify Needed Resources

DPS had a vision of what was to be accomplished—develop a job placement service for individuals who are Deaf or Hard of Hearing. They also identified supports in place to assist the program's success and a likely funding source. The timing was right to propose the placement services specifically for this population. DPS needed to formalize the proposal and sought technical assistance to accomplish this goal.

During a discussion between DPS and DVR, a DVR counselor suggested DPS contact the Center for possible technical assistance. The counselor's suggestion was the result of outreach activities from the Center to the Wisconsin DVR offices. DPS contacted the Center and the idea of a placement program for Deaf and Hard of Hearing individuals was discussed.

Development of a Proposal

A verbal proposal between the four authors of this case study was developed at a meeting at the Center. Specific assistance was needed to develop, write, and deliver a proposal to Wisconsin DVR. Because there was no formal request for proposals, there was not an official format to use to develop the written proposal. In addition, because this was a unique program in Wisconsin, there was not a model to aid in proposal development.

The ensuing verbal contract was for the Center to help develop a proposal outline, to review and provide feedback on the written proposal, and to assist with preparation for the oral presentation. During the writing of the proposal, an additional request for the Center staff to serve as program evaluators was added.

Delivery and Use of Technical Assistance

Writing of the proposal fell on the shoulders of DPS; editing and assistance with targeting key concepts was provided by the Center. One example involved a clarification of the role of the deafness professional. Because the proposal was to be reviewed by persons who may not be familiar with a professional who is also fluent in sign language, it was important to make sure that a distinction was made between providing communication assistance and interpreting. Interpreting was already available in the area and it would be easy to see this as a duplication of services without a clear explanation.

In November 1998 DPS was awarded a Third Party Establishment grant to begin in December 1998 and end on September 30, 1999. The goals for this nine-month cycle were:

- Admit and serve 30 people from five counties;
- Place 20 people into competitive employment;
- Close 8 individuals as successful, which means that the individual completes at least 90 days of employment.

At the end of the first year, Center staff were invited to evaluate and celebrate the first year. The on-site visit had two components. First we had fun and a dinner. Next, we toured the facilities and reviewed the year's results. The program was quite successful as thirty-five people were served, twenty-two people were placed, and eight people were closed successfully in a variety of jobs. Assistance was also provided on the grant year-end report format, and some changes were made in the data collection and interpretation procedures for the next cycle.

Recently, Center staff assisted in the development of an evaluation report format for the second year that accentuated DPS' successes and clarified the statistical presentation. The provision of technical assistance continues to

date in the areas of data collection, reporting, and program evaluation.

Building the Relationship

Two of the key elements that contributed to the success of this technical assistance are trust and mutual respect. DPS staff had to risk sharing of their need for assistance with proposal development and trust the assistance provided. Center staff recognized the expertise of DPS staff and served as providers of information and suggestions as a complement to enhance the DPS program. This relationship took time and evolved over many telephone calls, emails, and face-to-face meetings. As the trust grew, it became easier to give and take suggestions because the goal was and is to improve services.

Summary

Technical assistance is a process that simultaneously involves a personal relationship and program development. In this case study, the initial contact was made by DPS for assistance to expand their existing job placement program to include persons who are Deaf or Hard of Hearing. The process began with a needs assessment that provided DPS with a picture of available resources and additional resources needed to establish the program. DPS approached the Center and, after an initial consultation, accepted technical assistance. As the personal relationship among the authors of this case study developed, so did the trust necessary to maintain this process of technical assistance. The end result of this partnership was a successful expansion of the placement program and improved services for individuals who are Deaf or Hard of Hearing.

Communication Access Realtime Translation (CART) In the Classroom

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Abstract

Effective communication access for non-signing Deaf, deafened, and hard of hearing students is an area of concern for postsecondary programs. This workshop provides information on using communication access realtime translation (CART) in the classroom for students with hearing loss. Information is provided on identification of qualified CART providers, use of transcripts, ethical/copyright considerations and software that may be used. The institution needs to develop a policy and process for selecting the best accommodation for students.

Steve Larew: This workshop will provide information about the use of Communication Access Realtime Translation or CART in the classroom. I will allow Pat and Gayl to do the talking about CART as they are experts in the area. I am here as a deafened adult to promote the need for more CART access in college classrooms. A large number of deaf people are not able to benefit from sign language interpreters or lipreading in classes.

We are here to explain CART. None of us has in-depth knowledge of C-Print, which is a new method of providing speech to text translation. My information comes from the recent satellite teleconference. It was explained that C-Print would provide 8 pages of notes compared to 20 pages in a CART transcript. My question is, what information is missing? I do not have the answer.

As a student, I would appreciate knowing I am able to read all the information and class discussion occurring with CART. However, when class is finished, it would be easier to read the C-

Print transcripts than the CART transcripts. I am sure it will become a question on economics when colleges and universities decide which method they will choose. There are pros and cons to both methods and the colleges and universities will have to make their decision based on what is best for the student.

Gayl Hardeman: I have been a court reporter since 1970 and became a CART provider in 1992. In 1993 at Boston University, the number of enrollees who wanted CART grew from one to eight in one summer. I had to create eight CART reporters from "court" reporters in one summer. These were already highly skilled court reporters, and in one day, to begin to build the non-court dictionary/database, they learned to enlarge text, to reformat their periods and question marks so that at the end of every sentence a new line would happen, so that there would be more white space on the page, and the page would be easier to read. The university provided textbooks for all classes to the reporters and hired me to implement a program of payment, quality checks, and appropriate scheduling.

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We need to teach sensitivity, and we need to teach about the ADA laws, because we, like interpreters, become advocates for our clients, especially in classrooms where the professor doesn't have a clue what we do, or why we're here. In Massachusetts, the contract rate is a two-hour minimum and a half an hour of prep time. It is one hour of prep time, if it's a day-long event.

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Part of our training involves learning sign language. We teach sign language courses so that we can at least say 'how are you? My name is. . . . Can you read the screen okay?' We are trying to learn sign language. It is difficult, because many of us are not around people who sign. We are trying to develop a videotape on sign language for CART providers.

We need everybody we have—C-Print, real-time captioners, and interpreters, to work as a team to meet the needs of the students. I have often wondered as I'm writing this art history for one person, why am I not showing everybody this? It seems like such a waste. I know there were many foreign speaking students struggling with English who could have been helped by seeing the words.

Regarding software, it's called Live Note or Case View. Case View is less expensive. Case View is available from Stenograph Corporation. They have a dot.com. See what I mean about our language? Case View costs about \$175, and is installed on the user's computer. If your student takes his or her computer to class, the CART provider can output to the student. The student can have the CART coming in on his screen. As he reads something important, he hits the space bar. The space bar highlights the text. Rather than write down anything, he hits the space bar. At the end of the lecture, you can call for a printout of the marked passages. You have had the benefit of all the text coming through but at the end you have made the notes. You may have a page and a half or two-pages to take home with you. I think it's an excellent investment.

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screen for everybody else. For \$175 you receive five applications. We have a splitter box and it can go up to five students at the same time. They can make their individual marks. You can hit control n and type in a note or type in a question for a non-speaking deaf person. The CART reporter or another student can read and voice for the student. Live Note is another program but it is expensive.

To reduce the number of pages in a CART provider's text file, a transcript can be delivered via e-transcript, which creates a self-executable, searchable file and allows printing of condensed text (4 pages per page). E-transcript, produced by PubNetics, is found at <www.RealLegal.com>. The program costs about \$700. Anyone can use it to reduce the number of pages one must print.

Pat Graves: This is a strange role for me because I am used to sitting behind the machine. I was a court reporter for 14 years and worked in several different states. I got tired of working with attorneys who were fighting with one another. I took the challenge and switched from court reporting to CART providing. I am one of the few people who provide only CART.

I want to start by defining some terms. Everyone uses "captioning" for everything. No matter what we do, people call us captioners. **CART** is communication access with a full screen of text. **Captioning** means you have an image of the speaker with text at the bottom of the screen.

Post-production captions are the captions that you see on videotape. Those are done after the tape has been created. The captions are placed all over the screen where the least amount of action is shown.

Realtime captions are done live. Post-production captions are made after the fact.

Closed captions are hidden captions. You turn on your TV and you have the image of the speaker and the captions are underneath it. **Open captions** are there for everyone to see.

Finally, CART providers are not typing! People always say, you type so fast. I'm actually a terrible typist- 80 words a minute with about 49 errors! We are writing using machine shorthand.

I was fortunate to serve on the Illinois task force for CART. Our state rehabilitation agency list of CART providers consisted of four people. This task force was formed in 1997. We provided training in Illinois for court reporting students and court reporters interested in CART. We called

this a sensitivity training. People can develop their skills, but they need to understand whom they are serving. We are serving people with hearing loss, so we become their ears like interpreters do. We talked about assistive listening devices. We had interpreters for the sessions, and we asked them to come out of their role and discuss ethics and professionalism.

We also had a panel of consumers who told of their life before and after CART. Most of the consumers were deafened. The change in their life from hearing to not hearing, between having CART and not having CART, is drastic.

The next part of our training was ethics and equipment. We have a state code of ethics and we are trying to develop a national code of ethics. In an organization where we are all ethical, the members have different guidelines. CART ethics mirror the code of ethics for interpreters. The ethics include confidentiality, professionalism, and staying in your role.

The last part of the training was advanced skill training. People attended this training and they were still scared to do CART. Why? We spill our guts. It is obvious when we are having a bad day and reporters don't want to do it. We offered advanced hands-on training to make them more comfortable. Bring your machine, hook it up to the overhead. See how it feels, play with your colors, check your fonts, etc. After this training, the list in Illinois has grown to 15 CART providers. In your states, you may want to approach the court reporting association and inquire if they have provided CART training. If not, encourage them to do it.

The question is: can we take court reporters who haven't passed the state and national tests and put them into the CART setting? That is an ethical question. This is the world according to Pat Graves. There needs to be a baseline and the baseline we have chosen is the state and national certification. Our task force said all providers have to have passed the state certification.

I am not sure what is done across the country. There are pockets of CART providers providing the service and we have made up our own rules. It is embarrassing to say but I have made up all my own rules. My rule is: I pay an hourly rate to the captioners that work for me. If they are certified, the rate is higher.

Texas has developed a test similar to what the interpreters have. They are evaluated with level one, two, three, four, five. I think it would be a

great thing to do in Illinois and nationally. Once we get past the ethics issues, our task force needs to address national certification

There are different tests and certifications. We have state tests which say you are qualified to do court reporting. Not all 50 states have mandatory certification tests for court reporters. The state tests include testimony at 225 words a minute and the jury charge, which would be what the judge would say to the jury, at 200 words a minute. We have a category called literary or speeches. That is actually the hardest but the speed is the lowest, 180 words a minute. Those are the three parts of most state tests, and then written knowledge.

For people who live in a state that does not require certification, the National Court Reporters Association has the same tests, the same speeds, and same categories. You can get the state certification and/or the national certification. If you are a glutton for punishment, you can go for a higher speed and higher certification, and that's testimony at 260 words a minute.

Another test is the certified realtime reporter (CRR), which is literary and fluctuates between 180 and 200 words a minute at 96 percent accuracy. The difference is, for certification, you have one hour to transcribe five minutes of dictation. You can polish your notes and make the transcript perfect. When you take the realtime test, you write it and turn it in.

Our computers are friendly and tell us how many times a word appeared that it could not translate, or untranslated strokes. The computer comes up with a number, and that number, as a rule of thumb, should never be greater than 2% untranslated, or 98% accurate. The reality is you have to double, sometimes quadruple that number. Sometimes we have words that don't translate. Sometimes we have words that grab the word before it or behind it. We call them word boundary problems. It translates as English, but those are mistakes.

One example is the word Olympic. In reality it could come up Oh, limb, and pick, three syllables. That is three errors. My untranslated rate generally is .2. That is 99.8 percent translated. If I look at all the mistranslates, I would probably be around 99.2, maybe 99 percent.

I have recently developed what I call four corners of responsibility—School, Professor, Student, and CART provider. These are four areas related to providing CART in the classroom.

The first corner is the school, which is responsible for finding the right accommodation. It might be a notetaker, CART, or a sign language interpreter. You talk to the students and ask what they need. After determining the need for CART, you find a CART provider and demand quality. Ask for translation-error rate and demand quality services.

The school is the coordinator of the other three corners. The school needs to make sure we are talking to one another. The CART provider and the school need to work together to train the professors.

It is the student's job to go to school. We hope they attend class and realize the amount of work involved to put support services in place. There are guidelines the student needs to follow.

The students need to be aware of the coordination. With some universities, I was put into the role of tattling. The CART providers were driving two and a half hours to arrive in class on time. What I did was send a letter to the school, the students, and to the CART providers, explaining who is going to support you on Monday, Wednesday, and Friday. Here are the phone numbers. If you are not going to class, call us. For me, if I don't go, I wouldn't charge the school that day. I don't charge for the days that there are tests. That's bad business.

When I would send bills, there would not be an invoice for a day. If my CART provider showed up, they wouldn't stay the full-time. They might stay for a two-hour minimum, so the charge would be less. The school would call and ask, 'why did you not charge me?' Or 'why did you charge me less?' I would tell them that the student didn't go to class. They would become angry because the student never told them.

The professors are tough. Sometimes they take suggestions and sometimes they do not. I prefer to meet the professors before the class starts. For one school, I met the professors ahead of time, and it was great. For other schools, we walk in and the professor says "who are you?" It is disheartening because they don't know what we are about. With communication, barriers can be minimized.

I have done many math classes. The professors write on the board, turn their backs, talk to the blackboard, and say, 'you add this and this and you get that.' It is useless. What we want them to do is be a little more descriptive. When you

get into algorithms, that is more difficult because you have big N's and little n's and numbers to the Nth power.

Have you seen the cleaning carts used in the schools? I got a cleaning cart and put a camera on it with the encoder, which is what mixes the camera signal and the three lines of captions on the bottom. I would roll my cart into the classroom and put the camera onto the screen. The whole class was slides of anatomy. We had body slides the whole 90 minutes, and I would caption underneath it.

Another issue with professors is preparatory material. The books and the syllabus are important. The syllabus is passed out on the first day, but if CART providers could get the syllabus beforehand, it would be ideal. I do not build in a lot of prep time. I prepare, but I do it ahead of time. Every CART provider is different. It comes with experience.

The fourth corner is the CART provider. It is our responsibility to know what we are doing and to be able to go the Universities and say, "I can give you a well structured high quality service." That's in the ideal world. Hopefully there might be a meeting halfway if there is no training in your state. If a school has the knowledge, you can push that CART provider to provide quality services.

The school and CART provider need to talk to the professors ahead of time and tell them what is necessary. If communication fails and there is a breakdown, it is the CART provider's responsibility or the student's responsibility to say 'I didn't hear, say it again, I missed one sentence.' The training the professor needs in providing preparation materials and not turning his back and talking to the blackboard, is training that should be done by the school.

Question: Could you tell us how you would address the situation with someone who is afraid there would be a record?

Pat Graves: I think the written guidelines and contract are very important, so everyone knows what they can and cannot do. The first question is, who owns those words? Is it the University? Is it the professor? Is the professor willing to share those memorialized words with the students? I can't tell you the right answer, because every school has different policies. Some schools don't allow tape recording. I hate to throw it back at

you but in fact it is the school's policy, do they allow those words to be captured in a written form?

I worked at a dental school for one year that allowed disks to be placed in the library and every student could get a copy. It is a school mindset if you want to give those transcripts out or not. Putting the notes on the web for student access is another possibility.

Other issues need to be addressed in the contract or guidelines. What happens when the student is late or absent? How long does your interpreter or CART provider stay? Interpreters can leave quietly. CART providers can't leave gracefully. Personally, I have stayed the whole class because I cannot leave without disrupting. How late is late? I had one student who was late for every class. She could not get there. What I would do is give her a one-sentence summary. As soon as she walked in the room, I would start writing.

One school where I work has predominantly night classes. Everyone is working, and the school knows that people travel. Whether the student is there or not, I write it. Another concern is if you have two back-to-back classes, the student misses the first one but goes to the second class. If I leave after twenty minutes, am I supposed to stay for the second class? What do we do if there are four classes and the student only goes to the last one?

The next question is what do you do when a student sleeps? This is very tiring on their eyes. Do you kick them? Do you stop writing? Do you write and then give them the disk? These are issues that need to be put into this letter that the colleges write. I can't really tell you what the right answer is. One person suggested that the CART provider and the student work it out ahead of time. What do you want me to do when I see you are sleeping?

For those of you concerned with costs, I have developed a pricing formula. I am hoping this will help you. There have been some rules of thumb that say double the price of what an interpreter is paid, and that's what the CART provider earns. We work alone. When we go into court reporting, we never think of having a backup. Generally, I never think of having a backup when I do CART. I think that Boston has that policy. It is a new idea to me.

This is how I came up with my rate structure in Chicago. I asked court reporters to honestly clock their time for a couple weeks: What is your

average job and what are you paid for your appearance fee? What are you paid for your transcript? With transcripts, court reporters are paid per page. I asked them to average over a two-week period. If you do a two-hour deposition, generally it takes four hours to prepare the transcript. A court reporter will say I made a huge amount of money on a two-hour deposition. It wasn't a two-hour deposition; it was a six-hour ordeal. I asked my friends to average over two weeks, figure out how much money you made, and work it backwards. You take the time of production, divide it into the total amount of money earned, and you come up with your hourly rate.

This formula is good because hourly rates for court reporters and page rates vary around the country. This formula is portable. I'm in Chicago and the rates will be higher? If I were in rural Iowa, the rates would be lower.

Question: I'm from North Dakota, very rural with very few deaf students, and we have been working on remote captioning. Can you give us some suggestions? Our big issue right now is the eleven-second delay.

Pat Graves: I have not done classroom remote CART, but I have done corporate meetings. I will share my experience and see if we can translate it to the classroom. When using remote CART, the people attending are in one place sitting around a table. I listen on the speaker phone. On another phone line I send the words to the modem and they connect with the user's computer.

The speaker phones are terrible. It is hard to pick up the words. I have a device that grabs that phone signal and I feed it into an amplifier. I wear headphones to help understand the speakers. I think the way around it would be possibly people wearing microphones.

Question: I work in a K to 12 setting. We have seven middle-school- and high-school-aged deaf students who are late-deafened, don't know sign language, and can't use the interpreter. Do you have background on using it in the K-12 settings? The issue I deal with is administrators saying they can't read beyond third grade level, but we have kids that do read at 8th grade.

Gayl Hardeman: I know a parent who got CART for his 6th grade daughter. This year she made

the honor roll. It is used in K through 12 and they benefit greatly. I can't tell you at what level it starts being the most useful.

Question: If the University buys the equipment and hires different captionists, can they work off the same software and use the same dictionaries?

Gayl Hardeman: If they have the dictionary in the same software, yes. You can use the same laptop and then change to a different user in that program. We are constantly building dictionaries. Mine is 90,000 words.

Question: Repetitive motion injury for interpreters is sky high as the number of postsecondary deaf and hard-of-hearing students enter the classroom. What is that issue like in your field?

Gayl Hardeman: Court reporting is easier on the hands and wrists than interpreting because our hands are down and the blood supply is down. The steno machine is better than the computer keyboard because there is some resistance. The repetitive motion is not as great if you are pushing something. I know that I have pain in my right wrist when I edit because I'm using the page down arrow and the mouse in the editing process. I have pain in my wrist and have to sleep with a wrist brace occasionally. Vitamin B6 is supposed to be excellent in the treatment of this problem.

It's not as high in court reporting. However, in realtime captioning and CART, it can be diffi-

cult if you don't have the right chair. I remember driving home after a three-hour lecture at Boston University where the lecture hall sloped down. I sat squished in one of those lecture hall chairs where the desk table flops up. I sat squished for three hours, and a short break. Driving home, I had a throbbing pain. The following week, I found a chair, brought it into the classroom and hid it behind the podium.

Question: My question is about literacy. How does a person train to be a CART provider, and to spell and write proper grammar? If we sponsor someone to become trained as a professional, what criteria should we consider?

Gayl Hardeman: The criteria should be ideal or excellent English background. We are wordsmithing here. We need to have a strong background in English and spelling. I had a court reporting school years ago with an admissions exam. It was basic punctuation, ten spelling words.

I had a consumer whose vocabulary was poor. She had interpreters and she was good at lipreading, but her vocabulary was poor. She is in a fine University, taking art history, and the vocabulary is intense. I substituted many words. I couldn't do that if I didn't possess that vocabulary. In CART reporting, we train on synonyms. Do you know some synonyms for thwart or predisposed, for example? How can we train someone to become a CART reporter if they don't have those English skills? You can't. They have to get the English skills first.

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With a splitting box, a CART provider can output to a deaf student, to Case View, and to the

screen for everybody else. For \$175 you receive five applications. We have a splitter box and it can go up to five students at the same time. They can make their individual marks. You can hit control n and type in a note or type in a question for a non-speaking deaf person. The CART reporter or another student can read and voice for the student. Live Note is another program but it is expensive.

To reduce the number of pages in a CART provider's text file, a transcript can be delivered via e-transcript, which creates a self-executable, searchable file and allows printing of condensed text (4 pages per page). E-transcript, produced by PubNetics, is found at <www.RealLegal.com>. The program costs about \$700. Anyone can use it to reduce the number of pages one must print.

Pat Graves: This is a strange role for me because I am used to sitting behind the machine. I was a court reporter for 14 years and worked in several different states. I got tired of working with attorneys who were fighting with one another. I took the challenge and switched from court reporting to CART providing. I am one of the few people who provide only CART.

I want to start by defining some terms. Everyone uses "captioning" for everything. No matter what we do, people call us captioners. **CART** is communication access with a full screen of text. **Captioning** means you have an image of the speaker with text at the bottom of the screen.

Post-production captions are the captions that you see on videotape. Those are done after the tape has been created. The captions are placed all over the screen where the least amount of action is shown.

Realtime captions are done live. Post-production captions are made after the fact.

Closed captions are hidden captions. You turn on your TV and you have the image of the speaker and the captions are underneath it. **Open captions** are there for everyone to see.

Finally, CART providers are not typing! People always say, you type so fast. I'm actually a terrible typist- 80 words a minute with about 49 errors! We are writing using machine shorthand.

I was fortunate to serve on the Illinois task force for CART. Our state rehabilitation agency list of CART providers consisted of four people. This task force was formed in 1997. We provided training in Illinois for court reporting students and court reporters interested in CART. We called

this a sensitivity training. People can develop their skills, but they need to understand whom they are serving. We are serving people with hearing loss, so we become their ears like interpreters do. We talked about assistive listening devices. We had interpreters for the sessions, and we asked them to come out of their role and discuss ethics and professionalism.

We also had a panel of consumers who told of their life before and after CART. Most of the consumers were deafened. The change in their life from hearing to not hearing, between having CART and not having CART, is drastic.

The next part of our training was ethics and equipment. We have a state code of ethics and we are trying to develop a national code of ethics. In an organization where we are all ethical, the members have different guidelines. CART ethics mirror the code of ethics for interpreters. The ethics include confidentiality, professionalism, and staying in your role.

The last part of the training was advanced skill training. People attended this training and they were still scared to do CART. Why? We spill our guts. It is obvious when we are having a bad day and reporters don't want to do it. We offered advanced hands-on training to make them more comfortable. Bring your machine, hook it up to the overhead. See how it feels, play with your colors, check your fonts, etc. After this training, the list in Illinois has grown to 15 CART providers. In your states, you may want to approach the court reporting association and inquire if they have provided CART training. If not, encourage them to do it.

The question is: can we take court reporters who haven't passed the state and national tests and put them into the CART setting? That is an ethical question. This is the world according to Pat Graves. There needs to be a baseline and the baseline we have chosen is the state and national certification. Our task force said all providers have to have passed the state certification.

I am not sure what is done across the country. There are pockets of CART providers providing the service and we have made up our own rules. It is embarrassing to say but I have made up all my own rules. My rule is: I pay an hourly rate to the captioners that work for me. If they are certified, the rate is higher.

Texas has developed a test similar to what the interpreters have. They are evaluated with level one, two, three, four, five. I think it would be a

great thing to do in Illinois and nationally. Once we get past the ethics issues, our task force needs to address national certification

There are different tests and certifications. We have state tests which say you are qualified to do court reporting. Not all 50 states have mandatory certification tests for court reporters. The state tests include testimony at 225 words a minute and the jury charge, which would be what the judge would say to the jury, at 200 words a minute. We have a category called literary or speeches. That is actually the hardest but the speed is the lowest, 180 words a minute. Those are the three parts of most state tests, and then written knowledge.

For people who live in a state that does not require certification, the National Court Reporters Association has the same tests, the same speeds, and same categories. You can get the state certification and/or the national certification. If you are a glutton for punishment, you can go for a higher speed and higher certification, and that's testimony at 260 words a minute.

Another test is the certified realtime reporter (CRR), which is literary and fluctuates between 180 and 200 words a minute at 96 percent accuracy. The difference is, for certification, you have one hour to transcribe five minutes of dictation. You can polish your notes and make the transcript perfect. When you take the realtime test, you write it and turn it in.

Our computers are friendly and tell us how many times a word appeared that it could not translate, or untranslated strokes. The computer comes up with a number, and that number, as a rule of thumb, should never be greater than 2% untranslated, or 98% accurate. The reality is you have to double, sometimes quadruple that number. Sometimes we have words that don't translate. Sometimes we have words that grab the word before it or behind it. We call them word boundary problems. It translates as English, but those are mistakes.

One example is the word Olympic. In reality it could come up Oh, limb, and pick, three syllables. That is three errors. My untranslated rate generally is .2. That is 99.8 percent translated. If I look at all the mistranslates, I would probably be around 99.2, maybe 99 percent.

I have recently developed what I call four corners of responsibility—School, Professor, Student, and CART provider. These are four areas related to providing CART in the classroom.

The first corner is the school, which is responsible for finding the right accommodation. It might be a notetaker, CART, or a sign language interpreter. You talk to the students and ask what they need. After determining the need for CART, you find a CART provider and demand quality. Ask for translation-error rate and demand quality services.

The school is the coordinator of the other three corners. The school needs to make sure we are talking to one another. The CART provider and the school need to work together to train the professors.

It is the student's job to go to school. We hope they attend class and realize the amount of work involved to put support services in place. There are guidelines the student needs to follow.

The students need to be aware of the coordination. With some universities, I was put into the role of tattling. The CART providers were driving two and a half hours to arrive in class on time. What I did was send a letter to the school, the students, and to the CART providers, explaining who is going to support you on Monday, Wednesday, and Friday. Here are the phone numbers. If you are not going to class, call us. For me, if I don't go, I wouldn't charge the school that day. I don't charge for the days that there are tests. That's bad business.

When I would send bills, there would not be an invoice for a day. If my CART provider showed up, they wouldn't stay the full-time. They might stay for a two-hour minimum, so the charge would be less. The school would call and ask, 'why did you not charge me?' Or 'why did you charge me less?' I would tell them that the student didn't go to class. They would become angry because the student never told them.

The professors are tough. Sometimes they take suggestions and sometimes they do not. I prefer to meet the professors before the class starts. For one school, I met the professors ahead of time, and it was great. For other schools, we walk in and the professor says "who are you?" It is disheartening because they don't know what we are about. With communication, barriers can be minimized.

I have done many math classes. The professors write on the board, turn their backs, talk to the blackboard, and say, 'you add this and this and you get that.' It is useless. What we want them to do is be a little more descriptive. When you

get into algorithms, that is more difficult because you have big N's and little n's and numbers to the Nth power.

Have you seen the cleaning carts used in the schools? I got a cleaning cart and put a camera on it with the encoder, which is what mixes the camera signal and the three lines of captions on the bottom. I would roll my cart into the classroom and put the camera onto the screen. The whole class was slides of anatomy. We had body slides the whole 90 minutes, and I would caption underneath it.

Another issue with professors is preparatory material. The books and the syllabus are important. The syllabus is passed out on the first day, but if CART providers could get the syllabus beforehand, it would be ideal. I do not build in a lot of prep time. I prepare, but I do it ahead of time. Every CART provider is different. It comes with experience.

The fourth corner is the CART provider. It is our responsibility to know what we are doing and to be able to go the Universities and say, "I can give you a well structured high quality service." That's in the ideal world. Hopefully there might be a meeting halfway if there is no training in your state. If a school has the knowledge, you can push that CART provider to provide quality services.

The school and CART provider need to talk to the professors ahead of time and tell them what is necessary. If communication fails and there is a breakdown, it is the CART provider's responsibility or the student's responsibility to say 'I didn't hear, say it again, I missed one sentence.' The training the professor needs in providing preparation materials and not turning his back and talking to the blackboard, is training that should be done by the school.

Question: Could you tell us how you would address the situation with someone who is afraid there would be a record?

Pat Graves: I think the written guidelines and contract are very important, so everyone knows what they can and cannot do. The first question is, who owns those words? Is it the University? Is it the professor? Is the professor willing to share those memorialized words with the students? I can't tell you the right answer, because every school has different policies. Some schools don't allow tape recording. I hate to throw it back at

you but in fact it is the school's policy, do they allow those words to be captured in a written form?

I worked at a dental school for one year that allowed disks to be placed in the library and every student could get a copy. It is a school mindset if you want to give those transcripts out or not. Putting the notes on the web for student access is another possibility.

Other issues need to be addressed in the contract or guidelines. What happens when the student is late or absent? How long does your interpreter or CART provider stay? Interpreters can leave quietly. CART providers can't leave gracefully. Personally, I have stayed the whole class because I cannot leave without disrupting. How late is late? I had one student who was late for every class. She could not get there. What I would do is give her a one-sentence summary. As soon as she walked in the room, I would start writing.

One school where I work has predominantly night classes. Everyone is working, and the school knows that people travel. Whether the student is there or not, I write it. Another concern is if you have two back-to-back classes, the student misses the first one but goes to the second class. If I leave after twenty minutes, am I supposed to stay for the second class? What do we do if there are four classes and the student only goes to the last one?

The next question is what do you do when a student sleeps? This is very tiring on their eyes. Do you kick them? Do you stop writing? Do you write and then give them the disk? These are issues that need to be put into this letter that the colleges write. I can't really tell you what the right answer is. One person suggested that the CART provider and the student work it out ahead of time. What do you want me to do when I see you are sleeping?

For those of you concerned with costs, I have developed a pricing formula. I am hoping this will help you. There have been some rules of thumb that say double the price of what an interpreter is paid, and that's what the CART provider earns. We work alone. When we go into court reporting, we never think of having a backup. Generally, I never think of having a backup when I do CART. I think that Boston has that policy. It is a new idea to me.

This is how I came up with my rate structure in Chicago. I asked court reporters to honestly clock their time for a couple weeks: What is your

average job and what are you paid for your appearance fee? What are you paid for your transcript? With transcripts, court reporters are paid per page. I asked them to average over a two-week period. If you do a two-hour deposition, generally it takes four hours to prepare the transcript. A court reporter will say I made a huge amount of money on a two-hour deposition. It wasn't a two-hour deposition; it was a six-hour ordeal. I asked my friends to average over two weeks, figure out how much money you made, and work it backwards. You take the time of production, divide it into the total amount of money earned, and you come up with your hourly rate.

This formula is good because hourly rates for court reporters and page rates vary around the country. This formula is portable. I'm in Chicago and the rates will be higher? If I were in rural Iowa, the rates would be lower.

Question: I'm from North Dakota, very rural with very few deaf students, and we have been working on remote captioning. Can you give us some suggestions? Our big issue right now is the eleven-second delay.

Pat Graves: I have not done classroom remote CART, but I have done corporate meetings. I will share my experience and see if we can translate it to the classroom. When using remote CART, the people attending are in one place sitting around a table. I listen on the speaker phone. On another phone line I send the words to the modem and they connect with the user's computer.

The speaker phones are terrible. It is hard to pick up the words. I have a device that grabs that phone signal and I feed it into an amplifier. I wear headphones to help understand the speakers. I think the way around it would be possibly people wearing microphones.

Question: I work in a K to 12 setting. We have seven middle-school- and high-school-aged deaf students who are late-deafened, don't know sign language, and can't use the interpreter. Do you have background on using it in the K-12 settings? The issue I deal with is administrators saying they can't read beyond third grade level, but we have kids that do read at 8th grade.

Gayl Hardeman: I know a parent who got CART for his 6th grade daughter. This year she made

the honor roll. It is used in K through 12 and they benefit greatly. I can't tell you at what level it starts being the most useful.

Question: If the University buys the equipment and hires different captionists, can they work off the same software and use the same dictionaries?

Gayl Hardeman: If they have the dictionary in the same software, yes. You can use the same laptop and then change to a different user in that program. We are constantly building dictionaries. Mine is 90,000 words.

Question: Repetitive motion injury for interpreters is sky high as the number of postsecondary deaf and hard-of-hearing students enter the classroom. What is that issue like in your field?

Gayl Hardeman: Court reporting is easier on the hands and wrists than interpreting because our hands are down and the blood supply is down. The steno machine is better than the computer keyboard because there is some resistance. The repetitive motion is not as great if you are pushing something. I know that I have pain in my right wrist when I edit because I'm using the page down arrow and the mouse in the editing process. I have pain in my wrist and have to sleep with a wrist brace occasionally. Vitamin B6 is supposed to be excellent in the treatment of this problem.

It's not as high in court reporting. However, in realtime captioning and CART, it can be diffi-

cult if you don't have the right chair. I remember driving home after a three-hour lecture at Boston University where the lecture hall sloped down. I sat squished in one of those lecture hall chairs where the desk table flops up. I sat squished for three hours, and a short break. Driving home, I had a throbbing pain. The following week, I found a chair, brought it into the classroom and hid it behind the podium.

Question: My question is about literacy. How does a person train to be a CART provider, and to spell and write proper grammar? If we sponsor someone to become trained as a professional, what criteria should we consider?

Gayl Hardeman: The criteria should be ideal or excellent English background. We are wordsmithing here. We need to have a strong background in English and spelling. I had a court reporting school years ago with an admissions exam. It was basic punctuation, ten spelling words.

I had a consumer whose vocabulary was poor. She had interpreters and she was good at lipreading, but her vocabulary was poor. She is in a fine University, taking art history, and the vocabulary is intense. I substituted many words. I couldn't do that if I didn't possess that vocabulary. In CART reporting, we train on synonyms. Do you know some synonyms for thwart or predisposed, for example? How can we train someone to become a CART reporter if they don't have those English skills? You can't. They have to get the English skills first.

Innovations in Distance Mentoring: The Video Outreach Mentorship Program for Interpreters

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Abstract

Since its inception in 1996, The Video Outreach Mentorship Program (VOMP), a distance mentoring program through the Western Region Outreach Center & Consortia, has served interpreters in over three dozen institutions through the Western United States and the Pacific Islands. This paper provides the reader with an overview of the program, a description of its components, and an explanation of its challenges and successes.

Introduction

When charged with the mission of improving access to postsecondary education for students who are deaf and hard of hearing in the western United States, the Western Region Outreach Center & Consortia (WROCC) recognized the demand for quality interpreters in the postsecondary setting. In an effort to aid interpreters seeking to hone their skills, WROCC has developed the Video Outreach Mentorship Program (VOMP). VOMP has been modeled after the highly successful one-on-one classroom mentorship program available to interpreters employed by the National Center on Deafness (NCOD) at California State University, Northridge (CSUN.) The program was developed to serve interpreters at institutions where there exist no established mentorship programs. Meeting the needs of such a diverse population in 16 states and Trust Territories has served to be a challenge.

The Program

Interpreters from postsecondary institutions are linked with mentors trained by WROCC and the CSUN National Center on Deafness. Over a four-month time period and at established intervals, mentees receive feedback and suggested resources for skills improvement from their mentors. Communication between mentor and mentee takes place via videotape, telephone, e-mail, online chat, and surface mail. The VOMP Coordinator helps maintain ongoing communication between the mentor and the mentee and helps ensure timely completion of established milestones throughout the mentorship (see Appendix A).

Upon successful completion of the mentorship, the mentee receives a Certificate of Completion; additionally, both mentors and mentees may receive CEUs through RID's CMP and ACET Independent Study programs. The fee for participation in VOMP is \$150. Each mentee receives a \$75 stipend from WROCC to help defray the cost of participation; the mentee is responsible for paying the remaining \$75 prior to beginning the mentorship. When the VOMP program began, mentees were able to participate free of charge. However, a participation fee was established to maintain a higher commitment level, as well as to discourage mentee attrition. Since the implementation of the participation fee, the mentees' home institutions have frequently paid the mentees' portion. Mentors are paid \$325 per mentorship with the majority of the mentor's payment coming from the WROCC grant funds.

Since its inception in 1996, VOMP has served nearly 60 interpreters at approximately 40 postsecondary institutions within the WROCC region (Alaska, American Samoa, Arizona, California, Colorado, Guam, Hawaii, Idaho, Montana, Nevada, New Mexico, Northern Marinas Islands, Oregon, Utah, Washington, and Wyoming.) Over the past four years, VOMP has undergone many changes as the program has been refined and improved. The purpose of this paper is to explain the program and its components, its strengths and weaknesses, and to provide a framework for how a distance mentorship program can be administered.

Issues in Distance Mentoring

One of the greatest challenges VOMP mentees and mentors face is establishing quality interaction and learning while not in the same time and space. When individuals communicate in person, facial expressions and vocal tones are easily connected and a sense of rapport can be immediately established. To lessen the effects of distance, mentees are provided with a comprehensive biography of their mentor. Additionally, some mentors prepare introductory videotapes in an effort to make the mentee feel more connected.

The program offers a set of 10 stimulus videos from which the mentee selects two lectures. The selected lectures, one sign-to-English and one English-to-sign, are used by the mentee when preparing an interpreting sample. Since the mentee receives the videotape directly, the potential exists for the mentee to view the lectures prior to preparing the interpreting/transliterating sample, thus impacting the validity of the mentee's work. Also inherent in a distance mentorship format, the use of videotaped stimulus materials presupposes an artificial, rather than live classroom setting.

Established goals can be achieved within a four-month time frame; however, it is critical that both the mentee and mentor have a realistic picture of the amount of progress that can be made. One of the realities of distance mentorships is that they do not always progress at the same rate as face-to-face mentorships.

Another challenge VOMP faces is communicating primarily through the written word. Mentors and mentees are provided with a manual containing instructions, forms, and readings. Participants often overlook critical details when

printed in black and white. VOMP continues to revise its printed materials to keep information simple and visually formatted.

Scheduling phone and online appointments sometimes presents frustration for both the mentor and mentee. At times, e-mail systems are down or one party is unable to check e-mail for several days resulting in frustration and delay in accomplishing mentorship goals. Due to the time delay between contacts and discussion on the videotaped sample, the mentors and mentees need to be prepared for delayed gratification. Patience during the unfolding process of a distance mentorship is a must!

Program Philosophy

Initially, VOMP's program designers felt that a distance mentorship was different – that it required a different theoretical approach. Mentoring via distance was thought to require a different set of tools and more ingenuity to effectively reach the mentee. After its first trial, program administrators and mentors realized that the goal was actually to attempt to replicate or mirror as closely as possible the elements of a face-to-face mentorship while understanding the limitations of a distance format. Since mentees come from a variety of experiential backgrounds, from brand-new interpreters to certified, seasoned practitioners, the VOMP program seeks to use a theoretical orientation known as *Mentee-Centered Learning* (Gish, 1997). The process challenges traditional educational practice in that the student or mentee directs the learning, while the mentor follows the mentee's lead. Gish writes, "...this process is not about what you know, but about listening to, and being honestly interested in what your colleague [mentee] knows and/or discovers about her/his interpreting process." (Gish, 1996, p. P-93).

The goal of the mentorship is to produce mentees who are self-regulated rather than other-regulated. Developing the ability to analyze one's own work enables the mentee to continue to grow outside the confines of an established mentorship. Locating mentors and mentees who are open to this type of mentoring where guided-self analysis is used, (Gish, 1994) is not always an easy feat. Many mentor interpreters have been trained under a diagnostic model where they intend to fix and provide direct feedback on the interpreted

product. In the VOMP program, by contrast, the mentor's goal is to ask fruitful questions such as: "What factors led you to that decision? Is that a pattern for you? What can you do to address that issue?" (Gish, 1994).

As part of the initial mentorship packet, each mentee receives an introductory videotape containing several minutes of footage taken directly from the mentor training seminar demonstrating mentoring techniques reflecting the program's philosophy. One of the significant readings (see Appendix C) explains the Gish processing model (Gish, 1996), a goal-to-detail model that has been of great help to interpreters and those who train them.

The Application Process

Recruitment for participation in VOMP occurs in several ways. In the first years of VOMP, specific postsecondary institutions were targeted for recruitment. Letters describing the program were sent to interpreter coordinators at those institutions. Mentees were then referred to the VOMP office after their coordinators informed them of the program's existence. In later years, interested interpreters and interpreter coordinators have contacted the VOMP office indicating an interest in participating.

Mentees apply for participation in VOMP by completing a 2-page application (see Appendix B). The application asks for the mentee's contact information, reasons for wanting to participate, and their background and experience in interpreting and within Deaf community. If an applicant satisfies the requirements for participation (see section *The Mentees*) and if space allows, he/she is admitted. If no space is available, the mentee is placed on a waiting list and offered the opportunity to participate in the next phase of mentorships. Applications are sent out in November and December of each year and are due in January or February. Currently, one phase of mentorships is conducted per year, beginning in the spring.

The Program Coordinator

The VOMP coordinator is responsible for all aspects of the program from recruitment of mentors and mentees to the day-to-day operation. The

position requires the ability to work with detail, write clearly and concisely, interface with interpreters over a large and diverse geographic area, and communicate via phone, e-mail, and surface mail. Because the coordinator's post is broad—involving contact with the VOMP stimulus materials, pairing the mentor/mentee dyads, researching resources for mentors and mentees, dealing with field jargon, etc.—it has proven beneficial for the coordinator to also be an interpreter. The interpreting community is small, however. As a result, the coordinator may function in other venues as employee, team interpreter, colleague, or friend to the mentors and other participants in VOMP. It is therefore important to understand that potential role conflicts may occur as the coordinator deals with problems that arise over the course of the mentorships.

The Mentees

Individuals participating as mentees in the Video Outreach Mentorship Program must:

- Work as an interpreter at a postsecondary institution in one of the states and territories within the WROCC region.
- Commit to the four-month mentorship period during which he/she must complete assigned readings, prepare a videotaped interpreting sample, and communicate regularly with his/her mentor via e-mail, phone, and/or surface mail. Should the mentor and mentee find it necessary for the mentee to complete additional assignments over the course of the mentorship, the mentee must be willing to commit to the additional time required. Generally, the total hours spent over the course of the four months does not exceed twenty (20) hours.
- Have an e-mail address that he/she can access at least one time per week. The e-mail address must be in place prior to the beginning of the mentorship.
- Be accessible by phone.
- Have access to the following equipment at least once during the mentorship: a television, a VCR, and a video camera with microphone.
- Pay the participation fee, or arrange for

his/her institution to pay the fee, prior to beginning the mentorship. The participation fee is \$150; the mentee's portion is \$75.

- Locate someone willing to serve as the liaison between the postsecondary institution where he/she works and the VOMP office (usually the interpreter coordinator or someone in a similar position).
- Possess a strong commitment to skills enhancement and able to organize his/her time in such a way that he/she can meet the time deadlines delineated in the VOMP Timeline (see Appendix A).

The Mentors

Although mentors can be recruited from any geographic area and specialization, due to the nature of the WROCC grant the mentors in VOMP are postsecondary educational interpreters from within the WROCC region. Fortunately there exists a cadre of mentor interpreters at the NCOD from which to recruit for VOMP. In addition, several other mentor interpreters from within the greater WROCC region have been recruited and trained.

In order to participate as a mentor in VOMP, an interpreter must:

- Be employed by the National Center on Deafness (exceptions may be made to this requirement by special request).
- Work at an advanced level (have achieved a minimum of level 5 on the 6-level CSUN/NCOD pay scale).
- Hold RID certification (CI, CT and/or CSC) or possess the NAD/CAD level 4 or 5. (Exceptions may be made to this requirement by special request).
- Be approved by the Coordinator of the Western Region Outreach Center & Consortia.
- Be knowledgeable of the requirements for a successful interpretation, various philosophies/methods of mentoring, and be able to effectively communicate that knowledge using a distance format.
- Strongly desire to help postsecondary educational interpreters develop and improve their skills.

- Possess the self-discipline needed to follow through and complete the mentorship time deadlines established by the VOMP program (see Appendix A).
- Successfully complete the VOMP mentor training.
- Have an established e-mail address and access messages at least once per week.

The Institutional Liaison

Due to the distance aspect of VOMP, it is important for the VOMP office to have a contact person within the mentee's home institution, hence the establishment of the *liaison*. In general, the mentee's interpreter coordinator or DSS coordinator has served in this capacity. The responsibilities of the liaison are as follows:

- Provide the interpreter applying to the VOMP program with a letter of recommendation indicating his/her support for the interpreter's participation as a VOMP mentee.
- Help the mentee obtain e-mail through the employing institution. In addition, the liaison may be called upon to provide the mentee with a way to access his/her e-mail at least once per week throughout the mentorship period.
- Assist the mentee in locating equipment necessary to prepare the videotaped interpreting sample. The following equipment is needed: a television, VCR, and a video camera with a microphone. Additionally, the mentee's campus audiovisual center may be able to provide the mentee a place in which to prepare the interpreting sample.
- Assist the VOMP coordinator in contacting a mentee should the need arise. If, for example, the mentee cannot be contacted for an extended period of time, the VOMP coordinator may contact the liaison for assistance.

The Stimulus Materials

As previously stated, one of the major activities of a VOMP mentorship is the preparation of a

videotaped interpreting sample. Throughout the project the collection of stimulus materials available to the mentees has grown. VOMP has sought to provide a broad range of materials typical to a postsecondary setting. The materials consist of spoken lectures given by CSUN faculty and formal signed presentations given by CSUN students who are deaf.

From the list of available topics (see listing below), the mentee (with the mentor's input) selects one signed and one spoken lecture. The lectures are chosen for their appropriateness to fulfilling the mentee's goals. See figure 1.

Prior to starting the mentorship, each mentor receives a single video containing all available stimulus materials. The video enables the mentor to preview each lecture so that he/she can better aid the mentee in the selection of stimulus tapes.

The "Model Series"

At the conclusion of the second phase of VOMP mentorships, mentees indicated on their evaluations (see Appendix D) a desire to see an "appropriate" interpretation/transliteration of the stimulus materials that they had used when preparing their interpreting samples. To satisfy the mentees' need for a sample translation, a "Model Series" has been developed and made available on loan

to the mentees when they complete their mentorships. In keeping with the VOMP philosophy, and to avoid the mentees developing fears of incompetence or idolization of their mentors, VOMP does not encourage mentors to make a tape of *themselves* interpreting/transliterating the stimulus materials for their mentees. The video series features several models interpreting and/or transliterating the stimulus lectures. The tapes *Model Series I* and *Model Series II* are available to any interested individual for purchase or loan through the PEPNet Resource Center (Web address: <http://prc.csun.edu>; mailing address: PEPNet Resource Center, CSUN, NCOD, 18111 Nordhoff St. Northridge, CA 91330-8267; toll free phone number: 1-888-684-4695.)

Evaluating the Program

At the end of the mentorship, each mentee and mentor completes a VOMP Evaluation Form (see Appendix D). As expected, feedback has been both positive and negative. On the positive side, mentees have stated:

"It was beneficial seeing myself on video in a non-threatening situation."
 "As a very new interpreter, I have many doubts and obstacles to overcome. My mentor was non-judgmental and extremely supportive."

Figure 1.

Sign-to-English Stimulus Tapes	Subject Area
The Friendly Way: Vegetarianism	Sociology
Humankind's Impact on the Environment	Environmental Issues
Obsessive-Compulsive Disorder	Psychology
Socio-Cultural Learning Theory	Cultural Linguistics
Volkswagen: The People's Car	History

English-to-Sign Stimulus Tapes	Subject Area
The Chain of Infection	Health Science
Geography 101	Geography
Japanese Women as Agents of Change	Sociology
The Myth of Democracy	History
Wellness	Health Science

"I learned a lot about myself. I live in such an isolated area — I have little opportunity to be mentored."

On the negative side, mentees have reported:

"I felt very disconnected from my mentor."

"I wish I had an opportunity to know my mentor before getting down to business."

"I'm not into psycho-babble."

Some mentees have felt very connected to their mentors; others have not. Some mentees have liked the *Mentee-Centered* approach; others have not. Some mentees have felt that it was time well spent; others have not. After reading hundreds of comments, it has become clear that the over-riding characteristic of a successful mentorship has been consistent contact and follow-through by the mentor.

Cost Considerations

VOMP is fully funded by a federal grant; other agencies and institutions desiring to establish a distance mentorship program will need to consider the following expenses:

- Training of mentors (trainer fee, training site fee, materials, equipment, refreshments)
- Mentor costs (mentoring fees, travel to training and periodic meetings, mentor manual, phone charges, postage charges)
- Coordinator (coordinating fee, phone charges, postage charges)
- Stimulus materials (speaker fees, editing of videotapes, copying of videotapes)
- General expenses (postage charges, office supplies, duplicating, Internet access, RID CMP and ACET CEU processing fees)

Looking to the Future

VOMP is a work in progress. VOMP staff members are constantly seeking ways to improve the program and to incorporate innovative technology.

At the VOMP mentor training held in January 2000, mentors were provided with a larger collection of tools to use while mentoring. Part of the seminar, entitled "Tools of the Trade," involved a "share shop" where participants shared articles, books, videotapes, or other materials used successfully when mentoring and training interpreters.

Additionally, though the program still holds fast to the *Mentee-Centered* philosophy of mentoring, it is understood that there are times when a mentee and mentor choose to deviate from that philosophy and use a more traditional approach to mentoring. By far, the greatest lesson learned is that it is necessary to be flexible.

In November of 1999, Leilani Johnson, the director of the Educational Interpreting Certificate Program (EICP) at Front Range Community College in Westminster, Colorado, met with VOMP staff. The EICP is a certificate program for K-12 interpreters utilizing distance technology in a large portion of its instruction. As a result of those meetings, new technologies will be incorporated into VOMP in future phases. The technologies include:

- Cameras attached to PCs allowing conversants to see, as well as to hear, each other in "real time"
- Individual voicemail boxes allowing mentors and mentees to dial in to an 800 number to input and receive messages
- Video clips imported into e-mail
- VOMP program description, application, and ancillary information made available on the WROCC website

Conclusion

It is hoped that the reader now has a greater understanding of what is involved when setting up and conducting a distance mentorship program. Distance mentoring can be done successfully and serves a great need within the interpreting profession. The handouts distributed at this presentation are available upon request by contacting the presenters at California State University, Northridge or by e-mailing Catherine Tabor, at CATabor@aol.com.

References

Gish, S. (1987). "I understood all the words, but I missed the point": A goal-to-detail/detail-to-goal strategy for text analysis. In M. McIntire (Ed.), *New dimensions in interpreter education - curriculum and instruction*, Silver Spring, MD: RID Publications.

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modules for educational interpreter skill development (pp. P-52-P-93), Minnesota: MRID.

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Regional Interpreter Training Consortium Region IX. (1994a). *Mentorship program reference manual*. Northridge, CA: RITC Region IX.

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Appendix A

Video Outreach Mentorship Program – Sample Timeline

May 2000

Week of:	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
May 1 - 7	<ul style="list-style-type: none"> 5/1/00 Mentee receives VOMP packet (manual, mentor bio & contact information, introductory videotape, log forms, CEU info, evaluation forms). Mentee is notified that mentor will contact mentee in about 2 weeks. 						
May 8 - 14	<ul style="list-style-type: none"> Mentee completes and returns CEU paperwork by stated deadline (if applicable). Mentee completes readings in mentee manual and awaits contact #1 from mentor 						
May 15 - 21	<ul style="list-style-type: none"> 5/15/00 Mentor/mentee contact #1 - Mentor and mentee discuss stimulus materials, prep for interpreting sample. Mentee selects stimulus lectures and sends order form to VOMP office. Mentor and mentee set appointment for contact #2. 						
May 22 - 28 May 29 - 31	<ul style="list-style-type: none"> (For the next three weeks, the mentee researches the topics of the lectures selected for the interpreting sample. During this time the mentee may have additional contacts with the mentor.) 						

June 2000

Week of:	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
June 1 - 4 June 5 - 11	<ul style="list-style-type: none"> 6/8/00 Mentor/mentee contact #2 - Mentor/mentee continue to work on predicting vocabulary and content of stimulus tapes. VOMP Office sends stimulus tapes and videotaping instructions to mentee 						
June 12 - 18	<ul style="list-style-type: none"> Mentee uses this time period to prepare the interpreting sample. 						

- June 19 - 25 • Mentee uses this time period, if necessary, to prepare the interpreting sample.
- June 26 - 30 • **6/29/00** Deadline for completion of interpreting sample and for mailing the tape to the VOMP office for duplication.

July 2000

- | Week of: | Mon | Tues | Wed | Thurs | Fri | Sat | Sun |
|--------------|---|------|-----|-------|-----|-----|-----|
| July 1 - 2 | • Mentee's interpreting sample tape en route to the VOMP office. | | | | | | |
| July 3 - 9 | • 7/7/00 VOMP office receives mentee's interpreting sample, copies it, and mails a copy to both mentor and mentee. | | | | | | |
| July 10 - 16 | • Mentee's interpreting sample en route to mentor and mentee. | | | | | | |
| July 17 - 23 | <ul style="list-style-type: none"> • 7/21-8/7/00 Mentor receives interpreting sample, views it and makes notes. • Mentee receives copy of interpreting sample and makes notes on areas to discuss with mentor. | | | | | | |
| July 24 - 31 | | | | | | | |

August 2000

- | Week of: | Mon | Tues | Wed | Thurs | Fri | Sat | Sun |
|----------------|---|------|-----|-------|-----|-----|-----|
| August 1-6 | | | | | | | |
| August 7 - 13 | <ul style="list-style-type: none"> • 8/7/00 Mentor/mentee contact #3 -Mentor contacts mentee to discuss the mentee's interpreting sample. This will be a lengthy discussion, completed in more than one session. Both mentor and mentee may be seated near a TV with mentee's tape in each VCR in order to allow for referencing of specific points on the tape. This discussion should be done via phone or online chat. • Mentor/mentee set appointment for next contact (approximately one week in the future). | | | | | | |
| August 14 - 20 | <ul style="list-style-type: none"> • 8/14/00 Mentor/mentee contact #4 - Mentor and mentee complete discussion of mentee's interpreting sample. Mentor/mentee set date for wrap-up appointment. | | | | | | |
| August 21 - 27 | <ul style="list-style-type: none"> • 8/21/00 Mentor/mentee contact #5 - Mentor and mentee have wrap-up phone call, discuss goals accomplished, identify possible future goals for mentee, etc. | | | | | | |
| August 27 - 31 | <ul style="list-style-type: none"> • Mentee returns videos, log form, and evaluation form to VOMP office. Mentee keeps his/her interpreting sample video and mentee manual. | | | | | | |

Appendix B

Western Region Outreach Center & Consortia
Video Outreach Mentorship Program
Mentee Application
National Center on Deafness
California State University, Northridge
Chisholm Hall
18111 Nordhoff Street
Northridge, CA 91330-8267

OFFICE USE ONLY
REC'D _____
A ___ R ___ WL# _____
CK REC'D _____

Name of Postsecondary Institution _____

Name _____
Last First Middle Initial

Address _____
Street/P.O. Box City State Zip

Phone: Home () _____ Work () _____
Pager () _____ FAX () _____

E-mail address: _____

Best time to call me is: _____

Educational Background: Please list all postsecondary educational study (i.e., vocational training, community college programs, four-year degree programs, and advanced degree programs).

Institution Name	Degree Obtained	Year Obtained	Major
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Certification(s): If you are certified, please list the certifying body (RID, NAD, etc.), which certification(s) you possess (For example: CI, CT, NAD Level I - V, State QA & level, etc.), and the year(s) obtained.

Continuing Education Units (CEUs):

If admitted to the Program, do you wish to obtain CEUs through RID's Certification Maintenance Program? ___yes ___no (Note: You must be a member of RID and currently certified by RID to obtain CMP CEUs.)

If admitted to the Program, do you wish to obtain CEUs through RID's ACET Program? ___yes ___no (Note: You must be a member of RID and currently enrolled in the ACET program to receive ACET CEUs.)

Application – Pg. 2

Liaison: Each mentee must find someone willing to serve as the liaison between the postsecondary institution where he/she works and the VOMP office. The liaison is usually the interpreter coordinator. Please provide the name and contact information of your liaison.

Name	Title	Phone number	V/TTY/Both
Mailing address		E-mail address	

Interpreting Experience: Please list the settings in which you have worked (i.e., legal, medical, K-12 educational, postsecondary educational, vocational, religious, rehabilitation/employment, mental health, performing arts, deaf-blind, oral, etc.) and the number of years you have worked in each setting:

Deaf Community Experience: Briefly describe your involvement with the Deaf community.

Briefly explain why you would like to participate in the Video Outreach Mentorship Program.

I understand that if I am selected to participate in the Video Outreach Mentorship Program, I am responsible for paying my portion of the participation fee prior to beginning the mentorship. I further understand that I will be required to obtain an E-mail address prior to beginning the mentorship. I verify that I have at my disposal a video camera with microphone, a VCR, and a monitor. I am aware that I will be required to complete outside readings and assignments over the course of the mentorship and I certify that I am able to allot the time necessary to complete the mentorship-related tasks.

Signature	Date
-----------	------

Thank you!

This form was adapted from: Regional Interpreter Training Consortium Region IX. (1994b).

Appendix C

Mentee Manual – Table of Contents

- Introduction
 - Clark, T.S. (1994). Mentoring – An Historical Overview. In RITC Region IX (Ed.), *Mentorship: a sign of the times. A guide to mentoring in the field of sign language interpretation*. Northridge, CA: RITC Region IX.
 - Witter-Merithew, A. (1986). *Claiming our destiny, part I*. RID Views, October 1986. Silver Spring, MD.: RID Publications.
 - Witter-Merithew, A. (1986). *Claiming our destiny, part II*. RID Views, November 1986. Silver Spring, MD.: RID Publications.
 - Vidrine, J. (1984). An historical overview of interpreter training programs. In RID, Inc. (Ed.), *New dialogues in interpreter education: proceedings of the fourth national conference of interpreter trainers convention*, Silver Spring, MD: RID Publications.
- Forms
 - Mentorship Log Form
 - Mentorship Evaluation Form (See Appendix D)
 - Readings
 - Gish, S. (1996). The interpreting process: introduction and skills practice. In Minnesota Registry of Interpreters for the Deaf (Eds.), *Self-paced modules for educational interpreter skill development* (pp. P-52-P-77), Minnesota: MRID.
 - Gish, S. (1990). *Ethics and decision making for interpreters in health care settings – a student manual*. Minneapolis, MN: College of St. Catherine, St. Mary's Campus.
- VOMP Timeline
 - See Appendix B.

Appendix D Evaluation for Mentee

Your name (optional) _____

This evaluation is designed to help us to improve our program in the future. Please take a few minutes to complete this form and return it to the VOMP Coordinator at the close of the mentorship. Your comments and feedback as a VOMP participant are greatly appreciated.

Rate the following using a scale of 1 to 5 or N/A - not applicable: 5=very satisfactory, 4=satisfactory, 3=fair, 2=unsatisfactory, 1=very unsatisfactory.

Program Procedures

1. Clarity of instructions in mentee mailings and Mentee Manual5 4 3 2 1 N/A
2. Usefulness of forms in Mentee Manual.....5 4 3 2 1 N/A
3. Usefulness of readings in Mentee Manual.....5 4 3 2 1 N/A

Mentor-Related Comments

4. Dependability of mentor in following through on scheduled contacts (phone appointments, e-mail, etc.)5 4 3 2 1 N/A
5. Flexibility of mentor in responding to/adjusting to your needs and requests over the course of the mentorship.....5 4 3 2 1 N/A
6. Comments/feedback from mentor were helpful/constructive.....5 4 3 2 1 N/A
7. Feel that I am more equipped to direct my own professional development as a result of participating in VOMP.....5 4 3 2 1 N/A

Program Effectiveness/Design

8. Although program structure utilized distance format, ability to have regular contact with mentor.....5 4 3 2 1 N/A
9. Effectiveness of assigned tasks on professional development.....5 4 3 2 1 N/A
10. Adequate time to prepare for making interpreting sample.....5 4 3 2 1 N/A
11. Overall satisfaction with format of program.....5 4 3 2 1 N/A
12. Length of time of mentorship (4 months) was ___too short ___too long ___about right. If you answered "too short" or "too long," how long do you suggest that the mentorship last? _____
13. The most effective communication mode between my mentor and I was (e.g., phone, e-mail, videotape, etc.)_____.
Why? _____
14. If given the opportunity, would you participate as a VOMP mentee again?
___yes ___no. Why or why not? _____

Evaluation Form – Pg. 2

VOMP Procedures/Program Administration

15. Ability to contact VOMP Coordinator with needs.....5 4 3 2 1 N/A
16. Adequate assistance in resolving problems.....5 4 3 2 1 N/A
17. Ability to locate and use suggested resources over the course of the mentorship..5 4 3 2 1 N/A
18. Timeliness in receiving needed materials from the VOMP Office.....5 4 3 2 1 N/A

Additional Comments

19. Which component of the mentorship was least beneficial (if any)? _____

20. Which component of the mentorship was most beneficial? _____

21. If I were in charge of the Video Outreach Mentorship Program I would _____

22. General comments (if any)

Thank you for taking the time to complete this evaluation!

This form was adapted from: Regional Interpreter Training Consortium Region IX. (1994b), and the Arizona State University Mentor Program Evaluation Form.

Choosing Effective FM Technology Solutions for Students who are Hard of Hearing

Becky Morris

President, Effective Communication Solutions, Inc.
Independence, KY

Abstract

Disabled student service providers and vocational rehabilitation counselors are on the 'front line' addressing the needs of individuals who are hard of hearing. You are the professionals who need to understand the communication obstacles and introduce technical solutions and other support services to students who are hard of hearing. It often falls on you to also train and counsel individuals on the use of these services and technology.

Understanding the relationship between hearing instrument options and FM system options can mean the difference between successful communications and unnecessary hardship for the hard of hearing student. This workshop will help you understand this critical relationship and enable you to more confidently choose effective FM technology.

Introduction

I'd like to begin with a brief introduction. I am not a vocational rehabilitation counselor, although I work extensively in that arena. I am not an audiologist, even though I talk about hearing instruments. I am an ALD (assistive listening device) specialist. My experience and focus is meeting the needs of individuals who are hard of hearing, people who rely on their residual hearing, and who do not know sign language and who probably wear hearing aids. I support vocational rehabilitation professionals and audiologists with technical expertise in using ALDs to meet the

needs of individuals who are hard of hearing. Excellent technical resources are available that discuss FM systems and listening options. Those of us who love details get excited when we find these highly technical and thorough references. My purpose today, however, is to take that information and present it in a practical format so that anyone, regardless of their technical experience level, can leave this workshop feeling they can more competently support this technology.

After polling the audience for technology comfort levels, I see the experiences range from novice to knowledgeable. This diversity often makes it difficult to meet everyone's needs when discussing technical issues. It is my experience to have everyone 'read the menu', start with an appetizer, and then get to the 'meat and potatoes' that the more experienced folks crave.

When discussing FM systems, it's wise to remember that one size does not fit all. You can't purchase one system with a single option and expect it to meet everyone's needs. There are three groups of individuals who can benefit from assistive listening systems: people with hearing loss who do wear hearing aids, people with hearing loss who don't wear hearing aids and people with central auditory processing disorders. The method of interfacing with the assistive listening system determines how effective that system will be for each individual.

You cannot successfully choose technology without considering four key environmental issues and the strategies for recognizing them:

Environmental Strategies—recognize unfavorable listening situations in the classroom:

1. Room acoustics (large hall, open windows, air conditioners and outside noise) can make it more difficult to hear clearly in the classroom.
2. Seating (distance from the speaker, seating arrangements) can cause difficulty for a student with hearing loss.
3. Teaching style (lecture, class discussion, group discussions) can adversely affect one's ability to hear clearly.
4. Use of audio-visuals, while an excellent tool, can cause difficulty if the speaker tries to speak above the hum of the a/v equipment or with the room darkened.

Communication Strategies can also affect successful use of technology:

1. Face the audience and keep things away from your mouth.
2. Don't speak while looking down or with your back turned, and don't roam the room while speaking.
3. Repeat questions from the class before answering them.
4. Don't publicly draw attention to the person using the technology; devise inconspicuous hand signals prior to class to communicate about the technology.

Just how does an assistive listening system help?

ALDs produce a favorable speech-to-noise ratio by placing the microphone near the desired sound source. They overcome reverberation and background noise in acoustically unfriendly rooms and add amplification of the sound source when needed. An assistive listening system consists of two units. One unit has a microphone clipped to the lapel of the instructor (the transmitter). It transmits the sound signal to the other unit (the receiver) that is worn by the student. The receiver converts the signal back to sound that is delivered to the ear with a listening option.

This system can transmit the sound signal three ways. We are only addressing one system, FM systems, throughout this workshop because these are most prevalent. The FM system uses a radio frequency to transmit sound from the transmitter to the receiver. These frequencies are different for each ALD manufacturer.

FM System Listening Options

There are five basic FM system listening options (or interfaces).

- **Headphones**—standard headphones that fit over the head (and don't appeal to many students).
- **Ear hook**—basically half a headphone that fits over one ear with an adjustable hook. It is more appealing because it is more discreet.
- **Neckloop**—this wire loop fits over the neck and creates a special signal that a hearing aid telecoil can pick up. It allows the hearing aid to use its full power.
- **Direct audio input**—connects the hearing aid directly to the FM system.
- **Earbud**—this single earbud fits snugly in the ear, in place of a hearing aid.

Hearing Instruments

Hearing instruments come in three basic styles. A hearing aid consists of a microphone that picks up all sounds, the circuitry that takes that acoustic sound and amplifies it at the levels necessary for that individual, and the style of aid that gets the sound into the ear. Our goal should be to maximize the use of the hearing instrument by interfacing it most effectively with an FM system.

- **CICs**—the very smallest instruments that fit completely-in-the-canal and are virtually invisible.
- **ITEs**—instruments that fit in the ear; the largest fill the bowl of the ear.
- **BTEs**—instruments with an ear mold that fits in the ear and is attached to the aid that is behind the ear.

Hearing Instrument Options

Generally, ITE and BTE aids have options available that allow them to interface with an FM system. The telecoil is often a misunderstood option. The benefit of the telecoil is to turn off the hearing aid's microphone in listening situations where the aid does not perform optimally and pick up sound in a different way. Here is my basic definition of a telecoil:

A telecoil is a special circuit in the hearing aid that allows it to pick up sound differently than the microphone. Typically, you turn off the hearing aid microphone to turn on this special circuit. When you turn the telecoil on (also called t-switch or telephone switch), it is looking for a special electromagnetic signal. This signal will come through many telephone handsets and through the neckloop option of an FM system. It then converts the signal back to sound. This telecoil often is not as strong as the hearing aid microphone and users need to turn the volume control up in order to hear sound at the same level they perceive sound through the microphone.

Telecoils are not made alike, and there is an excellent article that discusses telecoils in great technical detail listed in the references.

Another hearing aid option is direct audio input or DAI. Direct audio input lets the hearing aid microphone remain on while also directly connecting the hearing aid to the sound source. This allows a more distortion free sound signal and is very beneficial for people with severe hearing loss or those in computer classes. There is a special boot that snaps onto the bottom of BTE hearing aids and connects a cord from the hearing aid to the FM receiver.

Putting the pieces together

We've discussed FM systems and FM listening options. We've also discussed hearing aids and hearing aid options. Now it is time to revisit each FM listening option and discuss how best to interface it with the hearing aid.

Headphones are for mild to moderate hearing loss. They can be used with no hearing aids, CIC hearing aids and some ITE or BTE aids that do not have telecoils. They may cause feedback (or squealing) to occur at higher volume levels as well as sound leakage. This sound leakage can cause distraction to others sitting around the individual, so you should monitor this during the system test. This option presents sound binaurally (to both ears).

Ear hooks are also for mild to moderate loss. They can be used with no hearing aids, CICs, most

ITEs, and BTEs that do not have telecoils. They may also cause feedback and sound leakage at high volume levels which can cause distraction to others. This option presents sound monaurally which may not be comfortable to some people. The ear hook is sometimes effective because it does not set snugly on the hearing aid and the possibility of feedback is lessened. It allows sound to go to one ear while leaving the opposite ear open to environmental sounds with the hearing aid microphone turned on.

Neckloops are for moderate to severe hearing loss. They can only be used with ITE or BTE hearing aids with the telecoil option. This is effective for people with more severe hearing loss because it bypasses the hearing aid microphone, eliminating the possibility of feedback and sound leakage. It allows for binaural listening and the full power of the hearing aid. Silhouettes are another option and fit behind the ear to bring that electromagnetic signal even closer to the hearing aid's telecoil. These two options use induction to transmit the sound from the receiver to the telecoil.

Direct Audio Input is for severe to profound loss. The boot and cord snaps onto the BTE hearing aid and plugs directly into the FM system. It provides a direct connection and allows the hearing aid microphone to remain on (to pick up environmental sounds) while also picking up the FM system signal. The FM signal will come in at the same level as the hearing aid microphone to give you the benefit of both signals. Another option similar to DAI is a cochlear connector cord that runs from a cochlear implant user's speech processor to the FM receiver.

Earbuds are used in place of a hearing instrument. If an individual's hearing aid has feedback and no other option is available to effectively interface with the system, then the earbud is an effective option. Sound goes directly into the ear, usually without sound leakage, with a snug fit. The drawback to this option is that we are unable to maximize the benefit of the hearing aid.

Conclusion

You should now have a grasp of the terminology of hearing instruments and assistive listening system options. You have seen hearing instruments up close with the visual display board that was

passed around the room. You are now in a position to look at product information and understand how it works.

I'd like to summarize with a few thoughts about protecting and maximizing your investment in assistive listening systems. When I work with disability service providers, I request details of all the systems owned by the school. This information helps me recommend how to use your systems most effectively and build in flexibility. I've shared a copy of this form with you because you will find it helpful in managing your inventory and documenting system maintenance.

In closing, I want to stress that a basic understanding of how this technology works is all you need to enable you to competently support your students. You don't have to become a technical expert. You only need to know enough to talk with those experts. I invite you to add me to your list of resources anytime you have technical questions. You can also call the manufacturer directly with any questions you have. You also have excellent resources available to increase your technical understanding.

Web-Based Distance Learning for Professionals in Postsecondary Education: Orientation to Serving College Students who are Deaf or Hard of Hearing

Debra Wilcox Hsu

Midwest Center for Postsecondary Outreach
St. Paul Technical College

David Buchkoski

Midwest Center for Postsecondary Outreach
St. Paul Technical College

Allisun Kale Marshall

Western Region Outreach and Consortia Center
California State University Northridge

Marcia Kolvitz

Postsecondary Education Consortium
University of Tennessee

Gary Sanderson

Western Region Outreach and Consortia Center
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Charley L. Tiggs

Northeast Technical Assistance Center
National Institute for the Deaf
Rochester Institute of Technology

Abstract

The Postsecondary Education Programs Network (PEPNet) offers interactive multimedia web-based training on the PEPNet web site at HtmlResAnchor www.pepnet.org. The training, entitled *Orientation to Serving College Students Who are Deaf or Hard of Hearing*, is designed for postsecondary education professionals who are serving students who are deaf or hard of hearing. The instructional goal of the project is to provide postsecondary administrators, faculty, and staff with a basic understanding of hearing loss and its implications for communication and learning in a postsecondary setting. PEPNet is the national collaboration of the four Regional Postsecondary Education Centers for Individuals who are Deaf and Hard of Hearing. The Centers are supported by contracts with the U.S. Department of Education, Office of Special Education and Rehabilitative Services. The goal of PEPNet is to assist postsecondary institutions across the nation to attract and effectively serve individuals who are Deaf and Hard of Hearing.

Introduction

The Postsecondary Education Programs Network (PEPNet) now offers one hour of multimedia web-

based training on the PEPNet web site at HtmlResAnchor www.pepnet.org. The training, entitled *Orientation to Serving College Students Who are Deaf or Hard of Hearing*, is designed for postsecondary education professionals who are serving students who are deaf or hard of hearing. Others who may benefit from completion of the training include prospective employers of deaf and hard of hearing students and beginning students preparing for careers in deaf education, audiology, communication disorders, rehabilitation, or sign language interpreting. The training is offered at no charge, and individuals who complete the training may download and print an official certificate of completion issued by PEPNet.

Instructional Goal

The instructional goal of the project is to provide postsecondary administrators, faculty, and staff with a basic understanding of hearing loss and its implications for communication and learning in a postsecondary setting. Upon completion of the course individuals will be able to:

- define basic terms and concepts related to deafness and hearing loss,
- explain how deafness and hearing loss influence people's life experiences,

- identify languages and communication strategies used by people who are deaf and hard of hearing,
- apply skills for communicating with students who are deaf or hard of hearing,
- describe the services available for students who are deaf and hard of hearing and,
- adapt instruction to accommodate the needs of students who are deaf and hard of hearing.

PEPNet

PEPNet is the national collaboration of the four Regional Postsecondary Education Centers for Individuals who are Deaf and Hard of Hearing. The Centers are supported by contracts with the U.S. Department of Education, Office of Special Education and Rehabilitative Services. The goal of PEPNet is to assist postsecondary institutions across the nation to attract and effectively serve individuals who are Deaf and Hard of Hearing. The training was developed with collaborative participation of a team of content experts from each of the four Centers:

- Debra Wilcox Hsu, Dissemination Coordinator (team leader) and David Buchkoski, Training Coordinator, Midwest Center for Postsecondary Outreach (MCPO) at St. Paul Technical College, St. Paul, Minnesota
- Charley Tiggs, Project Field Specialist, Northeast Region is served by the Northeast Technical Assistance Center (NETAC), located at the Rochester Institute of Technology in Rochester, New York.
- Marcia Kolvitz, Associate Director, Postsecondary Education Consortium (PEC) located at the University of Tennessee at Knoxville
- Allisun Kale, In-Service Training Specialist and Gary Sanderson, Outreach Program Coordinator, Western Region Outreach Center and Consortia (WROCC) located at the National Center on Deafness at California State University, Northridge.

The PEPNet content expert team contracted with Seward Learning Systems, Inc., in Minneapolis, Minnesota, for the design, development and programming of the web-based training. The training module was available on-line within six months of the inception of the project. Team members worked together during those months through one face-to-face meeting and many telephone conference calls and chat meetings.

Role of Web-based Distance Learning

The four Regional Postsecondary Education Centers for Individuals who are Deaf and Hard of Hearing were created to ensure that every postsecondary institution in the United States could easily access the technical assistance and outreach services that the Centers provide. The Centers serve over 10,000 colleges, universities, proprietary schools, and community based rehabilitation centers throughout the United States. Multimedia web-based distance learning is an ideal training and dissemination tool for organizations like PEPNet which provide outreach and training under the following conditions:

- Large populations - PEPNet serves over 10,000 postsecondary institutions.
- Geographically dispersed - PEPNet serves postsecondary institutions in rural and urban areas in every state and territory of the United States
- Continuous stream of trainees - PEPNet serves a continuous stream of professionals in postsecondary institutions.
- Learners at various levels - PEPNet serves professionals with varying levels of experience and knowledge about working with students who are deaf or hard of hearing.
- Stable content style and scope - *Orientation to Serving College Students who are Deaf or Hard of Hearing* content is stable and universally needed to effectively serve students.
- Accountability is required - PEPNet is

accountable to the U.S. Department of Education to provide training to professionals in postsecondary education and to document the training. Interactive web-based delivery of PEPNet training will allow for electronic tracking of completed training and automated credentialing of training for professionals in postsecondary education.

In addition to the collaborative web site and multimedia web-based training, PEPNet offers an on-line Resource Center on the PEPNet web site with thousands of listings of resources related to deafness and hearing loss. For more information about the PEPNet services or to participate in the on-line training, visit the PEPNet web site at <www.pepnet.org> or contact Debra Wilcox Hsu at 651-221-1432 or dwilcox@stp.tec.mn.us.

Section VI

Student Preparation for College

Skill Building Innovations to Help Today's Students Become Tomorrow's Employees¹

Steven E. Boone

Rehabilitation Research and Training Center for Persons who are Deaf or Hard of Hearing
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Abstract

This paper is focused on skill building resources designed to help deaf and hard of hearing persons obtain the skills needed to enter and succeed at work. The paper overviews innovative materials related to job interviewing and obtaining job accommodations. These materials are based upon research conducted at the University of Arkansas Rehabilitation Research and Training Center for Persons who are Deaf or Hard of Hearing (RT-31). For additional information regarding these resources and related activities of the RT-31, readers are encouraged to contact the authors.

Most persons can benefit from focused resources designed to help them succeed in different stages of the employability process — career preparation, job entry and placement, and job maintenance and advancement. The University of Arkansas Rehabilitation Research and Training Center for Persons who are Deaf or Hard of Hearing, funded by the National Institute on Disability and Rehabilitation Research, has conducted twenty years of applied research into the employment enhancement needs of persons who are deaf or hard of hearing. This paper focuses on skill building resources designed to help deaf and hard of hearing persons obtain the skills needed to enter and succeed at work. The

paper overviews innovative materials related to job interviewing and obtaining job accommodations. Each of these areas are of significant concern to persons who are deaf or hard of hearing and their service providers.

The Job Interview

The job interview is a primary strategy used by virtually all employers as a mechanism to collect information critical to hiring decisions. In the interview, applicants are asked to provide information that confirms or expands the employers knowledge of the applicant and his or her job qualifications. The key to interview success is clear communication—understanding the interviewer's questions and expectations and marketing your skills and qualifications for the job.

Learning to interview is a concern of all job applicants. Every job seeker could benefit from learning how to succeed in the interview. The interview process is especially challenging for job seekers who are hard of hearing or late deafened. Persons who experience hearing loss early in life can, like individuals without hearing loss, benefit from learning the skills necessary for successful interviewing. Similarly, those who experience hearing loss later in life often face changing jobs. Many have never interviewed as a person with

¹The research leading to this publication was conducted by faculty of the University of Arkansas Research and Training Center for Persons who are Deaf or Hard of Hearing, which is funded by the National Institute on Disability and Rehabilitation Research of the U.S. Department of Education. The opinions contained in this publication are those of the authors and do not necessarily reflect those of the University of Arkansas or the U.S. Department of Education.

hearing loss, and thus, face additional challenges and can benefit from relearning these skills.

Recognizing these concerns, we have conducted a number of studies to identify needs, develop materials or resources directed toward these needs, and then validate the usefulness of these materials in producing enhanced employment outcomes. The database underlying this resource has included late deafened and hard of hearing consumers as well as programs that provide employment related services to these individuals. Over 800 persons were involved in these studies.

The data clearly indicated that consumers needed assistance in learning how to succeed in the interview. For example, when asked to rate the impact of hearing loss in interviews, consumers indicated that hearing loss had moderate impact and made it difficult to demonstrate and market oneself. This impact was felt across all aspects of the interview, from the initial phone or face to face contact with the company until the end of the interview and requesting follow-up. Each step of the interview process was moderately difficult due to the impact of hearing loss. Consumers wanted assistance or resources to learn how to present themselves in the interview (Boone, Scherich, & Berkay, 1997). This need was also recognized by service providers. Sadly, other research conducted by our center has found that many programs do not have adequate materials and resources to meet these needs (Boone & Watson, 1999).

GET-IT: An Interview Training Resource for Job Applicants with Hearing Loss

Recognizing these needs, we designed *GET-IT*, a curriculum that focuses on the job interview skills desired by employers as well as the unique problems faced by applicants who are late deafened or hard of hearing. Gaining Employment Through Interview Training was based upon well validated procedures to assist deaf persons to learn interviewing skills developed at our Center. Our goal was to develop materials that are presented in accessible formats. The resulting curriculum includes a Trainers Manual, Consumer Learning Materials, and a 72-minute closed-captioned video that includes narrated guidelines and sample interviews modeled by persons who were late deafened or hard of hearing.

The *GET-IT* curriculum includes nine key lessons that correspond to the structural parts of the typical job interview. These lessons include:

- Orientation to the Interview
- Greeting the Person at the Front Desk
- Meeting the Employer for the First Time
- Answering Questions Confidently
- Asking for Important Information
- Offering Information
- Closing the Interview
- What If You Are Not Asked
- The Complete Interview

In addition to these lessons, the Curriculum includes an assessment instrument designed to help applicants to pinpoint problems and weaknesses as well as extensive appendices of vocabulary and sample responses for interview questions.

Each lesson follows the same format. Initially, a narrator describes the specific skills that are targeted by the lesson. This discussion is followed by examples of persons exhibiting these skills. Subsequently, learners are asked to practice the skills they are observing on the video in roleplays. Finally, homework “application” exercises are described to help learners to apply the skills they have learned. The curriculum may be used individually but is most effective when in small groups. Group members are invaluable in providing feedback on ways to improve interview performance.

Each lesson specifies the exact content needed based upon expectations of the employer. For example, in “Meeting the Employer for the First Time” applicants learn to:

- Greet the Interviewer
- Smile and shake hands
- Thank the Interviewer for meeting
- Request room accommodations
- Make small talk
- Use the Interviewer’s name
- Sit quietly
- Make eye contact, and
- Explain your communication needs.

The rationale for each of these skills is clearly described, modeled and practiced to ensure learning. Data indicates that the process is an effective way to learn these skills.

AcCOMModate! Communication Accommodations at Work

Our Center is currently developing an interesting, interactive way to learn about workplace accommodations—a multimedia program called *AcCOMModate! Communication Accommodations at Work*. Past research conducted by our Center found that many workers who had recently experienced hearing loss were unsure about how to identify and request appropriate communication accommodations. Furthermore, surveys of these workers' employers also found an overall lack of knowledge about accommodations.

These two findings resulted in the development of a text-based computer program called *Job Accommodations Curriculum* (Sherich & Berkay, 1995). Workers who were hard of hearing or late-deafened reviewed the program. While the resource was viewed as useful, most of these individuals felt the curriculum could be substantially improved through inclusion of multimedia demonstrations of accommodations, images, graphics, and, where possible, videos of people using various accommodations. Toward this goal, we successfully applied for and were awarded a knowledge and dissemination grant from the National Institute on Disability and Rehabilitation Research.

Thus, the *AcCOMModate* resource is being developed. This program can be used on either MAC or PC platforms, and we believe it will be useful to a number of audiences. Service providers will be able to use it with consumers they serve and to educate employers. Consumers themselves can use it as a self-help program. Employers may use it to educate other employees. Postsecondary institutions may find it useful for both new students and those about to graduate and join the workforce. Users can work through one or all of the sections included in the program.

AcCOMModate has been set up with a teleconference format - a setting we hope will be familiar to most users. In the Introduction, the "agenda" topics for the teleconference are described. Topics include:

1. What is an Accommodation?
2. Identifying Accommodation Needs (8 Situations)
3. Choosing An Accommodation
4. Marketing Your Request

This section also provides a brief overview of how to use the program with more in-depth explanations in the help section. To begin the curriculum, users simply click on the topic where they wish to begin.

Throughout the program, users will notice that everything spoken is captioned. To the right of the captioning are two control arrows for scrolling the text forward and backward. When the text is scrolled manually, the video portion is also reset.

Topic 1, *What is an Accommodation?*, introduces users to definitions of accommodations and their benefits. Four primary categories of accommodations are covered: equipment, support personnel, job restructuring, and workplace modifications. This looks very similar to most teleconferences—there are actually participants shown seated in the first row. From time to time, these individuals will be making comments or posing questions.

On the big screen, a moderator, video or other information may be presented. As before, whatever is spoken—whether from the moderator or video which might appear on the big screen, or comments from the other participants—is also captioned. Users have complete control over where they are in the program, and what they want to see happen. The remote control on the right side of the screen indicates which topic is currently being explored, allows access to the other three topics, as well as provides the familiar keys: stop/pause, play, reverse, and fast forward. To the right of the four participants is a computer monitor under the desktop. This computer monitor is utilized in Topic 2, *Identifying Your Accommodation Needs*.

The perspective is as though the program user is accessing the computer under the desktop. Users are provided the opportunity to explore accommodation possibilities for eight categories of workplace situations including: receiving instructions/talking with your supervisor, performance evaluations, department meetings, in-service training, work-related social functions, socializing with co-workers, working with customers or the general public, and alerting devices. Once a situation is chosen, users are led through a series of questions to which they answer yes/no based on their personal perspectives and experiences. These questions are related to a variety of aspects for the chosen situation. Answers to these questions lead to the development of a list of potential

accommodations that may assist the individual. Users may print the lists as they appear or wait until multiple situations have been completed to print a summary list.

The third topic, *Choosing a Preferred Accommodation*, is presented by Maxwell Gadget. Maxwell provides some comic relief for users while providing very useful information. He introduces six steps for individuals to use when choosing appropriate accommodations. These steps help narrow the list of potential accommodations to specific accommodations that best fit the workers' situation.

Marketing Your Request, which is Topic 4, provides guidelines and examples of effective ways to approach employers with an accommodation request. Two types of requests are discussed. The first type is requesting simple accommodations, such as moving to a quieter place or using available assistive technology. The second type is requesting formal accommodations which involves a supervisor or someone else in order to get the accommodation, such as purchasing assistive technology or changing job duties. Several vignettes are included which demonstrate how to put the steps into practice. The last portion of this section also discusses how to deal with denied requests.

This multimedia program also includes a glossary that may be accessed at any time to obtain more information or an explanation of a specific accommodation. Throughout the program, users may see a term or phrase in the captioning which is highlighted in red. By clicking on the highlighted item, the glossary is accessed. Users may peruse the glossary whenever they like and simply pick specific terms from the listing. Along with the text definition, often a graphic or short video is included to help better describe the term or phrase. Many definitions also have related concepts listed enabling users to delve further. The information presented may be printed, or users may return to the previous screen.

Closing

We sincerely hope that these resources provide information in an engaging manner. The *GET-IT* curriculum is currently available. Contact the authors or visit our website for ordering information. We urge you to check our website from time to time to see when the final *AcCOMModate* product is available. The Center's web address is: <www.uark.edu/deafrtc>.

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The Freshman Experience— A Piece of Cake!

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The Freshman Experience class offered at California State University, Northridge, was initially created as a response to an unmet need. Although freshmen were introduced during the University's Orientation to "services" on campus, students often spent years trying to learn how to navigate the "system." They needed an opportunity to explore more deeply the issues that would impact them later (Grade Point Average, General Education requirements, multiculturalism), skills that would serve them well on campus (time management, study habits, library skills), and skills that would serve them well in life (communication, critical reasoning, social interaction, health).

In developing the curriculum for the section of this class which focused on the needs of students who are deaf or hard of hearing, the professors took the position that incoming freshmen would benefit from two other areas as well. One class session allowed a panel of deaf sophomores who were incoming freshmen the year before to relate their experiences of their first year. Another significant session literally "turned the tables" and put the deaf students in the position of serving as an interpreter or captionist so that they might have a better understanding of the services they use.

Based on years of experience and research which indicate that students learn more from "doing" than from lectures, the class was designed to be "hands-on" at all times. Research resulted in the identification of activities to support skills and experiences critical for this course. The course text, *Becoming a Master Student*, by Dave Ellis, is supported by a professor's copy which provides a number of exercises for

each topic. Other activities were taken from library, internet, and personal resources. Based on students' evaluations of the class over the past three years, these activities have been effective in getting across critical points and have added to the students' enjoyment of the class. We include in this article the three projects presented at the PEPNet Conference; our Conference handout included all other projects.¹

In addition to the specific benefits of direct application (skills building), research has demonstrated that this type of "Introduction to College" provides the necessary transition needed to move from high school to college and to succeed. A study conducted at Phillips County Community College in Arkansas found that students who completed a freshman orientation class (experimental group) were twice as likely to remain in school as those who have not taken the course. That study also showed that the mean Grade Point Average at the end of the first semester for the experimental group was 2.28, compared with a 1.72 mean GPA for the control group.

Although research to replicate the results of the Phillips study is still in process, the professors who team-teach this course have found that students who complete the course are more successful in negotiating the changes and demands that are made of them in college. The experiences in the class and the related discussions help students

¹These activities were included in the handout packet and are available from the presenters at the National Center on Deafness, California State University, Northridge, 18111 Nordhoff Street, Northridge, California 91330.

identify the relationships and processes by which they become (or fail to become) members of the social and academic communities on campus. Since the class is taught in direct communication (sign language), students have the opportunity to interact with peers and have their opinions and feelings validated.

The final exam for the course asks students to “become the instructor” for the next year’s class, to select topics they think they would like to keep or drop, and to justify those selections. Their responses in their presentations and their later independence and success are strong defenses for continuing the class.

The Rocks of Our Lives

Time Management
(Taken from the Internet)

A while ago, I was reading about an expert on the subject of time management. One day this expert was speaking to a group of business students and, to drive home a point, used an illustration I’m sure those students will never forget. After I share it with you, you’ll never forget it either.

As this man stood in front of the group of high-powered over achievers he said, “Okay, time for a quiz”. Then he pulled out a one-gallon, wide-mouthed mason jar and set it on a table in front of him. He produced about a dozen fist-sized rocks and carefully placed them, one at a time, into the jar. When the jar was filled to the top and no more rocks could fit inside, he asked, “Is this jar full?”

Everyone in the class said, “Yes.”

Then he said, “Really?”

He reached under the table and pulled out a bucket of gravel. He dumped some gravel in and shook the jar causing pieces of gravel to work themselves down into the spaces between the big rocks. He smiled and asked the group once more, “Is the jar full?”

By this time the class was onto him. “Probably not,” one of them answered.

“Good!” he replied.

He reached under the table and brought out a bucket of sand. He dumped the sand in and it went into all the spaces left between the rocks and the gravel.

Once more he asked the question, “Is this jar full?”

“No!” the class shouted.

Once again he said, “Good!” Then he grabbed a pitcher of water and began to pour it in until the jar was filled to the brim.

He looked up at the class and asked, “What is the point of this illustration?”

One eager beaver raised his hand and said, “The point is, no matter how full your schedule is, if you try really hard, you can always fit some more things into it!”

“No,” the speaker replied, “that’s not the point. What this illustration teaches us is that: If you don’t put the big rocks in first, you’ll never get them in at all.”

What are the ‘big rocks’ in your life?

- Time with your loved ones?
- Your faith, your education, your finances?
- A cause?
- Teaching or mentoring others?
- A project that YOU want to accomplish?

Remember to put these BIG ROCKS in first, or you’ll never get them in at all. So, tonight or in the morning when you are reflecting on this short story, ask yourself this question: What are the ‘big rocks’ in my life? Then, put those in your jar first!

Hats

Stereotyping & Prejudice
(An activity from *Becoming a Master Student*)

Janie Perez of the University of Texas in Galveston uses the following exercise to demonstrate the impact of prejudice and stereotyped expectations on behavior. It requires the use of ten headbands or hats with one of the following messages printed on each one.

- Clown: Laugh at me
- Stupid: Criticize me
- Senile: Patronize me
- Helpless: Interrupt me
- Insignificant: Ignore me
- Expert: Ask my opinion
- Important person: Listen to me
- Powerful person: Agree with me
- Genius: Ask me to speak
- Attractive person: Play up to me

Ask ten volunteers to sit in a circle in the center of the room. Ask the rest of the class to observe closely, remain silent, and focus on the reactions and comments of the volunteers.

Place one headband or hat on each volunteer so that the volunteer cannot read his own, but the rest of the group can see what it says. Introduce a topic for discussion and instruct each volunteer to interact with the others in a natural way. Further instruct the volunteers to react to each person who speaks by following the instructions on the speaker's headband. Emphasize that volunteers are not to tell each other what the headbands say but simply to act consistent with them. Begin the discussion and let it continue for 15 to 20 minutes until everyone has participated. Then stop the discussion and ask each volunteer to guess what their own headband says, and then take it off and read it.

Discussion: Begin the follow-up discussion by asking the volunteers to share their reactions. What is it like to be consistently misinterpreted by the group? Did you find yourself changing your behavior in reaction to others' treatment of you? Ask the observers to join the discussion with what they noticed about changes in body language and attitude among the volunteers.

If you are interested in soliciting written feedback, ask students to write about a time when they related to a person as a "headband" instead of as an individual. Questions could include: What assumptions did you make about that person? How do you imagine that person after they have completed their writing assignment?

Sponges — Our Brains!

Study habits & Time Management (An activity from *Becoming a Master Student*)

This exercise requires the following supplies:

- 3 glasses with equal amounts of water in each
- 3 large sponges that have been saturated, and then dried until they are hard
- 3 plates
- 3 bowls

Prepare 3 sets of implements on a table in front of the class. Each set should include a glass filled with water, a hard, dried sponge, one plate and one bowl.

Begin by explaining that each of the sponges represents your brain. If possible, let three students volunteer to have the sponges represent their brains.

Start with Johnny's brain. Johnny is away from home for the first time. He is excited about living in the dorm and meeting new friends. Although he knows school is important, his first semester has been less than ideal in terms of commitment to academics. The first week he went to classes and kept up with his studies. By the second week he had discovered the beach. The third week he pledged for a fraternity and found that those fraternity brothers sure knew how to have a good time! He was dismayed when midterm time came around and he didn't do well, but he had difficulty getting motivated. A couple of his friends went snowboarding later in the semester and he didn't want to miss that trip! The week before final exams, however, he decided that he'd better buckle down. He hadn't reviewed any of his notes, he hadn't done any of the reading, and hadn't paid attention to what the professor had emphasized in class. So the week of finals he really had to cram and try to pour that whole semester into one week.

Hold the first sponge (Johnny's brain) over the bowl. Explain that you will count down the weeks of the semester and for every week that Johnny DID study, one-fifteenth of the water from the glass (information) will be poured over the sponge. Although little is used in the first week, pour the remaining portion of the glass over the sponge quickly at the end to represent the cramming for finals. Allow the excess to spill over into the bowl. Then place the sponge on the plate.

Next we have Susie's brain. Susie was a bit more diligent than Johnny. She was on top of her class work for the first three weeks before she started to slack off. She fell in love with Stanley and found it difficult to concentrate on school when he kept inviting her out. She did, however, study for her midterms for one week. Then she lost it again. She and Stanley went up the coast to visit his parents during Spring break and Susie slipped back into her old pattern. As professors began talking about preparations for final exams, Susie panicked and decided she'd better get her act together or her parents would kill her! Three weeks before finals, she organized all her notes, reviewed them, caught up on her reading and studied with friends for finals.

Hold the second sponge (Susie's brain) over the bowl. Count down the weeks of the semester, pouring one-fifteenth of the water each week Susie studied. Pour the remaining over the sponge quickly at the end.

Finally we have Hector. Hector has friends and enjoys activities but has decided that if he is going to become a doctor, he'd better do well from the start. Each week Hector reads the assigned work, takes notes to summarize, and reviews his notes from class. A week or two prior to each exam, he organizes his materials and studies in a way that he can remember the information. He reviews his

information repeatedly to ensure that he will do well on his exams, and he does.

Count down the weeks of the semester with Hector's "brain," pouring little by little for each week, including final exams. You should come to the end of the glass by the time you come to the end of the semester week count.

Open discussion with the class to see how they perceive this activity. Let each share examples of when they may have been like Johnny, Susie, or Hector in their school lives. This can lead to more specific activities in time management or study skills.

Vocabulary Improvement for the Deaf and Hard of Hearing with *Meet the Words*

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Abstract

This article comes from a poster presentation of a World Wide Web based vocabulary course developed for students who are deaf or hard of hearing. Web courses present special challenges and well as unique opportunities for learners who are deaf or hard of hearing. This poster presentation focuses on the ways in which one instructor worked through many of the relevant issues.

Vocabulary Improvement for the Deaf and Hard of Hearing with *Meet the Words*

The Resource Center for the Deaf and Hard of Hearing (RCDHH) at Tulsa Community College offers a slate of classroom based courses to assist our students to enhance basic skills. However, we found that a number of our students wanted additional work in vocabulary building even after they had completed RCDHH's three levels of reading and vocabulary classes. In addition, our colleagues in other institutions in Oklahoma reported a similar student demand for vocabulary enrichment. Unfortunately, although most of the institutions, including our own, offer vocabulary courses, many of the courses developed for hearing students do not address the primary concerns of our students. Consequently, we decided to explore the possibility of developing an on-line vocabulary course for these students.

Once RCDHH determined a need for such a class, it fell to me to develop it. However, I did not feel that a course that would simply present and test over a long list of vocabulary words was either necessary or likely to be effective. Instead, I decided to spend some time examining what students have told us about their needs regarding vocabulary development. I found that our students' vocabulary needs tend to fall into three categories. First, they need ways to unlock word meanings without continually resorting to dictionaries (which were not always particularly helpful). Next, they need strategies for finding variations on root words; in other words, they do not always realize that words such as "recognize" and "unrecognizable" are related. Finally, they need a means to determine which form of a word to use in their own writing; in other words, should they use "Jan was sympathy," or "Jan was sympathetic"?

Course Design

The course I came up with, Vocabulary Improvement for the Deaf and Hard of Hearing, was developed to meet these three needs on a level that fills the gaps between vocabulary studies created for use with basal reading texts and those intended for traditional college level vocabulary courses. The vocabulary itself was selected with the needs of the adult learner who is deaf or hard of hearing as the foremost consideration with a focus on expanding vocabulary through building an understanding of

how common affixes alter meaning and usage. The course focuses on word parts and how they work together to form new words and to change the meanings and functions of familiar words.

Vocabulary Improvement consists of an introductory unit and twelve vocabulary units. The introductory unit sets forth quick and simple principles (more properly considered “rules of thumb” rather than a comprehensive grammar) for determining a word’s “work” in a sentence. These principles are reviewed and constantly reinforced in the vocabulary units. Each unit except the introductory unit has twelve words divided between two PowerPoint presentations. The presentations are divided in order to allow students to plan their learning sessions more effectively and to avoid stretching the attention span beyond a comfortable limit.

Although the course was originally conceived and developed as an on-line course, I realize that some instructors may prefer to use the curriculum in other ways. As a result, RCDHH decided to make the course materials available on a CD-ROM as well as on-line.

In the initial version, the course was offered by Tulsa Community College using *LearningSpace* as the course interface. Subsequently, the College switched to *Blackboard* for most Internet courses, and Vocabulary Improvement was revised for this product. I have not taught the course since this switch was made, but I anticipate that it will run even more smoothly with Blackboard than it did earlier. *Blackboard* allows students to self-enroll, but those who miss the deadline for payment of tuition and fees are removed from the system. All course materials and assessments are available on-line. A face-to-face orientation is always desirable but not vital, and I do not schedule one unless individual students request it. Assessments are designed to be “open book” to avoid the necessity of on-site testing or proctoring. Some assessments include immediate remedial feedback for incorrect answers. Assessments are graded automatically by *Blackboard*, and the results are available to individual students on-line.

The CD-ROM version can easily be used in either a classroom or a lab. I have used it in both situations myself and found it to work very smoothly. The student computers in the RCDHH lab all have PowerPoint and Word installed, but a PowerPoint Viewer and a Microsoft Word Viewer

are available to allow users who do not have the full versions of these programs to use the course materials. A printer should be available to students or lab personnel should print the assessments, lesson outlines, and handouts ahead of time to distribute to students. Assessments for the CD-ROM version of the course are paper and pencil based and must be graded by hand. Answer keys are on the CD-ROM, so the teacher or lab attendant should copy the course to the lab computer’s hard-drive minus the answer keys. The remedial feedback is not available for the paper and pencil version of the assessments. Lessons are self-contained and may be used out of sequence.

All of the lessons are formatted in a similar way, so once a student learns the format, he or she should be able to work independently. For each lesson, a student first works through the two PowerPoint presentations then proceeds to the assignments. At the beginning of a lesson, students are reminded to print or locate their Practice Sheet. The purpose of the Practice Sheet is to engage the learner as he or she proceeds through the lesson. Next, a major word part is introduced and defined and the first vocabulary word using the word part is introduced. The word is then analyzed by breaking it down into its parts and these parts are identified and defined. The purpose of the analysis is to model and reinforce effective word attack strategies. In addition, learners are exposed to incidental learning of word parts which are used and defined but not featured in the lesson.

After word analysis, the learner is invited to choose one of three possible “estimates” for the word’s meaning, using the analysis as the basis for the estimate. Students record their answers on their Practice Sheets. By making an “estimate” of the word’s meaning, students engage with the analysis just presented to them and gain experience in using known morphemes to arrive at word meaning. Once the student has recorded his or her estimate on the Practice Sheet, the word’s actual definition(s) and part(s) of speech are presented, and the student can compare these with the recorded estimate.

Finally, a sentence example for each definition and/or part of speech is presented. The sentence is shown using the word and then shown again using a synonym or short definition in the place of the word so students can be sure they un-

derstand the sentence. At the end of the presentation, students check the answers they recorded on their Practice Sheets.

After completing the presentations, the students work through a number of assignments. In the on-line version of the course, all the assignments are electronically graded and many have immediate feedback for responses. Each lesson includes a "Working with Definitions" assignment, in which students match words with their definitions and parts of speech. This exercise is simply to assist students with focusing on, understanding and remembering the definitions and parts of speech.

In the next two assignments, students begin to work with the words in sentences. In the "Working with Sentences" and "More Work with Sentences," students select the proper word to complete a sentence. In "Working with Sentences," the part of speech is provided for the student; "More Work with Sentences" is similar but uses new sentences and does not include the support of the part of speech clue. These exercises encourage students to note parts of speech and how they are used in sentences. In the Web-based version of the course, the feedback for incorrect answers reinforces the "job" each part of speech performs in a sentence and helps students make a better informed selection for their second attempt.

Before going on to the next lesson, students take a "check-up," actually a quiz. For the quiz, students select the proper vocabulary word to replace a synonym or short definition of the word used in a sentence.

Graphic Design

With an on-line course, graphic design becomes vital. When a student logs on, what he or she sees on the computer screen comes to represent both the teacher and the institution itself. For that reason alone, a clean, attractive and professional design is important. However, the importance of design can go much deeper, influencing not only student retention, but student success.

For Vocabulary Improvement, I chose the "Fireball" template provided with PowerPoint for several important reasons. First, it uses a dark background, and dark backgrounds have been shown to provide more comfortable reading for some distance learning environments. (My goal

was to design for as many environments as possible in case we decided to adapt the course later to another use.) Next, because the template consists of a single graphic on a plain, dark background, I was easily able to vary the template by changing the background color. I wanted overall consistency with a slight variation in order to signal to the student a transition between the course introduction (violet background) and the vocabulary lessons. In addition, odd numbered lessons use black backgrounds while even numbered lessons use royal blue backgrounds. Since each lesson consists of two presentations, students know they have skipped a presentation if the background color changes after only one presentation.

So far I've had the opportunity to use the Vocabulary Improvement curriculum with a small number but wide variety of students, including deaf, hard of hearing and international students. To date, I've been pleased with the results of the course. Students seem to have little or no problem understanding the course format, proceeding through the lessons and making real progress in their vocabulary development. I like to see students using their newly acquired vocabulary in original writing; when I use the curriculum in the classroom or lab, I sometimes add writing assignments. However, such a requirement seems a bit onerous and clumsy in a one hour on-line class, so I have not added it to the distance learning version. In the future, I hope to develop additional units and to add sign language video to the presentations.

Resources for On-line Course Development

Because resources and technology change rapidly, probably the best way to keep up with developments is to search the Internet frequently. The following key words are the ones I have found most useful: curriculum design; distance learning; web design; on-line course; readability.

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Facilitating Self-Determination in Students who are Deaf and Hard of Hearing

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Abstract

Self-determination skills are vital to students in postsecondary settings. Students are expected to advocate for their needs in these settings, something that they may have never had to do for themselves in secondary settings. This paper describes the characteristics of those who are considered to be self-determined, provides insights into the connection between students with disabilities and self-determination skill, and covers tips to help develop these skills in postsecondary settings.

Self-determination is often thought of as knowing what you want and being able to get it. Field and Hoffman (1994) describe it as the ability to define and achieve goals based on a foundation of knowing and valuing oneself. They give examples, such as learning self confidence, defending one's position, problem solving, standing up for oneself, making tough decisions, and, in general, being a causal agent in one's life.

Reiff, Gerber and Ginsberg (1997) point out several positive characteristics of students who are seen as self determined: they understand and accept their disability; they are proactive in their approaches to learning and therefore actively reduce their stress; they are persistent and focused on goals; they make use of support systems; they capitalize on strengths; and they find creative ways to compensate and problem solve. Wehmeyer (1998) lists several requisite skills to self determination, including choice making,

problem solving, decision making, goal setting and attainment, risk taking and safety, self regulation, self advocacy or leadership, and interpersonal communication. In order to be self-determined, individuals must be able to demonstrate these skills *and* know when and how to apply them to achieve their goals.

Common to all of these descriptions is the idea that individuals who are self-determined take responsibility for getting their needs met. People often find that when they take the initiative to get their needs met, their problem-solving and decision-making skills increase and their stress is reduced. For those in the workforce or in educational settings, this kind of proactive behavior can be the key to success. In fact, these behaviors are among those identified as the guiding principles in the 1991 report from the Secretary's Commission on Achieving Necessary Skills (SCANS), guidelines that are being adopted in secondary schools across the country.

The Significance of Disability in Relation to Self Determination Skill

The traits described above would benefit all, but can be particularly useful to students with disabilities, especially when it comes to advocating for their accommodation needs in different settings. When students enter postsecondary settings, they have graduated from secondary programs and the support of IDEA, and they are now required by ADA and 504 to advocate for their own needs. If the individual does not request the

accommodation, the school program or employer is not responsible for providing it.

How does a student begin to advocate for her needs? Before any of the above skills can come into play, the student must know and value herself. Flannery, Bigaj, Slovic, & Dalmau (1999) list four major areas that students with disabilities in particular should know about themselves: a) strengths, preferences and learning styles; b) the impact of the disability on their learning; c) the strategies and accommodations that provide them access and success in learning; and d) their rights and responsibilities.

It would behoove all students to be aware of their strengths, preferences, and learning styles, and to know how to take make the most of these traits. Different study strategies are recommended for different learning styles. An on-line test to determine if your learning style is visual, aural, read/write, or kinesthetic is available on the internet at The Active Learning Site <<http://www.active-learning-site.com>>. Descriptions and study tips are provided for each learning style. Self-knowledge and awareness of the impact one's disability has on one's learning process is vital to choosing a major that is a good match for the student's strengths and weaknesses. Developing a realistic understanding of one's own strengths and limitations is a key to identifying areas where problem-solving skills may be needed.

Knowledge of the impact of the disability is more than simply knowing that one has a hearing loss. Many students are only able to communicate that they are deaf or hard of hearing or that they use (or don't use) sign language. This information alone, though, is not very helpful to others who are trying to engage in communication with the student or in trying to develop appropriate accommodations. A better explanation would involve situation-specific examples that describe the impact of the disability for that situation or setting. For example, in talking with a new dorm roommate, the student would explain that she might not hear the phone ring. On the other hand, music played late at night might not bother her either. If the student were explaining her disability to a professor, she would let her know that she needed to see her face when she talks to her. The student would be able to identify what that person (e.g., friends, family, roommates, faculty, disability staff) needs to know about her disability to interact with her best in

that situation. One way to practice this skill is to have the student role play describing her needs to a friend, a child, an instructor, a disability services provider, or an employer so that she can practice changing her description according to the individual.

In order to understand their accommodation needs in different situations, hard of hearing and deaf students must also be knowledgeable about the range of assistive equipment and accommodations, resources, and supports available to them. This means knowing how their hearing aids work, what a telecoil is used for, and how to effectively use assistive listening equipment, interpreters, or even hearing assistance dogs. It is not enough for the student to say that she wants a particular accommodation. The student must be able to state why she prefers one accommodation to another, and to describe why one accommodation will meet her needs better than other accommodations. In addition, students should be open to learning about the pros and cons of each accommodation and evaluate each one in terms of the communication requirements of the specific situation. Being able to communicate this kind of awareness about a variety of accommodations and the benefits or drawbacks of each will greatly enhance the student's success rate in self-advocacy.

In addition to service-oriented accommodations, the student should also become aware of self-accommodations, that is, of the strategies and coping skills she uses in everyday life. Everyone uses a variety of coping skills to make it through various situations. Sometimes we are not even aware of what we do unless someone else points it out to us. Some coping skills work well in some situations and not so well in others. Some worked well when we were younger but are no longer appropriate in a college setting or on the job. The student should strive to identify behaviors she uses in different situations and which ones serve her best. She should then work on replacing behaviors that no longer serve her well with new ones.

In addition to self-awareness, the student should also be on the lookout for behaviors or strategies used by peers that she might use for herself as well. In addition to observing how others handle various situations, she can ask peers what they do in similar situations. If the student is the only student who is deaf or hard of hearing on the campus, she might try joining a group like

SHHH (Self Help for Hard of Hearing Persons) or ALDA (Association for Late Deafened Adults) or an internet group, such as Deaf-L or Beyond-Hearing. These are all great resources for finding out what others have done in similar situations and for how problems were resolved. It will help the student to anticipate consequences and to learn new coping skills. This kind of knowledge can be invaluable in developing a “Plan B” when the original plan does not work, and can save a lot of time and stress.

Finally, students must be aware of both their rights and their responsibilities. This means understanding both the law and procedures for obtaining services through the postsecondary institution, as well as consequences for not following through with the procedures.

Learning New Skills

Building on this foundation of knowing and valuing oneself, self-determination skill building is described in the following a four-step process. First, the student must *develop a plan*. In this planning stage, the student should consider her goals and develop a creative plan to accomplish those goals. She must think about the logistics of the situation and determine what she will need. Needs might revolve around scheduling, equipment, location, and/or conditions of learning. She might walk herself through the plan in order to anticipate the results of her actions.

The next step is to *act on the plan*. This might involve acquiring new skills, collaboration with others, negotiation, being prepared for conflict and criticism, and problem solving. It is a step of risk-taking and being willing to persist until the goal is met.

The final two steps involve *experiencing and evaluating the outcomes*. What worked and why? What did not work and why? Where did the plan fall apart? What could she do differently the next time to be successful? This leads to a greater understanding of her needs in a greater variety of situations, to improved problem solving strategies, and to a larger repertoire of accommodation options.

Students can make great progress in developing self-determination skills through this reflective process, evaluating successes and failures in a variety of situations. Before the student can solve

a problem, she must first identify it. For example, the student should consider different situations where there were problems with communication, and other situations where communication was a seamless process. Situations that were very comfortable and situations that were very uncomfortable should also be considered. She would look at each situation and identify why one interaction was successful and the other was not. The student should look for patterns (e.g., difficulty communicating in noisy or group settings) that she will now be able to address proactively.

Teaching New Skills

Much of the instruction developed for self-determination focuses on students in k-12 settings. At the postsecondary level, few curricula exist, even though self-advocacy and self-determination skills are vital to the student's success. At the postsecondary level, service providers may be able to develop workshops for students that focus on developing these skills. In addition to the self-determination elements and skills described above, other specific topics to include are rights and responsibilities, academic accommodations, and strategies to request them effectively.

Service providers should look for ways to incorporate self-determination information into pre-existing programs. They can integrate curriculum into summer bridge programs or into networking groups. Adjusting the environment for both students and staff can be vital to the success of the project. Staff should always be on the lookout for opportunities for self-determination. For example, staff need to be “on the same page” concerning the goals of self-determination. Instead of a staff person making the call for an appointment with a professor or at the Health Center, have the student do it on her own with practice or support, if necessary. Role-playing exercises can be very useful in these situations. With this age group, stress student responsibility, and the goals of independence, career transitions, and preparation. Emphasize learning from peer networks and provide structure for students to meet.

Be sure to support and guide students through this process, providing spontaneous support and feedback. Encourage students to establish goals. Assist students to understand their disability. Actively share feelings, con-

cerns, opinions, and needs with students. You may find it useful to incorporate questioning techniques in this process. Whatever the method used, always reinforce facilitating rather than enabling behaviors. Finally, be on the lookout for the teachable moment.

Resources

PEPNet has many materials available that can help students in their self discovery. Check out the PEPNet Resource Center website under PEPNet products for information on a variety of accommodations, and the pros and cons of each. There are also Tip Sheets available that students can read for their own understanding or that they can pass on to others to help them to understand the student's needs. There are also several videos available to help students in the decision making process about attending college. *College...Now What?* addresses the questions students should be asking themselves about choosing a postsecondary program. *Pah! I'm in College...Now What?* addresses the differences students will face in receiving accommodations in college programs that they may not have faced in their secondary settings. *Look out World-Here I Come!* is the story of a young woman describing her experiences in a mainstream college program and how they differed from her previous residential school background. These materials, and many more, can be found at <<http://pepnet.org>> under Resource Center.

The Northwest Outreach Center webpage also includes helpful information on understanding the ins and outs of using assistive listening devices (Demystifying Assistive Listening Devices) and how to connect with others through internet e-mail lists (Internet Resources Related to Hearing Loss). These can be found at <<http://www.wou.edu/NWOC>>.

Finally, don't forget that there are PEPNet trainers available to present on this and a variety of other topics to your program. Contact the PEPNet Regional Center serving your area for more information.

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Two-Way Bilingual Immersion: American Sign Language and English

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Abstract

Two-way bilingual immersion programs are in use all over America. Classes in these programs are conducted in two languages, and students are native speakers of the languages used. This paper outlines a bilingual immersion class in which English and American Sign Language were used. Half of the students were hearing and half were deaf. This two-way class was taught at Camden County College in Blackwood, NJ, in the summer of 1998. Course content included phonological and morphological aspects of American Sign Language and English. Some of the lectures were signed in ASL; some lectures were conducted in written English via a computer network system. The paper discusses two-way programs in America and describes the class content, presentations, challenges, and results of the Camden County College class. Examples of lessons, presentations, and student feedback are included.

History of American Two-Way Programs

Two-way bilingual immersion programs (TWI), sometimes called “develop-mental bilingual programs,” “two-way bilingual education,” or “dual language education,” are a combination of bilingual programs and immersion programs (Lindholm, 1987, p. 12). TWI programs take features from these two bilingual worlds of immersion. *Bilingual* programs begin with students being taught in their native language. The goal is for students to shift into English as the language

of instruction. *Immersion* programs differ in that the language of instruction is the students’ second language (Christian, 1996a; Howard and Christian, 1997). *TWI programs*, on the other hand, maintain two languages in the classroom. Both are valued; both are used. In two-way classes, there are two groups of students: one group from the majority language and one from the minority language (Christian, 1996a; Howard and Loeb, 1998; Lindholm, 1987). The interaction of native speakers is most advantageous to language learning (Howard and Christian, 1997).

Programs in the United States that utilize two languages in the classroom have three important goals. First, it is hoped that students will achieve high levels of proficiency in their first and second languages (Christian, 1996a). Not only will they learn about both languages, they will also understand and appreciate the cultures involved (Howard and Christian, 1997; Lindholm, 1987). Next, students are expected to do well in academic subjects, which are taught in both languages. And third, students will hopefully develop positive attitudes towards both languages and towards themselves (Howard and Christian, 1997). This last goal is especially crucial for minority students who have traditionally felt like second-class citizens in American language classrooms (Christian, 1996b, Howard and Loeb, 1998).

Most TWI programs begin in elementary schools and run from kindergarten through the sixth grade. Some continue into junior high, and a few continue through high school. TWI programs are scattered around the United States, with the highest number (in descending order) in Cali-

ifornia, New York, and Massachusetts. No matter where these programs are located, they share similar features (Christian, 1996b).

All TWI programs have students of two languages in one classroom, preferably an equal number of students speaking each language. One language is used at a time to teach all subjects: language and content-area subjects (Christian, 1996a; 1996b; Howard and Loeb, 1998; Lindholm, 1987). Classes are team-taught. Although both teachers are bilingual, one teacher speaks the majority language; the other teacher, the minority language (Howard and Christian, 1997; Lindholm, 1987). Students receive content-area instruction together, sometimes in one language and sometimes in the other. The percentage of time that each language is used varies from one program to the next. Some use each language 50% of the time from the onset. Others begin at 90/10; still others, 80/20. The ultimate goal is to use each language 50% of the time (Christian, 1996a; Lindholm, 1987). Most TWI programs employ Spanish paired with English, though several programs around the country have Portuguese, Cantonese, Korean, Navajo, Japanese, or French as their minority language (Christian, 1996a; 1996b; Howard and Christian, 1997). The number of programs around the United States has grown considerably. McCargo and Christian (1998) found that in 1987 there were approximately 30 TWI programs in this country. By 1998, that number had increased to 225 (cited in Howard and Loeb, 1998).

Results of TWI programs are promising. By the fifth grade, many students in these programs demonstrate proficiency in both the majority and minority languages (Christian 1996a; 1996b; Mahr and Christian, 1993). Also, the students' academic performance in two-way programs is equal to, or greater than, that of students in regular classes (Mahr and Christian, 1993). It's impressive to note that TWI programs lead to a change in attitude among minority students studying a second language. These students often held the view that their native language was subordinate to the target language, and they acted accordingly. Native language use, students believed, was reserved for informal situations, while the target language was used in more formal situations, such as in schools. However, by including both languages, TWI programs give equal status to the native and target languages. Minority students

leave these programs feeling more positive about their native language (Tarone and Swain, 1995).

The Use of American Sign Language in a Two-Way Bilingual Immersion Program

The concept of using American Sign Language (ASL) in a two-way bilingual immersion program is a relatively new idea. It is being done successfully in Laurent Clerc Elementary School in Tucson, Arizona. This unique version of a TWI program combines hearing and deaf students who are fluent in English and ASL, respectively. The program began as a K-3 program in 1997 with thirteen students. Since that time, it has been expanded to include almost 60 students. Parents and teachers alike are delighted with the children's progress in both English and American Sign Language (Tapia, 1997).

Two-Way Bilingual Immersion Course at Camden County College

As mentioned above, most of the TWI programs in America serve elementary and secondary students in intensive two-way environments that may continue for years. In the summer of 1998, an eight-week, experimental two-way bilingual immersion course was offered to deaf and hearing adults at Camden County College (CCC) in Blackwood, New Jersey. Enrollment in this class was limited to an equal number of deaf ASL signers and hearing English speakers. Twelve students registered. Having an equal number of deaf and hearing students allowed the class to be paired into six teams for class presentations.

The six deaf participants in the two-way class were either students at the college or worked in some capacity in the Interpreter Education Program. One student was an adjunct professor who taught American Sign Language at the college. Another was a tutor and lab assistant in the Interpreter Education Program. We also had two international deaf students in the class. As is the norm in deaf education, none of our deaf students had studied ASL formally in their elementary, junior high, or high school settings.

The hearing participants were all students or graduates of the Interpreter Education Program at Camden County College. All of them had completed at least three courses in American Sign Lan-

guage. One student was a graduate of the Interpreter Education Program and had recently been hired as a teacher of the deaf at a local elementary school. Another was about to graduate upon completion of this course.

The teachers of the TWI class at CCC are assistant professors at the college. Both are hearing. They received Master's degrees from Gallaudet University (the only liberal arts college for the deaf in Washington, DC). Ms. Falvo, whose degree is in Linguistics, teaches English to the deaf students; Mr. Klucsarits, who has a degree in Interpretation, teaches ASL and interpreting to hearing students. The teachers "solicited" students for the TWI class by promoting the two-way idea to students in their spring courses.

Challenges

Both groups of students faced similar challenges in the two-way class. Many of them believed there exists an exact, one-to-one equivalence between English words and ASL signs. Students working between ASL and English often ignore context when working between ASL and English.

Syntax also poses problems for students. A common concern in TWI programs is that second language students will, at times, fall back on the syntax of their first language, resulting in a mix of their first and second languages. (Genesee, 1999). Many of our students did muddle ASL and English grammar. This occurred for two reasons. First, some students had been under the mistaken impression that the proper way to sign, especially in school, was by coding English: using a "signed English" system. Johnson, Liddell, and Erting (1989), discuss the problems associated with codes of English, which attempt to represent English grammar by modifying American Sign Language (p.5). Second, many of the students were unfamiliar with grammatical rules of both their native language and the target language.

A conscious effort was made in the CCC class to avoid English codes. We also discouraged signing and speaking at the same time, which, by its very nature, is a form of coded English. American Sign Language was used during classroom discussions. No voice is used when signing ASL.

Codes of English present still another, complex problem. Over the years, deaf people have struggled to understand the signing of hearing people who code English, which is extremely dif-

ferent from ASL. The deaf have also struggled to make themselves understood (to hearing people) by altering their ASL signing to be more "English-like." This use of a "contact language" is common when hearing and deaf people interact (Valli and Lucas, 1995). However, the reliance on contact language clouded the judgment of our deaf students, who were asked to model ASL for the hearing students and critique their partners' ASL summaries. We found that the deaf students accepted these summaries, not on the basis of their ASL accuracy, but on the degree to which the hearing students' contact language was understood.

Most two-way programs in America employ two spoken languages, and most of these languages have both a spoken and written form. In the class at CCC, this was not the case. ASL has no written form. Therefore, when ASL stories were incorporated into the class, video recordings were used.

Spoken English presented a unique difference between this TWI course and most bilingual immersion programs: deaf students have no access to spoken language. As a result, for English interactions, we used a computer chat program. The classroom had eleven computers that were linked so that students and teachers could send and receive messages. We did not attempt to teach our deaf students how to *speak* English; we relied on English in print.

Finally, the deaf students had extremely varied backgrounds. Some had attended residential schools for the deaf while others were mainstreamed with hearing students throughout much of their educational careers. While the former group had had a great deal of exposure to the language and culture of the Deaf Community, the latter group had less. In addition, deaf students began the TWI class with distinct levels of English fluency.

Class Principles and Goals

At the beginning of the semester, we established the following class principles. An inherent characteristic in our class was that equal respect be given to both languages (Christian, 1996a). We designed the class so that American Sign Language and English would be used equally throughout the semester. Our goal was for a 50/50 approach, believing that students learn language best when the language is *used*, not merely *explained*

(Genesee, 1999). In addition, we asked that respect be given to all class participants as language learners and that students be accepting of classmates' limitations.

A major goal of the class at CCC was to bring together deaf and hearing students who were trying to master a second language. Our aim was to explore and contrast language features of both ASL and English, as well as to improve students' first and second language abilities. Students and teachers modeled both ASL and English to discuss the grammar of the two languages. This sharing allowed students to contribute meaningfully to the class (Tucker, 1990). Our TWI class encouraged student interaction and dialogue in an environment that was fully accessible to both groups of students (Lindholm, 1987).

Class Content

The two-way bilingual immersion class at CCC met twice a week for eight weeks, a total of 16 sessions. During the first four weeks, the course focused on morphology. Both English and ASL features having parallel (or similar) forms were included. When the focus was subject-object agreement verbs in ASL, for instance, the English parallel presented was SVO construction. Since both languages make use of compounding, this topic was also taught during the first four weeks using examples in ASL and English. (See Appendix A for the lesson on compounding). The focus of the second half of the course was syntax. For example, role shift and eye gaze in ASL parallel direct and indirect speech in English. Also, we explained similarities and differences between rhetorical questions in both languages. Another topic in syntax was conditional sentences in ASL and English (appendix B shows the lesson on conditionals).

As the semester went on, we realized that we had included a great many grammatical features, and teaching these features required more time than we had allotted. We had anticipated short, quick lessons for many of the structures we'd planned to teach. That turned out to be more the exception than the rule.

Class Presentations

Each deaf student was paired with a hearing student. Each pair was required to present every two weeks, incorporating examples of the features we had recently taught. The presentations included a summary of each of the following: an ASL story on videotape, an English story by O'Henry, a taped TV situation comedy, and a short novel by John Steinbeck. Students decided to do two of these presentations with the same partner. For the first and last presentations, students kept the same partner. For the second and third, they worked with someone new. Each student summarized the work in his second language. The deaf students typed their English summaries and showed them to the class using an overhead projector. (See Appendix C for excerpts.) The hearing students signed their summaries to the class in ASL. All presentations were videotaped.

Students quickly learned that these summaries required a great deal of time outside of class, since each person was responsible for helping his partner create an accurate summary. We were told that many practice sessions were held and numerous revisions were made before the pair was ready to address the class.

After one pair presented summaries in class, each student illustrated the grammatical points he had recently learned in his second language. The grammatical features were built into the ASL and English summaries. For example, if direct and indirect speech were recent English topics, the deaf student found a way to include an example of these in his typed summary. The hearing partner included role shift in his ASL summary as a parallel to the direct and indirect speech of English. The examples became the focus of the students' discussions.

Initially, the purpose of asking students to include examples of grammatical features was to help us assess their mastery of the material taught. What we didn't expect were the fascinating class discussions that followed all presentations. Lively interactions ensued in which students analyzed their use (or misuse) of language. Consequently, we had not anticipated the extra time needed to complete presentations. Near the end of the semester, when we realized we were running out of time, students agreed to extend the summer session and have a seventeenth class. All of our students felt it was important to allow ample time

for everyone to present. They didn't want to compromise the remaining presenters. Nor did students want to bypass or hurry through the subsequent class discussions.

Perspectives

As teachers, this two-way bilingual course using English and ASL was truly inspiring. Students not only took this course, they became *part* of it. Some students would stop us in the hall to tell us of out-of-class discussions they'd had with classmates regarding a form we'd studied. This was especially gratifying, since social interaction is a major element of second language learning (Howard and Christian, 1997). During class, students listened attentively to classmates who explained their use of particular features. There was laughter, lots of interchange, and contagious enthusiasm.

Students reacted favorably to the TWI course. We received many positive comments from them. (See Appendix D for the journal statements made by students.) We now have a waiting list of hearing students who would like to take this course. Two of the students who completed the course would like to take it again. The student who teaches deaf children has told us that she often includes features of the TWI class in her teaching. The ASL teacher suggested that his wife (who also teaches ASL) take the course. All of our students recommended that this experimental course be made a permanent one in our college. Camden County College has since approved the Two-Way Bilingual Immersion course.

Future Changes

In hindsight, some changes could be made to improve a TWI class using American Sign Language and English. First and foremost, the teachers should be native speakers of the languages used in class: one hearing, native English speaker and a deaf, native signer. Another important change would be to have a less ambitious syllabus, eliminating some of the grammatical features taught. This would allow teachers to spend more time on the features retained in the course. The requirements for class presentations would also change. Rather than asking students to do four presentations per semester, we would reduce that number and request that stu-

dents videotape revisions. Next, in order to encourage students to do an equal amount of work in both languages and to become better language models, a portion of each student's grade would be based on the content of his partner's presentation. We hope this would help to alleviate the problem of deaf students' acceptance of ungrammatical ASL. Finally, a two-way bilingual immersion approach could be expanded to content area courses, rather than limiting the concept to language classes (Tucker, 1990). With these improvements, the next two-way bilingual immersion experience at Camden County College can be more rewarding than the first.

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APPENDIX A

COMPOUNDS

(Celce-Murcia and Larsen-Freeman, 1999; Valli and Lucas, 1995)

Definition: Compounding is a morphological process in which a new word is created by joining two existing words. There are phonological indicators for compound words.

English:

Phonological process:

Two words are brought together to form a new word.

The stress on the second word in the compound is reduced.

Example: home work

homework

Morphological result:

A new word is created with a new meaning.

The meaning of the new word tends to be more specific.

Example:

Green house: a house which is green.

Greenhouse: a building made primarily of glass for the cultivation of plants.

3. The new word will tend to be the same part of speech as the second word in the compound.

Example: green house greenhouse
(adj.) (noun) (noun)

(Celce-Murcia and Larsen-Freeman, p. 35)

ASL:

Phonological process:

Two words are brought together to form a new word with a new meaning.

All internal and repetitive movement is eliminated.

The first or only contact hold of the first sign is kept; the rest is eliminated.

The non-dominant hand anticipates the second sign.

Morphological result:

A new word is created with a new meaning.

The meaning of the new word is more specific.

(Valli and Lucas, pp. 57-62)

APPENDIX B

CONDITIONALS

(Celce-Maurcia and Larsen-Freeman, 1999, pp. 548 - 550)

Facts about conditionals:

- * Conditional relationships involve a condition: a situation with respect to circumstances.
- * Topics discussed depend upon conditions given in the sentences.
- * Conditional sentences have two clauses:
 - a dependent clause (the “if” clause), and
 - an independent clause (the “then” clause).
- * Conditionals are used to show three different semantic relationships:
 - factual
 - predictive
 - imaginative

FACTUAL CONDITIONALS state truths.

- * Generic: If water is frozen, it becomes ice.
- * Habitual: If Tom cleans the living room, Sally cleans the bathroom.

PREDICTIVE CONDITIONALS state events that are likely to happen.

- * If you eat your vegetables, you can have dessert.

- * If it snows, class will be canceled.

IMAGINATIVE CONDITIONALS

- * Hypothetical — unlikely to happen
 - If I won the lottery, I’d do lots of traveling.
- * Counterfactual — subjunctive
 - If I were you, I’d keep my mouth shut.

ASL CONDITIONALS

(Cokely, and Baker, 1980; Humphries and Padden, 1992)

- * Eyebrows are raised.
- * Head is tilted to the side.
- * A short pause may be included.
- * The sign # IF may or may not be included.

ENGLISH CONDITIONALS

- * If the dependent clause is first, it is set off with a comma.
The independent clause may or may not have the word, “then.”

EX.: If I pass this course, I’ll be thrilled.

- * If the independent clause is first, there is no comma.
The word “then” is not used.

EX.: I’ll be thrilled if I pass this course!

APPENDIX C

EXCERPTS FROM STUDENT EXAMPLES

[NOTE: English examples are given below. ASL examples were signed during class.]

1. TV Situation Comedy
Third Rock From the Sun
(paraphrased summary)

Grammatical feature: Topic/Comment

The commander made a request of the dean. He asked the dean to move a ramp to the front of the building. The commander didn’t realize that the dean herself was in a wheelchair. She responded, “We can handle it right away.” The commander responded, “Rubber-stamping — even better!”

English topic: Rubber-stamping

2. Short Story
“One Thousand Dollars”
by O’Henry

Grammatical Features Included

1. TENSE: Gillian’s uncle *had* recently *died*.
2. NOUN/VERB PAIR: Gillian got in the taxi and told the *driver* to *drive* Gillian to his lawyer’s office.
3. Novel
Tortilla Flat
by John Steinbeck

The story begins with Danny, the main character, arriving home from World War II. Upon doing so, Danny discovers that his grandfather has died and he has inherited two houses in Tortilla Flat.

One night, a drunken Danny met his friend, Pilon, in the woods. He asked Pilon, “Do you have any wine?” “Of course I do,” said Pilon. “What would make you think otherwise?” Danny laughed and the two of them sat and drank. Danny told Pilon about his houses and asked Pilon if he wanted to live with him. Pilon accepted. While they were staying in the house, Pilon felt very uncomfortable there. He asked Danny, “Can I rent your other house for \$15.00 per month?” Danny agreed.

Grammatical Features

ASL: Role shift between Danny and Pilon
English: Direct speech

1. He asked Pilon, “Do you have any wine?” “Of course I do,” said Pilon. “What would make you think otherwise?”

2. He asked Danny, “Can I rent your other house for \$15.00 per month?”

English:

Indirect speech

1. Pilon accepted.
2. Danny agreed.
4. Novel
The Red Pony
by John Steinbeck

The Red Pony is a story about Carl and Ruth Tifflin, and their ten-year-old son, Jody. The Tifflin family live on a farm, along with Billy Buck, who is a hired hand and cares for the animals.

One day, Jody’s father called him out to the horse stable. Jody was a little nervous and tried to think of something that he may have done wrong. When Jody got to the stable, he found that his father had bought him a brand new pony at the sheriff’s auction and a show saddle as well! Carl and Billy Buck were both happy to see Jody so excited. Billy Buck asked Jody, “What are you going to name him?” Jody had to think a minute. “If he doesn’t already have a name, I think I will name him Gabilan,” said Jody.

Grammatical Feature

Conditionals

“If he doesn’t already have a name, I think I will name him Gabilan,” said Jody.

APPENDIX D TWI JOURNAL

WHAT HAVE YOU ENJOYED ABOUT HIS CLASS SO FAR? WHAT HAS BEEN YOUR FAVORITE ACTIVITY?

- I enjoyed this class. I have learned a lot about two languages. I never thought that ASL has role shift, classifiers, topics, etc. What is my favorite activity? I liked the ASL videotape and TV program. But of course, I liked reading the book.

- My favorite activity has been discussions.

- I enjoyed learning a lot in English, but sometimes English was hard for me. But that’s good, because I learned a lot about English.

- I liked getting feedback about how to improve my signing skills.

- I've enjoyed the mix of Deaf and hearing students and learning the grammatical rules of *both* languages.
- The two instructors signing so fast, it was a wonderful challenge to understand them both.

WHAT HAVE YOU NOT ENJOYED ABOUT THIS CLASS SO FAR? WHAT WOULD YOU CHANGE ABOUT THIS CLASS?

- I would like to do less homework.
- I understand this is an 8 week course; however, the projects seem to be very time-consuming. No time for summer fun.
- I didn't like using the computer.
- Scheduling conflicts with my partner. I'm not sure exactly what I'd change, because though conflicts were annoying, the benefits of the class far outweigh the tedious annoyances.
- The computer was confusing.

WHAT MORE WOULD YOU LIKE TO LEARN?

- I would like to learn everything, but I understand you don't have time to teach everything.

- I would like to do more projects, because they are a lot of fun.
- The deaf students want to use the computer more.
- I think it might be good to share what individuals learned from their partners.
- More presentations!!

WHAT SHOULD BE DECREASED?

- Less projects so we can polish our projects.
- Computer. Why, because I can't type fast.

ARE THERE ANY OTHER COMMENTS YOU WOULD LIKE TO MAKE?

- I would like this class to continue next year. This class is really awesome!! I'll give you "A" for this class! HA! HA!
- I liked the cooperation with partners all the time.
- Please!! Schedule more bilingual classes.
- It's a great class.

Hot Topics Session Report: Proposing an English Think Tank for Summer 2000

Facilitated by Paula George
Pikes Peak College, Colorado Springs, CO

and Linda Marie Allington
Salt Lake City Community College, Salt Lake City, UT

The Western Region Outreach Center and Consortia (WROCC), supported by the PEPNet regional center directors, proposed to host an English Think Tank during the summer of 2000. This “Hot Topics” session focused on the proposal to bring together instructors from all over the United States who teach English to Deaf and Hard of Hearing students (hereafter D/HH students) through ASL in the postsecondary environment. Initially, it was also proposed to bring in mainstream teachers who are quite successful with Deaf students, but that has been postponed to a later time. The purpose of this meeting, or “Think Tank,” is to form a network of instructors who are willing to share successful strategies, methods and practices. It is hoped that participants can also eventually develop some written recommendations for curricular scope and sequence, as well as achievable standards that Deaf and Hard of students can be expected to reach in terms of English writing proficiency.

Concerns brought up by the participants in the Hot Topics Session included:

- Justifying programmatic modifications/accommodations to administrators
- Justifying separate needs to administrators, including: Why D/HH students have literacy issues, why they still “belong” in the postsecondary environment, and why teaching English through ASL in separate classes is most effective

- Finding sufficient time and resources to develop such courses
- Running and funding courses with very few students
- Teaching multiple levels of students to achieve numbers
- Developing professional roundtables or networks to provide peer feedback
- Collecting ideas from each other and developing best practices
- Creating an e-mail listserv and a web page
- Collecting videos of professionals working and discussing ideas
- Developing models to demonstrate reasonable and achievable goals for students in reading and writing
- Identifying salient features of grammar that students can and should master
- Addressing testing and assessment issues

In light of these and other concerns addressed at this session, the first English Think Tank will be hosted in Salt Lake City, Utah on July 18-21, 2000.

Reports of recommendations and work products will be made available through PEPNet. At this writing, it is expected that there will be about twenty participants forming a core group and that there will be future annual conferences and an effort to build and reach all who are interested in this effort. The proposal for what is to be accomplished at this first Think Tank follows.

Statement of Need

Literacy is a common barrier to Deaf and Hard of Hearing students in postsecondary education. There needs to be a coherent approach to teaching literacy skills across the nation. There needs to be a logical, standardized scope and sequence of training to which students can have access anywhere in the country where Deaf classes are provided. Teachers need guidelines to follow when designing curricula for Deaf and Hard of Hearing adults.

Proposal

We propose to convene a Think Tank which comprises Bilingual teachers who are currently using or have in the past used ASL to teach English literacy skills to Deaf and Hard of Hearing (D/HH) adults in postsecondary education, other directly concerned parties, and consultants. This group will focus on developmental English and pre-developmental English. It is anticipated that we will expand our scope in subsequent years to include English as a Second Language, College English, Community-based English Programs, and English for Specific Purposes.

Follow-up Report: "PEERS" is Born

Eighteen dedicated instructors from all over the United States met by invitation in Salt Lake City on July 18-21, 2000. This meeting was sponsored by the Western Region Outreach Center and Consortia (WROCC) and hosted by the Rocky Mountain Connections Center, a hub of WROCC. Paula George of the Southwest Regional Resource Center and Linda Marie Allington of the Rocky Mountain Connections Center were the co-chairs. There was tremendous energy and excitement as each participant shared successful practices and experiences, as well as concerns and frustrations, from their own programs. Many issues were discussed and plans of action started taking shape to create a website and work products that may later benefit others in our field. Realizing that there is so much to do and that as instructors, there is a real need for ongoing support and contact,

this group formed a new organization: PEPNet Postsecondary English Educators Resources and Support network, or "PEPNet PEERS." The following identity statement and objectives were formed:

PEPNet PEERS

Postsecondary English Educators Resources and Support

We are a group of postsecondary language (Sign and English) educators who work with students who are Deaf or Hard of Hearing, founded in July 2000 and sponsored by PEPNet. Our purposes are:

- To promote educationally and linguistically appropriate, accessible classroom environments;
- To provide resources to educators which encourage the development of student competencies in American Sign Language and English literacy;
- To develop techniques for students to achieve literacy competencies supporting their academic, social, vocational/career, and personal goals.

PEERS Objectives:

- Develop a professional network of instructors teaching English to Deaf students, including a listserv, website and annual faculty institutes.
- Share curriculum ideas, strategies, materials, best practices and teaching tips.
- Develop suggested scope and sequence for each level of English course targeted to Deaf students.
- Develop recommendations of best practices and suggested evaluation tools for content area and English mainstream instructors.
- Provide outreach and technical assistance to postsecondary institutions and K-12 instructors through PEPNet.

The website will soon be up and linked to the PEPNet website <www.pepnet.org> and the WROCC website <wrocc.csun.edu>. Individuals engaged in teaching English to Deaf and Hard of Hearing students who are interested in joining the listserv may do so at:
<<http://groups.yahoo.com/group/PEPNetPEERS/join>>

For further information, please contact Linda Marie Allington <allingli@slcc.edu>, Paula George <paula.george@ppcc.cccoes.edu>, or Gary Sanderson at WROCC <gary.sanderson@csun.edu>.

Transitioning to College for Deaf Students: College? Now What?

Lucy P. Howlett
Coordinator PEC - VA
State Outreach And Technical Assistance Center
New River Community College, Dublin, VA

The following transcript is taken from the PowerPoint presentation, *Transitioning to College for Deaf Students: College? Now What?*

- How do I decide my career goal?
- How do I choose the right college?
- How do I apply to college?
- How do I enroll in the college of my choice?
- What type of accommodations do I need?
- How do I get these services?

COLLEGE GOAL?

- I have decided to attend college.
 - How do I decide my career goal?
 - What will I study/major?
1. Self analysis - likes and dislikes
 - Interest inventory
 - Vocational education
 - Aptitude tests
 2. Gather information on different careers
 - Library
 - Computer programs
 - Career fairs
 - Visit work sites
 - Ask questions
 3. Discuss with different people
 - High school counselor
 - Teachers
 - Vocational rehabilitation (VR) counselor
 - Parents and family

WHICH COLLEGE?

- How do I choose the right college for me?
1. Gather information on different colleges (start 2-3 years before graduation).
 - Library
 - College catalogs
 - "College and Career Programs for Deaf Students"
 2. Does the college have my career study/major?
 3. What are the requirements for admission
 - GPA
 - SAT
 - High school transcript
 - Application
 - High school diploma/GED
 4. Does the college have a deaf program?
 - Do they already have interpreters, free tutors, notetakers, assistive devices?
 - How are the notetakers and tutors selected? Are they trained?
 - Are the interpreters state screened or nationally certified?
 - How many Deaf students?
 - When established or when first deaf student enrolled?
 - Every year deaf students? Or occasionally?
 5. If no deaf program...
 - I may need to educate the college about deaf needs/accommodations
 - I may need to seek qualified support services (i.e. interpreters, tutors, notetakers)

6. How far is the college from home?
 - Do I have a car?
 - Do I want to drive to/from school daily?
 - Do I want to live in a dorm or an apartment?

7. Visit the colleges that meet my needs.
 - Major
 - Admissions requirements
 - Support services/accommodations
 - Comfortable environment (friendly, accessible, positive experience)

1. How do I apply to college?
 - Admissions requirements
 - High school transcript
 - Admission applicant package

2. How do I pay for college?
 - When do I apply? (EARLY)
 - Financial Aid Forms (FAF)
 - College financial aid forms
 - Work study program
 - Grants
 - Scholarships
 - Loans
 - Vocational Rehabilitation (VR)

3. Who do I see?
 - Admission staff
 - VR
 - Support services staff or deaf program staff

HOW DO I ENROLL IN THE COLLEGE OF MY CHOICE?

1. Meet with the college counselor to register for classes.

2. Review my finances and total college costs
 - Tuition
 - Books/supplies
 - Room/board (meals)
 - Apartment (food, utilities, rent)
 - Transportation
3. Who will pay for school costs?
 - Parents
 - Myself (SSI, savings)
 - Financial aid (grants, scholarships, work study)
 - VR

SPECIAL SERVICES?

1. What type of accommodations do I need to request?
 - Interpreter
 - Notetaker
 - Tutor
 - Assistive listening devices
 - TTY
 - Other
 2. How do I receive these services?
 - Ask college counselor
 - Ask student support services/deaf services staff
- IT IS YOUR RESPONSIBILITY TO ASK FOR THESE ACCOMMODATIONS.

SUMMARY

1. Plan in advance
2. Research, investigate, gather information
3. Visit
4. Fill out forms
5. My responsibility to ASK for assistance
 - Questions
 - Service/ accommodations

Same Problem, New Solution

Pat Stowe

Director of Services to Students with Disabilities
Oklahoma City Community College
Oklahoma City, OK

Chimene Long

Educational Technology Specialist
Oklahoma City Community College
Oklahoma City, OK

The same problem is, of course, the challenge of teaching English to deaf students. Oklahoma City Community College has always had an open door policy, meaning there are no admission requirements other than a high school diploma or equivalency. Many of our students, hearing or Deaf, have needed remedial instruction, especially for English. A developmental “Learning Skills” curriculum was created in order to address those deficiencies.

When a grant established the Deaf and Hard of Hearing Program in 1990 to provide extended services to Deaf students, beyond mandated accommodations, students who did not have the skills to enter college English Composition were placed with an interpreter into the Learning Skills courses. Over the years this placement created some frustrated students, interpreters, and faculty members. In response we explored other options. English as a Second Language (ESL) had long been a program on our campus taught by instructors specifically trained in second language acquisition issues. This seemed to be a viable choice for Deaf students, so they were placed in ESL courses with interpreting services. But before we could determine if this was an appropriate placement, the focus of the ESL program changed from reading and writing to listening and speaking.

Responding to that change, separate English courses were initiated with a Deaf instructor who would teach English using ASL. We offered our first course in the fall of 1997 by adapting the Learning Skills College Writing I curriculum. Based upon the Deaf students’ responses, we offered subsequent courses for Deaf students during the rest of that academic year and into the next.

The English Department supported the part-time Deaf instructor philosophically as well as financially, but—due to budget challenges—a strict enrollment policy was initiated. Twelve students were considered minimum enrollment, which posed a challenge for the Deaf Program. There were not enough “regular” full-time students to support the class minimum. To increase enrollment, a local civic club agreed to provide scholarships covering the cost of the English course for Deaf nontraditional part-time students. The numbers met the minimum enrollment requirement for a couple of semesters, but it became evident that we would not be able to generate enough new students to preserve the courses. Searching for other avenues to build enrollment, professional networking discussions revealed that other institutions with Deaf students were having the same problem of providing appropriate English instruction. The new solution became distance education. Using distance education would provide quality instruction for their students and increased enrollment for maintaining our courses.

Same Problem, New
Solution...Technology!

Distance education in Oklahoma has a specialized program called “OneNet” (see Appendix I). All colleges, universities, technical centers, and high schools are networked together to provide classroom interaction over distances. The system functions with full motion video relay that provides smooth transmission of movements essential for communicating clearly in sign language. In the spring of 1999, we piloted a distance education

English course for the Deaf. We teamed with a four-year institution that had a considerable Deaf enrollment but which did not have specific English classes for the Deaf. This partnership would allow both institutions to share resources, “their students,” “our classes,” and we all believed this to be a “win-win” proposition.

The actual implementation of this distance education class and the procedures to utilize the technology proved to be not so simple a solution.

The Technology

The distance education classroom on our campus was designed specifically to use the technology for the maximum student/instructor interaction. (See Appendix II). The two televisions located in the front of the room recorded everything that happened inside the classroom and allowed the students to see each other as well as view overhead documents. The four televisions in the back of the room were used to view other sites. Since we only had one site, the first television on the left (number 1) was used. Students from the “other” site could be seen on that set at all times. The fourth television carried a view of the instructor and the “home site” classroom. On each table was a microphone that controlled the student’s video camera. The cameras were located in the front and back of the room. Students would press the microphone on and the video camera would automatically focus on them. The technician could manually focus the camera, especially if it needed to be closer. The instructor’s camera was manually programmed so her image would fill most of the screen but in order for that to happen she had to remain seated and was not able to move about the room interacting with students. There was a fax machine for sending homework and testing back and forth between the two sites. There was a phone in case of technical emergencies. The room was also equipped with two computers. The first computer allowed access to the Internet and basic “office” software. The second computer controlled all of the technical functions within the classroom. Underneath the main computer were two VCRs. Every class was recorded in case of technical difficulties or absent students. The technician could also view the tapes to determine if any changes needed to be made. The other VCR was for watching videos and since this was a vocabulary class, it was never used. The other site classroom was

not as “studio like” as ours but had basically the same equipment.

Same Problem, New Problems

Procedural problems for using the technology had to be conquered before smooth communication between sites could occur. In order to communicate, the students at the other site would tap on their microphones when they had a comment. The instructor would be alerted to this and the technician would “switch” the front television from its present image to the new image at the other site. The students at either site were not accustomed to this procedure and would often forget to “touch” the microphone before signing/speaking. Sometimes it was difficult to clearly see the students’ signs at the other site. This was because the camera was not focused close enough and we could not control it from our campus. Figuring out their fingerspelling was almost impossible, even though full motion video relay was used.

Not having a technician that could sign at the other site was also a problem. The students at that site were unable to make their needs known directly to the technician when something was not functioning properly. Just having a small understanding about deafness would have been helpful. To illustrate this point, during one of the class sessions the video portion of the transmission disconnected; the OneNet technician did not understand why we could not just rely on the audio portion and continue the class as a regular distance education class would.

One other problem we encountered was the interaction between the instructor and the students at the other site. Each class was videotaped to provide instruction for students who were absent as well as providing a means of monitoring the class for the purpose of making improvements. When we switched the television screen from our classroom to the other site for questions, their image was brought up on the front televisions that were used for making the recordings and the questions were recorded. However, the instructor would automatically respond before the “switch” could be made again and her answers were not recorded on the video. In essence the videotape only recorded half the conversation. An absent student viewing the tape would not have the benefit of the instructor’s answers.

Another problem was scheduling. The university that we “partnered” with completed their academic schedule two weeks earlier than our campus. We were unaware of the differences between our two schedules when we began and the university students had to drive from their hometowns to complete the course.

Same Problem, New Solution...Successes

Reviewing this endeavor we felt we accomplished our initial objectives, which were to reach more students and maintain the specialized English course. Using this technology allowed more Deaf students from other institutions to benefit from a specialized course taught by a Deaf instructor, thus reducing the replication of programs and enhancing the ability to share resources. We learned from the challenges we encountered and feel better prepared to offer additional distance education courses in the future.

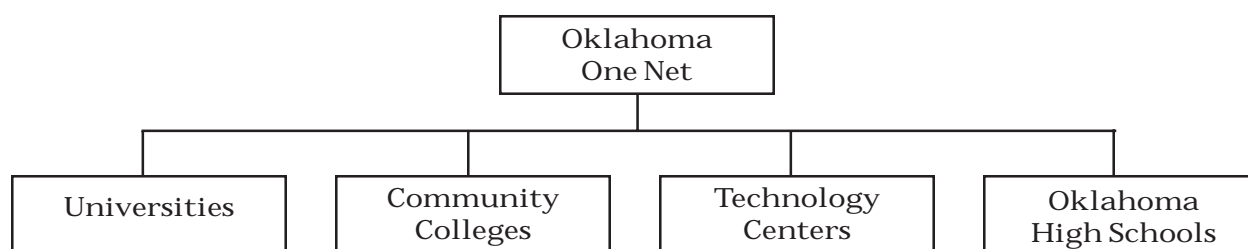
Same Problem, Future Solutions

Unfortunately, the Deaf instructor is no longer here, nor the full motion video that made this class possible. The OneNet System has opted to compress the bandwidth it uses to deliver distance education. The decision was linked to cost factors but the compression produces a delay and therefore is not capable of the smooth visual display required for accurate sign transmission. There are other systems such as “Procam” and “Team Station” that can be used to facilitate distance visual communication, and we have begun to explore their capabilities and although not “full motion,” they might have some application for serving Deaf students.

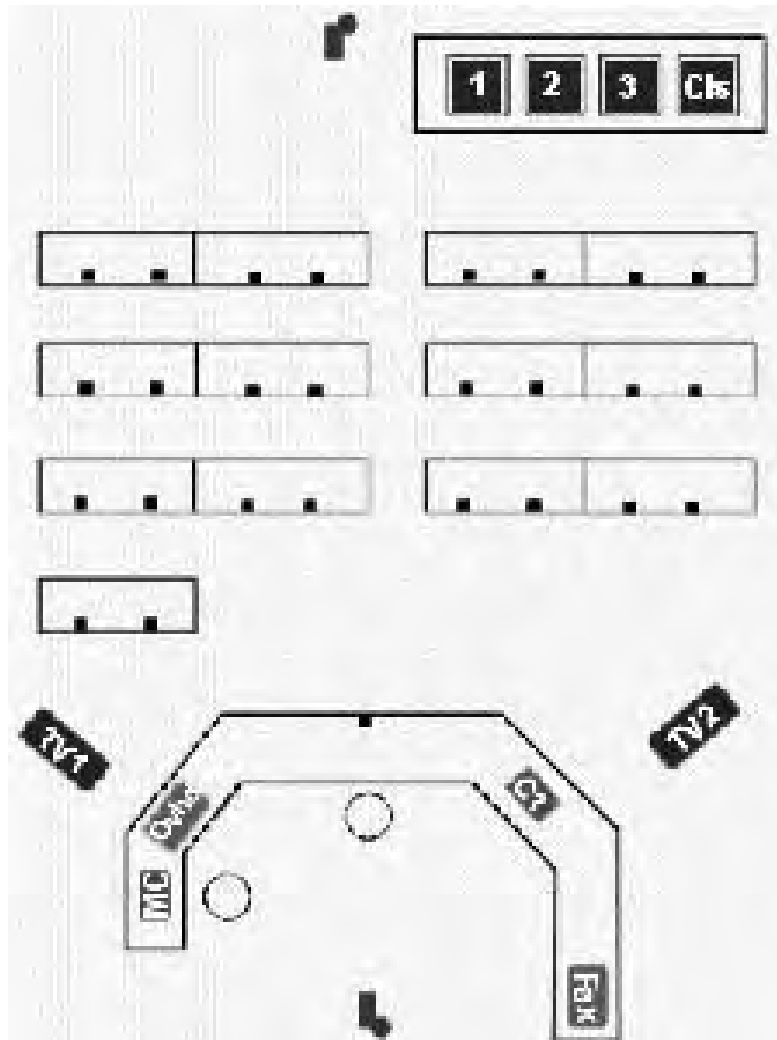
It is our belief that technology will continue to improve and offer opportunities to meet the needs of Deaf students. Hopefully you can benefit from our experiences by avoiding some of the problems and capitalizing on the successes.

Appendix I

Flowchart: OneNet and Its Affiliates



Appendix II
Distance Education Classroom Setup



Using the ACT for Admissions and Placement at NTID¹

Gerard G. Walter
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Abstract

This paper summarizes findings of studies conducted at the National Technical Institute for the Deaf concerning the performance of deaf and hard-of-hearing students on the ACT Assessment. The paper describes the ACT Assessment, and presents normative information about performance of a national sample of deaf and hard-of-hearing test takers in addition to results of performance of students entering NTID. Results for the studies reported in this paper indicate that the ACT Assessment is valid when used with postsecondary level deaf and hard-of-hearing students seeking admission to two and four year colleges in the United States. Caution must be exercised when interpreting results when students score below 14 on the reading and English tests.

Introduction

Most every college requires some form of testing, either for assisting with the admission decision, or with placement after admission. The National Technical Institute for the Deaf (NTID) is no exception. In 1969 NTID began using the Stanford Achievement Tests as a primary indicator of an applicant's academic preparedness to enter college. More than thirty years ago, when the

Stanford Achievement Test was adopted, about 60 percent of NTID applicants attended schools for deaf students where this test was widely used to assess annual achievement gains. At that time, it made sense to adapt the Stanford tests to assist with our admission decisions.

There have been many changes in the education of deaf students over the past 30 years. NTID has not been immune to these changes. First of all, today only about 25 percent of applicants for admission to NTID come from schools for deaf students; the remaining 75 percent enter from mainstreamed high schools or are transfers from other colleges. Many of the students applying from mainstream high schools do not have access to the Stanford Achievement Test, which means applicants often must make special arrangements to take the test battery.

Second, an increasing percentage of entering deaf and hard-of-hearing students are seeking admission to baccalaureate-level programs. The other colleges of Rochester Institute of Technology (RIT) require scores on the Scholastic Aptitude Tests or the American College Test (ACT) for admission. Currently, more than 40 percent of NTID's students are mainstreamed in programs with hearing students—up from only 25 percent just 10 years ago. The Stanford Achievement Tests did not provide the information necessary to make a decision concerning admission to the programs available through the other colleges of RIT.

Third, with increasing costs to both NTID and its applicants, it has been necessary for NTID to reduce its orientation program, called Summer Vestibule, from four weeks to 10 days. This re-

¹The research reported in this paper was supported, in part, under an agreement between Rochester Institute of Technology and the U.S. Department of Education.

duction has made it difficult to conduct the evaluations necessary to determine appropriate placement levels of entering students.

For these reasons, in 1996, NTID began searching for a test that would be accessible to students nationally, meet the needs for making quality admission decisions, and provide academic departments with information concerning the placing students in majors. At PEPNet 1998 we reported on preliminary studies conducted collaboratively by NTID and ACT concerning the use of ACT with deaf students¹, and the decision by NTID to begin using the ACT for admissions beginning in September, 1998. This paper follows up on the studies conducted in 1996 and 1997 with information about our experience with use of the ACT during the past two years. This paper will cover the following topics:

- What is the ACT;
- National norms for deaf test takers;
- Comparing the ACT with other measures of academic performance;
- Use in determining initial degree level.

What is the ACT

The ACT Assessment is a composite of tests and questionnaires designed to assist college admission and placement personnel in making quality decisions about applicants. The battery includes four tests of educational development, the High School Course/Grade Information questionnaire, the ACT Interest Inventory, and the Student Profile Section.

The tests of *Educational Development* include four curriculum-based measures in English, mathematics, reading, and science reasoning. The tests are based on the major areas of instruction in American high schools and colleges. A student's performance has a direct and obvious relationship to his or her academic development. Scores on the tests of Educational Development range from a low of 1 to a high of 36 and can be interpreted as indicated below:

- 1 to 15 need significant preparation;
- 16 to 19 minimum level of performance to enter credit-bearing college courses;
- Average for college bound seniors is 20.¹

The ACT also reports score ranges by institutional selectivity. Table 1 below provides the ACT mean composite scores by selectivity. Mean ACT composite scores of students from schools with open admissions are less than 16, while those with highly selective admissions are above 27. It is clear that there are significant differences in the ACT scores of students depending on the selectivity of the school they are entering.

Table 1
Institutional Selectivity

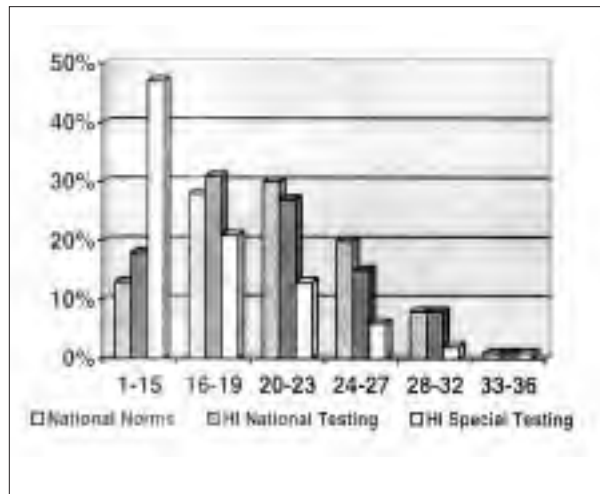
<i>Selectivity Level</i>	<i>Mean ACT</i>
Highly Selective	>=27
Selective	22-26
Traditional	18-21
Liberal	16-17
Open	<=15

The *High School Course/Grade Information* questionnaire asks students who register for national test dates about the courses they have completed or plan to take in high school and the grades they have received. The 30 courses listed represent six major curricular areas—English, mathematics, natural sciences, social studies, languages, and arts. The courses include those that customarily form the basis of a college preparatory curriculum and frequently are required for college admission.

The ACT *Interest Inventory* is usually completed when students register for the ACT Assessment. The 90-item questionnaire results in six scales, each based on 15 questions which parallel Holland's six interest and occupational types: Science, Arts, Social Service, Business Contact, Business Operations, and Technical. Students and counselors can use results from the Interest Inventory as a basis for career exploration.

The *Student Profile* section collects nearly 200 questions of information in 12 categories related to students' educational and vocational aspirations, plans, abilities, accomplishments, and

Figure 1
*ACT Composite Scores for two groups
of deaf and hard of hearing
test takers compared with national ACT norms.*



needs. These data are useful to college and university personnel in planning curricular and co-curricular services for entering students.

National Norms

The ACT reports scores for the four sub-tests (English, reading, mathematics and science reasoning). It also provides an overall performance score called the Composite Score. In the interest of space limitations, only the composite score will be used for all analyses in the remainder of this paper.

Figure 1 provides a breakdown of ACT composite scores for two groups of deaf and hard-of-hearing students and a national sample of high school graduates (National Norms). One group of deaf and hard-of-hearing students took the test with hearing students under normal testing conditions (HI National Testing). The second deaf and hard-of-hearing group was tested using the special testing arrangements for disabled test-takers (HI Special Testing). It can be observed that deaf and hard-of-hearing students taking the ACT under special testing conditions perform significantly lower than deaf and hard-of-hearing students taking the test under regular scheduled testing. This difference is indicative that there may

be reasons why special testing was chosen for these students. The score distribution for deaf and hard-of-hearing students taking the testing under regular conditions is similar to national normative distributions.

ACT and Other Measures of Academic Performance

Immediately upon enrollment at NTID students are administered a series of tests the results of which are used to place them in appropriate levels of developmental instruction in mathematics, English, and reading. Since these placement tests and the decisions resulting from their administration are currently used independent of the ACT, an opportunity exists to evaluate whether the ACT might be useful in making placement decisions. This is one way of assessing the validity of the ACT related to placement of students in various aspects of the curriculum.

Table 2 lists the correlation coefficients of the language, reading and mathematics components of the ACT with measures regularly used for placement at NTID: the reading comprehension subtest of the California Achievement Tests, the Michigan Test of Language Proficiency, and a mathematics placement test. All of the correlation coefficients easily exceed the .01 level of statistical significance.

Table 2

*Correlations of ACT and SAT scores with
placement tests for entering NTID students.*

	ACT
<i>Language</i>	English
Michigan	.72
NTID Writing	.66
<i>Reading</i>	Reading
California	.61
<i>Mathematics</i>	Math
NTID Mathematics	.71

In mathematics, English, and reading entering students are assigned to five levels of skill proficiency, which are related to requirements for admission to various levels of study. These levels are as follows:

- Level A = Fundamental preparatory curricula;
- Level B = Preparatory curricula;
- Level C = Entry into AOS, Diploma courses of study;
- Level D = Entry into AAS, AS courses of study;
- Proficient = Entry into studies at the Bachelor level.

Students at levels A and B are not considered prepared to begin studies in any degree program offered at NTID. Those in level C are generally prepared to enter programs where the outcome is an AOS or diploma that requires minimal academic work in liberal arts areas such as freshman composition, humanities, and social studies. Level D students should be prepared to take entry level college courses, while those scoring at the Proficient level should need no remedial work in English, reading or mathematics, and should be prepared to begin work at the bachelor level.

Mathematics. When a student enrolls at NTID, the mathematics department administers a test which measures basic computational and mathematics skills. The results of this test, in combination with a student interview, have been used to assign a mathematics level to each student. Table 3 presents ACT mathematics means and standard deviations for the mathematics placement levels.

Table 3

ACT mathematics scores by placement level for students admitted to NTID.

Placement Level	ACT	
	Mean	SD
Level A	13.8	1.56
Level B	14.8	1.89
Level C	17.7	1.90
Level D	19.5	2.66
Proficient	22.9	2.50
Correlation with Placement Level .77		

It is clear from studying the mean scores and the correlation coefficient that the ACT Mathematics Test discriminates among the mathematics placement levels. The mean ACT score of 13.8 and 14.8 at levels A and B indicate that significant preparatory work is still needed before students begin to pursue any academic work requiring application of mathematics skills. These findings are similar to the standards for transition reported by ACT for interpreting score results.

Reading. In the area of reading, NTID uses a combination of the reading comprehension subtest of the California Achievement Test and a vocabulary test to assign students to a proficiency level for reading. Table 4 presents the mean ACT scores for students assigned to each of these levels. Results in table 4 indicate that the reading subtest of the ACT is not able to discriminate between levels A and B, while separating students at levels C through Proficient. The ACT reading test appears not to be sensitive for deaf and hard-of-hearing students scoring below 14, and thus may not be useful for assessments of students with very poor reading skills. This finding is supported by the relatively low correlation between the placement levels and the ACT reading score.

English. In the area of English language skills, NTID uses a writing test that was developed at NTID for assessing written language competency. The ACT English subtest is a multiple-choice test of grammar usage. The mean ACT English scores for students at each of the proficiency levels are presented in Table 5. As with the reading subtest, the ACT English subtest does not provide discrimi-

Table 4

ACT reading scores by placement level for students admitted to NTID.

Placement Level	ACT	
	Mean	SD
Level A	13.3	2.71
Level B	13.0	2.81
Level C	14.3	3.14
Level D	16.2	3.78
Proficient	21.0	4.90
Correlation with Placement Level .58		

Table 5

*ACT English scores by placement level
for students admitted to NTID.*

Placement Level	ACT	
	Mean	SD
Level A	12.4	3.99
Level B	11.8	2.69
Level C	13.3	3.02
Level D	17.1	4.40
Proficient	19.0	4.06
Correlation with Placement Level .44		

nation between levels A and B. As a matter of fact, students at level A score, on average, somewhat higher than those placed at level B. This fact causes the overall correlation between ACT English and placement level to be relatively low. Like the reading test, the ACT is probably not sensitive for deaf students scoring below 13 in English, many of whom are scoring at or just above the chance level for the test. For levels C through Proficient, however, scores are in keeping with the reported standards for transition used by ACT for interpreting scores.

It is clear from these results that caution must be exercised when using the results from the ACT Assessment for placement in remedial courses for deaf and hard-of-hearing students scoring below 14. If we make the assumption that the assignments to the NTID levels have validity, then the ACT is not able to discriminate for students needing considerable remedial work before entering course work in an academic setting.

Determining Entry Degree Level

Another goal of this study was to determine how well the ACT could discriminate among various levels of degree placement for students entering NTID. Students can be placed into five degree levels depending on their academic preparation: Bachelor of Science, Associate of Applied Science, Associate of Occupational Studies, Diploma, and Preparatory studies. Students entering in 1998 and 1999 were placed in these levels without using the ACT scores. This permitted researchers to evaluate the ability of the ACT in discriminating among these five levels. Mean composite ACT

Table 6

*Mean ACT composite scores by entry degree level
for new 1997 NTID students.*

Degree Level	Mean	95% Confidence
<i>Bachelor</i>	21.8	21.1 to 22.5
<i>Sub-bachelor</i>		
AAS	17.6	16.2 to 18.9
AOS	15.0	14.5 to 15.5
Diploma	13.8	13.2 to 14.5
<i>Preparatory</i>	14.1	13.4 to 14.8

scores for each entry degree level are displayed in Table 6.

The ACT generally yielded distinctly separate means for four of the five entry placements. Statistical tests indicate that there are significant differences for mean ACT scores between Preparatory/Diploma, AOS, AAS, and Bachelor level students. It is also noteworthy that there is little overlap among the levels of degree placement. These results indicate that the ACT can be used for counseling students concerning the level of degree outcomes they can expect, given their level of performance on the ACT.

Summary of Findings

This paper has reported on studies conducted at NTID concerning use of the American College Test (ACT) for accepting students and placing them into programs of study. The results indicate that the ACT is a useful test for assisting with admission and placement of deaf and hard-of-hearing students at the postsecondary level. The following are some key findings documented in these studies.

Normative information. Deaf students being tested under special conditions perform significantly less well than deaf and hard-of-hearing students tested under regular conditions. Students entering NTID have score distributions similar to the national group of deaf and hard-of-hearing students tested under special conditions. In addition, it appears that the ACT can accurately discriminate between

students who fully meet NTID academic admission criteria and those who need developmental instruction before entering a program of study.

Relationship with other measures. The findings indicate that the ACT subtests are correlated with other measures of academic skills administered at NTID and used for placement into remedial courses. The findings indicate the mathematics test correlates very highly with independent placements, while the tests of reading and English appear to not be useful with students scoring on the low end of the ACT distribution between 10 and 14. Caution must be exercised in using the ACT results for making placement decisions with such students.

Determination of entry degree level. The analyses indicated that the ACT discriminated among students at four of five-degree levels at NTID. It was not able to distinguish among students placed at the diploma and preparatory level. This finding

may be due to the fact that students placed at the preparatory and diploma levels have English language skill levels that are below the level that the ACT was designed to assess. Despite this inability, the ACT certainly can be used for determining which students need remedial help, those who are ready to begin some academic studies, and those who can become fully matriculated at the college level. Generally, our findings indicate, based on independent testing, that normative information presented by ACT seems to apply equally to deaf and hard-of-hearing students entering NTID.

End Note

1. For more information the reader is referred to ACT's *Educational Planning and Assessment System*, Standards for Transition, P.O. Box 168, Iowa City, IA 52243-0168, (319) 337-1040.

Section VII
Program Development

Creating WIN/WIN Situations: Innovative Management of Interpreter Services at a Mid-Sized University

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Abstract

The University of Minnesota Duluth (UMD) has experimented with creatively managing their interpreting staff using a “WIN/WIN” strategy. “WIN/WIN” stands for What Interpreters Need/What Institutions Need to provide quality services to Deaf, Hard of Hearing and DeafBlind students. This workshop compared the needs of the institution with the needs of the interpreter and explored how to create a “WIN/WIN” program. Particular focus was given to scheduling needs, resources and collaboration, interpreter wellness, and professionalism. The story of the University of Minnesota Duluth’s program development was told and time was given for questions and situational discussions.

Win/Win Definitions

WIN/WIN stands for “What Institutions Need/What Interpreters Need.” This approach examines the administrative and legal needs of the institution with the employment and working condition needs of the interpreters. This leads to a more balanced and mutually respectful plan for interpreting service provision. At the University of Minnesota Duluth this approach has been implemented in interpreter management with apparent success as measured by administrator interviews, interpreter retention rates and job satisfaction ratings. A WIN/WIN approach will

positively enhance the campus environment and foster a sense of inclusion and respect.

Institutional/Administrative Needs

Local administrators were interviewed, and interview results indicated that issues were grouped into three major areas: legal requirements, cost factors, and operating processes.

Legal Issues

Administrators were unanimous in their need to have experts available for consultation. Depending on the campus community size, this need could be met by in-house staff or by experts at other colleges or community agencies. Most administrators had no issue with the fundamental legal requirement to provide interpreting services to students who are deaf. Interestingly, the notion of reasonable accommodation was interpreted in different manners at different levels of administration. Administrators who work closer with the day to day operations saw this as being very student oriented. That is, their frustrations had more to do with the determination of reasonableness with student behavior factored in (timeliness of requests, students’ understanding of accommodation, etc.).

Cost Factors

Controlling and predicting interpreter costs was high on the list of concerns for many administra-

tors. At a higher administrative level, “reasonable” often became synonymous with cost. Frustration came in the need to balance the financial needs of several programs under their administrative responsibility. Again, some administrators equate reasonable-ness with the actual budget liability. Another issue among administrators is to have open communication with disability service staff. They felt it is vital to have a consistent reporting system so that administrators may be informed of accommodation needs, alternatives, and options. An “early warning system” for interpreter cost increases would be appreciated by administrators. While the interviewees generally understood that interpreter costs estimates can change rapidly and radically, they felt that whatever level of predictability (or warning) the disability service office could provide would be valuable to avoid surprises and the hostility that may result.

Operating Processes

Most administrators were supportive of staff interpreters and wanted to look at ways to make them more involved in their greater campus community. Again middle-level administrators, who operated closer to interpreters on a daily basis, saw having staff interpreters as a great benefit to the campus community. Those who had worked with both staff and freelance or contract interpreters believed that staff interpreters brought increased consistency, reliability, and interpreting skill specific to the postsecondary level. Professional staffing was seen as important: having the right people in the right jobs. Administrators also expressed concern about assuring that policies and procedures for students were fair and equitable and that staff policies and procedures for interpreting staff also were consistent and fair.

Interpreter Needs

Interpreter Needs were evaluated by distributing a survey to past and present staff interpreters. Their responses indicated several areas of interest. They were grouped into the following headings: Professionalism and Working Conditions.

Professionalism

The issues with regard to Professionalism fell into three main categories: salary and benefits, Professional Recognition, and Professional Development.

Salary and Benefits

The issue of salary and benefits was of great concern to most interpreters. It was important to interpreters to be offered fair and equitable rates of pay, consistent with the regional market value of interpreter services. In order for a skilled interpreter to accept an interpreting position in a college setting, the salary and benefits package must be a significant motivator.

Professional Recognition

Appropriate recognition of staff interpreters was also seen as important to the interpreters surveyed. Staff interpreters in postsecondary settings need to be recognized as professionals. They are service providers who work in a team setting, providing communication access so that faculty and student can interact and continue toward their educational objectives. Staff interpreters are also members of the larger campus community and should be so recognized. Almost all employees at post-secondary institutions have some interaction with the larger campus community. Interpreters interact with the campus community in many ways, some which involve providing service to students and some which don't. With longevity of a staff interpreter position comes familiarity, respect, and recognition of the interpreter as a professional providing valuable service not only to deaf students, but also to the entire campus community.

Professional Development

Professional development was another priority for staff interpreters at the post-secondary level. Interpreters felt the need for on-going opportunities to continue to improve their interpreting skill, so that they could provide better service to students. Support for staff interpreters pursuing certification was also deemed important for those surveyed. Professional development did not have to be limited to specific interpreting topics. Staff interpreters felt that many types of professional development proved beneficial to their job performance. Computer training, training in other useful technologies, and workshops on human relations, organization, and many other topics presented regularly by university personnel were helpful. To summarize, with regard to professionalism, a post-secondary level staff interpreter position should minimally provide a living wage, a professional level of recognition, and a setting that is conducive to professional growth.

Working Conditions

The three areas of significant concern to respondents were the following: Scheduling, Appropriate and Clear Expectations, and a Healthy Working Environment.

Scheduling

Many staff interpreters preferred a 75% time benefited appointment, which allowed them more options if the interpreter wanted to limit actual interpreting hours or to add interpreting variety through freelancing. UMD interpreters appreciate an open and flexible schedule, which allows for unusual scheduling needs. For example, an interpreter who has a 75% time contract may not work strictly six-hour days, five days a week. They may have a night class one evening and only work three hours another day. Or, they may only work four days or perhaps a split shift, which allows time in the middle of the day to focus on other chosen obligations. It is important to look at the total scheduling needs of the program and the interpreter, not simply the classroom hours. Prep time, breaks, passing time, required paper work, and other miscellaneous duties may also take quite a scheduling toll. The goal is to provide a fair and reasonable schedule, as this will also improve retention of staff interpreters. Strategies must also be found for the unpredictable probability that schedules will change and workloads may vary significantly, even from week to week. Collaborations, special projects, additional duties, and professional development are all possible strategies to handle a reduction in workload. When an unpredicted increase in workload occurs, the institution could offer to augment a 75% interpreters' contract to 100% time, offer an apprentice program to newer ITP grads to work with a staff interpreter, hire more hourly interpreters, or look at schedule changes for students.

Appropriate and Clear Expectations

Communication was of vital importance to the interpreters surveyed. Beginning with the point of hire, interpreter candidates must be fully aware of the nature of the work and the working environment. If the schedule changes quarterly, by semester, or even by month, it must be clearly explained. If interpreters will be expected to work some evenings, weekends, or split shifts, this must be right out on the table. After hire, on-going

communication is important. Regular staff meetings and a clear chain of command were helpful for staff interpreters to be able to discuss working issues and confidently take these issues to the appropriate person or place. Staff interpreters unanimously stated that a high priority was that their supervisor truly understood the interpreters working environment and process and was competent to support their work and handle the difficult issues as they arose.

Healthy Working Environment

Of vital importance to working interpreters is the notion of a pro-actively healthy work environment—not simply a workplace free of physical hazards, but one which actively enhances health and wellness. Two years ago, the UMD Access Center began to implement an innovative program for the interpreting staff called “Interpreter Wellness Program.” This program, in collaboration with the on-campus Department of Life-Fitness, provides staff interpreters with a variety of services and opportunities to help them maintain their personal and professional health. Included in this program were several workshops provided to the interpreting staff on issues related to on-the-job wellness for interpreters. Topics included nutrition, stress reduction, stretching and relaxation, prevention of RMI, and fitness. Staff interpreters were provided with facility passes for the sports complex and were allowed three scheduled sessions with a personal trainer. In addition, they were allowed to use up to 2.25 hours per week of paid work time to be in some kind of fitness/wellness activity.

Another issue, which reflects a commitment to a healthy workplace, is the departmental policy on leaves of absence. Recognizing that all staff, interpreters included, have a real life outside of their workplace and supporting the employee in their real life can be an immeasurable boost to staff retention. When an interpreter needs a leave of absence for health, personal, educational or parental reasons, every effort should be made to allow such a leave. Attitude of the supervisor or co-workers can also have a great impact in this situation. A leave given reluctantly, even to the point of instilling needless guilt for the employee, will be of little value in retaining a good interpreter employee.

History and Development of the UMD Program

About the University of Minnesota, Duluth

Duluth, Minnesota is a city of 89,000 located on the shores of Lake Superior, approximately 150 miles from the nearest major metropolitan area, the Twin Cities of Minneapolis and St. Paul. The closest Interpreter Training Programs are located in the Twin Cities. It can be a challenge to recruit and retain qualified interpreters for both the freelance and educational settings in this semi-rural area.

The University of Minnesota Duluth (UMD) has an enrollment of 8,000 students and the number of Deaf, Hard of Hearing and DeafBlind students enrolled ranges from 2-20. Deaf, Hard of Hearing and DeafBlind students enrolled at UMD are served through the UMD Access Center. Currently in the Deaf, Hard of Hearing and DeafBlind program, UMD employs four staff interpreters on 75% time, nine month benefited contracts; four part-time, hourly interpreters with no benefits; and one coordinator on a 75% time, twelve month contract.

The Early Years:

The program began in 1987 when three deaf students enrolled part-time at UMD, and a coordinator was hired for the program. The coordinator position at this time was more akin to a lead interpreter/student counselor. The position was half time, ten months. Other interpreters were hired on an hourly, basis. In 1989 the first benefited interpreter staff position was approved, and an interpreter was hired at 75%, nine-month basis.

The first years of the program were characterized by:

1. Significant time devoted to scheduling due to predominantly hourly (staff or freelance) interpreters.
2. Developing program policies and procedure,s including an interpreter and a student handbook.
3. Educating faculty via instructor letters and info sheets.
4. Advocating for staff positions for interpreters.
5. Counseling/advising students.
6. Learning the ropes of the job.

The learning curve was quite steep during those first few years! Among the things learned early on were:

1. Conflict of interest arose with the coordinator assuming a regular interpreting schedule. Instructor and students alike were confused by the role ambiguity.
2. Policies and procedures had to be equitable for all students – and let the chips fall where they may.
3. Faculty became supportive with consistency of quality service and a minimum of material to read.
4. Life would be much happier for everyone if UMD had staff interpreters!

When the UMD administration was convinced that the University would benefit from staff interpreters, the next challenge was how to hire wisely.

A strategy was designed for hiring interpreting staff. This strategy focused on these key questions:

1. What's the target market?
2. What do interpreters want and need from a job?
3. What does UMD need from staff interpreters?

In short, this was the beginning of the “WIN/WIN” approach to interpreter management!

With these guiding questions in mind, the UMD Access Center was able to build a program that has provided many students with fair, high quality, and consistent interpreting services and has provided to interpreters a healthy, interesting, fair, and flexible work environment. Retention rates for staff interpreters at UMD are quite high. Several UMD interpreters have been employed for more than ten years with the UMD Access Center.

Moving On...Current Issues

While UMD has a solid history in providing quality service to students and quality working environments to interpreters, there are always new challenges on the horizon. UMD now faces many challenges for interpreters and the program. As workloads change and staff levels remain stable, opportunities for collaborations

with other post-secondary institutions arise. Efficiently managing services across institutions becomes a new challenge. Professional development for interpreters continues to be important, and funding sources need to be identified. Support for staff to pursue certification,

mentorships, or other training, such as cued speech training, will also become a need.

At the University of Minnesota Duluth, the Access Center will continue to look beyond traditional management strategies to implement innovative concepts in service management.

UMD Access Center Program For Deaf, Hard of Hearing and Deaf/Blind Students, 1987-2000

YEAR	TOTAL	DEAF/ SIGN	DEAF BLIND	STAFF	I-HOURS	T/N HOURS	TOTAL # COURSES	STAFF/HRLY INT NUMBER	HIGHLIGHTS
1987-88	3	3	0	0	NC	NC	NC	H-2	Coordinator/counselor/interpreter hired at 50% time, 10-months
1988-89	4	4	0	0	2330	NC	NC	H-4	Developed policy handbooks for interpreters and students
1989-90	6	5	1	0	2898	204/30	NC	1/3**	First benefited interpreter staff position
1990-91	10	7/1*	1	0	3315	246/1417	NC	3/1	Formal notetaking program established, interpreter staffing increases, apprentice interpreter program
1991-92	6	5/1*	1	0	2232	150/420	NC	3/1	Program name change from Hearing Impaired to Deaf/Hard of Hearing
1992-93	10	5	1	0	2273	150/783	NC	3/1** (3)	Lotsa LOAs this year!
1993-94	16	8	1	3	3681	24/1775	63	3/5**	Coordinator position becomes 75%, 12-month
1994-95	14	5	1	2	2784	0	46	3/5**	Program Initiatives
1995-96	14	4	1	0	1392	0	34	3/5**	Interpreters get private office space
1996-97	11	6	2	0	1841	0	29	2/5/2	Interpreter Wellness program proposed
1997-98	9	4	2	0	1794	0	39	3/4	Interpreter Wellness program implemented
1998-99	16	10	2	1	3991	0	67	4/4** (2)	Very "fluid" interpreter scheduling
1999-00 Semesters	13	5/3*	2	1	2121(F) 4000(E)	0	35/16 51 Total	51 Total	4/4 First year under semesters; Interpreter Wellness continuing

*Collaboration with other colleges during this year

**Staff LOA during this year

NC - not counted

Soliciting and Utilizing Interpreter Feedback in Postsecondary Student Services

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Abstract

This paper defines feedback by its relation to growth and change. Ways of responding to feedback include acknowledgment, review, planning, action and rest. Traditional and non-traditional strategies for soliciting and utilizing interpreter feedback are illustrated with real-life examples. Steps for creating feedback tools are also presented, as well as ethical, philosophical and practical considerations.

Personal, professional and programmatic development cannot occur without feedback. Yet for many postsecondary interpreters or student service providers, current methods for soliciting feedback may not be gathering the information that is really needed for effective service delivery. This paper will define feedback through its relation to growth and change and will include theoretical and practical considerations for designing more effective feedback tools, especially in relation to postsecondary interpreting programs.

Defining and Understanding Feedback: A Cycle

What is feedback? The Merriam-Webster dictionary defines it as a “response especially to one in authority about an activity or policy” (1989, p.277). Yet feedback is really much more than that. Feedback can encourage the status quo, lead to changes in a program, and empower consumers. It can be appreciated, ignored, celebrated and dreaded. Everyone intuitively knows what feedback is, but a complete definition is elusive.

One way to understand feedback is through its relation to change. Figure One shows a cycle of change and feedback, as it applies to individu-

als, small groups, departments, or any working unit. Movement within the chart happens along the bold lines with continuous movement between Acknowledgment, Review, Planning, Action and Rest. Movement may involve long-term circling around one part of the cycle and then rapid change through three other sections; there is never a set pattern, and there are no timelines. Brief acknowledgment of feedback may take a few seconds, or feedback may trigger a system-wide review which requires years to complete. There are four ways to categorize our responses to feedback: Acknowledgment, Review, Action, and Planning.

Acknowledgment is the most simplistic response and usually does not involve a great deal of energy or effort. Acknowledgment may be a basic “thank you” or a simple acknowledgment of the feedback itself (e.g. “We received your response to our survey”). It may be delegating someone else to handle the feedback or a complete lack of response under the implicit belief that someone else will follow up. Acknowledgment recognizes that feedback has occurred but does not make an effort to respond in any significant way.

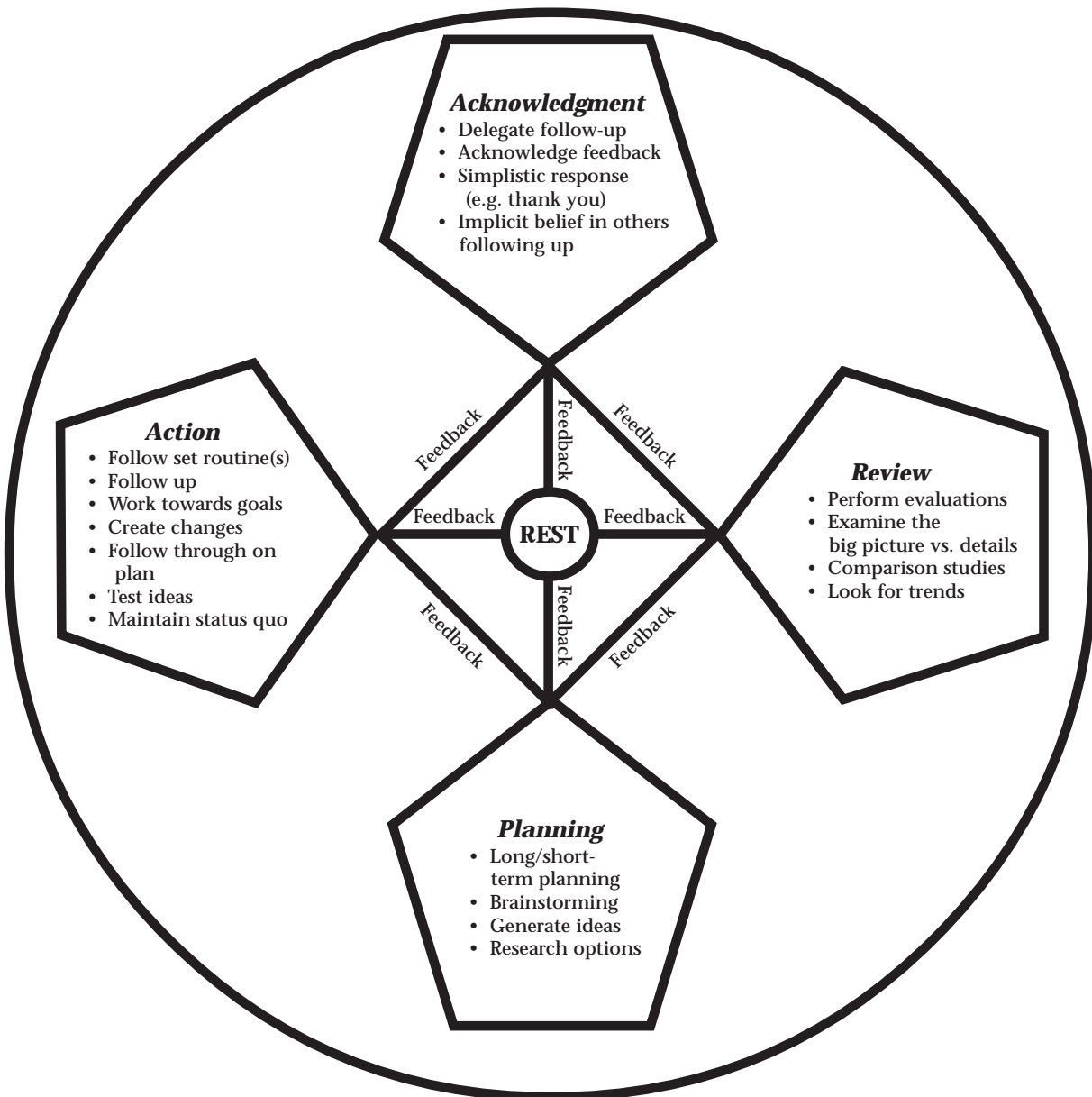
Review is an evaluation or analysis of whatever triggered the feedback. This may involve examining the “big picture” versus details of a program or policy. It might be an evaluation or study. Another way to review is to examine short- or long-term trends, to see whether changes have already occurred. For individuals, “review” may incorporate mentoring or other professional development opportunities, providing a way to review skills, ethics, education, etc.

Planning is a third response to feedback and may be short-term or long-term. Planning helps groups find and choose options for follow-up in response to feedback (but does not necessarily lead to any action itself). Planning also includes brain-

Figure 1
A Cycle of Change and Feedback

Working with Feedback:

- Individuals and groups can be anywhere on the cycle at any time. There is no set pattern.
- Feedback (informal or formal) may happen at any time.
- There is no time frame for any of these cycles.
- More power means more access to various parts of the cycle
- This cycle applies to each level of organizations (individual, departmental, systemic, societal, etc.
- Change (for better or worse) happens when movement happens within the cycle. Disconnecting from the cycle is to literally pull “out of the loop.”



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storming, generating ideas and researching options. Individuals may use journaling, career counseling, performance reviews and goal-setting, whereas groups may use retreats, inservices, or other strategic planning methods.

Action is when decisions of some kind are made and actions are taken. Action may lead to change, movement towards goals or the testing of ideas. It could create changes or follow-up. It is important to remember that maintaining the status quo is also an action and a response to feedback. Moving ahead or keeping things the same are both conscious choices.

The center of the figure is a circle labeled **Rest**. Constant feedback and/or change may lead to burn-out or low morale. To rest is to remain in the cycle of change and growth but to acknowledge that a break of some kind is needed. Rest may be on an individual level (e.g. taking a walk during lunch or a much-needed vacation) or on a group level (e.g. having a retreat, doing something “fun,” putting a hold on a project). People do not “pull out of the loop” unless they disconnect entirely from change and growth, leaving the cycle altogether by isolating themselves or actually leaving their job. Higher education needs dedicated and energized people; only people who take care of themselves will be able to continue making much-needed contributions.

In this way, the cycle of change and feedback may be a theoretical tool, but it is also a practical one. The more power a person has, the more access they will have to various aspects of the cycle; consciously understanding responses to feedback can ultimately empower those who are giving the feedback as well as those receiving it. For example, if interpreters are only “allowed” access to planning, but administrators never allow action, that can ultimately create disillusionment or frustration. If students are allowed any participation in the cycle, the feedback and follow-up may be more accurate and far more enthusiastic than if they are only allowed to fill out a form and never see their contribution or the “big picture” of an interpreting program. Feedback itself can become a response to programming but also a deliberate tool for change and growth.

Designing Feedback Tools

At the PEPNet Conference, participants were asked to discuss current methods for soliciting feedback

about interpreters. All schools represented were relying heavily on a “Student Feedback Form” in one form or another. Yet there are many other potential sources of information which may be just as useful, if not better.

When designing feedback tools, the basic who, what, why, when, where and how questions may be helpful. Who is working with interpreters? What are they saying, doing, experiencing? Why would they have useful feedback? When and where could they offer feedback? How could they offer it (what is the best method to get their opinion)? Designing feedback tools in a deliberate way may ultimately help bring a team together and align the visions of consumers, interpreters, and administrators.

Some ethical and philosophical issues may arise when an individual or department is soliciting feedback. In-house confidentiality policies and the RID Code of Ethics must all be considered so the privacy of students and staff are protected. Staff and interpreters must also consider any power differentials in soliciting feedback: Will the feedback be mandatory? Is it the student’s responsibility to provide this specific kind of feedback to interpreters? Will students be given information about any follow-up to the feedback or changes made to the program? Also consider how conflicts will be handled if feedback leads to disagreement or a grievance: is there a grievance policy, could interpreters’ jobs be in jeopardy if negative feedback comes forward, or will the privacy of students be protected if they give feedback to administrators? Considering ethics and philosophy before and during the development of feedback tools can help develop some agreement about how feedback will be handled.

Of course, every postsecondary interpreting unit has the experience of trying to solicit feedback and being met with a resounding silence. Theories, models and philosophies are only helpful if they are also practical. Staff need to consider their own resources of money, time, and staff. If a department has few resources, then elaborate feedback tools will be difficult to use. Also, consider the variety of students in most postsecondary settings, because the motivation for providing feedback may vary considerably. Freshmen may want something social; where, for example, groups of deaf students can work together and get free pizza. Commuter students may appreciate a postcard or web-based evaluation form that can be completed quickly at home. The

students themselves may not only vary in motivation, but also in their ability to provide feedback of any kind. An eighteen year old freshman will have a very different perspective than a 50-year old commuter student or a deaf faculty member. Keeping their perspectives in mind will help interpreting staff develop a more versatile and useful feedback tool.

Theory Meets Real Life: Practical Strategies

Below are some steps for implementing effective feedback tools that solicit feedback and also utilize it effectively. Some of these methods are more traditional (e.g. interpreter evaluation forms), and some are more “non-traditional” (e.g. focus groups). This information may be used by individual interpreters or staff members or by departments.

When creating a feedback tool or dealing with feedback that has already been given, here are a few helpful steps based on “The Spiral Model” by the Doris Marshall Institute (Bradley, Fiorello and Smith, 1999):

1. *State what is happening* (the situation or the issue that has been brought forward) or the information needed.
2. *What are some perspectives on this?* Consider administrators, interpreters, students, and past students. Is the “big picture” available?
3. *What is missing?* Consider what other information or details would be helpful and who might be able to provide it. Consider other resources as well, such as other colleges, PEPNet, community interpreter referral agencies, or other on-campus departments.
4. *Brainstorm about possible short and long-term goals.* What can realistically be accomplished in one month? A year? Five years?
5. *Select priorities and create a plan for soliciting the information* that includes a timeline and reflection or evaluation components (i.e. ways to measure success or know when goals have been achieved and ways for people to give opinions about the process).

6. *Create a plan for utilizing collected information.* How will the results be shared? Who will have access to the information? Which policies or programs may be affected by this information?

7. *Begin implementing the plan.*

For example, most interpreter feedback forms evaluate interpreter skills and ethics, while providing information about the interpreting program (i.e. policies and procedures) and student preferences. Figure Two lists some other ways to solicit the same information. Some of these may be more effective than a simple interpreter evaluation form; others may complement the evaluation form and provide more detailed information. Notice that students are not always the best people to provide a specific kind of feedback; interpreting staff, deaf employees, alumni, and community members may provide a new and important point of view. Figure Two is a model of how any feedback tool can be used in a variety of ways and how important it is to understand the exact information that needs to be collected.

After collecting the feedback, it is important to utilize it in some way. It may be used to make policy or program changes, or it may become part of a report that is disseminated formally or informally. Other options are to form work groups around an important issue, create a display board for students, add the information to a web site, or design some programming for students or interpreters. Using feedback effectively not only strengthens a program, but it also encourages further feedback by showing respect and purpose for the opinions offered.

When this paper was presented at PEPNet, I shared a video made by the University of Minnesota for the 1999 Postsecondary Interpreting Network (PIN) conference (Van Nostrand and Harbour, 1999). The video contains clips from interviews with postsecondary students, alumni, and even deaf children who discuss their dreams for college. Some of the opinions contradict each other, some of them are very personal, and some have broader applications; a few students are humorous, and a few are serious or even angry. The video, however, caused some interpreters at the University of Minnesota to see their job in a different light or to appreciate the changes that

Figure Two: Using an Interpreter Evaluation Form to Create Other Options for Soliciting Feedback.

Below are the four major topics usually addressed on an interpreter feedback form. Under these categories are listed a variety of ideas for soliciting similar feedback.

Skills Assessment

- Perform one-to-one observation of working interpreters by supervisors
- Encourage peer mentoring among interpreters
- Develop self-assessment tools for interpreters to monitor their own performance
- Create interpreter “portfolios” that document interpreters personal and professional accomplishments
- Solicit feedback from non-student consumers (e.g. faculty, alumni, community members)

Ethics Assessment

- Establish regular “case consults” where interpreters have an opportunity to discuss difficult ethical situations
- Create case studies illustrating various professional dilemmas and practice with ethical problem-solving
- Plan retreats or inservices focusing on ethics, where interpreters have an opportunity to discuss difficult situations and offer ideas

Feedback about Policies and Programs

- Ask interpreters to evaluate their supervisor and/or programming
- Hire an external program evaluator
- Collect historical data about the interpreting program (past vs. present)
- Create an advisory board that includes interpreters and students

Information about Individual Student Preferences

- Conduct one-to-one interviews with each student, asking for feedback and preferences
- Create student focus groups
- Develop different feedback tools for different consumers (e.g. deaf staff and faculty, undergraduates, graduate students, commuter students)
- Set up an electronic listserv and encourage discussion on-line about preferences and suggestions for working with college interpreters
- Plan fall “interpreter orientations” with incoming deaf students to learn about their preferences and expectations for college interpreters

have been made at the University over the past few decades. It also led to a more general appreciation for the diversity of deaf students in higher education. Until we started interviewing students on videotape, we had never fully appreciated how useful one-to-one interviews could be and how much the students wanted to share their ideas.

This is what feedback is really about: giving everyone an opportunity to be heard and developing ways to make services more effective. Combining models and theories with real-life experiences can lead to change on individual, departmental, or campus-wide levels. In this way, soliciting and utilizing feedback becomes an important part of service provision and a powerful tool for postsecondary student services.

References

- Bradley, A., Fiorello, B., and Smith, J. (1999). *Lasting leadership: Popular education and self-advocacy. A guide for facilitators*. Minneapolis, MN: Advocating Change Together.
- Merriam-Webster, Inc. (1989). *The new Merriam-Webster dictionary*. Springfield, MA: Merriam-Webster, Inc.
- Van Nostrand, C. and Harbour, W. (1999). Perspectives: Interviews with deaf/hard of hearing people about postsecondary interpreting. (Video created for the 1999 Postsecondary Interpreting Network Conference). Minneapolis, MN: University of Minnesota.

Successfully Coping with Interpreter Shortages

**Lauren M.B. Kinast,
Jim Vincent**

San Diego Community College District

Abstract

Providing accommodations to Deaf and hard of hearing students in postsecondary education is an on-going challenge. Faced with a shortage of interpreters in the 1998-1999 academic year, the San Diego Community College District took a number of steps aimed at increasing the number of interpreters available and reducing the negative impact of the shortage. Additionally, three Office of Civil Rights (OCR) complaints were filed in the Spring of 1999 related to interpreting services. The OCR findings and process will be reviewed. The importance of a collaborative approach between students, administrators, DSPS staff, and interpreters will be emphasized.

Introduction

A discussion regarding the supply and demand of interpreting services will be covered. This presentation will provide some helpful 'tips' that pertain to your institutional needs to allow you ways of alleviating shortages of interpreters. While we cover 'alternate' options, the issues discussed, in addition to the forms attached for review are items for which OCR gave us their 'stamp of approval.'

Your institution's goal: to be able to follow a 'goal' for your program, you need to clearly develop a goal that is for students, interpreters, and all parties involved when providing services. Without a goal, you are unable to strive towards something for accomplishment. For example, our institution's goal is:

To provide consistently high quality interpreting and captioning services.

Having a goal allows you to understand the purpose behind it through the provision of services and how you want it to affect the involved

parties. It gives the department 'an expectation' to meet and an expectation to which they feel obligated.

Outside Experts

We asked WROCC to come and do a program review of our institution's interpreting services department. We also included the ADA/Section 504 Officer to participate with the revision of forms, policies, and procedures.

Communication

Communication is a key factor involved in successfully providing services. Some of the people you need to communicate with are:

- Interpreters
- Counselors
- Students
- Faculty/Staff

Interpreter Involvement

Recruiting interpreters is almost always something we pursue. Your current staff is almost always the source of 'PR' that goes around in the community. Therefore, work closely with your current staff, address concerns or issues, and reward them—they in turn will provide 'positive' recruitment possibilities!

Incentives

While we may offer a variety of incentives, we continue to strive more to fit the needs of today's interpreters. A list of the following incentives are ways you can prolong your pool of interpreters' interest in staying with your institution:

Guaranteed Hours—provide those only with higher levels and most available schedules to accommodate your needs. In return they will receive guaranteed hours which shows they are of ‘higher priority’ as well.

Prep Time—we expect our interpreters to go into a class/assignment – READY! Build in prep time in their schedule, depending on the type of course load they have. It shows you want them to do their job prepared, which becomes ‘high quality’ services provided.

Professional Development—just like many counselors, supervisors/managers, clerical staff, faculty, etc., interpreters attend professional development opportunities/conferences during their working hours; therefore, they should be paid to attend them as well. If they want to obtain CEUs, then they need to cover those costs themselves.

Scheduling Options—Give them their ‘choices’ of classes they’d like to interpret, schedule by priority, and try to work around their preferred schedule.

- **Materials/Books** – Provide materials and books needed for their assignments; this is also used in addition to Prep Time to help them become familiar with ‘tomorrow’s’ assignments, and be prepared. We also have a ‘office/lounge’ for them, storage for their books, tv/vcr for video practice/prep, etc.

- **Parking/Mileage** – Give them STAFF parking privileges, mileage to and from other sites, and field trips. Give them staff parking because you want them to arrive to their assignments relaxed, not late or frustrated due to the overcrowded student parking, if you treat yourself as staff – they should be treated with the same privilege!

- **Teams**—we provide teams for classes of 50 minutes or more, depending on the class (lab, low demand, etc). You will prevent injuries and burnout, and quality as well as support are better due to the relief time they have in team situations.

- **Mentoring**—self explanatory, depending on your program size, abilities; check with them to see what type of mentoring program they’d like. This shows you want to see their skills en-

hanced, you are providing ‘evaluations’ through this use!

- **Monthly Meetings**—Keep staff informed of things (big or small), and make them feel important!

- **Pagers**—provide pagers to those with 20 hours or more, and open schedules to allow you to use them for sub assignments, adhoc, special requests. Save yourself the trouble of calling a dozen answering machines! You will get a faster response and confirmation from them!

Advertise

Advertise for any interpreting position through all means of publications possible! Don’t narrow your areas! Some of the places we advertised in were: Registry of Interpreters for the Deaf, Views Newsletter, local chapters; local organizations and affiliations; college ITP; community; and networking Groups.

Handbook Policies & Procedures

When developing handbooks for interpreters, include them in this process, because they are ‘on the job’ and can provide valuable input. This is also a way of ‘recognizing’ their importance with the institution—the administration or other departments that create the handbook do not always create them from an interpreter’s perspective or role.

- Developed policies which included input from interpreters on staff.
- Covered the handbook during staff meetings to ensure all were up to date on policy changes or new procedures.
- Obtained input on developing a standard protocol for assigning interpreters into classes appropriately.

Skill Development Opportunities

We provide skill development workshops on a frequent basis. One of the ways to determine what types of workshops is through a survey from your interpreters regarding what they’d like. One of the incentives we discussed earlier

was that we provide these workshops, and we PAY them to attend—the idea is to align with interpreters just like with any other staff professional who are often ‘required’ or encouraged to attend professional development workshops/seminars.

- Prior to each semester, offer three days of skill development workshops related to interpreting, and pay hourly interpreters for attendance.
- Offer one workshop ‘mid-semester’ that is open to all interpreters within post-secondary interpreting experiences.
- Staff development—Allow interpreters to meet each other and see who they will work with (as a team) by providing an informal gathering (ie: BBQ)

Collaboration with ITP

Many ITPs require some type of field work/intern hours completed—this is an intimidating experience for anyone new to this field! Staff interpreters are a good source of those facing ‘reality!’ and can help alleviate the fears ITP students may have. Getting the most experience from their field work is through actual professionals!

- Provides ‘pillar’ of support for incoming/newcomers getting into the interpreting field.
- Establish connections with future potential interpreters to work for the District and already have some type of ‘rapport’ with them beforehand.
- Experience/expertise given to new interpreters, and benefits as well as further fulfills the Deaf Community needs.

Establish Criterion:

To determine interpreter assignments if/when a shortage exists:

1. Assign priority by date of request for interpreting services.
2. When different sessions of the same class are offered, provide incentives for students to voluntarily group in the same class session.
3. Designate specific sections of high demand courses districtwide which are guar-

anteed to have an assigned sign language interpreter.

4. The establishment of an English class for Deaf students taught by an instructor fluent in ASL.

5. Explore accommodations that might serve as an alternative to the District’s almost exclusive reliance on sign language interpreters to accommodate Deaf students.

6. When allocating sign language interpreters, prioritize academic courses over non academic courses, such as physical education (unless it is vocationally related).

To determine whether a Deaf student in a particular class will be assigned real-time captioning:

1. The class is offered at an impacted time.
2. The course has a prerequisite or advisory reading skill level of 5.
3. The course is primarily lecture.

Counselor Involvement

- Regular ISO/Counselor Meetings—keep each other informed of students concerns, and issues and address them immediately. You want to avoid ‘surprises’
- Email communication—we all have busy schedules, and we try to meet with students, faculty, staff, etc. There is no reason you can’t email each other with even ‘not so urgent’ information.
- Meet with students and counselors regarding their services and/or concerns—if you have tried to work with the student on the provision of their services, often times a meeting with their counselor in addition will allow you to address other options. Counselors may also have additional input that correspond with students’ services.

Faculty/Staff Involvement

- Provide notices too faculty regarding a Deaf student using interpreting or Real-time Captioning (RTC) services in their class. We developed a ‘letter/notice’ that includes students’ names and which class, brief tips, etc.

- Develop a pamphlet for instructors to obtain a quick overview of how the services work and tips on working with them. The pamphlet should be designed for instructors and include information on the interpreters' roles, tips on utilizing them efficiently, why there are two (team), what to do if the interpreter does not show up, and a fingerspelling chart. Keep this simple and to the point, instructors often don't read pages of literature.
- Offer a workshop during Flex/In Staff Day to cover interpreting and RTC Services. Provide a workshop to allow instructors get a first-hand idea of what it is like having an interpreter in the classroom by having an actual team of interpreters interpreting the workshop; have a demonstration of RTC.

Managing Demand

This section of our presentation deals specifically with what steps were taken to minimize the adverse impacts of interpreter shortages. The most significant measure that can be taken is to communicate *frequently* with students and others in your college(s).

Identify stakeholders

An essential step in coping effectively with the demand for interpreters is to identify those constituencies who have an interest in this area. Clearly Deaf and hard of hearing students are of utmost importance. While these students are the "consumers" of these services it is critical that frequent and open communication also occur with the following people:

- Interpreters
- Counselors working with Deaf/hard of hearing students
- Instructional Faculty
- DSPS Coordinator
- Administrators
- Deaf Community

A team approach

In the San Diego Community College District DSPS counselors work directly with Deaf students to determine class schedules. In order to keep counselors fully informed, we found it essential to have regular meetings between DSPS counselors and Interpreting Services Office (ISO) personnel. These meetings facilitated the timely and accurate sharing of information regarding upcoming deadlines, problem identification and problem solving, updated information on interpreter supply and demand, and joint planning on communications with students. By keeping counselors thoroughly updated, they could in turn share accurate information with students, thereby helping students make informed decisions as to what classes to register for each term.

Communications with students

Examples are attached (see appendices) of letters that were sent from the ISO approximately two weeks before the beginning of priority registration, encouraging students to take advantage of early registration. Additionally, an extensive orientation program for new and returning Deaf students was held before the beginning of the fall semester at which interpreting services information was shared and discussed.

An integral part of the orientation program was exposure to real-time-captioning (RTC) technology. A captionist was present at the orientation to interpreting service, and students had the opportunity to have hands-on use of this technology and understand its advantages and limitations. At the orientation program students were also educated about their rights and responsibilities under ADA as well as informed about the Office of Civil Rights decisions.

Letters were also sent out by DSPS counselors regarding registration, and these too are attached. An essential part of these letters was information to the students regarding grouping. Students were informed in these letters about which classes were already assigned an interpreter and were encouraged to register for these classes if they were appropriate for that student.

Outside Expert

Jeanne M. Kincaid, Esq., an attorney with extensive experience dealing with the ADA and laws relating to students with disabilities, was hired by the District to meet with staff and students regarding the OCR report and its implications. Ms. Kincaid also met with ISO staff and DSPS staff to review policies, procedures, and forms.

Alternative accommodations when interpreters are not available

In order to clearly establish that interpreters are not available, it is necessary to document a diligent search. This means that you must do everything possible to recruit and hire interpreters, including advertising outside of your geographical area, offering competitive wages, contacting local interpreting agencies, etc. It is essential that everything you do with regard to this activity be documented in order to prove that you have done an exhaustive search.

Once you have done an exhaustive search (please note that this search needs to be on-going), and you are at the point where you have a request for interpreting services that you are not able to meet, then you need to document an offer of alternative services, being clear as to what the student must do to obtain these services.

Real-time-captioning is one alternative service that is available. It has been our experience that early in the scheduling/registration process a letter needs to go to students for which RTC may be an alternative and who are registered in classes, informing them of this potential. A copy of this letter is attached. This letter outlines the criteria used to determine the assignment of RTC and indicates that if the ISO is not able to obtain interpreting services then RTC will be provided as an alternate accommodation.

The criteria that the San Diego Community College District has used to determine if a class is appropriate for RTC is as follows:

- The class is offered at an impacted time. (Impacted time is defined as that time when the demand for interpreters exceeds the supply of interpreters.)

- The class has a prerequisite or advisory reading skill level of 5. This is the reading level of the lowest level English class required for matriculation.
- The class is primarily lecture format.

What we've learned and then shared with stakeholders from our experiences with OCR

A. Have a process in place to address interpreter shortages.

To develop this process we did self-evaluations, consulted with outside experts and implemented recommendations from a WROCC review of our interpreting services program.

B. Not all students requesting sign language interpreting services will necessarily receive them. (A common misperception is that ADA "entitles" students to interpreting services. It is our understanding that this is not the case.)

C. The SDCCD also uses the following set of questions to assist in determining where to assign its limited interpreting services:

1. Is this the last course the student needs for graduation?
2. Is this a basic academic course that the student needs in order to succeed in any other course of study?
3. Is this a critical course for the major?
4. Are there several sections of this class offered?
5. Is this course offered anywhere else in the District or at a different time?
6. Is this a course that is offered every semester at a variety of times?
7. Will any alternate times work for the student?
8. Does the subject matter lend itself to the use of RTC?
9. How was the student affected by the shortage of interpreters during the previous semester(s)?

Attachments

Date

Dear

Greetings from Mesa College! I hope you are having an enjoyable summer. All of us at Mesa College are BUSY preparing for August 23, the start of the Fall semester.

In an effort to maximize sign language and real time captioning interpreting services students have been requested to plan their schedules carefully with the assistance of the DSPS Counselor. I will also discuss with you the factors which will be considered if interpreting requests need to be prioritized: date of request for interpreting service; classes with more than one deaf student; designated high demand courses; real time captioning options; etc.

I am concerned because I have not yet heard from you regarding classes for the Fall semester, which begins in 4 weeks. It requires time to set up quality support services (sign language interpreting, notetaking, real time captioning, test proctoring, etc.).

For your convenience, two drop-in-scheduling parties are available:

Tuesday July 27 9:30-noon room I108

Wednesday July 28 11: 30-1 : 30pm room F262

A schedule of classes where sign language or real time captioning interpreting services have already been authorized is posted in the DSPS office room H202. Please take a look at the schedule and consider joining these classes, as appropriate. Some benefits of "grouping" with other deaf students are:

- Save skilled interpreters' time (more time available to interpret other classes).
- You can have a deaf study partner from your class.
- If you are absent, you can get the lecture information from other deaf students.
- Priority for receipt of interpreting services.

I look forward to working closely with you to meet your educational and service needs for the Fall 1999 semester.

Sincerely,

Julie Pludow
DSPS Counselor Specialist

Disabled Students Programs and Services

STUDENT DISCLAIMER

Student Name: _____

I have requested sign-language interpreting or real-time-captioning services for:

Semester	Class	CRN	Days/Time
----------	-------	-----	-----------

I have been advised that there is/are _____ other section/s of _____ open and available which have an assigned sign-language interpreter or real-time-captionist. I have chosen to take a different section instead of joining a class with an assigned sign-language interpreter or captionist.

I have been advised that every effort will be made to find a sign-language interpreter or captionist for my requested class, but one **may not** be available for my class.

I have been advised that due to my decision I will need to take advantage of other available support services including a notetaker. I have been advised to talk with my DSPS Counselor to request alternative supportive accommodations as soon as possible.

Student Signature: _____ Date: _____

DSPS Counselor: _____

Disclaimer799.doc

White: Student

Yellow: DSPS Counselor

Disabled Students Programs and Services

STUDENT DISCLAIMER –IMPACTED CLASSES

Student Name: _____

I have requested sign-language interpreting or real-time-captioning services for:

Semester	Class	CRN	Days/Time
----------	-------	-----	-----------

I have been advised that this is an “impacted” time, meaning that a large number of students have requested sign-language interpreting or real-time-captioning services at this same time.

I have been advised that every effort will be made to find a sign-language interpreter or captionist for my requested class, but one **may not** be available for my class.

I have been advised that due to my decision to request sign-language interpreting or captioning services at an impacted time I will need to take advantage of other available support services including a notetaker. I have been advised to talk with my DSPS Counselor to request alternative supportive accommodations as soon as possible.

Student Signature: _____ Date: _____

DSPS Counselor: _____

Disclaimer-Impacted799.doc

White: Student

Yellow: DSPS Counselor

Interpreting Services Office
Mesa College – Room F204d
(858) 627-2993 tty
(858) 627-2481 fax
(858) 627-2944 voice

IMPORTANT!!

Student Name:

Date:

You were absent on _____ from your _____ class and did not call the Interpreting Services Office 24 hours before the beginning of your class. It is your responsibility to tell us 24 hours before your class starts that you will be absent.

CALL:

(858) 627-2993 (tty) – 24 hour answering machine

_____ **First Notice**

_____ **Second absence without calling in 24 hours before the beginning of your class. Interpreting services are suspended.**
You must meet with your DSPS Counselor to request reinstatement of services.

DSPS Interpreting Services Supervisor

Comments:

White: Student
Services Supervisor

Yellow: DSPS Counselor

Pink: Interpreting

To: Mesa College Deaf Students
From: Julie Pludow, Counselor Specialist
Jennifer Brinkley, Deaf Peer Counselor
Date: November 1999
Re: Spring Registration

Are you ready for this?!?! Spring Registration!

As you know, priority registration for Spring 2000 semester will begin Monday, November 29. We strongly encourage you to use priority registration so you can register in the classes you want and so you can request DSPS services **EARLY**.

Please make an appointment with your counselor to discuss classes, get questions answered, get help with financial aid forms, plan class schedule, and request services (interpreting, notetaking, real-time captioning, etc.).

In order to maximize interpreting services, we are encouraging you to “group” with other deaf students, when appropriate. Some benefits of “grouping” are:

- Save skilled interpreters’ time (they have more available time to interpret other classes)
- You can have a deaf study partner from your class
- If you are absent, you can get the lecture information from other deaf students
- Priority for receipt of interpreting services.

Class schedules were mailed November 15 week. Please use the information below to begin planning your schedules.

Classes with Sign Language Interpreting

<u>CRN</u>	<u>Class</u>	<u>Day</u>	<u>Time</u>	<u>Units</u>	<u>Room</u>	<u>Instructor</u>
81202	English 101	TTh	2-3:30	3	G-115	T. Moran
04813	History 109	MW	11-12:30	3	H-309	T. Valverde
73056	History 151	MWF	11-12	3	H-304	N. Miller
40899	Math 95	MTWThF	1-2	5	H-215	L. Clark
41090	Math 96	MTWThF	12-1	5	K-213	B. Peters
Any	Computer Business Tech	F	12-2	Any	K-405	Any

Classes taught in ASL

<u>CRN</u>	<u>Class</u>	<u>Day</u>	<u>Time</u>	<u>Units</u>	<u>Room</u>	<u>Instructor</u>
40445	College Success 127	MW	1-2:30	3	K-210a	J. Pludow J. Brinkley
71690	English 07	MTWTh	9:30-11	6	I3-401	T. Moran
46373	English 08	MTWTh	9:30-11	6	I3-401	T. Moran
46384	English 09	MTWTh	9:30-11	6	I3-401	T. Moran
46396	English 10	MTWTh	9:30-11	6	I3-401	T. Moran
82792	English 55	MTWTh	11-12	3	I3-401	T. Moran
02000	ASL 101	TTh	1-3	3	F-113	B. Clary
04271	ASL 200	TTh	1-3	3	F-218	Buchannan
05666	ASL 201	MW	5-7	3	F-218	J. Halcott

Please contact your counselor if you have any questions at (858) 277-1968 tty. We look forward to seeing you soon.

Thank you.

August 13, 1999

Jane Doe
5555 Address Way
San Diego, CA 92103

Dear Jane:

You have requested sign-language interpreting services for Political Science 101, Th 6:30p.m.-9:30 p.m., room H-305, Mesa College. This class has been determined to be eligible for real-time-captioning (rtc) services based on criteria listed later in this letter. A major factor in the decision to consider rtc services for this class is that this class occurs at an “impacted time,” when the demand for sign-language interpreters is greater than the supply of sign-language interpreters. While we realize this is not your first choice in terms of access to this class we believe that real-time-captioning will provide you access to this class. Additionally, educational experts in education of Deaf students suggest that increased exposure to written English, as provided by rtc, will support Deaf students’ learning the increasingly complex vocabulary found in upper level college classes, especially in four year universities and graduate programs.

The following criteria are used to determine if a class is appropriate for rtc services:

- R5 prerequisite or R5 advisory. (This suggests that your advanced level of English reading skills will allow you to benefit from rtc services.)
- The class is primarily lecture.
- The class is offered at an impacted time. A time when the demand for sign language interpreters is greater than the supply of sign language interpreters.

If, as the semester progresses, sign-language interpreters are available we will contact you to see if you would like to switch from rtc service to sign-language interpreting service.

The SDCCD DSPS Department is very interested in your academic success. We are committed to providing high quality rtc services and we believe that rtc service will provide you access to your Political Science 101 class. The attached sheets describe rtc and what you can expect from this service. If you have questions or concerns about rtc services you are encouraged to talk with your DSPS counselor.

Sincerely,

Lauren M.B. Kinast
Interpreting Services Supervisor

CC: Julie Pludow, DSPS Counselor, Mesa College
Interpreting Services Office
rtcletter

Supplemental Instruction at LaGuardia Community College

Sue Livingston
LaGuardia Community College

Desiree Duda
LaGuardia Community College
Northeast Technical Assistance Center
New York Downstate Coordinator

Kim Lucas
LaGuardia Community College
Program for Deaf Adults,
Academic Counselor

Abstract

As one of the few public institutions in the Northeast to provide Deaf and hard-of-hearing students open access to degree programs, LaGuardia community College receives many students who lack the academic preparation for admission to either of two highly competitive, specialized postsecondary institutions which serve Deaf students exclusively – Gallaudet University and the National Technical Institute for the Deaf. Although these students possess high school diplomas, many experience difficulty and concomitant frustration keeping up with their hearing classmates.

Next to interpreter services, tutorial services offer students the best chance to compete equitably with their hearing classmates and to succeed academically. But in order for Deaf students to graduate and progress in their chosen fields of study, tutorial services at LaGuardia Community College needed to be reconceived and reconstructed. This new view of tutorial services will be modeled after the nationally recognized non-remedial academic support program for hearing students known as Supplemental Instruction (SI).

Introduction

LaGuardia has responded in a supportive manner to the problem that many Deaf students face, i.e., difficulty and concomitant frustration keeping up with their hearing classmates in main-

stream classes. At LaGuardia, sign language interpreters are commonplace; hearing classmates are recruited as notetakers, and tutors are provided upon request. These services, although mechanisms for equal access to classroom instruction, do not go far enough in creating optimal learning experiences for Deaf students. Interpreted content is secondhand, and its quality is highly dependent on the expertise of an individual interpreter. With the demand for certified interpreters far outweighing the supply, certified interpreters have become all too rare a find – leaving some classes, at best, filled by inexperienced interpreters and, at worst, with no interpreters at all. Notes taken by other students, likewise, are secondhand and highly dependent on the accuracy of a notetakers' understanding of a particular lecture. In addition, notes are written in English – the language Deaf students still struggle to come to know even at the college level. And, while hearing students have the opportunity to give some initial shape to incoming information through notetaking, since Deaf students must, for the most part, constantly watch an interpreter, they are precluded from looking down to take notes. This denies them the first pass that hearing students have at organizing, and thus subsequently remembering, "orally" conveyed information.

Over the years, it has become apparent that the most effective way for Deaf students to keep up with their class work is to provide them with tutorial services. With such services, students receive information firsthand, "talk" directly to their tutors and have the luxury of time to write notes for themselves. Ironically, this support service,

which does seem to hold the most promise, has suffered from the most neglect. Only certain students are eligible for monetary support for tutors, there is no formal training or screening program for tutors, and little is known about the quality of tutoring offered or if, in fact, tutoring is beneficial to the students. But even more harmful is the fact that tutors have to do much guessing about what transpires during classes that students attend. They are, in a sense, tutoring to the trees, without a picture of the forest. In addition, without funds to purchase the texts that students are using in tier classes, tutors are often forced to read assigned readings that need to be digested before the tutoring session begins, during the session itself. This wastes precious instructional time.

Next to interpreter services, tutorial services offer students the most chance to compete equitably with their hearing classmates and to succeed academically. But in order for Deaf students to graduate and progress in their chosen fields of study, tutorial services at LaGuardia Community College needed to be reconceived and reconstructed. From our years of experience, we have come to see that tutors need to be as effective as possible if Deaf students are to learn in mainstream-postsecondary settings. They need to be thoroughly trained, know what transpires in the classes they are hired to tutor, have access to the necessary books required each session early-on in the session, be well-versed in the reading and requirements of all assignments and be able to converse with their tutees effortlessly and meaningfully. This new view of tutorial services will be modeled after the nationally recognized non-remedial academic support program for hearing students know as Supplemental Instruction (SI).

What is SI?

SI is an academic assistance program that differs from traditional tutoring. Rather than targeting high-risk students, SI targets high-risk courses. These are courses which students typically fail, drop out of or do not do well in. SI also requires that "SI leaders" – trained by an "SI supervisor" – attend class sessions, take notes and organize at least three out-of-class weekly study group sessions. Rather than viewing themselves as teachers, SI leaders view themselves as facilitators who encourage student interaction and student-initiated questioning while assisting them in the in-

tegration of ideas culled from lectures and readings (Zaritsky, 1994). Leaders use the course texts, lecture notes, supplementary readings and examples of former tests as the bases for instruction.

SI embraces the notion that knowledge, rather than being transferred from the head of the leader to the students, is something that leader and students construct by talking or dialoguing together. Commonly referred to as **collaborative learning**, the idea that knowledge is socially constructed views learning as essentially a reacculturative process (Bruffee, 1993) where students, over time, become members of a new knowledge community – the knowledge community of their leader. They do this by taking on the characteristics of their leader, specifically by taking on the new academic language used. This, however, can only be achieved by having opportunities to "talk" in the new language and by receiving response to this talk.

SI also views student leaders as model students – students who are looked up to because their behavior, perhaps more than their knowledge, offers students something to emulate. Rather than being "smart", students come to see that their leaders know how to become smart. They come to see that leaders struggle as well when they are confronted with confusion and that being intelligent perhaps requires more perseverance than genetic endowment. They see firsthand that learning means allowing time for thoughtful analysis and having the desire to tackle a problem from different angles.

Finally, SI strongly supports the view that all students have capabilities to learn and that this should be made clear to students by providing them with opportunities to feel good about themselves as learners. As students wind their way closer and closer to acceptable responses, they should be heartily praised each step of the way. Sharing ideas is full of risk for students who might not have had successful histories as learners, but if they are positively acknowledged for offering ideas, they will most likely continue to remain active in their learning.

What is SI's Track Record?

SI was conceived at the University of Missouri – Kansas City (Martin and Arendale, 1983; 1990; 1992) and has been certified as an Exemplary Edu-

cation Program by the U.S. Department of Education. In its 10 years of existence, participation in SI has proved to significantly reduce course failure, improve average course grades and increase persistence towards graduation. It is currently in place in over 600 schools, including over 60 community colleges, and in countries such as Australia and Sweden.

SI has a successful track record. Lundeborg and Moch (1995) investigated the relationship between learning and social interaction among women college students in an SI program for science classes and found it to promote intellectual risk taking. Martin and Blanc (1994) studied SI's effect on seriously underprepared students and ascertained that these high-risk students could master difficult content and develop study skills simultaneously. Kenney and Kallison (1994) researched SI's impact on the learning of math and found the SI model to be more successful than the traditional content-only focus of traditional tutoring especially for lower-achieving students. Finally, Congos and Schoeps (1993) discovered that with SI there was a marked decrease in the number of withdrawals from courses.

In the fall of 1993, SI was piloted at LaGuardia Community College with hearing students in Fundamentals of Human Biology I – a high-risk course. When grades of students who attended SI sessions for this section were compared with those of students who were in an identical course taught by the same instructor during the fall of 1992 before implementation of SI, there were noticeable differences. Successful completion of the course – defined by students receiving a grade of A, B or C – improved from 43.6% in the non-SI section to 63.2% in the SI section. Percentages of students receiving grades of A increased from 8% to 17.7% and those of students receiving grades of B from 13.3% to 25% (Zaritsky, 1994). Students, then, who attended SI sessions performed better than a control group of students who did not.

What is the Goal of SI for Deaf Students at LaGuardia?

We, of course, hope to replicate the success rates mentioned above with our Deaf student population and, in so doing, remove the stumbling blocks posed by several courses which serve as gatekeepers, frustrating and holding students back from making the most of their college years. Typi-

cally, these courses have been English Composition (English 101), Biology (SCB 101) and Math 96. On a larger scale, we hope to become a national model of SI instruction targeted for Deaf students by sharing with our colleagues in other settings what teaching techniques and learning strategies worked best for tutors and tutees. As of this date, the writer is not aware of SI having been used or currently being used in any postsecondary program for Deaf students.

How Does the SI Model Used with Hearing Students Differ from its Use with Deaf Students?

SI leaders for hearing students introduce students to the idea of SI during the first day of classes and request schedules for the students interested in participating. During the second day of classes, the schedule of SI classes is announced and distributed.

The SI model for Deaf students has different initial procedures. Their counselor introduces all Deaf students scheduled to take one of the high-risk courses to SI during the time of registration. At that time, their schedules are arranged to fit two, one-hour study-group sessions. Study group sessions must be scheduled to fit the availability of the student leaders as well. Requests for interpreters for SI courses are given priority status by the coordinator of interpreter services.

The evaluation plan funded by the State Department of Education requires that both SI leaders and students keep learning journals. For the SI leaders, we ask that, for each SI session, they keep brief anecdotal notes on which SI strategies have more impact on students than others. We need to also ask that the SI leader pay close attention to the kind of “talk” that transpires during small group work and to write brief anecdotal accounts of the ways in which students explain their understandings to one another. Here we would be interested in finding out what specifically students do, through language, to help each other understand new concepts. More specifically do they:

- Use analogy and/or example?
- Refer to past encounters with similar material?
- Use more visually based ASL grammatical constructions such as classifiers,

referencing, constructed action or constructed dialogue?

For the students, in addition to asking them to pinpoint the strategies they found most helpful, we ask, at the conclusion of each session, to jot down what specifically they were confused about at the beginning of the session, the reasons they were confused and what they subsequently learned.

What Additional Strategies Might be Tried with Deaf Students?

Encourage Notetaking

Our SI leader for the MAT 96 course is Deaf. After consulting with him, he agreed to try to take as many notes for himself as possible. We asked him to consider this idea not only for the good that it would do to have a self-written record of the lecture, but to show the other Deaf students in the class that it is not totally impossible all the time to take some notes. Our Math 96 leader explained that he is able to jot down the important concepts the teacher covers in a session as well as copy examples from the blackboard. Using this student leader as a role model, Deaf students would be able to see firsthand how notetaking and watching an interpreter are, at times, not necessarily mutually exclusive activities.

Use Text Interpretation

In courses other than math, we encourage the use of **text interpretation**. This means that either sections of textbooks or novels or stories that the SI leader deems necessary for students to understand should be made into transparencies and projected, through the use of an overhead projector, on an empty classroom wall. The leader should stand to the left of the projected text (facing the class), read a sentence ahead to him or herself and then interpret that sentence using ASL. Once the meaning of the sentence is presented, he or she should backtrack, using his or her finger underneath the projected sentence that was just interpreted to allow students to the opportunity to re-read the sentence to themselves. Vocabulary words that still cause students difficulty should be interpreted again for them.

Use Good Models of Student Work

Particularly with respect to English 101, it would be most helpful for the students to see examples

of the edited work of other Deaf students who have taken English 101. This will offer students opportunities to see writing that is appropriately scaffolded – i.e., within their reach given instructional assistance. Representative examples in several rhetorical modes (argument, compare/contrast, analysis) as well as the researched essay could serve as models and springboards for their own writing.

Assign Summaries and Questions about Lecture Notes as Homework

It might be helpful for students to arrive at their study-group sessions with summaries of the class notes along with written questions about any parts of the notes that were problematic for them. Leaders can start the session hearing the summaries and questions which will give them a handle on how much each study group member understands. With this information, leaders can zero in on a particular student's mis- or non-understandings.

Conclusions

Our program of SI assisted 72.4% of its participants in receiving grades of A, B or C. In addition, over 75% of the students attended 85% or more of the study-group sessions. Another way of looking at the influence SI had on student achievement is to ask why 27.6% of the students received grades of only D or F. In the majority of these cases, students who did not receive grades of A, B or C either attended 50% or fewer of the study-group sessions, did not turn in required assignments or did not attend required laboratory sessions which counted as part of their course grade. Obviously, students who attended more SI session fared better than those who attended fewer sessions but for a few other students, attending SI sessions was not enough to assist them in getting grades of A, B or C. Lack of diligence and discipline worked against these students and were forces beyond the power of SI influence.

Perhaps the more important question to ask at this point is what specifically it was about that enabled its participants to experience success in mainstream-college classrooms. For this answer we look to some specific strategies that were used by the SI leaders, how the SI model fostered a sense of accountability in the students, and why the SI model suits the needs of students who learn visually.

Specific Strategies Used by SI Leaders

The Explicit Teaching of Reading

Our first few strategies clustered together and came to fruition when virtually all SI leaders realized that they were facilitators for specific content areas, **as well as for the reading required** by those content areas. When teaching Deaf students, there is no way that written English and content can be separated. Each must be embedded in the other if we expect Deaf students to be educated well.

The Use of Discussion in the Teaching of Writing

Again, in our English 101 SI study-group sessions, SI leaders noted the need to thoroughly discuss any reading, film or concepts brought up in class prior to asking the students to do any writing assignment about them. Related to this, before students would embark on an essay assignment, our SI leader facilitated a discussion to ensure that students understood the essential meaning of the essay question.

The Use of Drama, Analogy and Drawings

In their journals, students reported that the use of drama, analogy and drawings helped them to visualize concepts more easily.

SI Students Became More Accountable for Their Own Progress

It was an eye-opening experience for many of our students to receive low grades on quizzes and tests. Used to social promotions from their respective high schools, they began to see that they could not get by without “sweat,” and if they did not study, they would not pass. Being held responsible for their own progress was a new demand as was the reality of the aphorism that without pain, there would be no gain. As students became more accepting of the idea of self-discipline, they became less passive about their learning. They also started depending more on each other and less on their SI leader for explanations, appreciating the fact that incorrect answers that were student-generated, discussed and corrected as a group were more enlightening than answers explained by the SI leader.

The SI Model Suits the Needs of Students Who Learn Visually

This study has taught us that SI is an **essential component** of a postsecondary program for Deaf students in mainstream, postsecondary settings. In all of the courses offered with SI, both students and leaders recognized that the majority of learning transpired not in class but in the SI study-group sessions. There were a variety of reasons for this, ranging from feeling that the classroom teachers “surface taught,” went too quickly or did not present concepts in a visual way, did not allow Deaf students time to look away from their interpreters, to their textbooks and then back to their interpreters again before moving on to a new topic, or even to the seemingly unavoidable fact that sometimes interpreters showed up late or did not show up at all.

The study group instilled a certain level of comfort and thereby confidence in the students—two feelings that need to be internalized before any learning can take hold. Of particular interest was an SI leader’s comment that “Deaf students need absolutely excellent teachers” which struck this writer as being very true. Deaf students face enormous challenges in the mainstream classroom – much more perhaps than any other group of students. Are there enough excellent teachers out there to ensure that Deaf Students will not have to worry about getting the education they deserve? While we would like to believe that there are, we know there aren’t. With this in mind, SI for Deaf students should be a more mandatory than optional component of a postsecondary mainstream program. It is the “second breath” in Deaf students’ efforts to compete equitably with students who are far less challenged in becoming college-educated.

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Job Enrichment: One Avenue to Retaining Strong Staff and Providing Quality Service OR They Really can do More than Interpret

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Abstract

Because of the physical limitations of sign language interpreting, when a postsecondary institution hires a full time interpreter, it is generally with the understanding that s/he will not interpret forty hours a week. Many institutions and administrators wonder what these employees will be doing after they have finished interpreting classes. This paper examines various approaches to hiring interpreters and the positive outcomes of enriching and expanding the variety of duties for interpreting staff. Higher quality, consistent and stable services for students and increased job satisfaction for staff are some of the possible benefits of retooling interpreter position descriptions. For those institutions using primarily freelance interpreters, these issues raise the possibility of creating palatable staff positions or developing new approaches to hiring interpreters who work in private practice.

Introduction

Historically, postsecondary institutions in the United States have had difficulty hiring enough interpreters, slotting interpreters into appropriate human resources categories, developing job descriptions, and determining duties other than interpreting and preparing to interpret. This paper examines the variation in interpreters' roles at various institutions, focusing on the University of Wisconsin—Milwaukee (UWM), and suggests that interpreter job duties can be enriched to include varied professional duties beyond in-

terpreting, thereby improving staff job satisfaction and at the same time leading to improved quality, consistency, and stability of services for students who are deaf or hard of hearing. This builds on research that interpreters are advised, due to repetitive motion injuries, to limit their number of actual interpreting hours to approximately 20 – 25 hours weekly. With this limitation on the number of hours a person can interpret, institutions are faced with the dilemma of fashioning positions to meet the interpreting needs, while at the same time creating palatable positions.

Retention of Interpreters

Hiring and retaining qualified interpreting staff has long been an issue at many postsecondary institutions. As more students who are deaf or hard of hearing attend these institutions and work in professional positions on the same campuses, there are even more challenges in keeping strong staff than there might have been in the past. This issue is significant for numerous institutions. In 1997/98, both PEPNet and the Midwest Center for Postsecondary Outreach (MCPO) surveyed postsecondary institutions in their *National and Regional Needs Assessments Results: Priority Needs for Postsecondary Institutions Serving Students who are Deaf or Hard of Hearing*. The needs assessment reflects the need, both nationally and regionally, for knowledge of “managing interpreters” and “how to recruit, coordinate and fund quality interpreters.”

Also, the 1989/90 National Technical Institute for the Deaf/Rochester Institute for Technology (NTID/RIT) Repetitive Motion Injury research established the need for new standards on the number of hours per week someone can interpret to retain qualified interpreters, and this resulted in the lowering of the weekly number of interpreting hours at NTID and other institutions. In addition, the current tight labor market, competitive salaries and the development of more staff positions at community interpreting agencies, are additional reasons for postsecondary institutions to pay attention to retention of skilled interpreters.

One of the greatest challenges a DHH program faces is providing quality, consistent, stable and responsive services while at the same time retaining strong staff. Campuses would do well to analyze their own services and ask these questions:

1. Does the campus have established hiring standards in terms of certification, education, and experience?
2. Is the campus able to provide consistent interpreters for ongoing classes and meetings?
3. Are interpreters available for the full length of a student's needs?
4. Are the services responsive; are interpreters available for last minute one-on-one meetings with faculty?
5. Does the campus ask consumers to evaluate the interpreting services?

Historical Deaf/Hard of Hearing Programs Staffing Models

Postsecondary institutions have made a few attempts at creative position development for interpreting services. In general, the first and most common approach is to hire someone generically referred to as a "Program Manager/Interpreter." Many campuses have found this arrangement to be beneficial when there are only a few students who are deaf/hard of hearing. This arrangement allows the manager to serve as an advisor to students, to schedule freelance interpreters, and to do some interpreting also. This is a common model.

As programs expand and serve more students, a next logical step beyond hiring a Program Manager is creating a "Lead Interpreter" position. In

general, this person interprets, does scheduling of other interpreters, and might serve in a supervisory capacity as well. While these positions create new duties for the individuals lucky enough to land the Program Manager or Lead Interpreter positions, this does not create other interpreter positions with duties above and beyond interpreting. On many campuses, administrators look at the interpreting situation and request that staff interpreters also tutor. While this appears reasonable because interpreters often have "down time" between classes and understand deaf/hard of hearing students and their needs, due to conflict of interest or lack of subject knowledge, this is not always the best use of interpreters' time. There are other ways to retain strong staff, build interesting interpreting positions, meet campus demands, and make the best use of staff hours.

Applying the Theory of "Enrichment" to a Postsecondary DHH Staff

One approach to re-tooling interpreting staff positions is to "enrich" the jobs. According to Frederick Herzberg's theory of "job enrichment" (Herzberg, 1968, 1987), if you re-design jobs by giving employees more and varied duties, which are different than their standard responsibilities, they will be more satisfied and motivated, which in the case of a DHH program, ultimately leads to higher quality services for students and staff retention. This can be viewed as altering the jobs vertically - giving people more challenging duties which might have been done by supervisors, by people above them - instead of enlarging the jobs horizontally or giving staff interpreters more of the same duties they are already performing, in this case, interpreting. In fact, due to repetitive motion injuries, additional interpreting between 20-25 hours a week is generally not acceptable. If a full time staff member interprets half of the week, s/he has to carry other duties. With the above in mind, how can programs retain staff?

According to Herzberg, if employees are satisfied and motivated, they remain loyal, and organizations see less turnover. In terms of DHH staffs, less turnover means the campus retains strong individuals, familiar with the workings of the institution, familiar with the students, and committed to the office culture.

Job enrichment theory suggests that employees are satisfied and motivated by some of the following factors:

- achievement
- recognition
- responsibility
- intrinsic challenge of work itself
- advancement

While familiar issues such as salary, benefits, and institutional policies need to be fair, it is the above motivation factors which keep employees interested and committed to the work. In the early stages of the development of the interpreting field, interpreters were often relegated to the lower rungs of pay scales. Interpreters who were motivated by the work often stayed in the field because they were satisfied by other factors. Certainly, if an institution's pay scale is not in accordance with local standards, this will be detrimental to staff retention.

In creating interpreter positions with more and varied duties, institutions can reap some of these positive benefits of job enrichment:

- Answering administrators' questions about non-interpreting downtime.
- Making staff interpreters a more valued and integral part of the institution.
- Assisting in further professionalization and diversification of the interpreting field.

Enriching a Staff Position

The following suggestions are not all inclusive of job enrichment ideas, but attempting the following can assist a campus in redefining staff positions:

- Remove controls: allow interpreters more power in choosing their schedules.
- Increase accountability: more varied duties means staff might have to report to more people.
- Create natural work units: encourage self-managed teams based on various projects or experiences.
- Provide direct feedback: have more one-on-one meetings to assist with new projects.

- Introduce new tasks: provide additional duties that might be considered a duty normally performed by someone higher up on the chain of command.
- Allocate special assignments: give staff the time to create a presentation for local, state, or national conferences.
- Grant additional authority: develop a mentorship/intern program and allow staff to supervise the mentees or interns; grant employees more power over planning and control, not just execution of a project.

The University of Wisconsin - Milwaukee DHH Program

The University of Wisconsin—Milwaukee (UWM) is a medium-sized program with six staff interpreters with varying contracts (some full-time, some nine-month, some twelve-month), one program manager, and one assistant program manager. The campus also houses an outreach site for the Midwest Center for Postsecondary Outreach and sub-contracts interpreting services to other local postsecondary institutions. The use of job enrichment ideas at UWM might not parallel those of campuses of varying sizes, but some of the points can be used in programs of any size.

Following the concept of job enrichment, UWM has added these types of duties for interpreting staff beyond the standard 20-23 interpreting hours per week:

- Develop/manage internship site.
- Coordinate Deaf Issues Network on campus.
- Develop new faculty/staff training: Deafness 101.
- Administer RID testing supersite.
- Serve as liaison to UWM ITP advisory board.
- Coordinate student "Sign and Dine" program.
- Co-teach RID certification preparation course.
- Plan high school preview days.
- Handle accounting for notetaking and subcontracting services..
- Coordinate notetaker training.
- Provide TTY inservices.

- Develop/maintain national staff interpreter salary survey.
- Design/maintain web page.
- Manage Postsecondary Interpreting Network listserv.
- Manage student reflector.
- Assist with scheduling.
- Troubleshoot computer challenges.
- Manage graphic design projects.
- Assist with photography to document DHH program history.

The half-time staff members also have “enriched” duties, but not as many as full-time staff. In addition, UWM has several positions which include two jobs, such as, Interpreter/Program Manager and Interpreter/Outreach Specialist. These positions allow experienced interpreters to maintain their interpreting skills and at the same time expand their repertoire of experiences.

One might argue that job enrichment looks similar to “slash” positions sometimes used in primary and secondary settings, such as interpreter/tutor or interpreter/aide. These have been criticized because the duties often appear to be used to fill interpreters’ downtime. The difference with the job enrichment approach is that the duties are more challenging; hence, the term enriched, instead of expanding their jobs into “slash” positions, only to fill them with less meaningful duties.

Hazards of Change

While enriching job duties for interpreters at UWM has met with positive reactions from the staff, is it also possible the idea might be met with resistance.

Interpreters might say, “We don’t want to be enriched.” If the staff is comfortable with fairly predictable positions, adding new duties might be overwhelming for some. During hiring of new interpreters, it will be important to clarify the expectation of the program or department.

The next question interpreters might ask is, “Are you going to pay us more?” The short answer to this is, “No.” This can be qualified by add-

ing, “If your job duties change significantly enough to warrant a transfer to a totally new job category, yes, your pay will be adjusted.”

Finally, managers might not be interested in job enrichment for staff interpreters because it generally means that managers relinquish some power. In addition, it might mean more time providing feedback as staff learn new duties. In general, managers can benefit by transferring some duties to the staff, thereby giving themselves more time for planning, working with students or program development. Many DHH Program Managers were or are interpreters themselves and might not have had the opportunity for any management training. Job enrichment of staff interpreters might provide time for professional development for managers also. In the case of UWM, these changes were viewed by all as positive and led to staff retention at the campus.

“Quick Wins”

For some institutions, immediate, large-scale change is not possible. There are still means to attempt to retain staff interpreters while considering other changes. Also, campuses might try some of these ideas in retaining hourly or freelance interpreters. (During the sessions in Denver, the audience contributed some of these ideas for “Quick Wins,” or ideas to retain experienced staff. The ideas listed needed to be inexpensive, feasibly accomplished and have positive outcomes.)

- Nominate deserving individuals for campus, local, state or national awards.
- Remain flexible to personal scheduling needs for doctor appointments, children’s illnesses, etc.
- Provide passes to campus health and recreation facilities.
- Free parking.
- Tuition reimbursement if the campus provides it for other employees.
- Free tickets to campus events.
- Mental health days with classes covered by colleagues.
- End-of-year party or dinner.

The Future of Work

Job enrichment for staff interpreters and “quick wins” are not a panacea for all DHH Programs’ retention challenges. Each program carries its own idiosyncratic issues. Job enrichment does take into account that the world of work is ever changing. Our original models for interpreting positions need to be examined and placed in the greater context of the current and future professional and technological world; postsecondary institutions are researching providing long distance classroom interpreting between several campus via remote video.

At the same time, we need to be aware that organizations will need to be more flexible and provide less rigid job descriptions. In the future, employees with varied skills/competencies - not only interpreting - will be valued more than those with one specific expertise. Those who can learn new skills/competencies quickly will be highly valued in our rapidly changing world. Job enrichment is one means to meeting those future challenges.

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Section VIII

Working with Students from Diverse Backgrounds

Designing a Program in a Postsecondary Mainstream Institution to Meet the Needs of Multicultural Students who are Deaf or Hard of Hearing

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Abstract

LaGuardia Community College is one of 19 City University of New York campuses in the New York metropolitan area. It is located in the borough of Queens and is the home of the Program for Deaf Adults, which provides academic support services and courses to deaf and hard-of-hearing students at LaGuardia.

Several years ago, the college made significant changes in curriculum and policy to support its commitment to pluralism and better meet the needs of its diverse population of students. It is important to understand the context in which these changes were made and how they have positively influenced the activities and initiatives of the Program for Deaf Adults (PDA).

The PDA model as described below has helped make an important contribution to our college, and it is hoped that this information will be valuable while designing your own programs to meet the needs of students from multicultural backgrounds.

A Look at Diversity

Why is the issue of diversity so important today? Is it because President Clinton established a committee to address these concerns; or, because it is politically correct to talk about these issues? Or, is it that since the Civil Rights law of 1964, the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990, there remains little progress in the inclusion or acceptance of people of color in our society?

It is a sad truth that even today, segregation exists in communities, housing, and schools. More tragically, the resultant economic inequality and violence continues to devastate our nation.

Some people in the field of educating students who are deaf or hard of hearing feel that the situation is different. Working in this field does force one to deal with diversity. All of us are aware of the special educational concerns and supports for our students. And, for the most part, including those culturally different from mainstream populations; we serve them on an individual basis in terms of their unique needs without regard to race.

However, when students enter the classroom, they are often confronted by a mainstream curriculum – using materials and lessons plans that have consistently omitted the many accomplishments and contributions people of color have made to our society. We are not giving our students a true representation of how our nation was formed, and we are certainly not giving them the hope that they too may aspire to become leaders and influence the world in which we live.

In Beverly Daniel Tatum's book on race, racism, and racial identity, she identifies "the cycle of oppression." Dr. Tatum speaks eloquently about how we are bombarded with stereotypical images in the media, exposed to ethnic jokes of family members and friends, and are rarely informed of the accomplishments of oppressed groups.

Without illuminating the shadowy ignorance of the past, it likely that the dark periods of our history will be repeated. Until we begin to change the images in media, introduce a history that includes the contributions people of

color have made to society, and begin to talk openly about race relations, we will be stuck in this cycle. Dr. Tatum also speaks about how the cycle is true not only in the way we raise our children but in the material that continues to be chosen for and taught in schools from elementary level through university study. She writes, “we teach what we are taught – it is not our fault, but it is our responsibility to interrupt the cycle.”

One example she offers makes this very clear. While at a grocery store, a white mother and preschool child pass a black mother and her child. The white child says, “Mommy, look at that girl! Why is she so dirty?” (A common misconception among white preschoolers). The mother is embarrassed and says, “Shhh,” and walks away quickly.

What happened here is: one, the white girl’s misconception about the black child being dirty is confirmed by her mother’s reaction; two, the white girl is taught that you don’t talk about people “like that;” and three, you in fact run away from “those” people.

Absent a discussion by the white mother regarding different ethnicities, the girl is left to her own imagination. What could have happened is that the mother might have said, “No, the little girl is not dirty, she is has a different skin color...” Other discussions about the differences in height, weight, color of hair, kind of hair, etc. might have taken place and would have informed the little girl better.

One point that Dr. Tatum makes clear is that we develop prejudices not only from what we are taught, but more significantly from what we are not taught. We are often left to our own imaginations and previous experiences when thinking about someone who is different.

If we look at our own programs, we can begin to think about how to change the cycle of oppression. First, as educators we can start to look at our curriculum, the materials used, and the discussions held in class. As program administrators and counselors, we can look at how we treat each other in non-academic settings and in other program and school related activities.

The best situation is to be in an academic setting in which the administration supports an inclusive environment, an environment I will describe and that currently exists at LaGuardia Community College.

LaGuardia Community College

Beginning with only a handful of students and administrators in 1971, LaGuardia currently serves 11,000 students in the academic division and 28,000 in the division of Adult and Continuing Education. Fifty percent of the students are immigrants. The student population is representative of over 100 countries and speaks over 130 different languages.

Eleven years ago, when President Bowen came on board, he stated his commitment to pluralism. In an effort to provide an environment of openness, equity, and support for this highly diverse population and to maintain a community of inclusion in which deaf and hard of hearing students will thrive, LaGuardia established systems specifically to promote pluralism and diversity.

College-wide Infrastructure Task Force on Pluralism—Formed by a mandate of the City University of New York in 1989 as a committee of the president’s office, this task force was established to promote pluralism and confront racism. Over the years, it has provided numerous college-wide forums and faculty development workshops focusing on issues of equity and diversity.

Lectures on stereotyping in the United States, were organized by outside scholars, writers, directors of organizations, and human rights leaders. The lectures served a dual purpose: to increase awareness of the evolution of stereotyping and of its manifestations in the American society and to provide accurate representations of various groups and their contributions to American culture.

The task force has two adjunct groups, the *Network to Confront Racism* and the *Student Network to Confront Racism*, which share the same goals: to educate and raise consciousness about racism; to provide forums for “difficult dialogues” about racism and other contentious issues; to serve as a resource on these issues to the college community; and, to identify strategies in dealing with bias and racial incidents in and out of the classroom.

Participants from both groups receive extensive mediation financed by the Office of the President, the Division of Adult and Continuing Education, and Student Affairs. The student component of the network assumed a leadership role in establishing a new initiative called “Town Meetings.” These provide a safe, comfortable, and constructive forum for students,

faculty, staff, and administration to ask questions, share concerns, disseminate information and develop a greater facility for dealing with difference. The forums proved to be an invaluable venue for airing problems and resolving conflicts.

The Task Force on Pluralism succeeded in raising consciousness about pluralism and worked to establish curricular policy in support of its goals throughout the college. When the college prepared to change its academic calendar from quarters to a modified semester system in 1991, the task force seized the opportunity to work with the Curriculum committee on establishing guidelines to ensure that all courses and programs in the academic division incorporate pluralism throughout the curriculum, instruction, materials and assessment of students.

These guidelines have now been institutionalized, and the Division of Adult and continuing Education supports them. The LaGuardia Library reflects its commitment to multiculturalism through its collections and services. The Program for Deaf Adults exemplifies the application of these principles.

Program for Deaf Adults (PDA)

PDA is a model, urban, postsecondary program primarily serving multicultural students who are deaf or hard-of-hearing. It offers a comprehensive education through an extensive variety of both degree and continuing education courses, serves an average of over 1,000 students annually, and is among the largest of such programs in the United States.

PDA's student population is similar to that of CUNY overall: ethnically diverse recent high school graduates plus older students returning to school, many of whom work full or part time.

The largest group, Hispanic, includes students from Colombia, Dominican Republic, Puerto Rico, Mexico, and others. The second largest, non-Hispanic white includes students from Russia, Romania, Poland and Greece. The third largest group is Black, but only one-quarter of that is African-American; the majority is from Jamaica, Trinidad, Haiti, Guyana and England. The Asian group represents India, China, Hong Kong, the Philippines, and Vietnam.

PDA's on campus student body represents the following:

- 47 deaf/hard-of-hearing students in the academic division
- 430 deaf/hard-of-hearing students in continuing education courses
- 44 deaf/hard-of-hearing students in CUNY outreach programs
- 859 hearing students in ASL and Interpreter Education programs

The Program for Deaf Adults offers services and courses to students in both the academic division and the division of adult and continuing education. It also serves as a resource to college-wide offices and departments. The following is a list of such services:

Services offered to Students:

- Support services to deaf/hard-of-hearing students in the academic and adult and continuing education divisions
- Counseling and registration assistance for students in the academic and adult and continuing Education
- Specialized sections in remedial reading and writing for deaf students in the academic division taught by a professor proficient in ASL and skilled in teaching this population
- Reading and writing intensive workshops to prepare students for college and to prepare students for passing CUNY exit exams
- Continuing education and "feeder" programs for students preparing to enter the academic division
- ASL classes to students for credit or non-credit

Educating the College Community and Collaboration within CUNY –

- Serves as liaison to administrative offices: The Registrar, Admissions, Bursars, Financial Aid
- Provides education to the college community as a whole – security office, nursing, staff, general college community
- Collaborates with the Academic Division (Human Services Program) to initiate a Deaf Studies Program; Job Placement Office to make services more inclusive;

English and Communication Skills Department to offer courses specifically to deaf/hard-of-hearing students

Outreach work within CUNY/throughout Region II, and New York State

- CUNY-wide Regional Support Services (providing interpreter services)
- Interpreter Education certificate program and workshop training throughout Region II
- Through the Northeast Technical Assistance Center – looking at issues of diversity

Staff and Teachers

PDA's teachers and staff are ethnically diverse and fluent in both American Sign Language and English. PDA strives to recruit interpreters that meet the communication needs of students and match the cultural diversity of this population. PDA reaches out to established minority organizations in the New York City area and encourages members of these groups to enter the interpreting profession and join the interpreter education program at LaGuardia.

Teaching Practices

PDA provides individuals who are deaf or hard-of-hearing with the special education and skills they need to succeed in a mainstream environment. It offers students an education in an atmosphere with few communication barriers and significant numbers of deaf and hard-of-hearing peers from different cultures with whom to socialize and share experiences.

The philosophy of teaching to students who are deaf or hard-of-hearing embraces the extensive understanding and usage of two different languages, American Sign Language (ASL) and English. ASL is the language of instruction used. Reading courses are based on themes, taught in context using a who language approach and include a multicultural perspective – example of such themes have been the Apartheid, Native Americans, Bosnia, and of course, Deaf Culture. Pluralism pervades the curriculum and pedagogy. Students read and write about works drawn from a wide array of genres by authors who represent a full range of ethnicity and national backgrounds.

The goal is to motivate students to question their preconceived ideas about race, ethnicity, sexual preference and gender by drawing them into an exploration of the backgrounds of the diverse characters they encounter.

The teachers hired by PDA are ethnically diverse as well as fluent in American Sign Language and English. Some of the instructors are graduates of LaGuardia. The particular needs of students insufficiently prepared for college-level work are met by creating learning environments where students are not afraid to take risks and where diverse ways of thinking and learning are valued and respected.

Continuing Education Courses

A sampling of Continuing Education courses for Deaf and Hard of Hearing students includes: ASL for Deaf Foreigners, Intensive Academics for Deaf Foreigners, Academic Skills Levels I through IV, GED, Typing and Computer Skills, College Preparatory courses (which is a part of the feeder program), and Individual Instruction.

Individual Instruction is a one-to-one intensive instruction provided to meet the specific needs of individuals whose educational needs cannot be met in a group setting. This course was developed about ten years ago when a late-deafened adult came to the program. Individual Instruction has been very successful and is offered to a multitude of students to meet very individual needs. For instance, a Haitian-native student who is hard-of-hearing and fluent in spoken Creole French required prep work to prepare for the American History Regents exam. We were able to provide a licensed high school teacher, also fluent in Creole French. Eventually, this student passed the Regents test and was able to earn his H.S. diploma and enroll in LaGuardia's degree program.

Unique to LaGuardia are the articulation agreements (with the Division of Academic Affairs' departments of English and Communication Skills) to run specialized credit course sections specifically designed for Deaf students in English (basic writing), Communication Skills (reading), and English 101. The English and Reading courses are very important to note, since courses such as these are rarely seen on mainstream campuses. Before these were established, students would pass these developmental skills courses only after 2 – 4 failures.

One attempt by the college was to place students in the ESL sections. Again, this failed. Finally, hiring an educator who is experienced and educated in teaching Deaf students and fluent in ASL was the solution. Students now pass these courses after one semester and gain the prerequisite foundation skills so necessary for success in other courses. These courses are not considered PDA courses but academic courses offered by the academic Division, which must meet all of the requirements as any academic course.

In addition to these courses, specific workshops are provided to Deaf and hard of hearing students to offer additional support to pass the University exit exams – Writing Assessment Testing, Reading Assessment Testing, and Math Assessment Testing (also known as CUNY Proficiency Exam). These exams have been used for placement into appropriate classes and are now required for graduation and to transfer to CUNY's four-year colleges.

A unique support service system (Supplemental Instruction)-

Supplemental Instruction Program, or SI, takes a unique approach to academic support. Rather than targeting students who are at high risk, the program identifies high-risk courses, mostly those taken by beginning students. All students in those courses have the option of attending study group sessions, facilitated by peers (also known as SI leaders), who also attend the class. SI leaders can be former students or tutors from the Deaf Community. The SI Model was developed by University of Missouri at Kansas City in the 1970's and is now widely practiced in many colleges all over the nation. Approximately three years ago, working closely with LaGuardia's SI Program Project Administrator, the Program for Deaf Adults adapted the model and implemented the SI Program for our Deaf and hard-of-hearing students here. The results were a higher rate of Deaf students passing high-risk courses.

One major project of PDA's college-wide was to increase the percentage of workers in the Deaf field who represent culturally diverse populations is the proposed Deaf Studies degree program. It is offered through the College's Human Services Program, and its students are mostly hearing whose career goals include working with the Deaf

population as interpreters, teachers, and/or human services providers.

Deaf students are also taking these courses. The curriculum includes two years of classes in American Sign Language (four different levels), Sociology of Deaf Communities, and Internship Seminars. The Coordinator and full-time professor is profoundly deaf and fluent in ASL and who teaches such mainstreamed courses as Principles of Human Relations. This professor also teaches a cross-cultural class to interpreter students (a program administered by PDA), which typically includes a panel of Deaf individuals (generally PDA students) from different cultural groups each week.

"Dual Access" courses are an outcome of the Deaf Studies initiative. Dual Access courses are either ASL (II through IV) courses offered in the academic division that can be offered to students for academic credit or continuing education status. This innovative system has helped increase the enrollment in these courses, a problem we had previously seen when continuing education and academic divisions compete for the same students.

The Dual Access system in Basic Writing and Reading Skills courses are also made available to Deaf and hard-of-hearing students who are not matriculated. This has helped students to maintain non-degree status for one semester before entering as a degree students and tapping into financial aid and vocational rehabilitation supports.

One other noteworthy item is worth mentioning. Every year, Deaf and Hard of hearing students of color and diversity in the Basic Skills Academic Writing course contribute their best essays to a college-wide reading. Some of these essays were published as a collection in the booklet, "Voices of Deaf Writers." This booklet was distributed throughout different secondary and post-secondary educational institutions for Deaf students. The collection was also part of the required reading in the current Continuing Education's feeder program courses and in Academic's Basic Writing and Reading classes for Deaf and hard-of-hearing students. These stories have often inspired other Deaf and H/H students of color. In addition, some of the students' work can be seen in Professor Sue Livingston's recently published book, "Rethinking the Education of Deaf Students: Theory and Practice from a Teacher's Perspective."

Extracurricular Activities-

The Deaf Multicultural Club (DMCC) caters to students who are deaf, hard of hearing, and deaf-blind both in the academic and continuing education divisions. Its main mission is to increase awareness of deaf culture within the college community and promote integration among students who are deaf, hard of hearing, and hearing. It includes weekly meetings facilitated by a deaf, minority-group faculty advisor.

Summary

Through its Program for Deaf Adults, LaGuardia Community College continues to be a successful pioneer in meeting the challenges and special needs of a unique multicultural student population segment—students who are deaf or hard-of-hearing. Specific courses and programs have been set in place and methodologies are used that are specific to this population. Significantly, the student success rate (graduation with degree) of PDA has consistently improved and now parallels that of mainstream institutions.

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Using a Self-Directed Guide for Students who are Deaf-Blind Considering College

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Students who receive a postsecondary education who have both a vision and hearing loss are a relatively small population. However, their support needs can be many and are as varied as the individuals themselves.

Often deaf-blind students who are considering college have never considered their learning style or the accommodations that best meet their needs. In high school, accommodations are usually made by teachers with little involvement from the student. Once in college, the student must learn to advocate for necessary supports. It is essential to the student's success at the college level. However, deaf-blind students need a way to gain these skills.

Many times, college staff including Disabled Student Services, have not had experience serving deaf-blind students in the past and are not familiar with many of the accommodations that could be afforded to deaf-blind students. Does the student need braille transcribed textbooks, access to a closed circuit television (CCTV), or a tactile sign language interpreter? To answer these and many other questions, college staff need a guide or tool that would help determine how best to meet the needs of deaf-blind students.

Description of *The Guide*

In response to these gaps, *The Guide for Students who are Deaf-Blind Considering College* was developed. It is a tool to assist students to identify their own personal learning style and to identify and evaluate college programs and support services,

which enables them to select a college that best meets their individual needs. It is a useful tool for high school graduates as well as adults seeking additional education after time spent in the workforce. *The Guide* is divided into four sections, which can be used individually or collectively. The following is a description of each section:

The "Personal Learning Profile Checklist" surveys a student's preferences (communication modes, use of ALDs, teacher positioning), environmental concerns (lighting sources, use of audio/visual equipment), and other accommodation considerations (print or alternate media, test accommodations) in a yes/no checklist format. Once completed, a compilation of the "yes" answers will reveal the student's personal learning style.

"Searching for College Programs: Getting Started" includes a questionnaire about the student's high school experiences, interests, and relationship with his/her vocational rehabilitation counselor. The section concludes with a checklist of initial questions to consider for colleges of interest to the student, e.g. size, entrance exams, academic calendar system, etc.

The third section titled, "Campus Characteristics," asks the student questions about classrooms, e.g., size, seating arrangements, travel on campus, and the dormitories (lighting, events/activities, and safety issues). Students complete this checklist for each college being considered.

The last section of *The Guide* is the "Support Services Checklist." Questions regarding fourteen support services that may be requested by students who have vision and hearing loss are included to help stimulate discussion with college staff and

additional questions by students, and to identify support services available on the prospective campuses. These fourteen support services include: interpreter services, notetakers, readers, tutors, volunteers, large print materials, braille materials, taped textbooks, alternate test-taking methods, reading machines, orientation and mobility (O&M) services, transportation services, counseling and support services, and additional services.

Postsecondary Education: A Personal Perspective

I am Heidi Aulenbach, a social work student at Metropolitan State College of Denver. I will discuss my own personal experiences as a college student who happens to be deaf-blind and my encounters with other deaf-blind college students on the campus that I now attend.

I was born deaf and blind as a result of maternal Rubella. I do have distance vision problems in my left eye, but it is usable. Through the right eye, I can see colors and shades of light and dark, but it is out of focus.

I am profoundly deaf in both ears. However I do have residual hearing that allows me to compensate for my lack in the ability to lipread others or things I do miss in my limited field of vision. I had years of speech therapy which enabled me to use my hearing and speech to converse with hearing people. My preferred method is sign language, which I use fluently in addition to my speech skills.

My experiences as a deaf-blind college student began fifteen years ago when I attended Gallaudet College in Washington, DC just after I completed high school. At that time, I considered myself a very independent adult, able to get around on my own, just as I still do today. Still, my first college experience did offer new experiences for me in handling my affairs and taking responsibility for myself. I learned these skills gradually over the next several years. While at Gallaudet, I had some denial regarding my deaf-blindness and thus, I did not take advantage of the services that were offered for the deaf-blind students there.

At that time, services for deaf-blind students at Gallaudet included note taking, tactile interpreting, and tutoring. There was even a support group for deaf-blind students. I didn't think to

use those services in the classrooms as I could see the teachers signing the lectures. Thinking back now, I do admit that I had trouble seeing the blackboard and did not take good notes.

After two years, I decided to leave Gallaudet and return to California, where I attended a community college. The student services were excellent. I did well in most of my classes. There was only one other student at that community college who had similar vision/hearing problems as a result of Rubella.

In 1993, I relocated to Colorado. After living in Denver for a while, I realized that there was a serious need for better deaf-blind services in Denver. Three years later, I went back to college for a degree in social work from Metropolitan State College. The college offered good support services for disabled students, including deaf students. I accessed support services needed for my classes, including note taking and interpreter services. I was later asked by the coordinator of Disability Services at the community college to teach the deaf-blind students some tactile sign language in an effort to enhance their communication with others.

There are three colleges on this campus: Community College of Denver (CCD), Metropolitan State College of Denver (MSCD) and University of Colorado at Denver (UCD). Of the three, Community College at Denver has the largest number of deaf-blind students. At present, there are six students who are deaf-blind, including myself on Aurora campus. One woman takes classes at CCD and MSCD at the same time. Each student has varying needs according to their degree of hearing and sight. I will describe each of these students to demonstrate that deaf-blind persons are unique in their needs with regard to their college education.

Terry is a 40-year old woman and is gradually losing her hearing and sight. This deterioration began about six years ago. She had vision problems in the past but is now coping with her hearing/vision loss. She now attends classes both at Metro and CCD. Since her hearing and her vision have changed, her learning methods have been modified. For example, with the aid of her math tutor, they devised ways to do graphs. Terry also uses a hearing aid and an FM system, and that allows her to communicate with others and on the telephone. She used to use the closed circuit television (CCTV) but now is finding it diffi-

cult to use. She can read large print in addition to braille. At home, she has a computer system, but it took quite a while to get it set up so that she could use it efficiently. She is also learning tactile sign language. Also, she now has a leader dog to guide her around campus and Denver.

Melissa, a 21-year old student at CCD, is a fairly recent high school graduate and communicates orally. She can see light and dark and, due to her residual hearing, she converses orally with hearing people. However, she has to learn tactile sign. She can read braille, move around well with a cane, and is a quick learner.

Charlotte, a woman in her 50s, goes to CCD to improve her skills in English. She is partially blind and uses a cane. She uses a CCTV in order to read print materials. Due to her deafness, she has excellent tactile sign language skills and has no usable speech.

Diana is another deaf-blind woman in her 20s who attends CCD. She is blind in both eyes and has hearing loss in both of her ears. She can converse very well with others in person or on the telephone using the relay service. She can sign very well.

There are two additional deaf-blind students, Maurice and Amanda. They attend CCD. Both of them can speak and hear using hearing aids with or without FM. Maurice knows very little sign language but, on the other hand, Amanda is fairly good with sign language.

As you read about each person, look at their individual needs that require accommodations in order to be successful in a postsecondary environment. At present, there are plenty of interpreters, but it is hard to find qualified people who would be willing to take up the challenge of working with deaf-blind students. There is always a risk that the deaf-blind person will become overly dependent on that person working with them. Some assistance will vary; for example in my case, my needs are minimal as I require notetakers, interpreters and sometimes large print materials. Others need additional assistance such as using tactile sign language, braille, CCTVs, etc.

I again emphasize that each deaf-blind individual has unique needs. By working with support service staff on campus to develop and imple-

ment a workable plan for support, deaf-blind individuals can succeed in a college setting.

The Guide for Students who are Deaf-Blind Considering College is an excellent resource and will be extremely helpful for those who work with prospective deaf-blind students, such as school counselors, vocational rehabilitation counselors, and parents. It would help the deaf-blind student view the college experience as a whole in a realistic and thoughtful way.

Summary

While all students who attend college feel that the burden of success or failure rests solely on their shoulders, most students will admit that it can truly be a team approach. Students without vision and hearing loss rely on their family members, friends, classmates, and instructors to succeed. Students who have vision and hearing loss often have a few more members on their team, including disabled student services staff, vocational rehabilitation counselor, readers, O and M instructor, interpreters, and notetakers. In order to self-direct this large team of support, it is necessary to have a handle on one's own needs and accommodations. By using *The Guide*, the student can serve as captain of his/her own team and increase the chances of success at the postsecondary level.

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Inclusion of Students who are Deaf or Hard of Hearing in International Educational Exchange Programs at the Postsecondary Level

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Inclusion of people who are Deaf or hard of hearing in international exchange furthers access to important educational opportunities; promotes diversity, cross-cultural learning and cross-disability perspectives; and increases educational equity for people with disabilities. The following will offer an understanding of the issues, provide valuable resources and discuss how people who are Deaf or hard of hearing can become involved in a variety of international educational experiences.

Mobility International USA (MIUSA) is a non-profit, US-based organization established in 1981 with the mission of empowering people with disabilities around the world through international involvement, promoting cross-cultural understanding, providing leadership, and disability rights as part of diversity training. MIUSA's involvement internationally includes coordinating exchange programs, surveying international development organizations for inclusive practices and providing free resources through the National Clearinghouse on Disability and Exchange (NCDE). The NCDE, managed by MIUSA and sponsored by the Bureau of Educational and Cultural Affairs of the United States Department of State since 1995, educates people with disabilities, resource centers' staff and higher education administrators about international educational opportunities in order to increase the participation of people with disabilities in international programs. NCDE also facilitates partnerships between people with disabilities, disability-related organizations, international exchange organizations and higher education institutions.

An example of a successful partnership project at the postsecondary level is Access Abroad (which was highlighted during the conference session by Wendy Harbour from Disability Services Office at the University of Minnesota). The University of Minnesota's disability office collaborated with its education abroad office to develop models, tools and other resources to enhance study abroad for students with disabilities at the University of Minnesota and Access Abroad's partner, affiliate and overseas higher education institutions. This three-year project, funded by the Fund for the Improvement of Post Secondary Education at the U.S. Department of Education, has resulted in a multimedia online tutorial that can be used by disability service providers, overseas coordinators and international exchange professionals when recruiting, advising and arranging for the successful participation of students with disabilities in study abroad programs. It also includes useful information for students with disabilities interested in or already planning a study abroad experience.

It is important in this ever-changing global society to focus on creating strategies for the successful inclusion of postsecondary students who are Deaf or hard of hearing in international exchange programs. International educational experiences provide a deepened knowledge of and interest in diversity, cross-cultural learning and the cross-disability perspective for all students, including students who are Deaf or hard of hearing. Students with disabilities must have the opportunity to experience the benefits of interna-

tional programs, as do their non-disabled peers. As our world turns to a globalized economy and the job market becomes increasingly competitive, international educational opportunities, such as volunteering, interning, studying, working, living with a homestay, and teaching or researching abroad provide life-long skills and enhanced employability. Although attitudinal barriers do exist all over the world, it is vital to individual development that people with disabilities have the right to choose to have an international experience.

As students who are Deaf or hard of hearing become increasingly interested in international educational programs, it is the resource center staff and the college and university administrators and faculty who are in key positions to give these students the information and encouragement that they need to successfully pursue international educational opportunities. NCDE publishes (in print, audiovisual, alternative formats or online) several books, captioned videos and tip sheets on rights, options and creative solutions for students with disabilities regarding full participation in international educational programs. By reviewing and sharing these resources, administrators, faculty and staff can assist in preparing students who are Deaf or hard of hearing to make contributions and reap the benefits of international educational opportunities.

If a person who is Deaf or hard of hearing is pursuing a career in which international experience is vital, there are some options to consider for funding. If a person who is Deaf or hard of hearing receives Supplemental Security Income (SSI) benefits and has the opportunity to participate in an international exchange program, he or she should apply to have his or her benefits continue while abroad. There is a little-known SSI provision that allows for the continuation of benefits while participating in a U.S.-sponsored, overseas, accredited program that is not available in the United States and will further one's employment options.

This is an exception to the more well-known "SSI 30-day rule" that does not allow for the continuation of SSI benefits while outside the United States for more than 30 days. The "30-day rule" was amended through legislation introduced by Congressman Peter Stark of California in 1994 as part of the Social Security Independence and Pro-

gram Improvements Act and became effective January 1, 1995. Even though there are set requirements to qualify, this provision makes it possible for people with disabilities, who financially need to continue their SSI benefits, to gain the international experience they need to increase their employability. Another option available to SSI beneficiaries to proactively plan for international exchange is through the SSI work incentives program. An individual with a disability receiving SSI benefits can apply for a PASS (Plan for Achieving Self-Support). If an international experience is approved by the Vocational Rehabilitation counselor as necessary to meet an individual's career goal, income can be set aside to be used to cover some of the expenses related to participating in the overseas program.

Other questions that need to be answered regarding Deaf and hard of hearing students are how accommodations will be arranged abroad. Sign language varies from country to country, and not all countries have a uniform national sign language. Countries where the people's spoken language is English may have sign languages that are very different from American Sign Language or have accents that are difficult to lip-read. Some students have successfully learned another country's sign language or practiced lip-reading the spoken language by finding international individuals in the United States that use the foreign language. Other students have found it useful to arrive a month early in the host country and locate sign language classes or Deaf clubs where they could learn the language before the exchange program begins. NCDE has contacts with Deaf organizations overseas that may be of assistance in locating sign interpreters abroad. Some universities overseas may have sign interpreter programs and have interpreting services in the native sign language available to their students. It is important to find out the availability and certification of interpreters that may be found overseas.

Other study abroad options may be "island" programs where participants take classes with other U.S. students in the English language while studying the host culture's history, language, and other subjects. Not all programs are classroom-based; there are also internship, independent research, homestay and volunteer options that can provide a different type of

international exchange experience and could be conducted with the Deaf or hard of hearing community in the host country.

To learn about these different program options and the experiences and strategies of past exchange participants who are Deaf or hard of hearing, contact NCDE to inquire about our publications, peer to peer network and our several stories written by Deaf and hard of hearing individuals published in our free *A World Awaits You* journal and on our website.

MIUSA/NCDE is deeply committed to increasing diversity through the inclusion of people with disabilities in international programs. Resource centers' staff, university administrators, and fac-

ulty have the chance to empower post secondary students who are Deaf or hard of hearing, through providing information and encouragement, and creating opportunities of which these students can take advantage to experience the cultural diversity that can lead to a desire to explore the world!

For more information on the services and resources mentioned above, please contact:

Mobility International USA The National Clearinghouse on Disability and Exchange

PO Box 10767

Eugene, OR 97440

Tel/TTY: (541) 343-1284 Fax: (541) 343-6812

E-mail: <clearinghouse@miusa.org>

Web-site: <www.miusa.org>

Section IX
Personal Development

Avenues to Literacy: Our Stories, Our Visions

Coordinator:
Barbara Boyd

Panel Moderators:
Beth Peters
Lauren Teruel

Panelists:
Dan Girard
Julie Hochgesang
Erika Leger
Nan Zhou

A Panel Presentation by Students Who
Are Deaf or Hard of Hearing
From California State University,
Northridge

Coordinator: Barbara Boyd, Ph.D.

Panel Moderators:

Lauren Teruel, B.A., English, from Chicago, Illinois, and Beth Peters, B.A., Liberal Studies, from Pleasanton, California.

Panelists:

Dan Girard, Senior Psychology Major from Boston, Massachusetts; Julie Hochgesang, graduated with a B.A. in English, from Chicago; Erika Leger, freshman Liberal Studies major, from Boston, Massachusetts, and Nan Zhou, graduated with B.A. in Psychology, from China and San Francisco.

Lauren: Our presentation is concerned with literacy. The most simple definition of literacy is the ability to read and write. Today, literacy means far more. Literacy is the ability to read and write so that we have the competency to carry out the complex tasks of the world of work and life outside the classroom.

Beth: Ideas and ideals from past culture define and shape society. Literacy allows us to see and experience the different facets of society through the eyes of myriad persons, allowing us to reshape and redefine society as we know it today. The definition of literacy has broadened to include so many more forms: computer literacy, math literacy, science literacy, art literacy, cultural literacy.

Lauren: Paolo Freire, the Brazilian educator, wrote: "On the basis of the social experience of illiterates,

we can conclude that only a literacy that associates the learning of reading and writing with a creative act will exercise the critical comprehension of that experience, and without any illusion of triggering liberation, it will nevertheless contribute to its process." The task of liberation is in the hands of what Freire calls "the oppressed." He further explains that only when the oppressors stop "making pious, sentimental and individualistic gestures and risk an act of love" can the liberation process succeed. Freire's intent is that we must move beyond tokenism; we must hear and we must see the messages of the *true* professionals in our field, the students whom we serve every day.

Beth: Last Wednesday evening during the opening plenary session, Annette Reichmann from the Office of Special Education and Rehabilitation Services in the United States Department of Education was addressing the decline in the number of vocational rehabilitation cases that are closed. Ms. Reichmann posited the theory that one reason for this might be due to the fact that better literacy and math skills are required in work settings, due possibly to the fact that literacy requirements are increasing. Our panel of students from California State University, Northridge, will address literacy; we will discuss the ways in which we have incorporated literacy in our everyday lives, how we initially developed the ability to read and write, how we carried the learning of our elementary and secondary schooling into our college careers.

Beth: Emergent Literacy is always the first crucial stage in learning to read and write. This begins when we are infants, when reading and writing and

vocabulary development start, when parents communicate with their children. This first stage includes—for some of us starting school early and — for others, learning pre-reading tasks in the home. Dan, you went to college long before you went to elementary school! Tell us about your parents' involvement in your preschool education.

Dan: I was in preschool when my parents found out that I was deaf, when I was six months old. They sent me to Emerson College for preschool. After school, when I arrived home, my parents shared stories with me. They had pictures of cookies, for example, and then they showed me the sign for cookie and associated that word with others such as milk. (We were all learning American Sign Language). So, words were drilled into me every day as I developed language and the vocabulary that was appropriate for me at that age. And it was done in a fun way.

Lauren: Erika, you started school at the age of two. Tell us how your mother used dolls to introduce you to literacy.

Erika: When I was very small, I loved dolls. My mother gave me dolls and asked me to create a story about the dolls. Mother would then write my story and ask me to read, voicing and signing the story at the same time.

Beth: Nan, would you give us a brief summary of how you started learning and how you learned your first word?

Nan: I was born in China. My parents are deaf. So of course our native language was Chinese Sign Language at home. I remember in the first grade I was seven years old, and the teacher approached me and showed me a card at the desk where I was sitting. I didn't know exactly what was going on. The teacher then asked me to copy that word. I did, and she said, "Do you know what that word is?" I said, "No." And she then told me, "This is your name." Until then, I had no concept of associating names with their written counterparts. That is how I developed a vocabulary; it was the initial experience in my acquisition of literacy.

Lauren: Julie, you had an older sister with whom you competed. How did that competition influence your motivation to learn?

Julie: Yes, there was sibling rivalry. My sister is five years older than I. She seemed always to get our parents' attention by showing off her ability to read. And I wanted that attention, too. So I worked, and I read things, and when I could understand something, I went to my mother and

showed her that I could do as much as my sister. That competition provided me with the motivation. My sister is a brilliant writer now; she was my model for the future.

Beth: Lauren, how did the use of cards and words help you to develop literacy skills?

Lauren: My mother is an artist as well as a professor and is very creative when she teaches. So my mother made these activities for me rather fun. She gave me pictures of my father, who was typically out of the house. He worked all day long for very long hours. So I was constantly thrilled to see my father when he came home. We would cut out the shape of my father from pictures, and we glued them on very brightly colored cards. Then my mother would ask me: "What is Daddy doing? What's Daddy doing in this picture that's in front of you, Lauren?" I looked at the pictures, and I said, "Daddy is looking," and my mother wrote on the card exactly what I gave her. Then I could make the connection between activities as well as the printed word on the card and the action verbs associated with what my father was doing – talking, looking, and so on.

Beth: I work with children today teaching them to read. It is a constant struggle. But there are so many, many different strategies that can be used. Not only do I develop those strategies, I also share and learn from others. One wonderful strategy that I've learned is to have a parent tell stories to their child, either a published story or one that they create themselves and write. Read the first part of the story, stopping midway or enough to stimulate the child's curiosity. When the child wants to know the end of the story, the parents say, "You read the story... and that is how you find out what happened." So the child then begins to understand that the book is a story and that there is a plot that develops; the story has people. In terms of books and literacy, for the twenty-first century, another activity which fosters the development of literacy skills is engagement, meaning students are actively involved in their learning; they're not just passive readers and learners. Rather they are doing, and they are connecting the print with the activity and making that association.

Lauren: In elementary school, we make the shift to a more involved type of reading. Not only are the parents educators in the home but also the teachers in the elementary school setting. Nan, what's your experience in elementary school?

Nan: Yes, there was a time when we were asked to bring pictures of our families, and I brought a picture of my parents. I learned their names and made the connection between the written name, the signed name, and the person. We had pictures of animals, and we made the same connections. From all these pictures and words we developed and wrote stories that became increasingly complicated. We learned grammatical syntax and identified nouns and verbs. In sum, we learned language. Children are curious by nature. Once we learned to read and write in the classroom, we were more interested in the world around us, and that motivated us to read the print that was in our environment.

Beth: When I was a little girl, I was captivated by books. I wanted to read everything. I was hungry to read. One day my mother saw me looking at the newspaper, and she thought, "That's appropriate; Beth is reading the comic strips or whatever." But I wasn't. I had discovered a statement in the Business Section of the newspaper that had captured my attention. And my mother wondered, "Why is my daughter reading the Business Section?" The headline had something to do with Santa Claus. That was enough to spur my curiosity and get me reading. How cool that I was reading about Santa Claus and had been exposed to the Business Section of the newspaper.

Lauren: That shows what a diligent reader Beth was and is today. And we have a lot of diligent readers on our panel. Erika, tell us about reading and how you became a voracious reader.

Erika: From the age of five, I went to the library near my home every week and got a stack of books. Then I'd sit in the car on the way home from the library, reading. I read all the time. I'd get through that stack of books so quickly we'd have to make another trip to the library. My mother, I guess, got tired of taking me back and forth to the library, but I think she was glad I liked to read so much.

Julie: My mother would also take us to the library every day. And I would be there, thinking, I'm going to read this because my sister has read it. Then I would go on a search of my own; I wanted something that would be to my taste and something new, so I looked in the stacks, and I would gather more and more books, and I thought some of these books were difficult, but I would get my 12 to 20 books and take them up to the librarian. And she would say, "Oh, another 20 books—eh, Julie?"

And I would do that every time. Eventually, my mother got a little tired of it. One day, she said to me, "Quit reading! Go play!" I was so disappointed because I wanted to keep on reading.

Lauren: You are a parent's dream child. It's difficult to get a child to read that much, so that's nice. That internal curiosity that children have is a wonderful gift. How do we foster that? How do we encourage it? Do we provide rewards to the child?

Erika: In the third, fourth, and fifth grades, I had the same teacher who gave us excellent lessons. We had to do creative book reports every Friday. Sometimes we created a play and sometimes a written summary or poster. I enjoyed my projects, my book reports. So, every week I looked forward to doing my reports. And of course I'd read three books in that time. So I would always have the longest reports. But I loved it. There was a program called "Book-It!" We read maybe 25 books a month and received a certificate for free pizza. I'd read 25 books a week. Friday was the best day of the week for me because of the book reports and pizza.

Lauren: Tell me about the book you wrote in 4th grade.

Erika: In the 4th grade I wrote a book about dolls, of course, and I drew the pictures, too. It was an illustrated book. Then I went to this big conference and read it aloud to the audience. I loved doing that. That was a validating, motivating, and confidence-building experience for me.

Lauren: Dan, while we're on the subject of school, please tell us about your apples.

Dan: As I said before, after school my parents would help me with language and mathematics. My father is an electrician, and he was into chemistry and so forth. I recall an instance when I had a hard time with math. What he did was get different kinds of fruit, but most of the time it was apples. Then he proposed a question: how many apples are there? I responded, "there are five." Subtract two. So I took away two. He led me through that process that there were now three, then he put the problem into the equation form, "five minus two equals three." He did the same with the addition principle. There were five, and we added three. So then we got more apples and changed the mathematical concepts to dividing and multiplying. And that was my experience with math and fruit, and I thank my father for that.

Lauren: Our student panelists have been sharing positive experiences that have taken place in the home and in the classroom. However, I'm sure we've had experiences that have inhibited us. I went to a very good school. My teachers spoke and signed at the same time. I did not need interpreters. I was very lucky. However, I was required to also take speech therapy on a daily basis. And you might ask, where did I find the time for that? They actually would take me out of my history class and put me into speech therapy. So essentially, from elementary school to junior high school, I didn't take history classes. And to this day, if you were to ask me questions regarding Christopher Columbus, such as when he came to America. I wouldn't be able to answer that for you.

Julie: Your experience was much like mine with speech therapy; I was in a mainstreamed environment and the only deaf person in that setting. The school personnel would put me in speech therapy and take me out of classes; this was a negative experience because I could not stay with my peers. I couldn't be at the same level, having been deprived of the information they were getting. I think it did hinder my progress. On the positive side, though, I found the means to overcome problems.

Beth: Our panelists have their own ways of being involved in their learning. Julie, for example, could go to the library and choose her own books. Dan experienced both visual and tactile learning and visually learning with his apples, a technique that fostered reading, writing, and mathematics literacy. When I was in the 5th grade I remember very clearly how I learned to prepare for tests. We were taught to write out facts, create stories, talk to the computer. At all times, we were given the freedom to choose what we wanted to do. In the 6th grade, Dan learned idioms in a creative fashion.

Dan: My teacher started the week with fun activities. You know how it is the morning of the first day of the week. You come in to class, tired, and you need something energizing. So we would do skits or dramatizations of idioms. Prior to these experiences, I had no exposure with idioms. I remember distinctly one time when "kick the bucket" was the idiom of the week. Up went my hand, and I proudly declared, "I think I know what this means. I'll act it out." So two of my classmates went with me out of the room to plan our strategy for acting it out. Back in the room, my friend laid on the floor, and I kicked him really

hard. And I said, "That's what that means." So we had a discussion about it... our perception was to kick the person, and the teacher explained in more depth and with greater precision for us. Since that time, I've been fascinated with idioms.

Beth: Julie, when did you separate the influence from your teachers and take a more active role in your own learning?

Julie: With reading and writing, like I said before, my sister and I were competitors. Everywhere in our house were books—the kitchen, the living room, the bedroom, everywhere. It was fantastic. We moved to a new house with a basement. Books had been left in the basement. I relished this chance to catch up with my sister, finding this cache of books in the basement.

With writing, as I said before, I was mainstreamed and was the only deaf person in the class. And I wasn't all that happy. I didn't think I had enough interaction with the other students. So my escape was in writing. I wrote journals and showed them to my teacher. In his wonderful way, he wrote comments and told me I had excellent ideas. He praised me and gave me feedback. So it was the combination of those things that encouraged my acquisition of literacy skills.

Lauren: I had a similar experience. I had the same teacher for three years. My teacher noticed that I had some issues with grammar and syntax, the word order in sentences. So my teacher decided to start a journal process between the two of us, just the two of us. This process of journal writing became an intimate exchange for us; it was not graded, but the teacher would correct my grammar and give me feedback on my sentence structure. Of course she used a red pen! I told her of my experiences, and she shared hers; I thrilled to know more about her. We did this over a span of two years, and the "blood" on the paper became less and less as this journaling process went on.

Beth: Tell us about the sign on your door, "No little sisters allowed."

Lauren: My older sister, my arch enemy essentially, had a plaque on her door. I didn't understand the message. What it said was, "No Shoes Allowed." And I thought perhaps this was an idiom I wasn't catching. And my sister said, "The real meaning behind this is 'No Little Sisters Allowed.'" And for years I honestly believed her. Sometimes I still think "'No Shoes Allowed' actually means no little sister can be in the room."

Beth: How did your father encourage your learning?

Lauren: My father recognized my interest in books. He gave me an autobiography about a woman living in Mexico, a woman who was trapped there for years and years with her family. She was deaf as well as blind; she did not have a very nice life. And I was captivated by this book. That summer my father told me that we were going to take a family trip to Mexico, to the very southern part of Mexico, to a small town called San Cristobal, which was actually the setting of that book. It was a wonderful connection for me to make in terms of reading and then visiting the city and seeing the places that had been mentioned. This type of learning experience stays with us long after the event has passed.

Lauren: We have talked about junior high school where we begin to develop our own self-assertiveness, getting ready to move into high school. Julie, share with us your experiences in high school writing.

Julie: I focused on liberal arts in high school, where I was in the honors program. I progressed just fine, but I wasn't truly happy. Approaching my teacher, I asked: "What's wrong? I'm not doing so well." And the teacher said, "You're one of the best writers in my class." And I felt angry about that. Why hadn't she ever told me? I would have been more motivated. In my senior year I was in an Advanced Placement class in preparation for college; I had a phenomenal teacher, Mr. Roz, one of the best teachers I ever had. And he had a phenomenal influence on me. We just had that bond. He understood what I wanted and needed. He would challenge me, saying I could do better, and he would say something about a book that would relate to me. And he'd say, "I know you'll like this book." So, I'd go home and read it, and think, "Wow, he was right." So, that was such an inspiration. He was a fantastic, wonderful inspiration. Mr. Roz, wherever you are, thank you!

Lauren: The transition from junior high to high school is always a challenge, but never more so than for Nan. Tell us what it was like moving to America.

Nan: My education up until Junior High was in China. We left China just as I was to start high school and came to the States. In America, everything was brand new. The biggest barrier for me was the English language. I took the standardized

test for math and English, and that had to be translated for me because my first language is Chinese. I scored at the 11th grade level for reading in Chinese. So I was going to be placed in the 11th grade. But, instead I was placed in a lower grade because of my English. I was not pleased with this. I had to start all over learning a new language with pictures and vocabulary. I wanted to express myself in my own language. As a high school sophomore, I took English as a Second Language. Again, as Julie said earlier, the teachers really make the difference. They told me to bring my favorite book from home. In class the teacher suggested that if I didn't understand vocabulary, then I should not use the dictionary, just keep reading and take in the big picture and try to figure out the word's meaning from the context. So, I'd do that and after finishing the story, I'd look up the words in the dictionary. And we practiced spelling and writing and reading. I bought a Chinese/English dictionary; that was my true passport.

Lauren: You had the foundation of your native language, Chinese. You could read Chinese, write Chinese. Were there other students in your school at the International Studies Academy who had issues in developing English because they didn't have that native language foundation?

Nan: Yes. My peers were from South America, Central America, and other nations; they had no or little foundation in a first language. Some came to the States with no language at all at the age of 16 or 17. Yes, I do consider myself very fortunate that I was literate in my first language. I built a strong foundation that way. And then I think it was much easier learning a new language.

Lauren: Your parents made the decision to move to America from China to improve your educational opportunities. What influence did they have when you were in high school?

Nan: Yes. In China we had lengthy discussions about what we should do. My family is deaf; we thought about educational opportunities in China. The States seemed to be the best option. I was a self-motivated student. My parents are blue-collar workers, but they were very supportive of me and wanted me to learn English, knowing it was my biggest barrier and that I had to overcome that obstacle in order to attend a university. Again, they supported me in every way as much as they could.

Lauren: Did your parents know English?

Nan: No, not at all. They still do not use English.

Lauren: Dan, please tell us your high school experiences in the Honors Program.

Dan: I started as a high school freshman in a self-contained class with other deaf and hard of hearing students with direct communication. I worked at my grade level. After my sophomore year, I was advised to take Honors English in a mainstream class. I thought, "Oh, my gosh, I don't want to leave my peers, my deaf peers. I don't know if I'm ready." Well, the teachers advised me, "I think you're ready." So I decided to go with that recommendation. My teacher had graduated from Harvard; she brought to our school many of the standards she had experienced in college. It mattered not to her what language we spoke, or whether we were deaf or hearing, or what our native languages were. She started us in writing, and her requirements were far stricter than what I had experienced before. So, I went home and did my best on that first paper. A couple of days later, I got it back – marked with a score of zero. So I went to the teacher and said, "You know, I can't do this. ASL is my native language, and English is my second language, and I'm really upset." The teacher would not accept that. "No, you can do this. You have me, and you have many resources. Take advantage of them." Once again, I went home and wrote my paper again. I went to the English Lab and worked with someone who corrected my paper and explained essay format and the need for an introduction, body and conclusion. I moved up to a B on the paper, and that increased my confidence. I did a lot of that same type of work, analyzing my topic, the structure of the paper, the grammar, that sort of thing. We did that on a weekly basis. This was not an easy time for me. So the third term of my junior year, I got a paper back that I had written twice. Much to my surprise, I got the highest grade in the whole honors class. This continued through the year; I had never worked so hard on English in my life. My teacher saw me during office hours and told me, "I have seen the improvement that you've made over this term." Near the end of the year, I was called to go to the auditorium. I showed up at the auditorium, not knowing what was happening. And my friend said, "You got a letter to receive an award." And I said, "No, I didn't get any letters." So they went on with the awards presentation, and my English teacher went on stage and started to describe one student's success. She mentioned that this student had received a zero at the very beginning of the term. She talked about the student's progress and how he had inspired her,

how he'd never given up, and at the end of the class, received the highest grade. That's how I received the Honors English Award my junior year.

Beth: As you can see from our panelists comments, three concepts are important: communication at home, language whether it's oral, sign, PSE, SEE, or Cued Speech, and thirdly high but reasonable expectations. These truly do foster literacy skills. Erika, how did you learn to read and write well enough to succeed in an American University?

Erika: I was really very highly motivated, and I practiced writing and read often. I was in the same school as Daniel; I had the same teachers. Their expectations and demands resulted in my feeling ready for college. I am glad that I did all the work they asked of me, because it paid off in the end.

Beth: Nan, how many languages do you know, and how do those multi-language skills help you achieve in a university setting?

Nan: I know five languages... my native language is Chinese Sign Language which we use at home. Then I know the Chinese language, American Sign Language, English, and now I'm learning Australian Sign Language. I was able to pick up ASL based on my foundation of CSL. I still struggle with English. In my first years at the university, I struggled; my constant companion was my Chinese-English dictionary. By the time I had graduated last year, though, I was pretty fluent.

Lauren: I have a question. In retrospect, what do you wish that high school teachers or even elementary school teachers had done to better prepare you for college?

Nan: I recall during my freshman year at Cal State Northridge, I took freshman English. In this class, I developed the analytical skills; we had to write and then look at a story, read a story, interpret a story, and write stories about my experiences. I wish I could have done that type of analysis in high school.

Lauren: Erika, can you tell us about your experiences in being a TA?

Erika: I am currently a Teaching Assistant for Freshman Composition. I'm helping teach grammar. In high school my teacher made grammar so "un-fun." Now, it's different. I'm learning every day and beginning to appreciate grammar as I work with freshmen students in writing.

Julie: What do I wish I'd learned in high school? I majored in English and graduated with that major, but I wish I'd learned how to critically analyze

literature. To really get into it. And analyze all the features, not just to know the name and the author and simple interpretations, but to really, truly, and critically analyze it. When I got to college, I was expected to do that. I had to write a paper about the significance of a “red tree” in a story we were reading—the symbolism, the possible interpretations. Having that in high school would have been helpful to me in college.

Lauren: But in Dan’s case, he was very lucky. Please tell us why, Dan.

Dan: Yes, I consider myself to be very fortunate. All through high school I had teachers from Harvard and Boston College, and they were demanding. And they told us: “Yes, this is hard; I mean it’s hard, yes. But you have to prepare yourself. This is high school; in college, it’s harder.” So the teachers had that perspective. “It’s my job to educate you and prepare you.” And they would say, “Trust me; later you will thank me.” And now I can say, YES. I mean, I’m not perfect, but the culmination of all these experiences that I have had have really led me to success. I have learned so much, and all experiences build upon the others. So I am very fortunate because my high school teachers were also college professors.

Lauren: I wish that I didn’t have to fight for the foreign language requirements. I went to a residential school for the deaf, and they were associated with a local public school. I was able to take classes there. And the teacher there refused to teach me Latin, because they felt that I couldn’t learn because I’m deaf. In my last year of high school, I was finally allowed to take a foreign language.

Beth: My experiences in high school were positive. My teachers challenged me to take the AP classes, just like the rest of our panelists. And the teachers didn’t let us have any restrictions. We were free to write also. I wrote so much I didn’t have to focus much on the grammar, whether it was all right or not. I had writing and immediate feedback, and it was critical for me. The fact that it was AP English challenged me and prepared me for college.

Lauren: Let me now ask the panelists what being a deaf or hard of hearing college student means to you?

Dan: What being a deaf college student means to me is independence and responsibility and proceeding on my own. In high school I had parents there to constantly remind me, “Do your homework.” When I went to college, it was up to me to prepare for the real world. And I am thankful for

all my experiences growing up which have made me what I am today. I’m facing the real world.

Erika: In high school, my parents really had to fight for me to get services such as interpreting. In college, I fight those battles. My parents are 3,000 miles away and I can’t call and say, “Mom, I have problems. Come and solve them for me.” So I’m becoming more independent and taking responsibility for myself.

Nan: I would say the college experience for deaf and hard of hearing students has been very important to me. In China people think deaf people are incapable of going to college. By moving to America, learning a new language, and graduating from college, I have proven something that continues to be a myth in China. And so that is a tremendous accomplishment for me.

Julie: I have to explain again the influence my older sister had on me. We have that life-long competitiveness. When I graduated from college my sister said, “I guess we’re in the same boat now.” And I thought, “Finally!” I have reached that pinnacle, being at the same level as my sister.

Beth: Not only are you a successful graduate of CSUN, Julie, you now are teaching English at Cal State Northridge. What do you see as the greatest determinant of success as a writer at CSUN?

Julie: I teach Developmental Writing to eight students. They have some natural skills and can hold their own in most areas of the university experience. They’re extremely motivated to question and investigate whatever I assign. It’s a phenomenal experience, and they’ve just improved so much. And that’s what teachers like to see, students who are thrilled and motivated. We work on their writing skills, and practice helps; but, motivation is the key. These students have become better writers as a result of their motivation.

Lauren: Before we close, I want to pose one more question to our panelists. What is your favorite book, the best book you’ve ever read, regardless of the age you read it?

Julie: Mr. Roz was my teacher. He showed me the book, *The Stranger*, by Albert Camus. I read it and it was phenomenal. A wonderful book for me, *The Stranger*.

Nan: *Anna Karenina* by Tolstoy. I remember my aunt watching the movie on television, where a woman was hit by a train, and I remember seeing this on television and wondering, “What’s going on?” Then I read the novel and made the connections.

Erika: I have two favorites – one is *Catcher in the Rye* by J. D. Salinger and my second favorite is *Wuthering Heights* by Emily Brontë.

Dan: I had two favorites, also. Both were from high school—*Rebecca*, and then *The Great Gatsby*. My teachers assigned us wonderful novels; they inspired motivation by asking us to act out chapters and envision events. Those were my two favorites.

Beth: You read my mind... that's my favorite as well, *The Great Gatsby*. To this day I remember the exquisite details of the novel.

Lauren: My all time favorite book from a long list, the one that comes to mind right now, is *Johnny Got His Gun* by Dalton Trumbo. I just made an instant connection with that book. It allowed me to see war through another person's eyes; I became more sensitive to other cultures. I had the opportunity to form a vision and get an idea of who I am and how I fit into today's society and what that means for me individually.

Beth: From the stories we have shared today, we recognize again that what's important in success is more than just language used. It's parental involvement and the fact that communication does take place in the home. It's an ambitious school program that wants students to be challenged and plans lessons and activities that facilitate learning. It's the belief that deaf students can and will succeed.

Lauren: We began this discussion by citing the work of Pablo Freire, and I will conclude with another of his basic beliefs that when people speak their own true words, they engage in dialogue capable of transforming and humanizing the world. Freire wrote that "faith in people is an *a priori* requirement for dialogue, and trust is established by dialogue." It has been our privilege to dialogue with you, and it is our fervent hope that you will now take the task further and initiate dialogue among yourselves and with us, as we all strive together to create "Avenues to Literacy" everywhere for students who are deaf or hard of hearing.

The Eugene and Inez Petersen Collection

Gail Kovalik

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Abstract

During the mid-1980s, a Deaf couple, Gene and Inez Petersen, set out to document the life stories of ordinary and extraordinary Deaf Americans. Traveling across the country, they videotaped interviews with over 150 people. Inez spent hours transcribing the videotapes. Completed transcripts were then sent to those interviewed for review, and approximately 50 were selected for inclusion in the final collection. Gene's manuscript presented Deaf Americans from all walks of life—old and young, men and women, blue collar and professionals—who talked about their educational, social and vocational experiences, and opinions and philosophies. The stories recount the richness and diversity in the Deaf community over the last eight decades. But the manuscript was not published before the Petersens were killed in an automobile accident.

In 1999, with approval from the Petersen family and the original interviewees, the author created the Gene and Inez Petersen Collection Web site at <www.rit.edu/~glk9638/history.htm>.

In the early 1980s, a deaf couple, Eugene and Inez Petersen, began a face-to-face interview project that would take them around the country, visiting with deaf Americans in their homes recording their life stories. The interviews were conceived as a way to introduce deaf adults to hearing people, parents of deaf children, and young deaf adults who have had little or no contact with adult deaf role models or to the world of deaf Americans. An attempt was made to get to know these deaf interviewees by listening as they talked about their educational, social and vocational experiences, opinions, and philosophies. The interviews revealed the ordinariness of the lives and experi-

ences of deaf people, but also portrayed the extraordinariness of people who had succeeded in compensating for a severe disability. These interviews were also conducted primarily in American Sign Language (ASL) by people who were deaf and accepted as being members of the Deaf community in America, although the majority of people interviewed were bilingual, responding in both ASL and Pidgin Signed English (PSE).

The approximately 150 interviews were videotaped, then laboriously transcribed by Inez Petersen—who would watch signed portions of the videotapes, then type phrases or sentences in English on a manual typewriter. Eugene Petersen then checked the transcripts for accuracy in capturing the flavor and informational content of the interviews as well as the translation to English. The transcriptions were shortened to 5-15 pages, double-spaced, and returned to the interviewees to check for accuracy. Approximately 50 of the 150 edited life stories were returned to the Petersens; the remaining 100 drafts were not returned, despite follow-up TTY calls and letters. Eugene Petersen ascribed this lack of response to what he called the “old nemesis of prelingually deaf people: Their reading comprehension. They were uncertain if they fully understood their own stories and [were] too proud to ask for help.” The remaining 50 life stories were gathered for publication as *You Deaf? Visits with Deaf Americans*, but were not published before the Petersens were killed in an automobile accident in 1989.

A colleague of Eugene Petersen, Susan Foster, who had been given a review copy of Petersen's manuscript in the late 1980s, reopened the issue of publication of the life stories in 1998. After consultation with Gail Kovalik, PI on this project, the decision was made to “publish” the life stories in a relatively new medium, the World Wide Web. Attempts were made to contact each of those 50

interviewees to obtain their permission to post their life stories on the Web, to obtain updates or epilogues to their life stories, and to obtain photographs of these individuals. In short, we wanted to make these full-text stories come to life in a way that would be more visually pleasing and interesting to people who have become accustomed to the capabilities of the Internet and the WWW. Plans included placing videoclips of the original interviews on this Web site, storing the original videotapes in an archive when found. (To date, 6/30/00, only one original videotaped interview has been located. A videoclip of Barbara Hinrich's life story, which relates how she became deaf, is on the WWW at <www.rit.edu/~glk9638/history/hinrichs.htm>; click on the link under the photo at the top of this page.)

Concomitantly, we attempted to contact Eugene Petersen's children in an effort to track down the original videotaped interviews, transcripts, permission forms, and any other materials related to Eugene's original work. We also contacted several individuals at Gallaudet University, where Eugene had been named to the 1985-86 Powrie V. Doctor Chair of Deaf Studies to complete work on this project, thinking that the library or Archives might have copies of the videotapes. This took several months, and we finally learned from one of the Petersen children that all of these original materials had been lost in the intervening years since the Petersens died. Gallaudet University did not have copies of any of these materials either. Thus, the only material remaining from this important project was Eugene Petersen's edited manuscript.

Robert Davila, one of the original interviewee, and now the first deaf Vice President for NTID at Rochester Institute of Technology, helped us find addresses for approximately 35 of these 50 people. Some of those individuals led us to others on the list. We wrote letters, requested new permissions to make the edited interview materials available, asked for photographs, and asked the individuals to write epilogues to their life stories. Several people jumped at the chance to participate fully in this project. Others were reluctant to write epilogues but gave permission to post the old life story and sent photographs. Still others did not respond to our original and follow-up letters.

In 1999, Kovalik obtained a ten-week 50% professional development leave at NTID to develop a Web site based on the available Petersen

interview materials. This leave included workshops in Dreamweaver, a Web page software package, as well as consultation with individuals at NTID skilled in Web development. The life stories were typed into Dreamweaver but not uploaded to the WWW until we received new permissions from the original interviewees. Any materials that they sent to us at this time (photographs and updates on their lives) were also added to their Web pages. Photographs were cropped and enhanced in Adobe Photoshop 5.0 and uploaded to the individual Web pages. Epilogues and additional materials were added to the site, which is still under development. Eventually, 19 life stories, several epilogues and innumerable photographs were added to the Eugene and Inez Petersen Collection Web site, which can be found at <<http://www.rit.edu/~glk9638/history.htm>>.

Communication continues with several Petersen interviewees who appeared genuinely thrilled that their stories were finally coming to "life" on the WWW. One, David Bloch, a deaf Holocaust survivor, has subsequently donated some of his artwork to NTID (copies are posted on his Web page at <<http://www.rit.edu/~glk9638/history/bloch-epilogue.htm>>). Another, Edna Adler (now deceased), who had been a deaf consultant to the Deaf and Hard of Hearing, Deafness and Communicative Disorders Office, Social Rehabilitation Services, Department of Health and Human Services, wrote: "The reemergence of the Gene and Inez Petersen Collection seems just too incredible to believe. NTID is to be thanked profusely and complimented for assuming the responsibility of preserving the collection." A third, Barbara Hinrichs, participated in the Poster Session about the Petersen Collection at PEPNet 2000. Through this conference, we made contact with the daughter of Leo Jacobs and with another of the original interviewees. These two life stories will soon be added to the Petersen Collection Web site.

In March, 2000, contact was made with Gary Petersen, Gene Petersen and Lorraine Petersen White, three of Eugene's children. Gary spearheaded a family effort to develop a life story for his father and Inez, and these materials and photographs were added to the Gene and Inez Petersen Collection Web site at <<http://www.rit.edu/~glk9638/history/petersens.htm>>. On June 19, 2000, Gene

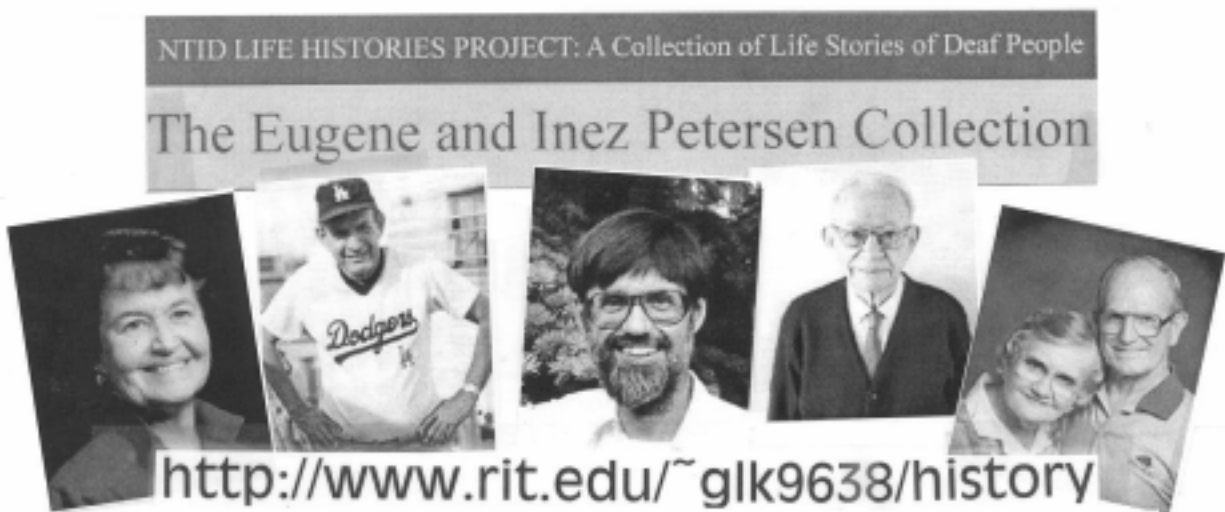
Petersen, Eugene's son, wrote a perspective on the Petersens' work, which is linked to the Petersen Web page. The Petersen Collection is still very much a "work in progress."

There are several people who have not yet given their permission to have their life stories included in the Petersen Collection. If you know any of the following individuals, please contact them and encourage them to get in touch with Gail Kovalik at the National Technical Institute for the Deaf in Rochester, NY (e-mail <glk9638@rit.edu>).

Janice Adams
Glenn Anderson
Daryl and Jill Argrave
Jack Bertram
Barbara Babbini Brasel
Nancy Jo Brown (Deller)
Howard Busby
Alex Ewan
Jack and Rosalyn Gannon
Thomas and Barbara Gant
Phyllis and Nelson Gehman
Harvey and Anna Gremillion

Jeffrey Hoffer
Ellie Jergensen
Joseph and Noreen Jezerski
Roy and Wanda Kirby
Claude Moore
Gerald Nygren
Everardo and Emma Padilla
Marie Jean Philip
Eldon and Donna Ragland
Gregory and Rose Maria Rathbun
William and Nikki Simpson
Tommy Walker
Bruce Weir
Sterling White
Colleen Wilkins
Janelle Yoder (Hartman)
Chris Zagorewicz

In July, 2000, the author submitted a grant proposal, *Life Histories of Deaf Americans*, to the National Endowment for the Humanities. Additional funding will allow us to expand the project begun 15 years ago by Gene Petersen.



Career Attainments of Deaf and Hard of Hearing Alumni Fifteen Years After College

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Abstract

This article reports on the results from a national longitudinal survey of 240 graduates with hearing loss from 47 colleges with support service programs. The overall findings demonstrate an economic pay-off from the postsecondary training of these alumni. Most respondents had made long-term gains in their educational, occupational, and economic attainments. A majority were satisfied with their supervisors, prospects for promotions, and careers. However, between 1988 and 1998 males made more consistent gains in earnings than females. The implications of these findings are presented for secondary professionals, vocational rehabilitation counselors, and post-secondary service providers.

There were an estimated 258,000 students with hearing loss enrolled at the nation's 5,000 colleges and universities in 1989-1990 (USDED, 1993). Watson and Schroedel (2000) calculated that 197,000 of these students were hard of hearing, 52,000 deafened at or after age 19, and 9,000 deafened before age 19. In contrast to the *one-time* provision of accommodations, such as, curb cuts or wider doorways for students with physical disabilities, accommodating students with hearing loss, especially those who are deaf, requires *on-going* support services, special methods of instruction, smaller class sizes, and specialized communication devices. These expensive on-go-

ing accommodations place a hardship on many institutions of higher education. This is particularly acute when most states currently face reduced revenues after a decade of spending increases, tax cuts, and depletion of surplus funds (Wolf, 2000).

In response to external constituencies such as governments, parents, alumni, and other donors, colleges and universities conduct surveys of their graduates to establish the benefits of higher education. Administrators, faculty, and support staff use the results of these surveys to modify instructional curricula, career-preparation programs, and on-campus services. Various colleges serving deaf and hard of hearing students have surveyed their graduates (e.g., MacLeod-Gallinger, 1998; Olson, 1991; Rawlings, King, Skilton, and Rose, 1993; Thompson and Lucas, 1981). However, differences in the kinds of college attended significantly influence the level of acquired degree, type of occupation, and earnings of alumni (Crammatte, 1987; Schroedel and Watson, 1991). Only a few researchers have simultaneously evaluated the attainments of deaf and hard of hearing graduates from multiple colleges and universities (Crammatte, 1987; Quigley, Jenne, and Phillips; 1968; Schroedel and Watson, 1991).

Another drawback from all of these studies is that they have gathered information from one point in time from respondents. Thus, time confounds comparisons between the results of surveys done at different points in time with different participants. Longitudinal surveys overcome

many of the limitations of one-time studies. By repeated contact with one group over time, such surveys can assess progress in the *careers* of alumni and identify explicit factors contributing to long-term socio-economic attainments.

Methods

Survey participants were deaf and hard of hearing graduates in the classes of 1983, 1984, and 1985 from 47 institutions of higher education in 23 states. All of these colleges provided special support services and had 15 or more deaf or hard of hearing students enrolled each year during 1984 and 1985. They were selected from a national directory prepared by Rawlings, Karchmer, and DeCaro (1983). First contacted by mail in 1985, these alumni were further surveyed in 1989, 1994, and 1999. In preparation for the 1999 survey, 311 of the 400 (76%) respondents in the 1994 survey were successfully traced and 240 of these 311 alumni (77%) returned questionnaires after three contacts by mail and one by TDD. Although tracing and survey response rates were reasonably high for all surveys, the number of respondents decreased from 490 in 1989 to 240 in 1999. Some analyses, comparing changes between 1989 and 1999 in the socioeconomic attainments of alumni, were limited to only respondents who participated in all surveys during 1989, 1994, and 1999. Other analyses focused on respondents' accomplishments in 1999.

Respondents

The 1999 sample contained 240 respondents who resided in 39 states at that time. Their average age was 38 and 53% were female. Ninety-three percent were white and 7% were from ethnic minority backgrounds. The under-representation of the latter alumni reflected their chronic under-participation in postsecondary education (Schroedel and Watson, 1991). Seventy-one percent identified themselves as deaf and 29% as hard of hearing. Recalling that the alumni in this study graduated from colleges that provided *programmatic* support services, the hard of hearing graduates were probably not typical of hard of hearing alumni from regular colleges and universities. The distribution of completed degrees among alumni

during 1999 was: vocational degrees (28%), associates degrees (24%), bachelors degrees (32%), masters degrees (15and), and a doctorate (1%).

Results

Labor force participation: Eighty-five percent of 1999 survey respondents were in the work force in contrast to 90% of college graduates without disabilities (Hale, Hayghe, and McNeil, 1998). Among the former, 5% were unemployed compared to 2.5% of associates degree recipients and 1.9% of bachelors degree recipients among workers without disabilities (U.S. Bureau of Labor Statistics, 1999).

Underemployment: An underemployed person is one whose abilities or educational credentials are higher than those usually required for the job in which he or she presently works (Clogg, 1979). Using a definition of underemployment based upon level of completed degree (see Schroedel and Geyer, in press), it was determined that 13% of alumni were underemployed in 1994 and 15% in 1999. Comparatively, 27% of the non-disabled workforce with completed college degrees were similarly underemployed (Survey of Income and Program Participation, 1993). Among deaf and hard of hearing college alumni, those most at risk to underemployment had vocational degrees. Furthermore, there are reasons to believe that proportionately more vocationally successful alumni with hearing loss participated in the survey than their less vocationally successful peers. This factor probably deflated the rates for underemployment and unemployment found in this sample and restricts comparisons to samples of college-educated workers without disabilities.

Occupational attainments: Most respondents in 1999 were well established in their jobs: their average tenure on their current job was between 4-5 years and 24% had the same job for nine-plus years. The 195 employed alumni in 1999 worked in a wide range of 70 different occupations. Overall, there was much less occupational clustering, a factor which limits upward career mobility, than reported in studies of deaf workers without a college education (Barnartt, 1985; Terzian and Saari, 1982). These results imply that access to broader career training options expands employment opportunities and subsequently reduces occupational segregation.

Trends in educational and occupational attainments: Between 1983-85 and 1999 the percentage of alumni completing masters degrees increased from 5% to 16% and the proportion with vocational and associates degrees decreased from 62% to 52%. The percentage with bachelors degrees remained stable during the same period (32% to 33%). Furthermore, there was an increase in the proportion of alumni working in professional, managerial, and technical occupations from 49% in 1989 to 56% in 1999. However, in 1999 there was a larger percentage of males over females in these occupations (61% vs. 52%). This reversed a trend since 1985 in which females in this sample predominated in these occupations (El-Khiami, 1993; Schroedel, Geyer, and Mc Gee, 1996; Schroedel and Watson, 1991).

Economic attainments: The annual 1998 earnings of alumni were strongly influenced by the level of the degree they completed: vocational degrees (\$15,000-\$19,999), associate's degrees (\$25,000-\$29,999), bachelor's degrees (\$20,000-\$24,999), and master's or doctorate degrees (\$35,000-\$39,999). However, these alumni at all degree levels earned less than college graduates who hear: associate's degrees (\$31,700), bachelor's degrees (\$40,100), and master's degrees (\$50,000) (U.S. Bureau of Labor Statistics, 1999).

Why did deaf and hard of hearing recipients with associate's degrees earn more than their peers with bachelor's degrees? Although there was not any significant difference in the proportion of males and females among these degree recipients, gender did influence this disparity in earnings. This discrepancy is primarily rooted in the long-term effects of gender patterns in choice of college majors (Fisher, Harlow, and Moores, 1974; MacLeod-Gallinger, 1992; Schroedel, 1986; Schroedel and Watson, 1991). In short, deaf males are much more likely than their female counterparts to be trained in the crafts, technical, and scientific fields which lead to higher-paying jobs. Furthermore, disproportionately more males over females obtained vocational and associate's degrees (Schroedel, et al., 1996; Schroedel and Watson, 1991).

Over time males made more consistent and larger gains in income than their female counterparts. Whereas men increased their earnings from \$10,000-\$19,999 in 1988 to \$30,000-\$39,999 in 1998, the earnings of women increased from \$10,000-\$19,999 to \$20,000-29,999 during the same time span. The 30% gap in earnings favor-

ing deaf males over deaf females has been documented since the 1960s and persists into the 1990s (Schroedel, et al., 1996). This pattern continues despite the fact that these females were more likely to acquire higher degrees than their male peers.

Other career attainments: Most respondents had positive attitudes towards their supervisors and prospects for promotions and their careers. Forty-five percent of alumni had obtained promotions since 1994, and those who were more frequently promoted had more favorable attitudes towards their prospects for promotion. A supportive supervisor is a pivotal factor in gaining promotions and workplace accommodations (Mowry and Anderson, 1993; Schroedel, Mowry and Anderson, 1994). On the downside, 25% reported that their college training was not helpful to their careers.

Conclusions

Although the deaf and hard of hearing alumni in this survey earned less and experienced more unemployment than their similarly educated peers who hear, this study provided evidence of the economic advantages of postsecondary training. A majority of respondents were well established in a wide range of jobs and were satisfied with their careers and prospects for promotions. A near majority had been promoted during the past five years and there was an increase in the proportion with masters degrees leading to better-paying jobs.

Implications

Among areas identified by this survey, the following two topics especially need attention from secondary, rehabilitation, and postsecondary professionals.

Enrich the career potential of females. It is important for professionals to intervene early to increase the prospects that deaf and hard of hearing females will enter into better-paying careers that will help reduce the long-standing disparity in earnings with their male counterparts. As a first step, career educators need to change the traditional gender stereotypes that many of these females have about jobs. These stereotypes begin in junior high school and persist into college (Kolvitz and Ouellette, 1980; Kovelchuk and Egelston, 1976). In addition, school

teachers should encourage eligible females to enroll in advanced computer, mathematics, and science courses. School and rehabilitation counselors can advise these young women to select appropriate technical and scientific college majors. Rehabilitation counselors should contact these students and their parents as early as the ninth grade. Clarifying parents' educational and occupational expectations for their deaf adolescents is particularly important (Schroedel and Carnahan, 1991). Moreover, postsecondary and rehabilitation professionals should co-monitor students who change their fields of training.

Strengthen career goals. Providing career counseling is important to reduce the probabilities that deaf and hard of hearing graduates will experience underemployment and unemployment. One study found that deaf high school seniors more motivated about their vocational goal were more motivated, ready, and likely to complete postsecondary training than those unmotivated about their career goal (Schroedel, 1991). Considering that 75% of deaf students quit college, it is important that these students have clear vocational goals (Stinson and Walter, 1997).

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Planning for Success: Initiatives for Positive Outcomes

PEPNet 2004 Conference Proceedings

Introduction

How may an individual who is deaf or hard of hearing focus on success? How can we as professionals best promote environments that will facilitate achievement and positive outcomes for these individuals? *Planning for Success: Initiatives for Positive Outcomes*, the PEPNet conference held in April 2004, was a conference dedicated to answering these questions and many more. Educators and service providers from across the nation and the world gathered together at the fourth biennial PEPNet Conference to share concepts, ideas, facts, technologies and successful practices that have helped to achieve these goals. And PEPNet is dedicated to the concept that we no longer have to work in isolation. Bringing challenging issues and promising solutions together in a collaborative atmosphere establishes solid networks that enhance one-on-one service delivery to clients and students who are deaf and hard of hearing.

There are many conferences that are structured to address issues related to provision of services to individuals who have other disabilities, but PEPNet is the only one that centers its focus entirely on the individual who is deaf and hard of hearing. And how are these individuals being served by the many postsecondary institutions and training centers across our nation? PEPNet 2004 attempted to bring together professionals with interest and training in service provision, disability support, rehabilitation, state and federal government, educational and technological arenas to share successes, challenges, initiatives, issues, encouragement and support. Through their willingness to share new, exciting and creative ideas, PEPNet conference participants were given a wealth of workable ideas to improve their own service delivery efforts.

The PEPNet 2004 conference offered sessions that were of interest to disability support services staff, administrators, counselors, interpreters, tutors, and faculty members from developmental studies as well as college-level courses. In addition, faculty and staff from secondary education programs and service providers from rehabilitation also participated. Students in related professional areas such as rehabilitation counseling and interpreting were welcomed at the conference. The conference featured sessions that offered practical, replicable strategies for providing services to students who are deaf or hard of hearing and attending postsecondary educational programs. This publication offers the reader a small sample of the information that was exchanged during the conference. It is our hope that these sessions will truly support each reader to develop an effective plan for success!

Kay Jursik, M.A., Editor
PEC Special Projects Coordinator
The University of Tennessee: Center on Deafness



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Policy Statement

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Beyond the Core English Curriculum

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Abstract

Since 1997, the core of the English Department's curriculum at the National Technical Institute for the Deaf (a college of Rochester Institute of Technology) has consisted of three course strands in academic writing, non-fiction reading, and literature. There are four sequential courses in each strand. Over the last two years, the Department has introduced two new initiatives designed to increase the effectiveness of the core curriculum. This presentation will introduce and discuss the critical features of these two initiatives, *Outcomes Assessment* and *English Across the Curriculum*.



Beyond the Core English Curriculum

It is well understood that many deaf students have difficulty making rapid progress in their English language proficiency, be that in writing or reading. Many students come to NTID after progressing through the elementary and secondary education systems still with not much more than 7th and 8th grade reading and with writing that is significantly below the standard normally associated with college requirements. The NTID English Department was created to provide a program of courses with the goal of raising the reading and writing ability of such under-prepared students as quickly as possible to levels where traditional college work can be undertaken. As faculty gained experience with a new mastery-based course framework that was introduced in 1997, two problems became apparent.

First, a curriculum designed to be sequential requires a mechanism for assuring that student progress from one course to the next only occurs when the student has developed the skills taught at the lower level. Traditional course grading has fulfilled this function. However, achieving a reasonable degree of grade standardization across multiple sections and instructors and being confident at the same time that grades are reflective of student achievement of the goals and objectives of the course, turns out to be quite difficult. Two years ago, the English Department began to discuss the use of a formal program of "outcomes assessment" to help increase our level of confidence that students really do have target skills before they move on to the next level. Since then, we have expanded and refined this program so that it is now used in various courses in both the nonfiction reading and academic writing strands. This paper will discuss some of the issues that arose in developing the program as well as the gratifying results that have been achieved.

The second problem that English faculty identified will scarcely be new to practitioners in the field. In order to become proficient in the use of discrete aspects of the language, be these individual vocabulary items, grammatical structures, or forms of discourse, many deaf students need multiple exposures in multiple contexts. Time on task can help, as well as variety of

exposure. Since the Institute does not have the ability to offer students an intensive English program along the lines of some second language learning programs, we have looked for ways to multiply the opportunities for students to be exposed to English-language learning opportunities. This effort has taken the form of an Institute-wide commitment to the concept of *English Across the Curriculum*, in which the English Department has taken a leading role. Since many faculty in other disciplines are hesitant to become also teachers of English, this role has been an interesting one. This paper will discuss some of the issues that English faculty members have encountered in promoting this effort and some of the solutions that have been developed.

Using Outcomes Assessment Principles to Standardize Grading in a Mastery-Based Curriculum

In our initial attempt to specify the meaning of course grades, the Department introduced the following generic grade policy:

Course Grades are assigned as follows:

- | | |
|-------------------|--|
| <u>Grade of A</u> | The student demonstrates excellent achievement (90-100%) in all performance objectives. |
| <u>Grade of B</u> | The student demonstrates very good achievement (80-89%) in all performance objectives. |
| <u>Grade of C</u> | The student demonstrates satisfactory achievement (70-79%) in all performance objectives. |
| <u>Grade of D</u> | The student demonstrates barely satisfactory achievement (60-69%) in all performance objectives. |
| <u>Grade of F</u> | The student has failed to demonstrate satisfactory achievement ($\leq 59\%$). |

A grade of "C" or better in the course indicates that the student has satisfied the entry criteria for placement into the (next) course. Students who earn a "D" in (current course) will be recommended to re-take the course, although they may proceed to (the next course), if they wish.

Despite this conscious attempt at standardization, grading has remained fully within the purview of the individual faculty member. And as a result, Student A, with broadly similar skills to Student B, but in a different section of the same course may, for a variety of reasons, get a significantly different grade. While these reasons may be justified seen from within the microcosm of a single course, some of them may be less valid in the context of a mastery-based course sequence. And indeed, as a result of grading disparities, it is not uncommon for instructors at the higher levels to complain that students are being promoted through the system when they do not have the requisite skills.

Grading, because it is central to the faculty member's prerogative, is not an easy subject to talk about. The student voice is also a factor. Many students who come to NTID do so with the expectation that they will move on into baccalaureate programs at RIT. While for the most part they accept the need for additional preparatory work in English, they are not thrilled when their grades are below what many of them have become accustomed to in high school. As a result, departmental discussions of grades can be colored by extraneous factors like the Institute's concern for attrition and graduation statistics. Otherwise, specific factors that enter into such discussions include the student's motivation to continue in the program, the relatively common phenomenon whereby the a student's hard work in a course fails to led to the necessary progress, and, of course, the constant issue of how much of a student's work is actually the product of their

own efforts and how much is reflective of outside assistance.

Even if everyone were to agree that what goes into a grade ought to be based, to a significant extent, on performance of course objectives that in itself spawns a further discussion of whether the course objectives are appropriate. When the curriculum was first introduced, each course syllabus contained a long list of objectives – partly to accommodate different opinions of what should be taught at each level. However, with the benefit of several years of experience, it became increasingly apparent that to get through the work that we said we would get through was not possible even for the most accomplished student.

About the same time that English Department faculty members were beginning to recognize that the issue of grading and promotion through the separate course sequences was becoming something that we needed to address, serendipitously the Middle States Accrediting Agency was telling RIT that it needed to implement outcomes assessment principles across the curriculum in time for the next re-accreditation visit. In brief, such principles require that the “outcomes” or learning objectives for each course be specified in some measurable way, that they then be measured, and the results considered for their curricular implications.

With this added impetus from the broader Institute, we decided we would start with the writing side of the house - the reason being that with writing there is a measurable product, whereas with reading, skills gains are less amenable to direct measurement.

After due discussion, it was agreed that we would introduce an outcomes assessment protocol in one course – the Level 3 writing course. We decided that we would require students in the last week of the academic quarter to write an independent writing sample in one 50-minute class period. Students were given, without the opportunity for preparation, three prompts, from which they were to select one. The resulting essays would be scored by three faculty with experience teaching that course and the next higher one. Since our primary interest was improving our course grading system, we decided that the papers should be scored on a three-point scale: “ready” (i.e., for the Level 4 course), “marginally ready”, or “not ready”.

We have now run this assessment three times – once per year over the course of the past three years. It has proven to be a very productive exercise. Not surprisingly, we found immediately that what constitutes “readiness” in one scorer’s mind may indicate the opposite in another’s. Indeed, only approximately one third of papers rated have resulted in unanimous judgments. Also, not surprisingly, given the initial reason for conducting this assessment, we have found significant discrepancy between ratings and course grades. The success of the experiment inheres, of course, not in its having verified that we really do have a problem with grading, but rather in the food for discussion that the ratings have provided. This extended discussion, which we have now continued over three years within the Department, has covered several topics. As expected – and intended – it has included the whole process of course grading, including the relative weights one should give to effort, attendance, participation, out-of-class work and in-class writing, the appropriateness and reasonableness of existing course objectives, as well as the assessment measure itself, including the nature and wording of the prompts, and the characteristics of each of the three rating points. As a result of these discussions, course objectives have been altered and reduced in number, most faculty have introduced more in-class writing into their courses and most faculty have changed the relative weights of factors in their grade calculations, increasing the amounts given to evidence of student accomplishment of objectives, and decreasing the amounts awarded to factors unrelated to such evidence, such as effort. These discussions and their products have not been limited in scope to the Level 3 writing course, but have rather sparked similar modifications across all of the Department’s courses, as

faculty have bought into the concept that grading, in a sequential program, needs to reflect evidence of skill development on the part of the student more than anything.

Despite these successes, however, it is important to acknowledge that this whole process is no more than a work in progress. The discussions spawned by our outcomes assessment have been and will continue to be ongoing. There are still significant disparities in grading as in readiness judgments. While the writing faculty have what may be termed an advantage over the reading faculty, in that they have access to a directly measurable product, the work of grading and rating remains a pre-eminently subjective activity. Nevertheless, grading discussions have now become a regular feature of Department meetings, and the faculty's comfort level with what might otherwise and in the past, was, seen as an intrusion on individual academic prerogatives has risen significantly.

Using *English Across the Curriculum* Principles to Improve Retention and Transfer of Skills Learned in the English Classroom

As noted above, most students at NTID are not surprised when they learn that the college requires them to do preparatory work in English. And in fact, many are anxious to take courses that will help them improve their English literacy. In particular, students frequently seek out grammar-intensive courses and often enroll for multiple special grammar workshops. Many of them come with skills in reading and writing significantly below what is normally associated with college-level skills, and the sequential curriculum is designed for them as well as their more highly skilled peers.

While it is probably true that all students benefit from this curriculum in terms of skills improvement, that improvement is often not as rapid as they might wish. Most students have only a few years in college and often the skills gap that they need to make up in order to get an undergraduate degree is simply too wide. Though all concerned, students as well as faculty, push for the necessary improvement, it is elusive. One phenomenon that plays into this struggle, which might almost be seen as a race against time, continues to cause puzzlement. That is, the common observation that students who work hard in the English classroom, do well, and produce quite good work, appear to have difficulty transferring their newly-acquired knowledge to environments outside that classroom.

It sometimes seems as if when students walk out of the English classroom they leave what they have just been studying behind them in the room. The quite frequently encountered, but serious response from students that "no-one ever taught me that before" or "I've never seen that before", may be quite believable to the new teacher but when one hears it over and over again, one begins to realize that such statements cannot be true. Much more likely is that the student has not internalized the information than that the many English teachers that he or she has encountered through the years of schooling have failed to impart it.

In our own program, the problem raises its head in multiple ways, but most pressingly, when faculty in the student's major complain to English faculty that the student's English is "awful", with the implication, often directly stated, that English instructors don't know what they are about. And indeed, when the same student's papers from an English class and a "technical" class are compared, the difference can be quite noticeable.

In order to address this problem, the English Department embarked three years ago on a new initiative under the title *English Across the Curriculum*. Reasoning that either students simply needed more practice or that they needed to realize that they would be held accountable for skills studied in the English class in their other classes also, we began by selecting a few academic departments in our own division, notably the Math and Science Department, and the

Cultural and Creative Studies Department, and having one of our number begin to attend department meetings in those departments with the intention of serving as a resource to faculty who would not normally emphasize English skill development or reinforcement in their classes. These so-called English liaisons offered their time and expertise and gradually developed working relationships with individual faculty from these other departments. As these relationships blossomed, the English faculty member visited the other's classes, worked on assignment preparation, talked about the process of giving feedback on English skills and grading and discussed textbook selection. As a result, those science and humanities faculty who bought into the concept began to emphasize higher expectations with regard to their students' English writing, and math students began to come for English tutoring. As an added incentive for the development of these cross-department relationships, the college's *Outcomes Assessment* program, that is, the generic part of it that had by now evolved to satisfy the requirements of Middle States re-accreditation, included assessing English skills in math courses and in the Humanities "capstone" course.

With this first stage of our *English Across the Curriculum* program underway, this past year, we have begun Stage Two – applying the same principles and approach to setting up a liaison relationship with the technical departments at the Institute. While it is still too early to tell what the results will be, it is hoped that we will enjoy at least as much success in infusing higher English expectations in the students' major courses.

We hope that the result of these efforts will be that students will take more of what they learn in the English classroom with them when they walk out of the door.

Outcomes Assessment and *English Across the Curriculum* have now become accepted parts of what we as English faculty do. Both initiatives stemmed from a realization that, particularly in a sequential program of courses, it is simply not adequate to teach one's class, assign a grade and hope for the best. Neither initiative was introduced without initial soul-searching, which most obviously took the form of prolonged and detailed discussion within the Department. As a result particularly of this process, an unlooked for consequence has been an increase in collegiality within the Department as well as across other academic departments at NTID. The task of working with students on improving their English literacy skills is now more clearly than ever before a shared effort.

Roles and Goals: The Impact of Role Models and Expectations on the Success of Individuals Who are Deaf and Hard of Hearing

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Abstract

Strong role models have a major influence in the aspirations of young students who are deaf and hard of hearing. This session will provide anecdotal stories about what impacts the life stories of successful professionals. NETAC and PEPNet will present their new Web site and Video Series, “*Achieving Goals! Career Stories of Individuals who are Deaf and Hard of Hearing*” and panelists will consider the impact that these will have in the lives of 45,000 students who are deaf and hard of hearing. Attendees will view the Web site and several video segments that document the lives of individuals, highlighting their experiences growing up as well as factors that made them successful in the workplace.

Featured are some truly unforgettable people...people whose ambition and drive allowed them to overcome great obstacles on the way to professional success. Their stories demonstrate in a powerful way how much can be achieved through motivation...hard work...and education.



Roles and Goals

I have some exciting materials to show you. My name is Pat Billies. I am the project coordinator of the NETAC, the Northeast Technical Assistance Center, one of the four PEPNet regional centers. During this grant cycle, we committed to make a set of videotapes that show successful deaf and hard of hearing individuals in the work place. And very quickly into the project, we saw that producing videotapes were expensive and consumed a lot of time. Each tape can only showcase four people.

And I am going to show you some of those in just a bit. But we had so many recommendations of people that we also decided to establish a website. And there are more than 250 people on that website today! I will show you that today too. In the entire project, we plan to make five video tapes (three of them are already finished.)

I am going to start today's presentation with two segments of videotape. Then, go to the website and talk to you about that. And lastly show you our first, award winning videotape.

I am going to start today with two segments. The first speaker is Marilyn Smith. You will see her organization, ADWAS (Abused Deaf Women's Advocacy Services) and some of the people that she works with. The second segment features Curtis Pride, who was a New York Yankee last summer. (And hit a home run in his first game!) Really exciting. I will start with those two and then go to a PowerPoint and then come back and show you the rest.

This has been one of the gifts in my life to do this project. I have had a wonderful opportunity to meet these brave people. And to listen to their great stories and to experience their hopes and their goals. Each person that we interviewed gave us the same words of advice:

Don't let anyone else tell you that you can't do something.

Find yourself a mentor and someone who believes in you.

We have a great website which I plan to show you. We realized, as I told you in the beginning, we could not feature all of the individuals on videotapes. Early on in the development of the videotapes, we made a commitment to have diversity. Each tape will feature an African American and a Latino. Each tape will have a balance of males and females. We hoped to have a better balance of hard-of-hearing and deaf persons. But we gave up that to have gender and racial diversity. Most of our people do sign.

Show video segments

Website

I told you in the beginning we wanted to raise expectations and provide role models for students. Our audience is wide spread but also the people who support them. I am going to show you a bit of our website on CD. This is about a year old that has been updated. I have provided you some handouts of that. I am going to go to a CD now.

This is what the website looks like. It is <http://netac.rit.edu/goals>. When you go in, you have options. Let's start by using "Browse". When you select browse, there are a lot of career choices. I am going to pick education, because that is what many of us do.

You will see along the top, this is 1 through 10 of 98 and this is a year old. Individuals pictures are there if they gave them to us. Regina, my colleague, has chosen a quote from each person. You can click on 'more' and open that up to all of the information that the person had provided. Where they went to school, words of advice for others. It is very interesting reading, and we learned that some high school classes are using this for reading assignments.

Many of the stories are inspiring. We can go on to the next. There are some people who do not want their pictures on the web, and we honor that. People have ask if they could have their own website, we do that. We do screen. In general you are reading a person's own words.

All of the deaf or hard-of-hearing individuals, right here at this convention, are urged to complete a questionnaire for us and fill in that information. There is a way at the bottom to upload a digital picture of yourself. If you can't, you can e-mail it to us and we will do it for you. You don't need to complete the whole thing in one sitting.

If you get a new job, you can go in and enter your user name and your e-mail address, and then go in and adjust. We allow people to file themselves in as many as 3 categories. You maybe an English teacher and a magician on the side. So you want to get into both categories. There is information about the video series.

Now, we can't search live because this is not a live connection. If we had one, you could go in there and search for your friends by name or by position. So if you have a students interested in accounting, you can put in 'accounting', and anyone who has that in their profile will come up.

We do not provide individual contact information however. If you find someone and you want to get into touch with that person, you would first get in touch with us and we will privately

ask them. And then we will allow that individual to get in touch with you.

This is a tremendous website and resource for persons who are deaf or hard of hearing. I have given you slides of all of this so you can search for yourself. The videotape series. I want to show you the first videotape before you leave today. There will be 5 altogether. The first 3 are finished.

Videotapes

The first videotape, features an Optometrist, a Veterinarian, an Attorney and a Pediatrician. This videotape has already won 3 major awards. It is a great tape and you will see that in a minute. The second tape features people who are involved in business careers; the third showcases persons who are giving back to the deaf community in unique ways.

The important thing to stress is that accommodations, modifications only change the way the job is done, not the job itself. Jimmy Libman on the second video tape, has a light system. When the light goes off, there is a customer. The different lights mean different things. So they have a system allowing them to run their business.

Kim is working with a company to develop a clear face mask. How awesome would that be? Our Attorney, you will see this in a minute, was on a PBS television commercial. Dr. Scott Smith and Kim, both, use an interesting Stethoscope. They don't need to be able to listen to it, they can read it. And Lee Kramer is using video conferencing like crazy. It is great. The modification just changes the way the job is done.

I have given you information on how to find the videotapes. We have it here. I am sure they are 20 dollars a tape for shipping and handling. And the PRC numbers. Are they on your handouts? Those will be helpful to you if you want them.

I want to thank you for coming. I know we will run a little bit over. What a gift to be able to work with these people. It has just been terrific. If you are interested in the video tapes, you can easily get them. Thanks for coming.

Learning On Line – A Notetaker Training

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Abstract

Online training of student notetakers is now available—it's comprehensive, it's interactive and it's free! Presented in three modules, the training takes 90 minutes. Students learn effective notetaking strategies and complete the training at their convenience. At the end, notetakers receive a printed certificate and present a set of notes to their local administrator for review. DSS Coordinators can access a toolkit for implementing a notetaker program that suggests selection criteria, policies, and practices for using student notetakers effectively. The outcome of this training will be improved quality of notes for students who are deaf and hard of hearing!

The training includes information about

- why notes are critical for students with disabilities
- deaf awareness
- how to take good notes for someone else
- qualities of a good notetaker
- roles and responsibilities of notetakers
- techniques and mechanics of good notes
- formatting strategies
- preparation of notes
- common notetaking problems
- collaborating with faculty and students

The Northeast Technical Assistance Center, Camden County College and the National Technical Institute for the Deaf collaborated to develop this much-needed training package.

Josie Durkow: Good morning. Welcome to “Learning On Line.” Thanks for coming this morning. I am excited about this new online training. This has been developed by Northeast Technical Assistance Center and it was developed to train notetakers for college and high school students who are deaf or hard of hearing.

The development team is here today: Pat Rahalewicz, Maureen Brady, Pat Billies, and Josie Durkow. I am the Northeast Technical Assistance Center state coordinator for New Jersey.

How did we come up with this idea? At Camden County College we have had growing numbers of deaf and hard of hearing students. We train notetakers each semester, and our workload was increasing. We had less time to do things that we could put on hold. Was there a way that we could put information about how to be a good notetaker on the website? As the Northeast Technical Assistance Center state coordinator, I am aware that colleges need to provide notetaking services and they may or may not train. There were internal and external needs.

I thought Northeast Technical Assistance Center would be the best place to start because this fulfills their mission. The four of us worked together with an outside company to develop this online notetaker training. It has four modules:

- *Introduction*
- *Disability awareness*
- *Notetaking skills*
- *Professionalism of the notetaker in the classroom.*

We will talk about administrative issues and a component that's being developed for service coordinators.

Why do we need to train notetakers? We want to make sure that people receive the best notes. By training, we hope to ensure that notetakers will be providing better notes. When a student has been trained, they feel more comfortable with their notes. If they feel good about their notes, they may want to do that again because they feel fulfilled that they are doing something to help another person. It provides a framework and accommodates student schedules. You can set the best time when students can learn at their own pace.

In module one, we have a welcome, information about students that receive support benefits, the role of the notetaker, understanding hearing loss, a component of terminology, a self test and a module quiz. This is an introductory page from the training. That is telling students that they have a valuable service for the students and their institution. They will take comprehensive notes that others can study from and they will be taking better notes for themselves.

This is a page from the training on the explanation of who receives support services. We talk about students with different types of disabilities and it talks about why students get notetakers, like laws. You can see the word LAWS is highlighted. If they click on that link, they are connected to more information.

The training is very interactive. We can't show that, but we will explain it.

Understanding hearing loss. This shows there are varying degrees of hearing loss and ways of communication. There is a link here for ASL and Deaf culture. There is a section on terminology. That's a matching section, but it has terms like Deaf and deaf, it explains the term of hearing impaired as a politically incorrect term and information about late deafened individuals.

At the end of the module there is a test. If student notetakers don't pass the test they can't continue.

Pat Rahalewicz: At Camden County College, we had to train notetakers in a small span of time. At RIT we are in a quarter system. To give you an idea, I have 112 classes with 76 notetakers. Retention is an important thing. To get people into training, you try to get things into their schedule. We do a night and a Saturday training. Despite the different offerings of trainings, we always miss training some students. This is a way to train students and to get them on a level playing field. Also, if they take these trainings, they have a set period of time. For myself, if we wait two weeks for a student to be trained, we have lost two weeks out of the 10-week period.

Getting Ready

Getting ready is the most important thing. You need to be there 10 minutes before and after class. You need to be prepared. What should you do? I say the 10-minute point is because much information is in the first 10 minutes of class. It could be a review of homework or something. Also the last 10 minutes could be a wrap up.

To take good notes, you need to understand the information. You can read the information or chapter that will be discussed. You need to know what's going on in class, so you are familiar that you will have clear notes so you don't have to think about how to spell something or what the teacher is talking about.

You also need to record the information in a clear and concise manner. If you can't read your writing, others can't. You don't need to change what the instructor is saying, but you need to make sure the student understands it. Let the student be the person that's not there so if they look at your notes they will know what happened that day. As they go through the training, they will learn why that's important.

What do you need to take good notes? A black pen works the best if you are copying notes. 8.5 by 11 paper works best. If you feel that you need to make changes quickly or if the instructor you are taking notes for may stop, a pencil may be good.

Knowing what's important

This is the goal of the notetaker. They need to be the one to make the decision to know what needs to stand out in the notes. From a deaf perspective, anything that will bring emphasis to the notes to let them know this is important. They are rendering a message that a teacher is giving. Anything that happens in class should be in the notes, announcements, homework assignments, etc.

What is on the notes page? A lot! We want to have students realize as they go through the training, that we develop a cover sheet that you can change. That's here as a model for them. The important part is a consistency that the notes look the same every day. The importance of the cover sheet has a course name, title, abbreviation or assignments. That's the building block of the notes.

Writing

This is critical. If you don't have legible handwriting, the notes are useless. Now with people using laptops, if you do use that as an alternative, that's another way to take good notes. We introduce those options in the training.

Spelling is important because they are looking at your notes. Do you remember the 10

minutes rule? You can check with the instructor after class to see if you spelled it right? If you don't have time for that, you can let the student know that you are not sure. They need to be responsible too.

Abbreviations

Many times we forget to tell people what they mean. If I say I work at RIT, that's good if you are from Rochester. Here, I need to tell you what that means.

If you use the cover sheet, that's like a helping hand. You can refer back to previous cover sheets for abbreviations. Once that's set down, they should be able to remember that. I tell students take notes or they will realize this in the training. I don't want them to have carpal tunnel at the end of quarter, so this is important for them.

Formatting

Formatting is how your notes look visually. If we look at something on the board, it's important. How you see the notes, if you have a list that looks like run on words, it's difficult. We will show you that later.

The way a lecture comes across is how you will format your notes. You are in a history class and maybe use paragraph forms. Here are some examples. I think we all know outlines. I think that's a comfortable way to take notes. If you start using an outline heading, stay with that. How the lecture comes across will dictate how you take notes.

You need to be consistent. You need to know how a notetaker set something up and we are trying to teach the notetakers how to do that. Many times with columns it could be a history or physics class with up to three columns with dates, places, and events.

This is a text paragraph. This is in the handout where you can see it easier. This is from the training. You can see legibility of things being neat. Here is an example to click on the page, you can see it. Here's a project and they are talking about that here. Many times this is a good study guide as well, if you use this type of formatting, because they can also put in their own notes.

When I talked about how do you set up a page, I mentioned that it is important to have a name, date and course number. If you have a uniform coversheet, you can have that separated. We did that in the training to show this as a good model. That should be on each page. We tell students to put that in the right hand corner. (As I am stamping in notes, we will send them to another building to be scanned. If I dropped a stack of notes, it would be really hard for me to get them back in order.) We are looking at notetakers being trained in large areas and serving more than one student.

Think of the paper as a frame. It looks nice with the margins, it doesn't look crowded. When students get to this point, you are trying to get a thought on the page; you want to train yourself to keep it clear in the margins.

White space is anything left in between. It could be that a teacher will jump back to something to have connecting thoughts together. You can add that if you leave the space there or a student can put his or her own notes in that area. You don't want the notes to be crowded. You can see examples of good notes.

Formatting strategies

This is what you will use in the notes. You need a topic heading. That will pull your notes together. How do you bring emphasis to the notes? By underlining.

Complete sentences: You will not always have these but you will have complete thoughts. Make sure that anything you read is complete so you can understand it when you read it.

Indicating speakers are important. If you reference that a question is from a student or teacher that may change the validity. If the teacher is asking a question and you realize that's important, you can include that as well. You are not going to say "this person said," That's an easy way to bring the notes together.

You will define any vocabulary. If you can use boxes around formulas, do that because it will draw your eye. That's very helpful.

Cleaning up

The important part of cleaning up is the details. That is what you are pulling together. You need to think of the three C's. Make sure the notes are

- *Complete*
- *Correct*
- *Clear*

This is an example of what we are talking about on the notes page. What would that include?

A page heading, a 1-inch margin, white space, indicating speakers, recognizing signal words. That's important here: That's a test question. Charts, diagrams, and drawings. When you have any type of chart or diagram, make sure it's labeled properly. We try to tell them these things in the training. We are not trying to kill a forest, but sometimes you need to use lots of white space to make something clear. You can use lots of white space with charts.

It's important to have references. If there is a chart in the book, you can reference that in the notes. There is no reason to duplicate something that is already there. You can reference what the instructor is saying so they can reference the problem they are working on.

Before you turn in the notes, this is the cleaning up process. Check the spelling and label and indicate the important information. We train them how to do that in the training.

An important part of cleaning up is the product is for someone else to use so you want to give him or her the best product possible.

Maureen Brady: It's great to be here. Do you remember the day you became a professional? Today, I will talk about professional as it pertains to notetaking. Several topics I will discuss are working professionally, the student notetaker, explaining your role, and building relationships.

Working professionally

This part of the training spells out the basic responsibilities as they pertain to notetakers. You need to arrive to time to class, asking for feedback, informing the person if you can't get to class or getting backup.

The student Notetaker

This is often a gray area. When they go into the role of notetaker, they are not sure of the boundaries of their roles as a student and as a notetaker.

Explaining your role

This part of the training advises students as to what their role is not: Interpreting, advising, etc. It's important to set up a boundary.

Building relationships

Often a new notetaking recruit has a fear of meeting their students to serve because they don't know how to communicate. This part of the training teaches them that the deaf student is a peer and they are part of a team. It encourages the students to work together. It acknowledges the fact that the students may be nervous. If they are concerned about communication, they can ask an interpreter to help out in the beginning.

Tip on Communicating

Make sure you have the student's attention. You can let them know that you can tap them on the shoulder and wave. You can maintain eye contact. This is to help the students better communicate with the deaf students they will be serving.

Working relationship

The training encourages the new notetakers to build a working relationship with the student so both are more comfortable and open for communication. That's encouraged by soliciting feedback on the notes. How can I improve them? They need to be flexible enough that if they get feedback, they can be willing to change if necessary. That points out to maintain a two-way relationship with the deaf student and it gives the person a chance to grow as a student and as a person.

Collaborating with faculty

It's important to have a working relationship with them as well. The training involved with the instructor will vary with the class, the type of work, the teacher's style, and how much experience the person has with working with deaf students, notetakers, and interpreters. It advises the notetaker to meet the teacher in advance, explain the role of the notetaker and offer the instructor a copy of the notes. The instructor may enjoy that.

Some instructors don't want to be interrupted when they are lecturing. Also, make sure that the instructor understands the role so they don't try to put the notetaker in the position of an interpreter.

Code of Ethics

That serves as a guideline for behavior for students. Like Josie said, they can't jump through the training, but they have to go systematically through the training. That's the best part because you can monitor and make sure that someone doesn't open the training and jump to the end. They have to go through each portion. You can get a printable version of that.

Pat Billies: The four of us have been working on this for over a year. Before we started, we did a review of the literature out there, but we wanted to incorporate as much of your input as possible. We are proud of the result and the feedback on the training has been positive. The training will reside on the Northeast Technical Assistance Center website. It is live, but incomplete now. It will be finished for the next fall semester. If you have an interest in playing

through it yourself, get in touch with us, but we don't want to give it to everyone until we get everything in it. It's free at the Northeast Technical Assistance Center website: <http://netac.rit.edu>

When students first come to the training, they will sign in with the user name (NEWSTUDENT) and password (NEWSTUDENT). They can then create their own user name and password. We require that they give us other confidential information. We plan to track the states and institutions that the students are from so we can report that to the Feds. (That will be done by zip code.) We are interested in the institution because you can contact us and we can tell you who may be trained from your university.

We have developed a Handbook for Notetaker Coordinators. At this time, we are calling it an implementation tool kit. That's something outside of the training designed to help the notetaker coordinator. If you are a large school with many notetakers, you may have a notetaker coordinator. This tool kit has a lot of advice for that person with best practices. It will have suggestions about how to select good notetakers.

I remember a situation many years ago where a deaf student was taking statistics. He was a very bright student, but he and his friends were all failing this class. The bottom line was that the notetaker didn't understand what was going on and the quality of the notes given to the deaf students were not strong. All of them were getting D's and F's. That hit home with me with the importance of the notetaker being a B or better student in that major.

We developed a set of policies and best practices for notetakers. Those are available for the use of the disability support services person. There are some simple mechanical things like including information like the faculty member's name, the building, what do you do with the notes, and importantly, what will you do if you can't make the class. We suggest that the notetaker be responsible for finding a good backup, but plan for a backup system so each class has services.

We suggest a common list of abbreviation. TC - Teacher Comment, SQ – Student Question, etc.

Why? When a student who is deaf or hard of hearing gets those notes, he may place more emphasis on what the teacher said, not what another student said. We all have different ways to abbreviate words. We are accustomed to our way, but a person looking at notes may not realize what the abbreviation means. That information should be on the cover sheet so the student that gets the notes knows what it means.

Also, there is a downloadable cover sheet with a PEPNet logo. You can put your own university logo on there as well, if you wish. You can tweak that to fit your needs. That should have information about the class, contact information, which is receiving the notes, homework assignments, due dates, etc. Sometimes teachers will say when a big project is due in the middle of class. It's important that information is put in a prominent place so they can see it. Announcements and handouts are important as well.

We can suggest how lecture notes will look, but we leave that in the role of the notetaker. If a person likes to take notes in an outline format, you may not be able to force them to use a paragraph format. If the notes are clear, you can ask the student if that's working for them. The faculty member may take a look at the notes as well.

The training is about one and a half hours. We pay the notetakers for the training, but that's up to you and your institution. Let me talk about how a student completes the training and then what they do. At the end of the three main modules, there is a quiz for each one. If you can pass that quiz with an 80% or better, you can go on to the next module. (We don't provide the answers because we want to make sure the students develop their skills.) At the end of the entire

training, there is a 30 question final evaluation. When students pass that with an 80% or better, they can print a certificate of completion.

I have here a student's certificate and that student can now take this certificate with a sample of some notes that s/he has taken to the coordinator at her institution. S/he is not taking notes as part of the training, but we need to give the Notetaker Coordinator some assurance that you can read her writing. The notetaker coordinator should look for the margin and white space, etc. We suggest that students take this final test on a computer that's linked to a printer, but if that's not the case, they can print the certificate later without going through the whole training again.

This has been a strong collaborative effort with the home office of Northeast Technical Assistance Center, Camden County College, and RIT. We knew in our office we didn't have the expertise to do all the work for us. We worked with a company to do the design and web programming for us. You have not had a chance to see how interactive it is – that's hard for you to because we had to grab slides from the training and put them in Power Point. It's very interactive. It appears there is a lot of reading here, but in practice, that's not the case.

Here is some contact information about Northeast Technical Assistance Center and of course we are part of PEPNet. The students that went through this training were enthusiastic about it!

Audience Member: When you said that was ready for fall enrollment, can you predict when it will be ready?

Pat Billies: July 2004

Audience Member: At your institution, they are independent students that are hired to be notetakers?

Pat Billies: I will let someone else comment on that. Pat and Maureen?

Pat: If they are a business student they will not take information technology notes. If they are a student in the class, they will have a vested interest in showing up on time.

Maureen: There are times when we need to find outside people. Classes like computer graphic design, I try to get people that are competent with computer classes because they can do the computer work.

Pat Billies: One comment: the first module is one on disability awareness. The current first module I weighted toward understanding deafness. We have left it open where we can add sections about other disabilities. If some of you have institutions that may be interested in partnering with us, we could develop that. We don't have the money for that right now, but a dollar and a dream, anything can happen.

Audience Member: Is there a way to put in the contact information for your institution.

Pat Billies: You can tweak the toolkit like the cover sheet to put any information that you may want on there. You could have that up front for everyone all the time.

Audience Member: Is there a way I can look at this without needing to take the test?

Pat Billies: No. The only people that can do that are the web designer and me. We did that intentionally because we want people to take the training. You need to go through it. We can give you access to the current location.

The toolkit can be accessed by signing into the training and on the first page, when you have gone through the training; you have access to all pages. There will be an introduction and the modules. You will be able to find that on a home page.

Audience Member: I am at a large institution and I have problems finding out how to identify a person.

Pat Billies: You are talking about selecting a notetaker in the first place?

Presenter: I have seen a similar situation and they wanted to get students to come in for notetaking. To work with another department like the social work department because there are caring people. We also have a job fair where you can set up a booth and I know most universities have something like that.

Presenter: We pay \$6.42 cents an hour.

Audience Member: Have you been successful doing that for work-study?

Presenter: We do hire federal work-study students first.

Presenter: With recruitment, there are many different ways to do that. We advertise in the college newspaper, we have an interpreter education program; we have flyers at registration, etc. We contact the honor society.

Audience Member: Are you talking about notetakers that are not signing up for the class?

Presenter: We call students with a B or better grade that are students that are currently in the class. We call two weeks before the semester starts. We leave a message by telling them there is a student that needs a notetaker and we try to recruit that way.

Audience Member: We use volunteer notetakers. It sounds like from what I have seen that they will benefit and it will be difficult.

Presenter: We use other things like the information system to check with the students, and I email students directly, you get a priority form and that really helps.

Audience Member: I was wondering, so if anyone that is taking the training, if they are in the class as a student as well, they will get paid the same rate?

Presenter: That's correct.

Audience Member: You would not have someone doing that voluntarily?

Presenter: I have seen that with someone that doesn't want to be paid for it and is coming back to college. Knowing there is money is a great incentive.

Audience Member: Would you pay them more?

Presenter: No. Everything is funded with the notetaking federally and they need to be a student.

Presenter: At Camden County College they don't have to be a student, but we can hire them.

Audience Member: Would you pay them a different amount?

Presenter: We would probably stick to that unless it was a highly technical class and we can't find anyone.

We get funding from the New Jersey Commission and VR.

Audience Member: Can you get a module; can I complete that and come back later?

Pat Billies: Sure.

A Model Approach to Networking Professionals in Your State

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Abstract

What services are available in your state for individuals who are deaf or hard of hearing? Who can you contact to find out? What happens to those individuals who “fall between the cracks?” These are questions that those in deaf services ask on a daily basis. Often there are answers out there but problems go unsolved because we work in isolation. This paper will describe the need for statewide networks and what has been done in many of the states in the PEC region to establish these networks. Participants will discuss strategies for developing the initial workshop, maintaining the network, and implementing innovative solutions to age old problems.



A Model Approach to Networking Professionals in Your State

In the first room of the FDR memorial in Washington DC, the inscription on the wall reads, "No Country, however rich, can afford the waste of its human resources. Demoralization caused by vast unemployment is our greatest extravagance. Morally, it is the greatest menace to our social order" (Roosevelt, 1934).

The poster on the wall in a university campus office features a drawing of a very old, rickety boat dock with wooden planks. Some planks are missing, while others are broken apart. Sticking through the gaps between the planks are the legs of several children. The caption reads, "Don't let children fall through the cracks."

Both of these quotations offer service providers the opportunity to consider what happens when young adults who are deaf or hard of hearing don't fit into the traditional plan of going to college or participating in job training/placement programs. Roosevelt expressed his thoughts regarding employment issues more than 60 years ago, but they are still applicable to the population of deaf and hard of hearing individuals who can be described as low functioning. This population is also at great risk for falling through the cracks of service delivery because services to address job training, employment, and independent living may not be easily identified in many communities.

Background

It can be difficult to provide support services for students who don't fit the norm. Although open door community colleges may have very flexible admissions requirements, progressing into major areas of study may be limited by placement tests or successful completion of developmental studies courses. Students may not have the skills necessary to compete in that environment, or may lack the motivation or discipline to be successful. High school faculty and staff may be concerned about the availability of options for students who are not "college-bound."

In a given area, service providers who work with individuals who are deaf and hard of hearing may know about some of the options available after high school, but it isn't uncommon for them *not* to be aware of a wider range of opportunities. Making referrals or encouraging students to explore other options may be difficult without a strong network among service providers.

Organizing Regional Discussions

Recognizing the need to bring professionals together to discuss issues and resources, the Postsecondary Education Consortium (PEC) hosted a roundtable discussion in the fall of 2000 immediately following the Southeast Regional Institute on Deafness (SERID) in Atlanta. Two participants were invited from each of the 14 states in the PEC region. The participants represented postsecondary education programs, vocational rehabilitation services, and community agencies. Limiting participation to about 25-28 participants allowed the group to have a discussion rather than a more structured, lecture format.

The agenda during the first regional meeting focused on identifying issues and concerns, and brainstorming possible solutions. The group identified several goals, and listed steps to address them. The second regional meeting in Biloxi focused on clarifying the purpose of the group. Instead of identifying new goals, the group agreed to come together to talk about issues and resources, and options and opportunities. Since not all group members were consistent from year to year, this format seemed to work better than trying to catch up the new members each year.

The group continued to meet after SERID in Lexington in 2002. The discussion turned into a brainstorming session that expanded the network beyond state lines. During the 2003 meeting in Mobile, the group discussed a model national service delivery plan. The common thread in all of the roundtable discussions was a concern about what happens to individuals who fall through the cracks. The eventual format of these meetings was difficult for some members because it did not produce a tangible product. However, sharing concerns, ideas, and resources is a very important part of the puzzle for those in the field of deafness. Too often professionals get caught up in outcomes and statistics and forget that establishing networks and support systems is equally significant.

The region-wide meeting offered benefits and liabilities. Planning it as a post-conference activity to a well-attended event worked well because people were already traveling to attend the conference and were willing to stay for a few more hours. It was also interesting to have a mix of participants with a variety of perspectives. Each year, the discussion topics varied a bit, based on the experiences of the participants. However, having annual region-wide meetings might not be the best way to develop projects or get tangible results. Selecting only two participants from each state was difficult when several others were interesting in participating. While some members of the initial group returned each year, there were usually new participants each time. Because the

group met after the SERID conference, it was difficult to get ongoing participation once the participants returned to their own agencies and institutions.

Developing Statewide Discussions

One of the issues that the regional group discussed was the need to better understand what options and opportunities were available in each state. The PEC State Outreach and Technical Assistance Centers (SOTACs) seemed to be a good point of contact for various groups because they were already well connected with postsecondary education institutions across each state, and usually had strong relationships with vocational rehabilitation and other agencies. As a resource for the state, the PEC SOTAC often interacted with less-than-two-year programs and high schools.

When planning the roundtable discussions, it was obvious that one size did not fit all. Although there's a model to follow, each state has adapted it to fit their needs. Meetings are planned twice each year in Alabama, while other states have planned them annually. Colleagues in Georgia wanted the discussion to start within the Deaf community, and only included participants who are Deaf, hard of hearing, and late deafened in the initial meeting. In Oklahoma, it seemed more feasible to attach the discussions at the end of other meetings. Those planning the discussion in Louisiana invited participants, but other states have hosted open meetings. At this time, roundtable discussions have been held in Alabama, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and West Virginia.

Questions to Consider

Who is the target audience?

The range of service providers who might be interested can include high school faculty and staff, postsecondary service providers, social service agency staff, and vocational rehabilitation personnel.

Is it by invitation only or is a general announcement about the meeting distributed?

Inviting participants gives the planning team the opportunity to select participants from a variety of agencies and organizations. In those states where the meeting has open participation, people unfamiliar to the planning team participated, which created an expanded network within the state.

For a fresh perspective, inviting “outsiders” to the meetings is important. There are teachers and interpreters in mainstream programs who never have the opportunity to network, and they miss out on issues, trends, and current practices. If we only involve “leaders” in the field then we are missing out on the majority of people in the field. Both groups are important.

Should there be a limit on the number of participants?

If there are too many people in the room, it may be difficult to have a discussion of the issues. Networking among a smaller group of participants may be easier for participants.

How will accommodations be provided?

Appropriate accommodations are crucial to a successful meeting. Consider the composition of the group and decide what accommodations will be needed to ensure communication access. While providing interpreters may be a regular procedure for meetings,

captioning and assistive listening devices can provide increased access. Not only does captioning provide real-time access to the information, it also serves as a record of the meeting.

Where should the meeting be held?

Political issues within a state may support the idea of holding the discussion at a neutral location such as a hotel meeting area so the participants do not perceive the agenda as being skewed. Budget issues, however, may not support this strategy. Choosing a certain part of the state might make a difference in who can attend, so the planning team may want to consider locations that are more readily accessible by a larger number of participants. Doing this can lessen the complaint that “only people from the _____ area are ever invited or involved.”

Who will facilitate the discussion?

Choosing a facilitator is important in setting the tone of the meeting. It may be easier to have a facilitator from out of state because he/she is not viewed as being part of the local political agenda. It can be beneficial if the facilitator doesn't know what the “hot topics” in the state are because he/she may be seen in a more objective light. Because funding may be an issue, finding a neutral facilitator from within the state is another option. Should the facilitator have a hearing loss? Will more members of the Deaf community attend if the facilitator is hearing or hard of hearing? Will all members feel welcome and involved and comfortable? If the meetings continue on a regular basis, should the same facilitator be involved?

How will the meeting be funded?

Since travel funds may be limited, participants may ask for support to participate. Will there be a need for overnight expenses? Can state agencies help with the funding? Are small grants available from groups such as the Rotary Club? It could also be advantageous to charge a fee to the participants to help cover expenses. Even a small amount might increase the commitment of participants to attend and “get their money's worth.” Fees can also help cover expenses such as materials and refreshments.

What attracts people to the discussion?

Roundtable discussions are appealing because they are different from a typical training workshop. Active participation from the attendees is very important; this is not a place to passively sit back and listen. Some people will attend because they value the networking opportunities. Other participants will seek continuing education units (CEUs) that have been offered at some of the meetings. This is also a good way to share resources and disseminate materials. Door prizes and food are also big attractors. People remember good hospitality as much, if not more, than good information. Be sure to have both.

What does the agenda include?

The initial meeting is designed around group participation and discussion about the resources that already are established in the state. It's not uncommon for someone to bring up a problem and another participant will describe a strategy being implemented in another agency to address that problem. Time for networking may be overlooked, and organizations often don't advertise what they are doing outside their area. While there may be gaps in services, one of the biggest issues is the lack of regular communication between service providers. Participants may provide a brief summary of what is happening in their area or advertise workshops that are

coming up. This doesn't have to take a lot of time but it is a good way to keep people informed. Be sure that the information doesn't stop with just those in the meeting. It's possible to set up a web site or listserv to keep all interested parties in the state informed.

Keeping the format simple usually works well. Including a "gripe" session allows participants to vent their frustrations. This part should not be allowed to continue for too long because the goal is to focus on positive outcomes. After the problems are listed, move on to solutions. Starting with "pie in the sky" solutions forces participants to think outside the box and dream about the possibilities. While some of the ideas listed might never happen, one of them might serve as a springboard to a solution that could be implemented. Remind the participants to dream really big and to spend lots of money. This is fun and it is important to the next step.

Now that the group has identified a goal, what happens next? This is the part to focus on more practical ways to get started. It is important for participants to see what small steps are necessary to reach that goal. The group may discuss projects and plans for action.

If we were to offer a blueprint for the "Falling Between the Cracks" roundtable discussions, it would be to begin with a brainstorming session that includes getting to know the other participants and establishing a network. Allowing time for announcements and the opportunity to share resources is also important. If the meeting progresses in a state past the initial meeting or two, then the format might change to better reflect the group and its goals. There might be an educational program offered. For example, an Alabama meeting featured a speaker on legal issues. Participants were able to discuss their concerns, but also left with new ideas.

What else can be included as part of the agenda?

The statewide group in Alabama has elected to provide an educational program as part of their semi-annual meetings. Other groups realized the need for a statewide directory of services. A group in Oklahoma used this opportunity to develop a coalition to address the reduction of services in recent years.

What are some of the brainstorming strategies that have been used?

There are numerous ways to stimulate brainstorming activities. One strategy that has worked well at some of the roundtable discussions has been to set flip charts in different parts of the meeting room. Each flip chart includes a stimulus question, such as "What are the strengths in service provision in ____ state?" or "What gaps in service provision do we face in ____ state?" Participants jot down their ideas and concerns, and other add to it. All of the responses become part of the group response. Some participants may have ideas to share, but may not be entirely comfortable expressing them in front of the group. Using flip charts allows people to express their ideas without using a lot of discussion time, and it also may allow discussion on a topic to proceed at a much deeper level.

What will the meeting accomplish?

This forum can provide a statewide network, identify problems and problem-solving strategies, offer workshop opportunities, serve as a means of information dissemination, or develop project work groups. Too often, there must be an official outcome for a meeting. For this meeting, if the only thing that happens is that people have the chance to get together to discuss issues and concerns, that may be enough. Establishing a network is important, and developing

projects and models may not always be on the agenda. While it's valuable to see tangible results, don't overlook the importance of communicating and networking

What were the major concerns?

Most of the groups that have met shared similar concerns, such as options available after high school, the lack of resources in rural areas, the lack of transition services that are meaningful for deaf and hard of hearing students, the lack of communication among professionals, the lack of training for professionals who aren't in deaf services about issues related to individuals who are deaf or hard of hearing, and the weak reading and writing skills that many deaf and hard of hearing students demonstrate.

What are some of the additional or unexpected benefits of establishing this network?

Trying to get support for a project or program alone can be very difficult; however, the support of the group carries much more power. Another benefit is that people who may not usually have the chance to interact can do so in this forum. In some groups, a problem might be identified that can be traced back to practices in lower level school programs. By bringing it to the surface, changes can be made to address the issue before it becomes a problem in later years.

How is interest sustained from meeting to meeting, or from year to year?

Some statewide groups have set up websites, internet bulletin boards, or listservs to continue the discussion between meetings. Resources related to job training and employment, communication issues, and cultural perspectives can be posted online for easy reference. Other groups have established small work groups to address particular projects or activities. A simple way of sustaining interest is to involve the participants in the decision-making process to consider issues such as how often the meetings might occur or where they could be held. Build ownership as part of the process.

Summary

Postsecondary service providers are frequently asked to provide resources and referral information for students who are deaf or hard of hearing who "fall between the cracks" in the service delivery system. Many of these individuals might benefit from job training, employment services, and independent living skills development, but they may not be easily identified once they leave secondary education. Even where there are appropriate programs and services available, it is not unusual for service providers to remain frustrated because there are few opportunities to share resources and experiences. By establishing a statewide network of professionals, colleagues have the opportunity to learn about existing and emerging programs and support the implementation of innovation programming. Strategies for bringing together a statewide network may vary, but increasing the awareness of professionals may have a strong impact on the choices that young adults who are deaf and hard of hearing may have.

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Captions! Captions! Everywhere??

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Abstract

Open captioning, subtitles for the hearing impaired, closed captions... What does it all mean? This presentation will help explain the differences in various captioning formats and what research shows is the best format and why. Information will be provided about how captions can be added to a non-captioned video and the legal issues involved. Participants will learn why captioned media is crucial to the education of Deaf and hard of hearing as well as beneficial to all students. In addition strategies will be given for encouraging teachers and school systems to utilize captioned media and participants will see samples of videos on a variety of educational topics.



Introduction

Those of us who watch TV at home with our closed-captioned decoder turned on sometimes get the feeling that captions are everywhere. After all, doesn't every company caption their educational videos and other media now? Unfortunately, no. Companies surveyed by the National Association of the Deaf have the general perception that it does not make "market sense" to pay for captioning as the demand from buyers for captioned media is very low (Taylor, 2001).

Is captioned media really needed? Who benefits from its use? Where are captioned media found? What does it cost to have a video or other media item captioned? Can individuals learn to caption? Does federal accessibility law require institutions to use captioned media? This article attempts to answer these and other questions.

The National Association of the Deaf (NAD) has gathered data on the number of media items with captions that are available for purchase. According to the R. R. Bowker database, as of September, 2003, of the 372,469 media titles (educational and movie titles) in the database, 31,283 are indicated as captioned. Sadly this amounts to less than 12% of videos available for purchase. While captioning is primarily intended for those who cannot hear the audio, research has determined that it also benefits many who can hear. This includes those who may not be fluent in the language in which the audio is presented and individuals with learning or reading difficulties.

General Need

Media with an audio component cannot be readily understood by deaf or hard of hearing persons. Not being able to hear narration, dialogue, and other sounds critically limits the amount of information received. Something must be added to compensate for this limitation, and a visual compensation called captioning is commonly used. Access problems multiply daily, as audio and media clips with sound play an increasingly important role on the Internet and within DVD/CD-ROM and multimedia materials.

Postsecondary Need

According to the National Center for Educational Statistics (1999), an estimated 428,280 students with disabilities were enrolled at 2-year and 4-year postsecondary education institutions in 1996-97 or 1997-98. Most of the students were enrolled at public 2-year and public 4-year institutions, and at medium and large institutions. Institutions also reported 23,860 students had a hearing impairment.

Further study by the NCES (1999) reports nearly 24,000 students who are deaf or hard of hearing enrolled at 2-year and 4-year postsecondary education institutions between 1996 and 1998. Including the approximately 2,500 students enrolled at Gallaudet University and the National Technical Institute for the Deaf (NTID), Walter (2003) estimates that the number of deaf and hard of hearing students in postsecondary education has increased to approximately 28,000. This represents a 65 percent increase during the decade of the 1990's.

Captions Assist Reading and Learning English

English as a Second Language (ESL), English Language Studies (ELS), and other terms are used to describe English language instruction for those individuals who are non-native speakers. This population is a huge and growing domestic market for captioning.

A study published in 2003 entitled "The State of Closed Captioning Services in the United States: An Assessment of Quality, Availability, and Use" was funded by the NCI Foundation with research conducted by the Annenberg Public Policy Center of the University of Pennsylvania. The goal of the study was to survey and "determine the end-users' views of closed-captioning and how we might make improvements." A total of 203 respondents (deaf, hard of hearing, ESL, and general audiences) participated in the survey, and the interesting results were that 28% of the total sample said they used closed-captioning to help with reading, while 30% said they used it to help with English.

Waiting lists for class space attest to the overwhelming demand for ESL instruction. New Americans from all over the world are eager to learn English, and nothing can teach them the language better than media with captions. In addition, Spanish-language captioned media is on a tremendous growth curve, as witnessed by the proliferation of programming on cable television networks. Captioned media is a great motivator. Language, vocabulary, and comprehension dramatically improve from watching captions.

The Need

According to the National Center for ESL Literacy Education (NCLE), over one million adults, enrolled in ESL programs in 2000, received funding through the U.S. Department of Education's Office of Vocational and Adult Education (OVAE). This number represents 38% of the overall national adult education enrollment. Most adult education programs (70%) offer some ESL instruction, with 21% being predominately ESL. The NCES reported that minority students

represented nearly a third of all undergraduates in 1999–2000, up from about a quarter in 1989–1990.

The National Adult Literacy Survey (NALS) resulted in estimates that 23% of the adult population fail to achieve the National Literacy Act of 1991 definition of literacy: “An individual's ability to read, write, and speak in English, and compute and solve problems at levels of proficiency necessary to function on the job or in society, to achieve one's goals, and develop one's knowledge and potential.”

The National Institutes of Health (NIH) estimates that at least 20 million of the nation's 53 million school-age children are poor readers. Of the 10% to 15% of the children who eventually drop out of school, more than 75% will report reading difficulties (Henry, 2001).

Captioned media, which combines visual and audio stimuli, is accessible to those who have not yet learned to read and write well, and provides context for learning. Research has shown that captioned television, video, and other media are a powerful and effective literacy and language tool. Students using captioned materials show significant improvements in reading, comprehension, vocabulary acquisition, word recognition, decoding skills, and overall motivation to read. Teachers who use captioned media are selecting an activity that is relevant and interesting.

Visual learners learn best by seeing (sometimes reading) information to be learned. Captioned media is ideal for reading/literature, writing/spelling, social studies, and other subjects, as it offers opportunity to associate the printed word with the picture, as well as visualize the words.

Learning resources for people who learn differently or experience learning disabilities are critical. In a technology-rich classroom or in a distance-learning environment, multiple modes of access and multiple options for demonstrating student competencies are integral to providing a successful educational environment. Captions are an extension of the use of visual and concrete information, linking visual images with the language used to express ideas. Multimedia can provide a radical departure from yet another set of compartmentalized pieces of information to which the student is exposed. Developing vocabulary as part of knowledge structure requires much more energy and focus than memorizing terms, and captions can play a critical role.

All of this research shows that captions are beneficial to a large population, not just those with a hearing loss. If this is the case, then why would instructors show videos without captions? There are many excuses for not using captioned media, but are they good reasons? “The information won't be on the test.” “The information is also in the text book.” “It's just a short clip.” “I can't find a captioned version.” The bottom line is that showing an uncaptioned video in a classroom with deaf or hard of hearing students is denying access to information. A question to the instructor would be: If the information is not “really” important then why show it, or is there no captioned video which would provide the same information? The problem is usually that instructors either don't think of captions or don't think captions are important, or they don't plan ahead enough to get a captioned version of the video.

There are also some misconceptions about viewing captions. Some people think that simply turning on a caption decoder allows captions to be seen on all videos. They do not understand that captions must be added (encoded) to the video and that not all videos contain captions. This misunderstanding leads to frustration when they push the “cc” button but no captions appear. They may assume that there is something wrong with the monitor or receiver. Not all TVs have a built in decoder. For TVs made before 1993, an external closed-caption decoder is needed. Connecting the decoder correctly to the TV and VCR is not a difficult

process. However, if an instructor doesn't know that an external decoder is needed to view the captions this can be another source of frustration. And finally there is a myth that hearing students will find the captions distracting. At first, some hearing individuals may find captions distracting. However, it just requires some practice. It has been proven that using more senses improves the learning process. Thus, besides providing access to those who cannot understand the information through hearing, captions enhance learning for everyone.

If captions are good for everyone then how can educational institutions find and provide captioned media? The easiest way is to find a captioned version of the video and there are a couple of good sources for this information.

The Captioned Media Program

The CMP captions and distributes over 4,000 open-captioned titles (videos, CD-ROM, and DVD). Deaf and hard of hearing persons, teachers, parents, and others may borrow these materials. There are no rental, registration, or postage fees. Several hundred titles are also streamed on the CMP Web site at <www.cfv.org>. It also provides a clearinghouse of information and materials on the subject of captioning. These resources are available in print or online to consumers, agencies, businesses, and schools. The clearinghouse also maintains a database of captioned media available for purchase and assists captioning agencies upon request. An evaluation is administered to any agency that desires to perform CMP captioning work and to other agencies who want to pass the evaluation in order to appear on the U.S. Department of Education's "Approved Captioning Service Vendor" list. Agencies are provided training and captioning guidelines upon request or as required in their preparation for the evaluation.

Captioning Videos

R.R. Bowker Corporation has generously provided its closed-captioned information (captioned media available for purchase) to the CMP for its database. Information about this organization is included in the resource list at the end of the article.

If a captioned version of a video is not readily available, the next course of action is to add captions. This can be done either by hiring a captioning agency or by purchasing the equipment to do it in-house. There are pros and cons to both methods. Before deciding, look at how many videos will need to be captioned, how quickly they are needed, and what the total budget is. Whether choosing to pay someone to caption or caption in-house, always remember that quality is a key factor.

Institutions can caption materials themselves possibly save money. But, be aware that there is a real skill involved in captioning, and it is much more than just putting most of the words on the screen. Consider if there is adequate time and personnel to devote to captioning in-house. A staff member is needed to transcribe the video and the technical personnel to encode the video. Is there already personnel available for this task or will an existing staff member's duties be increased? The up front cost of purchasing the equipment will be between \$7,000 and \$8,000. Compare this to the number of videos that need to be captioned and see if it is cost effective to purchase equipment or to pay an agency.

The cost of having a caption agency add captions to videos varies greatly. A survey of 20 captioning agencies was done in relation to this presentation and the estimated price of captioning a 30 minute video ranged from \$120 to \$840. It has been said, "You get what you pay for." In the case of captioning, this is also true. Inexpensive agencies typically do not have the technology or the training to produce good-quality captioning. It may be better to use agencies

that charge a little more, than spend any amount for a poor-quality product. When choosing a captioning agency, be sure to ask if a proof copy will be provided and if there is an extra charge for this. Also ask if there is an extra charge if corrections need to be made. Quality captioning agencies usually include these services at no charge because they want to produce a quality product.

Some captioning agencies will provide an inexpensive service, but the result is often a shoddy product that has omissions of language and errors in spelling, capitalization, and grammar. These captions may satisfy the letter of the law, but will not really provide equal access to the information. We want to produce high-quality graduates. Sloppy (garbage) captions and failed access can add a new meaning to the phrase: “Garbage in, garbage out.” The CMP provides a listing of captioning agencies that have taken a CMP evaluation and met quality standards.

The Captioning Media Program offers its manual Captioning Key: Guidelines and Preferred Techniques free-of-charge to anyone who is interested in captioning. These guidelines can also be viewed and downloaded from the CMP Web site. A Spanish version of the Key is also available.

The Key provides instructions on text (caption placement, spacing, etc.); presentation rate (editing, etc.); language mechanics (spelling, punctuation, etc.); and special considerations (sound effects, speaker identification, numbers, etc.). This information is revised annually, updating information as new technology emerges and incorporating consumer input and research results.

The Key continues to have a great impact on captioning agencies and other interested parties throughout the United States. Many agencies adhere to these guidelines when captioning for broadcast television and other media formats; even Microsoft has requested copies for use by its caption editors.

Another important factor to consider when adding captions is the legal issue. Sometimes laws can conflict with other laws. Captioning is one such example. The ADA says that we must provide access to individuals who are deaf and hard of hearing; however, adding captions to a copyrighted video can violate the copyright laws.

Obtaining Permissions

The Consortium for Educational Technology in University Systems (CETUS) is a consortium of the State University of New York, the California State University System, and the City University of New York and was formed to explore a variety of initiatives in technology-assisted teaching, learning, and research. CETUS (1996) states the following about copyright permissions:

The complexities of fair use require that each member of the university community . . . make a sound judgment about the permissibility of quoting, photocopying, downloading, and making other uses of protected works. Invariably, however, each of us will encounter situations where we need to obtain permission from the copyright owner. Common examples where permission is ordinarily required include photocopying an entire article or entire book chapter into a course reader that students will purchase, or mounting substantial text or graphic work onto a publicly accessible World Wide Web page.

When permission is necessary, the institution must contact the copyright owner or the owner's authorized agent. Often the copyright owner will be named in the formal copyright notice accompanying the original work. Such notices are no longer required to obtain copyright protection; so many works often lack the notice or include the name of someone who is not the actual or current copyright owner. A sample permissions request letter and instructions can be found on the CETUS Web site. The Copyright Clearance Center (CCC) at <http://www.copyright.com/> can also simplify the process by acting as the agent on behalf of thousands of publishers and authors to grant permission.

Please keep in mind that copyright owners have wide discretion when responding to requests for permission. Permission may be granted or it may be denied. It may be granted, but only on condition of paying a fee. The fee may be modest or it may be exorbitant. Copyright owners also have no obligation to respond at all. For most common uses of materials for educational and research purposes, copyright owners usually will be cooperative and understand user's needs.

Fair Use Exclusions

CETUS (1996) further comments in respect to fair use of copyrighted materials with disabled students:

A university serves many students with various disabilities. Certain works need to be adapted to serve their needs, perhaps by creating large-print copies of some materials or by creating a closed-captioned version of a commercial educational videotape. The copyright owners have not authorized anyone to make such versions available for purchase. In addition, some of these adapted materials might be electronically delivered to disabled students in their homes.

Adapting materials for students with disabilities raises several problems under traditional fair-use analysis. First, the students generally need the entire work, so the "amount" factor will often weigh against fair use. Second, students need a wide range of materials, often including works of fiction and feature release motion pictures. In some such instances, the "nature" of the material can weigh against fair use. Although the copyright owner may not currently market a version of the work adapted for students with disabilities, the owner may nevertheless argue that making and providing any copy under any circumstances will deprive the owner of a potential sale and create an adverse effect on the market. Fair-use law may ultimately protect the adaptation of short works or excerpts from longer works, as may be needed to serve the requirements of specific students enrolled in specific courses. Third, fair use is less likely to encompass the adaptation of a full textbook or full motion picture for long-term retention in anticipation of unspecified needs.

This information is not meant to deter an institution from adding captions to the videos used at a school, but service providers should be aware of the issues. It is important to contact the producer of the video and obtain written permission to add captions.

It costs (time and money) to caption, it is not easy, and the ADA requires that it be done whether or not the institution wants to do it. Copyright laws can be a barrier. However, the

benefits far outweigh the costs. All students can benefit from captions. Perhaps the final word belongs to a deaf adult who said, "Captioning is very important for today and the future for deaf children and adults. We are human beings. We have a right to know. Please."

Important Definitions

Closed captions: These have traditionally been hidden on the 21st line of the vertical blanking interval (VBI) and made visible by a decoder at the time of viewing. They are usually white capital letters encased in a black box, though newer technology permits a variety of options. Federal law mandates the closed-captioning of broadcast, cable, and satellite distributed TV programs. However, this requirement does not extend to videos, DVD, and other media formats.

Subtitles: This is permanent on-screen text (traditionally in a foreign film) written for hearing viewers. Usually subtitles do not indicate information other than dialogue, and often are edited. Some may translate important onscreen printed information such as a street sign or a written message. Subtitles are created with a character generator; no decoding capability is required for viewing them. Subtitles are usually in upper- and lower-case letters with a black rim or drop shadow.

Subtitles for the deaf and hard of hearing (SDH): These are similar to subtitles used for foreign films, but also include information such as sound effects, speaker identification, and other essential non-speech features. They are presented as close to verbatim as possible. CMP videos are of this type (sometimes called open captions, though this term most often refers to closed captions made permanently visible by duplicating copies of a closed-captioned video while the decoder is engaged).

Pop-on captions: A phrase or sentence appears on the screen all at once (not line by line) stays there for a few seconds and then disappears or is replaced by another full caption. The captions are timed to synchronize with the program and placed on the screen to help identify the speaker. Pop-on captions are used for prerecorded captioning.

Roll-up captions: Roll-up captions roll onto and off the screen in a continuous motion. Usually two to three lines of text appear at one time. The top line of the three disappears as a new bottom line is added. Roll-up captions are used for all live (real-time) captioning, but are also used for some prerecorded captioning. These are not synchronized and do not allow for caption placement (to avoid on-screen graphics and identify speakers).

Off-line: Captions created and added after a video segment has been recorded and before it is aired or played. Examples of programs that utilize off-line captioning are prime-time TV programs, made-for-TV movies, and educational videos. (Live Display captions are created prior to airing but the timing of the display is controlled manually at the airing, often with a teleprompter.)

On-line: Captions created and added during a live broadcast. Sometimes called "real-time captions," these are used during live events such as a political debate or sporting event.

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Resources

- Bowker's Complete Video Directory - 888-269-5372 (V) - www.bowker.com.
- Captioned Media Program - www.cfv.org
- Captioning Key: Guidelines and Preferred Techniques - <http://www.cfv.org/caai/nadh7.pdf>
- Captioning Key: Guidelines and Preferred Techniques (Spanish version) - <http://www.cfv.org/caai/nadh52.pdf>
- National Center for ESL Literacy - <http://www.cal.org/ncle>

Captioning the Web

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Abstract

Adding captions to multimedia presentations on the Web helps to increase accessibility to people with disabilities. This can easily be done with little training or technical expertise by using the Media Access Generator (MAGPie), a free and easy-to-use software package developed by the CPB/WGBH National Center for Accessible Media (NCAM). MAGPie allows a great deal of customization, including specification of font, font size, bold, italics, alignment, text color, background color, audio descriptions for individuals with low vision, multiple tracks (e.g., for multiple languages), precise timing of the captions, and more.



Legal Requirements

In 1998, the Rehabilitation Act was amended to require federal agencies to make their electronic and information technology accessible to people with disabilities. This amendment is known as Section 508. Perhaps the best-known portion of Section 508 is 1194.22, which concerns making the Web accessible and where sixteen specific requirements are listed. Subpart B reads “Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation” (Section 508 Standards, 1998). This requires that multimedia web presentations be captioned, providing text synchronized with the presentation. A separate transcript is not sufficient for true access.

There is some debate about whether Section 508 applies to postsecondary institutions. While not federal agencies, most schools do receive federal funds. Whether this is sufficient to require compliance with Section 508 is still in question. However, there is no question that both the Americans with Disabilities Act and Section 504 of the Rehabilitation Act require postsecondary institutions to make their electronic and information technology accessible. The Americans with Disabilities Act (1990) states:

Subject to the provisions of this title, no qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any such entity.

Section 504 of the Rehabilitation Act (1973) states:

No otherwise qualified individual with a disability in the United States, as defined in section 7(20), shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance or under any program or activity conducted by any Executive agency or by the United States Postal Service.

While the Internet is not specifically mentioned, if an institution is using it to convey official information, as a supplement to class materials, or for on-line classes, it is clearly a service, program or activity that must be made accessible to individuals with disabilities. But because Internet accessibility is not specifically outlined in these laws, it is sometimes difficult to determine if a site is in compliance. Whether or not postsecondary institutions are required to comply with Section 508, this legislation provides a clear road map to the meaning of “accessible”.

The focus of this paper is on making the Web accessible to those who are deaf or hard of hearing. However, captioning multimedia presentations helps many other groups. Individuals with learning disabilities, those for whom English is a second language, individuals with slow connections or low quality sound cards, or those who have the sound turned off for any number of reasons (such as working in a library) may all benefit from the availability of captions. Following the principles of universal design, making something accessible for individuals with disabilities makes it better for everyone.

MAGpie

The three primary multimedia players for the Windows platform (QuickTime, RealPlayer and Windows Media Player) all have the ability for captions to be added. However, creating captions requires learning and writing specific computer codes which is a time-consuming and intimidating process. This is complicated by the fact that the platforms don't all use the same code, thus captioning a video presentation that would reach the widest audience requires learning more than one computer code.

The CPB/WGBH National Center for Accessible Media (NCAM) developed the Media Access Generator (MAGpie), a software tool that serves as an editor to create the code. MAGPie allows the average user to create captions easily, the same way an individual can create a Web page with DreamWeaver or FrontPage without knowing any HTML code. Once the captioning is entered using MAGpie, the project can be saved in any, or all, of the three formats.

MAGPie is a powerful tool that allows a great deal of customization, including specification of font, font size, bold, italics, alignment, text color, background color, audio descriptions for individuals with low vision, multiple tracks (e.g., for multiple languages), precise timing of the captions, and more. This program is available as a free download from their Web site (<http://ncam.wgbh.org/webaccess/magpie/>). There are two versions of MAGpie: Version 1.0 and Version 2.01. The operating system of the computer used will determine which version to download. The basic steps for adding captions are the same.

The first step is to transcribe the text. This is likely the most time consuming part, although it is not difficult. The text must be proof-read for accuracy, spelling, and appropriate

punctuation. The transcription may be done within MAGpie itself, or typed into another program and imported into MAGpie.

The next step is to divide the text into appropriate captions and format them. A caption is the amount of text that appears on the screen at one time. The Captioned Media Program developed “Captioning Key: Guidelines and Preferred Techniques,” a clearly written and thorough booklet providing guidelines on how to create and format captions most effectively. This guide is available on the CMP website (<http://www.cfv.org/caai/nadh7.pdf>). It describes situations such as when a speaker should be identified, when to use italics, how many lines of text to display at once, how to handle music and other non-verbal sounds, and much more.

Once the text is in MAGpie, divided and formatted appropriately, it is time to synchronize it with the video so that the captioning will appear when desired. Simply play the video from within MAGpie and press the F9 key when the next caption should appear. The software will automatically insert the time codes necessary for the players to know when to display the next caption. If a mistake is made, it is simple to correct it by moving the cursor to the last place it was correct and playing the video from that point, overwriting previous incorrect time codes and replacing them with new ones.

Once the captions have been synchronized, the video can be played to preview the captions and make sure everything appears as it should. The project can then be exported into the correct format for the desired player (QuickTime, RealPlayer, or Windows Media Player). Saving a version for all three players requires exporting it three times.

Other Considerations

A common response to captioning videos for the Web is to simply digitize a video that is already captioned. This is not a viable solution, however, for two reasons. The size of the text played back in a media player screen would be too small to read; and the quality of the video once compressed for the Web would be too poor for the text to be legible. Using MAGpie and the captioning abilities of the players puts the captions in a separate box outside of the video, making it much easier to read.

A common about captioning is that a video is designated as being captioned, but the captioning doesn't show up when the video is played. Just like viewing captions on television, the captioning must be turned on within the player.

Sometimes users will attempt to use MAGpie without first using the tutorial. While most of the process is intuitive, there are some details that must be attended to that are not obvious (e.g., where to save files). Missing one of these may lead to frustration and giving up on the idea of captioning. Therefore, using the tutorial with sample files provided is strongly encouraged before tackling a large project.

Finally, although this paper has focused on the captioning abilities of MAGpie, MAGpie can also be used to add audio descriptions for individuals who are blind or have low vision. An outstanding step-by-step tutorial for adding captions and/or audio descriptions can be found at the NCAM web site.

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Resources

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PEN-International: A Worldwide Change Agent for Postsecondary Deaf Education

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Abstract

In 2001, The Nippon Foundation of Japan entered into a partnership with officials from the National Technical Institute for the Deaf (NTID) at Rochester Institute of Technology, Rochester NY, USA, to establish a worldwide university network to serve and empower deaf students as they prepare for careers in a rapidly changing technological society.

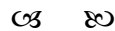
This ambitious project, called the Postsecondary Education Network International (PEN-International), was created to technologically link universities around the world that serve deaf and hard-of-hearing students, primarily those in developing countries. Using the combined expertise of faculty and staff members from its host institution, NTID, and other world renowned educational experts, PEN-International has helped these universities develop state-of-the-art instructional technologies, improve their technical curriculum, and update their instructional computer hardware and software. Generous opportunities for cross-cultural exchanges and faculty professional development and training have become additional cornerstones of the program's efforts.

This paper reports on the successes to date of PEN-International's collaboration with Tsukuba College of Technology (TCT), Tsukuba, Japan; Tianjin Technical College for the Deaf of Tianjin University of Technology (TUT), Beijing Union University (BUU), and Changchun University, all in China; Bauman Moscow State Technical University (BMSTU), Russia; De La Salle University-College of St. Benilde, Philippines; Charles University, Czech Republic; and Ratchasuda College of Mahidol University, Thailand.

PEN-International's two key goals are to create professional faculty development models and training plans, and to design and construct instructional multimedia computer labs on the campuses of its partner institutions. Training efforts are based upon a professional development model that begins with a needs assessment, the creation of workshops that are objective-based, Web-based workshop resources, and a formative and summative evaluation of effectiveness.

The ultimate goal of the entire effort is to improve student learning at partner universities. A secondary objective is to create an exponential “ripple effect” in participating countries, through which faculty members who have been trained share their newfound expertise with colleagues from other colleges and universities within their countries.

PEN-International has already improved teaching and learning for thousands of students in Japan, China, Russia, the Philippines, the Czech Republic, and Thailand by establishing relationships with selected institutions in these countries. Since 2001, PEN-International has constructed a network of eight universities that teach more than 1,250 deaf students, and have more than 150 faculty members who teach deaf students, many of whom have attended PEN workshops or benefited from local and regional training. Six Multimedia Learning Labs, have been designed, constructed, and are used almost constantly for teaching and learning at partner sites. The PEN network continues to expand in partner countries and new countries are being examined for inclusion in the network.



Introduction

In June, 2001, Rochester Institute of Technology’s National Technical Institute for the Deaf (NTID), Tianjin University of Technology (China), Bauman Moscow State Technical University (Russia), Tsukuba College of Technology (Japan), and The Nippon Foundation of Japan joined forces to create an international network supporting the technical education of postsecondary deaf students from around the world. The partnership’s goal is to support the sharing of expertise among technological universities teaching science and technology to deaf students worldwide, particularly in developing countries.

The program, called Postsecondary Education Network International (PEN-International), works closely with faculty, staff and students at NTID, where it is based, to facilitate sharing NTID’s nearly 40 years of academic experience and expertise in postsecondary deaf education with its international partners.

PEN-International Goals

PEN-International is a first-of-a-kind international partnership. Its main components--faculty training, online learning technology, information technology, and instructional technology--are being used to:

- Improve teaching and learning
- Increase the application of innovative instructional technology
- Expand career opportunities for deaf and hard-of-hearing people.

PEN-International already has met its goal to work in multiple countries. The recent addition of affiliate colleges in Thailand and the Czech Republic, combined with existing partnerships in Japan, China, Russia, and the Philippines, brings to six the total number of countries represented. Additional partnerships are constantly being explored.

PEN-International’s current partners are Tsukuba College of Technology (TCT), Tsukuba, Japan; Tianjin Technical College for the Deaf of Tianjin University of Technology (TUT), Beijing Union University (BUU), and Changchun University, all in China; Bauman

Moscow State Technical University (BMSTU), Russia; De La Salle University-College of St. Benilde, Philippines; Charles University, Czech Republic; and Ratchasuda College of Mahidol University, Thailand.

One of the project's significant goals is to encourage a successful "ripple effect" among its partner institutions. The hope is that, eventually, individuals and the colleges they represent will develop the ability to export what has been learned through the project to other programs serving deaf and hard-of-hearing students in their home countries and then to other countries around the world.

Implementation Strategy

Each partner works with PEN-International to create a professional faculty development model and training plan and to design and construct an instructional multimedia computer lab with videoconferencing capability. Descriptions of these components of PEN-International follow.

Training

PEN-International training is based upon a professional development model that includes a comprehensive needs assessment, the subsequent creation of workshops that are objective-based, creation of Web-based workshop resources, and a formative and summative evaluation of effectiveness. The ultimate goal of the entire effort is to improve student learning at partner universities.

The training model is based upon the successful NTID Instructional Technology Consortium () faculty development paradigm. The NTID Instructional Technology Consortium (ITC) is a collaborative, faculty-driven initiative for enhancing teaching and learning with deaf and hard-of-hearing students through the use of technology and related innovative teaching strategies. PEN-International depends upon these teachers to teach other teachers about proven strategies for use with postsecondary deaf students. (The key component of PEN-International's training is the experienced NTID faculty and staff who are willing to share their experience with their colleagues from around the world.)

Multimedia Computer Laboratory

PEN-International partners work with individual institutions to establish multimedia computer laboratories with videoconferencing capabilities to support student learning and faculty-developed technology-based teaching solutions. To design these labs, PEN-International officials bring teachers and technical experts from each partner university to NTID to meet with technical experts and to see firsthand the various multimedia classroom configurations that have proven successful for educating American deaf students.

Labs built at partner institutions offer faculty a teaching/learning environment with the latest instructional technology. When not used for classroom instruction, the labs are generally available to deaf students for independent work. Videoconferences can also be scheduled in the labs for seminars and instruction.

Each PEN-International partner institution has a multimedia lab on its campus. During the 2003 International Technology Symposium held at NTID, videoconferencing technology using these labs proved to be a highlight of the program. During two consecutive evenings, video seminars on the topic of "Using Technology" joined nearly 75 conference participants in Rochester with participants at PEN Multimedia Labs in China and the Philippines.

Evaluation

PEN-International activities and outcomes are assessed using both a formative and summative evaluation approach. The overall PEN-International evaluation plan addresses the attainment of project goals, level of satisfaction by partner administrators and faculty, and improvement in student performance as a result of PEN interventions. Additionally, the role of each partner organization as regional and national leaders will be addressed.

The evaluation of faculty development is central to PEN-International goals and as such is a critical component of the evaluation plan. Ongoing evaluations of workshop, seminars, and training sessions are conducted following the professional development evaluation model developed by Thomas Guskey (Guskey, 2001). Guskey specifies five critical levels of evaluation of the impact faculty training as: Level 1. Participants' Reaction; Level 2. Participants' Learning; Level 3. Organization Support and Change; Level 4. Participants' Use of New Knowledge and Skills; and Level 5. Student Learning Outcomes.

Participants' Reaction

At Level 1, evaluation looks at the participants' initial reaction to the experiences. Questions such as: did participants like the experience, did the material make sense to them, was the information useful, was the presenter knowledgeable and helpful, and was the room the right temperature, were asked.

Participants' Learning

Level 2 examines the knowledge and skills that participants gained from the workshops, seminars, and training sessions. The focus is to determine if participants acquired the intended knowledge and skills. Indicators of successful learning reflected in the evaluation also can function as a basis to design the content, format, and organization of the future workshops.

Organization Support and Change

According to Guskey, "Lack of organization support and change can sabotage any professional development effort, even when all the individual aspects of professional development are done right." For this reason, evaluations must include information about organization support and change. At Level 3, evaluation focuses on organization characteristics and attributes necessary for success. Was implementation advocated, facilitated, and supported? Were sufficient resources made available, including time for sharing and reflections?

Participants' Use of New Knowledge and Skills

At level 4, evaluation looks at the questions of whether participants effectively apply the new knowledge and skills in their professional practice and if the new knowledge and skills that participants learned make a difference.

Student Learning Outcomes

Level 5 addresses "the bottom line": how the workshop training affects students or "What is the impact on students?" Measures of student learning include cognitive indicators (student performance and achievement), affective outcomes (attitudes and dispositions) and psychomotor outcomes (skills and behaviors).

Unlike Levels 1 and 2 where information is mostly gathered through questionnaires distributed at the end of a professional development activity, enough time must be given before conducting evaluation for levels 4 and 5. It takes time for participants to effectively apply new ideas and practices to their home settings because the implementation of such knowledge and skills is a gradual process.

Currently, PEN-International is conducting evaluations at the participants' reactions and learning levels, Level 1 and Level 2 of Guskey's evaluation guidelines. Follow up evaluation information will be collected through questionnaires, participants' written reflections and portfolios, and the performance and achievement records of their students, as stated in the project "Evaluation Plan".

In addition, evaluation at Levels 3, 4, and 5 will occur in future extensions of the project as each partner institution exports what they learn to other institutions in their country.

About Our Partners

Japan's Tsukuba College of Technology (TCT) for deaf and visually impaired people was the first and "lead" partner in the PEN-International effort. Tsukuba College was modeled after NTID when it was founded in 1987. Tsukuba's Division for Hearing Impaired offers state-of-the-art programs in design, mechanical engineering, architectural engineering, electronics, and information science. It was the first of its kind in all of Asia and has proven in a very short period of time to be a leader in the technical education of people who are deaf and hard of hearing.

China's Tianjin Technical College for the Deaf of Tianjin University of Technology (TUT), the first technical college for the higher education of people who are deaf in China, was PEN-International's next partner. Established in 1991, the college enrolls more than 125 deaf students who study technical disciplines that prepare them for productive membership in Chinese society. The college is the lead PEN-International partner in China and coordinates all activities in the country.

China's Beijing Union University (BUU), founded in 1985, is a multidisciplinary institution offering humanities, science, social science, natural science, technological science, and management science programs to 12,000 students. The University's College of Special Education was created in 1999 and serves more than 125 deaf students who study art design, decorating and advertisement, gardening, and office automation.

China's Changchun University's Technical College for the Disabled was established in 1987. It is the oldest and largest postsecondary program for disabled students in the People's Republic of China. The college currently enrolls more than 200 deaf and hard-of-hearing students who study in the college's fine arts and graphic design programs. Graduates of the college are competing successfully in the workplace.

Russia's Bauman Moscow State Technical University's Center on Deafness has been educating deaf students since 1934. In the early 1990s, the university administration expanded its programs and services for deaf students and established the Center on Deafness. Presently, approximately 250 students study in various programs across the university as well as in compensatory programs at the Center on Deafness.

The Philippines' De La Salle University-College of St. Benilde's School of Deaf Education and Applied Studies in Manila is a leader in education for deaf students in that country through its academic programs, international linkages, and unique commitment to empower its citizens by preserving deaf heritage and nurturing Filipino deaf culture. The college offers a

bachelor's degree in Applied Deaf Studies, the first of its kind in that country. Established in 1991, initially as a small program for deaf students, it has evolved into a formal program with 26 faculty members and 120 students

The Czech Republic's Charles University in Prague is the oldest university in the Czech Republic and the oldest university in central Europe. Founded in 1348 by King Charles IV, the University enrolls 41,000 students at the bachelor's, master's, and doctoral levels. Among the University's population are 120 students with special needs, including 24 students who are deaf. The University's world renowned Language Resource Centre, which teaches English to deaf and hard-of-hearing students, is a collaborative effort with several international experts, including NTID.

Thailand's Ratchasuda College of Mahidol University is the first and only education institution in Southeast Asia dedicated to providing tertiary education for deaf students. The College, created in 1991, consulted with worldwide leaders in education of deaf students in formulating its curriculum. Ratchasuda College enrolls 89 students who are deaf.

Impact

It is widely understood that deaf and hard-of-hearing students have unique educational needs. PEN-International provides faculty training using successful strategies developed at the National Technical Institute for the Deaf over the past four decades. PEN-International not only offers workshops and training for faculty members from partner institutions, but also for professional educators all around the world.

Faculty members, at the PEN partner sites, have been provided technological training and teaching/learning workshops not only to strengthen their instructional skills, but also to prepare them to disseminate what they have learned to faculty at other institutions within their respective home countries. The benefit to deaf students is clear; better trained faculty offer better educational experiences to students.

Collaborative Spirit

Collaboration, an appreciation for cultural differences, and the mutual desire to technologically empower college-age deaf students worldwide are the characteristics that guide the efforts of PEN-International. Using years of accumulated experience in educating deaf students, all professionals involved with the PEN-International project are finding satisfying ways of bringing 21st century technology to students who are deaf. This project is a unique opportunity for education and technology to bridge cultural, social, and political boundaries and strengthen deaf education for thousands of people worldwide.

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Author's Note

Portions of this paper first appeared in the NTID Research Bulletin 8 (1), pages 6-7 (fall 2002) titled as "Postsecondary Educational Network-International for Students Who Are Deaf and Hard-of-Hearing", used by permission.

Instructional Technology and Education of the Deaf

Supporting Learners, K-College
An International Symposium, June 2003



Report on the 2003 NTID Technology Symposium

E. William Clymer, Symposium Chair
John Macko, Symposium Co-chair
Kelly Masters, Symposium Consultant

PEN-International
National Technical Institute of the Deaf
Rochester, New York
<http://www.rit.edu/~techsym>

April 2004

Overview



Educators from around the world gathered to learn state-of-the-art educational technology and innovative teaching methods for deaf and hard-of-hearing students on the campus of Rochester Institute of Technology (RIT) in Rochester, New York. Over 275 educational professionals from 12 different countries participated in an international symposium entitled “Instructional Technology and Education of the Deaf: Supporting Learners, K-College” June 23-27, 2003.

This significant event in deaf education was co-hosted by The National Technical Institute for the Deaf (NTID), The Nippon Foundation of Japan, and PEN-International.

The primary goal of the Symposium was to provide a forum, for educators and

teachers of deaf and hard-of-hearing learners, to disseminate information relative to current and future innovations and developments in the use of educational media and technology within the teaching/learning process. The Symposium showcased state-of-the-art practices and related research for teachers, instructional technologists, researchers, technical support specialists, and administrators in K-12 and postsecondary programs who support deaf and hard-of-hearing students. The feedback from those that

“NTID site was great for the conference. Friendly people, helpful, good resources, and assistive devices and services. Food service (included and paid for) was great.”

2003 Symposium Participant

“This entire Symposium has opened my eyes to the advantages of advanced technology in all aspects in comparison to traditional methods of education. Thank you so much!”

2003 Symposium Participant

participated in this event has been extremely favorable and will help pave the road to an even better symposium in June of 2005.

This comprehensive program consisted of 3 plenary addresses, 38 formal concurrent presentations, 24 poster sessions, 11 commercial exhibits, and various sharing and networking opportunities. In addition, 15 pre-conference workshops were offered that provided participants with hands-on training on the use of instructional technologies in deaf education. Participants were also provided with topnotch entertainment. Three world-famous Japanese Taiko drumming troupes, two hearing and one deaf, appeared at the Symposium courtesy of the Nippon Taiko Foundation.

Videoconferencing technology was one of the many highlights of the Symposium. All formal concurrent presentations were videotaped and archived on the web

(<http://www.rit.edu/~techsym/cgi-bin/sort/sessions.cgi>) for the purpose of sharing information worldwide. Interactive video technology was also used to provide the American School for the Deaf in Hartford, Connecticut with 12 hours of presentation coverage and enabled over 70 individuals from China and the Philippines to participate in two designated workshops.

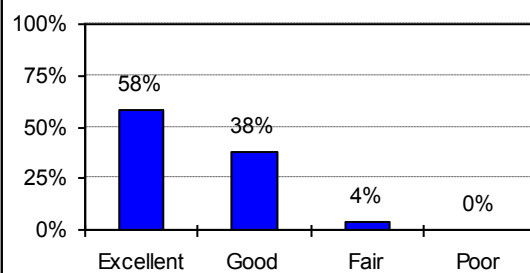
Numerous evaluations were conducted throughout the Symposium to assess participant satisfaction and help guide its future direction including an Overall Symposium Assessment, and evaluations for each concurrent session, video conference, and pre-conference workshop. All evaluations were conducted using a self-administered methodology, and were either included in participants' registration materials, or distributed after each workshop. The evaluation forms were also available online. The response rates and margins of error varied by session. On average, the number of completed evaluations resulted in a 22% response rate and a +/-5% margin of error in estimated values in the participant population (based on the finite population correction factor at the 95% confidence level). The demographic variables captured from participants that completed the evaluation forms were comparable to the demographic variables of all Symposium registrants. Data obtained from the evaluation forms are presented, where appropriate, throughout this Symposium Report.

Evaluation data shows the Symposium was a great success. Almost all (96%) participants rated the overall Symposium as either excellent (58%) or good (38%). Networking opportunities played a very important role in the success of the Symposium. Many participants mentioned networking when asked what they liked most about their overall Symposium experience. Many other participants felt the new ideas and technology and the hands-on demonstrations of the new technology were invaluable.

Symposium Program

- **3 Plenary Addresses**
- **38 Concurrent Presentations**
- **24 Poster Sessions**
- **11 Commercial Exhibits**
- **15 Pre-Symposium Workshops**

I thought the Symposium was...?



"The sharing of information and knowledge amongst experts in the deaf field."

2003 Symposium Participant

"The friendly, supportive environment. The opportunity to discuss with others, network."

2003 Symposium Participant

"The overall learning experience which would have immediate relevance to what I am doing at the moment. Appreciate the high standard of professionalism, commitment and the passion NTID represents. Meeting the people around the NTID."

2003 Symposium Participant

"Philosophical/theoretical concepts to reality-based programs will change the face of deaf education. This must be the future of our field."

2003 Symposium Participant

Sign Language Interpreting and Other Communication Services

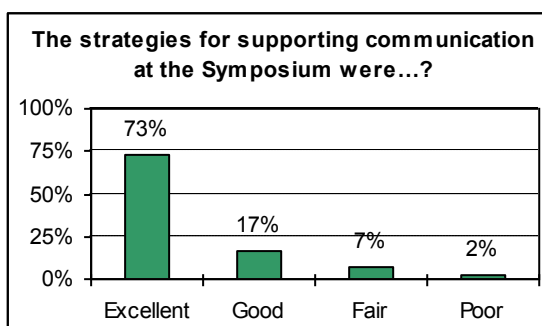
Communication support during the Symposium was paramount. Various strategies were used to support communication including interpreters, communication facilitators, real-time captioning, Real-Time Graphic Displays (RTGD), and Assistive Listening Device (ALD) signal and receivers.

Skilled interpreters were assigned to every event including social gatherings. To assist participants with any questions they may have relating to communication services, a communication facilitator was on hand at all formal concurrent sessions. Real-time captioning was provided for the opening and closing ceremonies, the plenary addresses, and all formal presentations. The formal presentations were also equipped with Real-Time Graphic Display (RTGD) technology. In addition, an Assistive Listening Device (ALD) signal was infrared in designated rooms and receivers were available upon request.

Communication Support

- **Skilled Interpreters**
- **Communication Facilitators**
- **Real-time Captioning**
- **Real-Time Graphic Display**
- **Assistive Listening Device Signal & Receivers**

The strategies used to support communication were very successful. Almost three-quarters (73%) of all symposium participants rated the strategies for supporting communication as excellent.



“All participants tried their best to overcome the language barrier and the NTID staff was very helpful in that aspect.”

2003 Symposium Participant

“Great interpreters!”

2003 Symposium Participant

“The communication support, interpreting and captioning, were excellent.”

2003 Symposium Participant

Program Overview

This highly diverse Symposium program offered an array of topics that were applicable to either the K-12 levels, the postsecondary level, or in many cases, both levels of education.

The entire program was organized around four major topic areas identified as strands: Using Technology to Support Learning, Online and Distance Learning, In-Service/Pre-Service Strategies for Educating Teachers in Applying Instructional Technologies, and Assessing the Impact of Technology in the Teaching/Learning Process. Of the 38 formal concurrent presentations and 24 poster sessions, half (52%) of these programs related to the strand Using Technology to Support Learning. One-quarter (24%) of the programs were based on the Online and Distance Learning strand, 14% involved the In-Service/Pre-Service Strategies for Educating Teachers in Applying Instructional Technologies strand, and 10% related to the Assessing the Impact of Technology in the Teaching/Learning Process strand.

All of the presenters were hand selected based on their in-depth knowledge of the topic area and their extensive experience serving deaf and hard-of-hearing people in either educational or community settings. This cross section of experts included teachers, researchers, media/library/technical staff members, and administrators.

One of the primary goals of the Symposium was to make the information presented available on its web site (<http://www.rit.edu/~techsym/cgi-bin/sort/sessions.cgi>) for worldwide dissemination. Each presentation, poster summary, and abstract was posted on the web site as well as entire papers, presentation media, captioned video streaming, photographs, and complete captions. For more information on how to access the information presented at the Symposium, refer to the section “Accessing Symposium Resources on the Web” included in this report. In addition, all Symposium proceedings links are included in the deaf studies databases. To access the deaf studies databases, visit <http://wally.rit.edu/electornic/topic/deafstudies.html>.

“The variety of sessions and poster sessions were great. I am involved in both K-12 and postsecondary education, and it’s rare to attend a conference where I learn about both levels of education. How refreshing!”

2003 Symposium Participant

“I liked most about the Symposium was the variety of subject matters and the variety of presenters that attended. Such a variety offers a wide range of opinions and ideas that will be of great use in my profession. I appreciate everyone’s time and commitment to this Symposium.”

2003 Symposium Participant

Program Strands

- **Using Technology to Support Learning (52%)**
- **Online and Distance Learning (24%)**
- **In-Service/Pre-Service Strategies for Educating Teachers in Applying Instructional Technologies (14%)**
- **Assessing the Impact of Technology in the Teaching/Learning Process (10%)**

Pre-Symposium Workshops



**Troy Olivier, Presenter,
Integrating Digital Technology
in the Classroom (WS2 and WS10)**



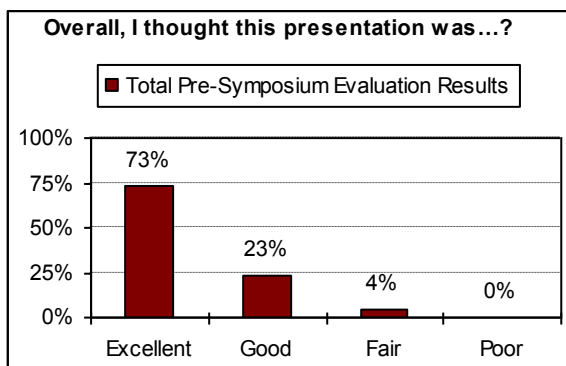
**Ed Mineck, Presenter,
Digital Imaging Essentials (WS3)**



**Simon Ting, Presenter,
IdeaTools: Building Interactive Online Courses
for Deaf Learners on the Web (WS4)**

A second goal of the Symposium was to provide a hands-on opportunity for participants to develop skills in the application of instructional technologies in the learning/teaching process. Participants had the opportunity to enroll in one of the 15, full day, Pre-Symposium Workshops held June 23-24, 2003. A total of 98 participants attended these workshops, and evaluation results show their experiences were extremely beneficial.

Almost three-quarters (73%) of all Pre-Symposium participants rated the presentation that they attended as excellent. Many Pre-Symposium participants were particularly impressed with the organization and clarity of the presentations, hands-on demonstrations, presenters' teaching styles, and quality and quantity of resource materials.



"Information was presented in an interesting (fun) manner. It was presented in an easy to understand manner. Presenters were easy to approach and talk to."

2003 Pre-Symposium Workshop Participant

"Seeing a wide variety of technologies and having so much hands-on experience. Great amount of supporting information. Very organized with materials, nicely set up when participants arrived."

2003 Pre-Symposium Workshop Participant

"Hands-on, relaxed pace, small teacher-student ratio."

2003 Pre-Symposium Workshop Participant

"The clear presentation, step-by-step demonstration, then hands-on."

2003 Pre-Symposium Workshop Participant

The Pre-Symposium Workshops and coordinating presenters are outlined below. Two workshops were canceled due to lack of participation: Microsoft Word for Educators (WS5) and Project-Based Open Lab (WS7). For more information about the 2003 Pre-Symposium Workshops, visit <http://www.rit.edu/~techsym/cgi-bin/sort/sessions.cgi>.

Pre-Symposium Workshops

<u>Title</u>	<u>Coordinating Presenter</u>
Videoconferencing (WS1)	Camille Aidala
Integrating Digital Video Technology into the Curriculum (WS2 and WS10)	Troy Olivier
Digital Imaging Essentials (WS3)	Ed Mineck
IdeaTools: Building Interactive Online Courses for Deaf Learners (WS4)	Simon Ting
Microsoft Word for Educators (WS5)	Susan Kelly
Using Advanced PowerPoint as an Effective Teaching Tool (WS6)	David Hazelwood
Project-Based Open Lab (WS7)	NTID's ETRR Staff
Cochlear Implant Technology (WS8)	Catherine Clark
Communication Technologies (WS9)	Karen Snell
Digital Imaging Basics (WS11)	Tony Toscano
Web Site Development (WS12)	Donna Lange
Electronic Portfolios (WS13)	Simon Ting
Adobe Acrobat for Educators (WS14)	Ken Hoffman
Project-Based Open Lab (WS15)	NTID's ETRR Staff



**T. Alan Hurwitz,
RIT Vice President for NTID and NTID Dean,
addresses the Symposium**

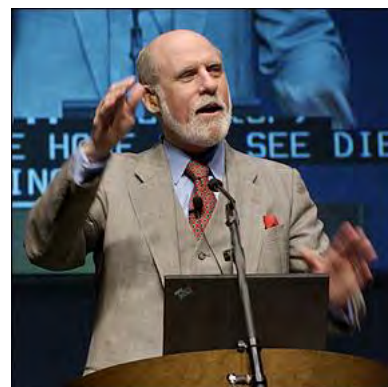
Plenary Addresses



**Yohei Sasakawa, President,
The Nippon Foundation of Japan
“The Growing Importance of
Global Education Networks in the
Age of Information Technology”**



**Dr. Alan Clinton Shaw
“When We Let Our Minds Dance
Together Nothing is Impossible”**



**Dr. Vinton G. Cerf
“Internet Technology Evolution”**

Participants had the option of beginning each day by attending a relevant and inspiring plenary address from one of three well respected and admired individuals prominent in the deaf community.

Yohei Sasakawa, President of The Nippon Foundation of Japan delivered the first plenary address titled “The Growing Importance of Global Education Networks in the Age of Information Technology.” Mr. Sasakawa spoke of the world as being one big family and that all individuals are valuable members of this family unit. Mr. Sasakawa stressed the importance of international educational networks and the use of technology in education as an effective means for promoting educational developments worldwide.

The second plenary address titled “When We Let Our Minds Dance Together Nothing is Impossible,” was presented by Dr. Alan Clinton Shaw. Dr. Shaw spoke of the process of uniting the world through information technologies, however he explained that it is not the information that unites people, but the ability of the IT tools to engage ideas. Dr. Shaw used the analogy of the Symposium being a dance, showing participants many movements. As a result, these movements or ideas will be taken into many different learning environments, essentially bringing minds together and having “profound ramifications” not only to educational advancement around the world, but to deaf education in particular.

Dr. Vinton G. Cerf delivered the third plenary address titled “Internet Technology Evolution.” Dr. Cerf, widely known as one of the “Fathers of the Internet” spoke of how the Internet has evolved and how it is continuing to evolve. He explained that separate media devices, such as televisions, radios, telephones, laptops, will become multifunction systems and will be able to interact with each other in the near future. Dr. Cerf spoke of cross-media translations rapidly evolving allowing the substitution of one modality for another. This technology is constantly improving by becoming more accurate and functional, thus better meeting the needs of the deaf community.

**“All of the plenary sessions
were informative and
uplifting.”**

2003 Symposium Participant

**“Dr. Shaw, the plenary
speaker (is what I liked most).
It was wonderful to have
someone speak about science
in a more artistic way. Very
inspiring.”**

2003 Symposium Participant

**“Meeting Vint Cerf, which is
the highlight of my life now.”**

2003 Symposium Participant

The complete plenary addresses are available on the web site (<http://www.rit.edu/~techsym/cgi-bin/sort/sessions.cgi>).

Plenary Addresses	
<u>Title</u>	<u>Speaker</u>
The Growing Importance of Global Education Networks in the Age of Information Technology	Yohei Sasakawa
When We Let Our Minds Dance Together Nothing is Impossible	Dr. Alan Clinton Shaw
Internet Technology Evolution	Dr. Vinton G. Cerf



**E. William Clymer,
Chair of the Symposium and Coordinator of
PEN-International, addresses the Symposium at
the opening ceremony**

Formal Concurrent Presentations



**Patricia DeCaro, Presenter,
Online Design: Access for Deaf
Students (W11D)**



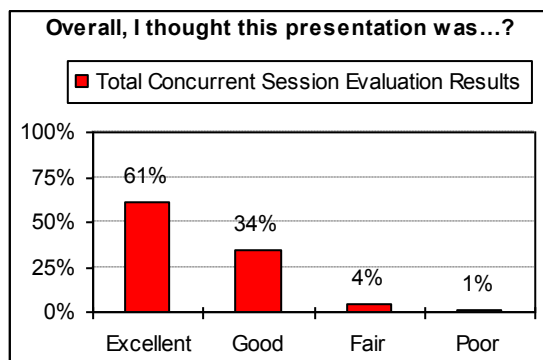
**James DeBee, Presenter,
Digital Video Production
for Deaf Students (F11B)**



**Robert Stern, Presenter,
In-Service Training Success Story:
20 Years in the Making (F10A)**

The Symposium was comprised of a total of 38 formal concurrent presentations. Each session included 30 minutes for the media presentation and 15 minutes for participant discussion and sharing. Four formal presentations were held at a time, which allowed participants the opportunity to choose the sessions that best met their needs.

Participants were asked to evaluate each of the presentations that they attended. Feedback suggested that the formal concurrent presentations “hit the mark.” Overall, 95% of participants rated the concurrent session they attended as either excellent (61%) or good (34%). Similarly, 95% of participants agreed (strongly agree/agree net score) that the presentation that they attended was clear and understandable, well organized, and that the presenters were well informed on the topic and offered new and interesting information.



“Loved the videos. Very helpful to illustrate concepts. New technology for me. Have never seen Smartboard before.”

2003 Symposium Participant

“Great use of technology! I loved their passion and enthusiasm.”

2003 Symposium Participant

“Well organized, well spoken, wonderful.”

2003 Symposium Participant

“Great Handouts for future reference.”

2003 Symposium Participant

“The fact that it left me wanting more! Great job. Nice work.”

2003 Symposium Participant

The formal concurrent presentations and coordinating presenters are outlined below by strand. Session abstracts, proceedings, and co-presenters are posted on the web site (<http://www.rit.edu/~techsym/cgi-bin/sort/sessions.cgi>).

Formal Concurrent Presentations

Strand: Using Technology to Support Learning

<u>Title</u>	<u>Coordinating Presenter</u>
What's New with C-Print (W10B)	Lisa Elliot
Active Learning Through Technology: Creating a Technology-Infused Environment to Actively Engage Deaf Students in the Learning Process (W10C)	Linda Burik
Providing Sign Language Access to Digital Information Using 3D Animation Technology: An Overview (W10D)	Danny Roush
Digital Video Conferencing in Deaf and Hard-of-Hearing Instructional Environments (W11A)	Douglas MacKenzie
Planning and Implementing Effective Interactive Television Sessions (W11B)	Barbara Strassman
Using Interactive Physics Software With Deaf College Students (W2A)	Vicki Robinson
Toward A Learner-Centered Multimedia Learning Environment: The DLSU-College of St. Benilde Experience (W2C)	Ronald Holmes
A Study of Interactive Media for Deaf Learners in Post 16 Education (W3A)	Azra Akhtar
Technology and Literacy (W3C)	Susan Schatz
Mainstream Educational Software (It's Effective with Deaf Children, Too!) (T10B)	Rosemary Stifter
Technology in the College Search Process (T10C)	Loriann Macko
The Use of Web-Based Technology in Teaching Reading and Writing to Deaf Students (T11B)	Rose Marie Toscano
How NTID's Office of Admissions Reach Prospective Students Using Available Technology (T11C)	Jillian Sinclair
Using Online Courses to Create an Electronic Environment to Support Art and Graphic Instruction in the Classroom (T2A)	Paula Greevic
Teleconferencing: "Meeting" the Needs of Prospective Students (T2C)	Kathleen Garlinghouse
Join Together: A Virtual Professional Development School & Community of Learners for Deaf Education (T3D)	Harold Johnson
Digital Video Production for Deaf Students (F11B)	James DeBee
CART in the Classroom: Meeting the Communication Needs of Students Requires an Individual Approach (F10D)	Duane Smith
PEPNet E-Learning Transition Project: Gates to Adventure! (F11A)	Debra Wilcox Hsu
TabletPC – The New New Thing – Demonstration, and Implications in Deaf Education (F11C)	Donald Beil

Formal Concurrent Presentations (continued)

Strand: Accessing the Impact of Technology in the Teaching/Learning Process

<u>Title</u>	<u>Coordinating Presenter</u>
Round One: Results from the Pilot Testing of a Technology Skills Assessment for Middle- and High-School Deaf and Hard-of-Hearing Students (W2D)	Pamela Luft
Career and Technology Learning Outcomes with Deaf and Hard-of-Hearing High School Students from a Single Activity (W3B)	James Mallory
Collaboration of Deafness Specialists and Instructional Technologists in Postsecondary Settings (W3D)	Rebecca Herman
Using NTID IdeaTools Web Site for Teaching About Deaf Art and Deaf Artists (T3A)	Patti Durr
Shared Reading Project: Chapter by Chapter—The Thinking Reader (F10C)	Mei Yeh-Kennedy

Formal Concurrent Presentations (continued)

Strand: Online and Distance Learning

<u>Title</u>	<u>Coordinating Presenter</u>
Online Design: Access for Deaf Students (W11D)	Patricia DeCaro
The Classroom of the Sea – Technologies Bringing the Sea to the Classroom (W2B)	Ivar Babb
Internet–Based Network Teaching and Learning Modes for the Deaf in China (T10A)	Qiang Li
Distance Learning Science Project for Deaf and Hard-of-Hearing Students (T10D)	Jennifer Powers
E-Learning Renaissance: What It Takes (T11A)	Earl Parks
Web-Based Bilingual Instruction for Deaf Children (T2D)	Vicki Hanson
Preferred Instructional Delivery Methods of Deaf and Hard-of-Hearing Remote, Online Learners (T3B)	James Mallory
Connecting Deaf Web Sites and ASL Classes (T3C)	Joan Naturale
Digital Video Applications for Online and Distance Learning in Deaf Education (F10B)	Jim Dellon

Formal Concurrent Presentations (continued)

Strand: In-Service/Pre-Service Strategies for Educating Teachers in Applying Instructional Technologies

Title

Coordinating Presenter

Evaluation of Virtual Asynchronous Resources for Teacher Education (W11C)

Harry Lang

Use of Instructional Technologies to Train International Teachers of English to Deaf Students (T2B)

Gerald Berent

In-Service Training Success Story: 20 Years in the Making (F10A)

Robert Stern

Faculty-Driven Technology Transfer: How NTID's Instructional Technology Consortium Brings Technology to the Classroom (F11D)

Myra Pelz

Poster Sessions



**Tsutomu Araki, Presenter,
The Use of Videoconference Technologies
Between International Universities Serving
Deaf Students (W2P)**



**Valorie Smith Pethybridge, Presenter,
The Interpreter/Captionist:
Enhancing Support in English and
ASL with Technology (T12P)**



**Phil Mackall, Presenter,
TecEds Project Provides Online
Databases and Training Materials for
Integrating Technology (T9P)**

The Symposium included a total of 24 poster sessions. Twelve poster sessions were presented at one time. The displays were set up in the morning, giving participants the opportunity to view the materials, at their leisure, throughout the day. Presenters were available for questions, conducted individual poster “tours,” and engaged in discussions with participants during a designated period, when no other Symposium events were scheduled. This unique set up gave participants an additional opportunity to network, one-on-one, with Symposium presenters.

“I liked the workshops and poster sessions that demonstrated applying technology with the deaf.”

2003 Symposium Participant

“The exhibitions/poster sessions with hands-on guidance is what I like most about the Symposium.”

2003 Symposium Participant

“Having presentations from people who actually are using the technology.”

2003 Symposium Participant

The poster sessions and corresponding presenter are outlined below by strand. All poster session abstracts and proceedings are available on the web site (<http://www.rit.edu/~techsym/cgi-bin/sort/sessions.cgi>).

Poster Sessions

Strand: Using Technology to Support Learning

<u>Title</u>	<u>Coordinating Presenter</u>
Techniques for Meeting the Needs of Deaf Students in the Design of Shared Computer Laboratories at a Major Technical University in Russia (W01P)	Olga Orechkina
You Betcha! (W04P)	Michael Burton
Enhancing Writing Skills Through Student-Generated Captions (W05P)	Margaret Chastel
The Interpreter Who Never Tires: Adding Animated Sign Translations to Student and Teacher Presentations (W10P)	Becky Sue Parton
American Sign Language Video Dictionary and Inflection Guide (W11P)	Geoffrey Poor
Captioned Media Program Online Innovations (W12P)	Melanie Updegraff
Information and Advisory Services Provided to Charles University Students (T01P)	Hana Urychova
Interactive CD-ROM for Speechreading: The New DAVID (T03P)	Linda Bryant
Improving Literacy with Technology Tools (T05P)	Kay Clausen
The "Gambo Show": An Instructional Multimedia Application for Hungarian Deaf Students (T06P)	Sandor Gabor
Varied Multimedia Instructional Approaches for Deaf and Hard-of-Hearing Online Learners (T10P)	James Mallory
The Interpreter/Captionist: Enhancing Support in English and ASL with Technology (T12P)	Valorie Smith-Pethybridge

Poster Sessions (continued)

Strand: Accessing the Impact of Technology in the Teaching/Learning Process

<u>Title</u>	<u>Coordinating Presenter</u>
Transferring Empowering Technologies in Deaf Education Through Higher Education Institutions in Developing Nations (W03P)	Ronald Brouillette

Poster Sessions (continued)

Strand: Online and Distance Learning

<u>Title</u>	<u>Coordinating Presenter</u>
The Use of Videoconference Technologies Between International Universities Serving Deaf Students (W02P)	Tsustomu Araki
The Application of Modern Distance Education in China's Postsecondary Education for the Deaf (W07P)	Mei Han
E-Learning Across Cultures: Is It Possible? (W08P)	Corinne Heschke
Roles and Goals: The Impact of Role Models and Expectations on the Success of Individuals Who are Deaf and Hard-of-Hearing. NETAC Introduces a Career Web Site and Video Series! (T02P)	Pat Billies
Production of Educational Media to be Consonant with Deaf Culture in Thailand (T08P)	Jarinee Iochawna
Integrating Library Resources into an IdeaTools Academic Writing Course (T11P)	Joan Naturale

Poster Sessions (continued)

Strand: In-Service/Pre-Service Strategies for Educating Teachers in Applying Instructional Technologies

<u>Title</u>	<u>Coordinating Presenter</u>
Increasing Teachers' Understanding of Dual Language (ASL/English) Use in the Classroom: Content and Exemplars Through Educational Technology (W06P)	Elizabeth DiGello
Administrative Support Technology (AST) Sign Vocabulary CD-ROM Project: A Self-Instructional Sign Language Resource for Faculty, Staff, & Students (T04P)	Frank Caccamise
Assessing the Effectiveness of a Web-Supported Course for Deaf College-Aged Students (T07P)	Linda Gottermeier
TecEds Project Provides Online Databases and Training Materials for Integrating Technology (T09P)	Phil Mackall
A Multilevel Approach to an Integrated Curriculum in Engineering for Deaf and Hard-of-Hearing Students at Bauman Moscow State Technical University (T13P)	Alexander Stanevsky

Accessing Symposium Resources on the Web

An important goal of the Symposium was to make the information presented available on the Symposium Web Site. Abstracts of every formal concurrent presentation and poster session are posted on the web site as well as entire papers submitted by presenters. Individuals visiting the web site are able to view presentation media such as PowerPoint Slide Shows, captioned video streaming, still photographs of presenters, and complete captions.

Resources Available on Symposium Web Site

- Abstracts
- Papers
- Presentation Media
- Captioned Video Streaming
- Photographs
- Captions

"I really appreciated the caption, especially being able to read it again after the Symposium."

2003 Symposium Participant

"Tremendous effort put forth to share information with those who could not attend."

2003 Symposium Participant

The process of accessing Symposium presentation resources on the Web is outlined below.

Accessing Session Resources from the Symposium "Session Lists"

1. To view a list of all plenary, concurrent and poster sessions at the 2003 Symposium, go to: <http://www.rit.edu/~techsym/cgi-bin/sort/sessions.cgi>
2. To facilitate access to sessions, it is possible to sort sessions by date, type or presenter.

Instructional Technology and Education of the Deaf

Supporting Learners, K - College
An International Symposium

National Technical Institute for the Deaf
Rochester Institute of Technology
Rochester, NY

Session Lists

Click on the session number at the end of each title to access abstract, submitted paper, media, verbatim captions, streaming video and photos for each session.

Select the sort fields below to change the session list ordering.
Listings will be sorted by presenter last name within the fields you indicate.

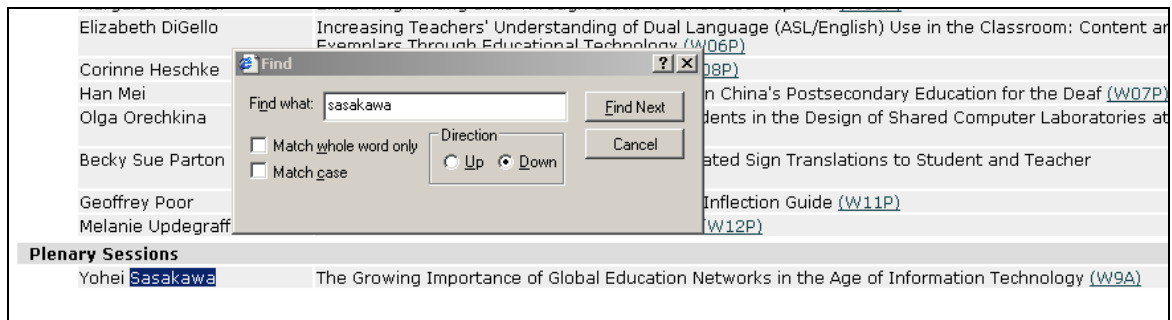
Primary Sort Field: presenter
Secondary Sort Field: session type

Sort on above settings

Formal Sessions

Azra Akhtar	A Study of Interactive Media for Deaf Learners in Post 16 Education (W3A1)
Ivar Babb	The Classroom of the Sea - Technologies Bringing the Sea to the Classroom (W2B)

- Use the browser “find” function (CTRL-F) to search the lists for a name or keyword.



- Select a session number, located after the session title, to move to the session listing.

Olga Orechkina	Techniques for Meeting the Needs of Deaf Students in the Design of Shared Computer Laboratories at a Major Technical University in Russia (W01P)
Becky Sue Parton	The Interpreter Who Never Tires: Adding Animated Sign Translations to Student and Teacher Presentations (W10P)
Geoffrey Poor	American Sign Language Video Dictionary and Inflection Guide (W11P)
Melanie Updegraff	Captioned Media Program Online Innovations (W12P)
Plenary Sessions	
Yohei Sasakawa	The Growing Importance of Global Education Networks in the Age of Information Technology (W9A)

- Select corresponding resources, located below session summary.

The Growing Importance of Global Education Networks in the Age of Information Technology (W9A)

Yohei Sasakawa **Email:**

President, The Nippon Foundation of Japan

Wednesday, 6/25/03 -- 9:00 AM
Location: LBJ [060] Panara Theatre

Strand:
Type: Plenary **Audience:** All

Summary:

The Nippon Foundation supports assistance activities around the world with the belief that the world is a family and every individual that inhabits this Earth is an important family member. In recent years, the foundation has turned its attention to international educational networks and the use of technology in education as effective means for promoting educational and economic development across the world. In his speech, Mr. Sasakawa will touch on recent developments in the field and propose a vision for the future of international educational networks.

[Abstract](#)

[Paper](#)

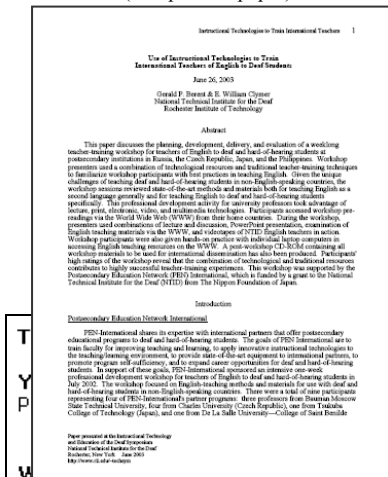
Presentation

- [Media](#)
- [Captions](#)
- [Streaming Video](#)
- [Photos](#)

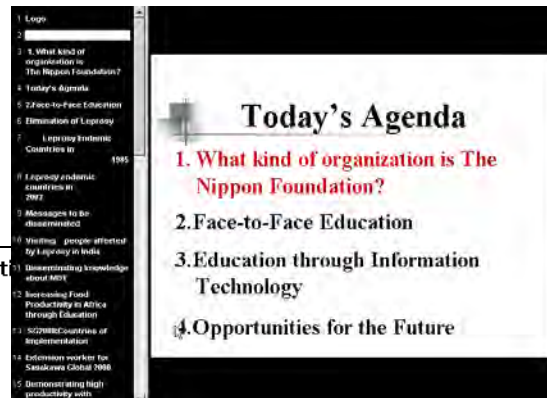
Accessing Resources Available from a Session Listing

- Click on the resource links to access materials related to the session. Note that some sessions may not contain all of the listed resources because they have not been submitted by the author(s).

(Sample of a paper)



PowerPoint Presentation



Location: **BBJ [060] Panara Theatre**

Strand:

Type: Plenary Audience: All

Summary:

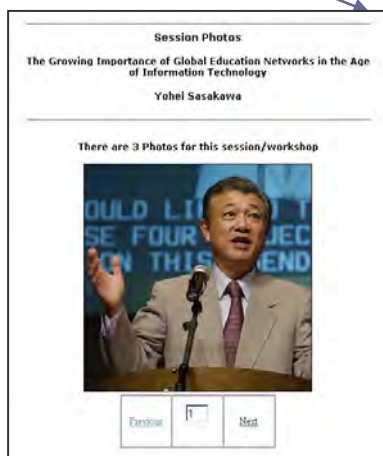
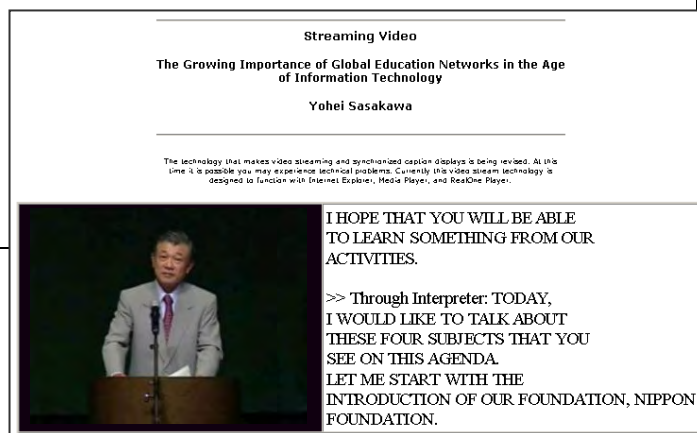
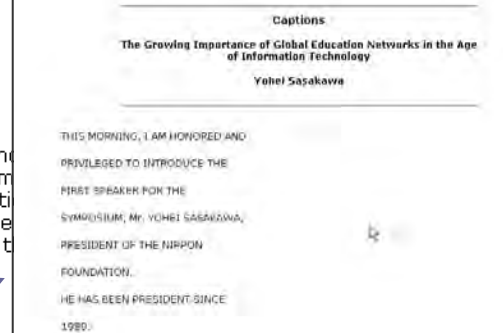
The Nippon Foundation supports assistance activities around family and every individual that inhabits this Earth is an individual. The foundation has turned its attention to international educational education as effective means for promoting educational and economic development. In his speech, Mr. Sasakawa will touch on recent developments in international educational networks.

Abstract

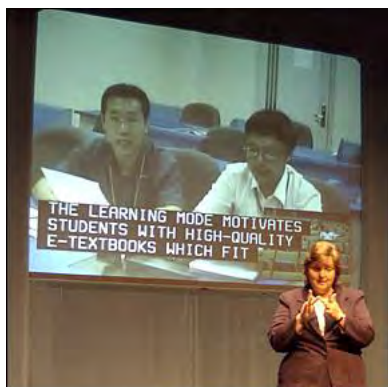
Paper

Presentation

- [Media](#)
- [Captions](#)
- [Streaming Video](#)
- [Photos](#)



Videoconferencing



**Qiang Li, Presenter,
Internet-based Network Teaching and
Learning Modes for the Deaf in China
(T10A)**



**Douglas MacKenzie, Presenter,
Digital Video Conferencing in Deaf
and Hard-of-Hearing Instructional
Environments (W11A)**



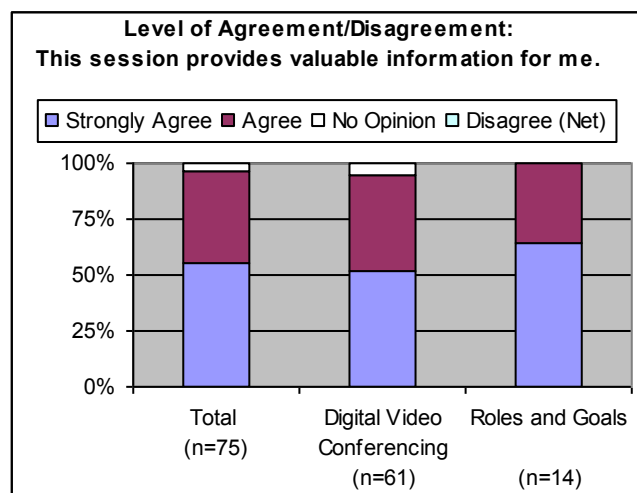
**James J. DeCaro, Director,
PEN-International, NTID/RIT addresses
Symposium participants in China and the
Philippines using a "bridged"
videoconference connection**

All formal concurrent presentations were videotaped and archived on the web for the purpose of sharing the Symposium information with individuals worldwide. For an added benefit, all video streaming posted on the web site includes synchronized captions (<http://www.rit.edu/~techsym/cgi-bin/sort/sessions.cgi>).

PEN-International has partnered with the American School for the Deaf in Hartford, Connecticut for the past two Symposiums. Their participation in videoconferencing was groundbreaking in 2001. The partnership continued in 2003 when interactive videoconference technology was used to provide the American School for the Deaf with 12 hours of presentation coverage from plenary and selected concurrent workshops. PEN-International plans to expand videoconferencing coverage with the American School for the Deaf at the Symposium in 2005.

Additionally, two interactive video workshops were conducted with PEN multimedia labs in China (Tianjin University of Technology (TUT) and Beijing Union University (BUU)) and the Philippines (De La Salle University-College of St. Benilde (CSB)) to accommodate the PEN-International partners that were not able to attend the Symposium in person. These video workshops included "Digital Video Conferencing in Deaf and Hard-of-Hearing Instructional Environments" presented by Professor D. McKenzie and "Roles and Goals" presented by Professor P. Billies. A total of 75 individuals participated in these two workshops.

Almost all (96%) videoconferencing participants from both sessions agreed (strongly agree/agree net score) that the session provided valuable information. Similarly, 93% of all videoconferencing participants agreed (strongly agree/agree net score) the information learned from the session will be useful in their professional development.



**Results of Videoconference Evaluation
By Participants in China and the
Philippines**

“The smoothness of the videoconferencing. I appreciate all the work involved in producing this presentation.”

2003 Symposium Participant

“The technology to connect clearly to a remote site in China – amazing.”

2003 Symposium Participant

“Videoconferencing technology was what I like most about the Symposium.”

2003 Symposium Participant

Commercial Exhibits



Exhibitor



Closed Caption Maker, Exhibitor

Eleven organizations with products and services related to deaf technology seized the opportunity to be a part of the Symposium experience. Although the Symposium included a relatively small number of participants (275), it proved to be a worthwhile experience. The Symposium participants included a key group of individuals that were decision makers in the use of technology in deaf education.

The location of the exhibit show was ideal for both exhibitors and participants. The exhibit show was located in the main lobby of the building where the Symposium was held. This location enabled exhibitors to prominently showcase their products and services.

“I would like to take this opportunity to say that the level of conference organization and the service provided to the vendors was outstanding. I have been to several conferences in the past few months and I definitely can say that, in comparison, NTID did an exceptional job of organizing the conference and the vendor area. Thank you for your efforts.”

2003 Symposium Exhibitor

The 2003 Symposium commercial exhibitors are outlined below. For more information on how to become an exhibitor at the 2005 Symposium visit <http://www.rit.edu/~techsym> and select “Exhibits.”

2003 Symposium Commercial Exhibitors

Organization/Business

Product/Service Description

Audisoft Technologies

1470-B Joliot-Curie
Boucherville, Quebec J4B 7L9
(877) 641-8436
www.audisoft.net
Contact: Melanie Gudgeon

AudiSee is an audiovisual-FM system for students who rely on oral communication (lip-reading).

PEPNet—The Postsecondary Education Programs Network

52 Lomb Memorial Drive, 50C-A260
Rochester, NY 14623
(585) 475-6980
www.pepnet.org
Contact: Regina Kiperman and Pat Billies

PEPNet – The Postsecondary Education Programs Network is the National collaboration of four Regional Postsecondary Education Centers. The goal of PEPNet is to assist postsecondary institutions in serving individuals who are deaf and hard-of-hearing.

Northeast ADA & IT Center

331 Ives Hall, Cornell University
Ithaca, NY 14853
(607) 255-6751
www.northeastada.org
Contact: Sharon Trerise and Shammi Carr

Funded by U.S. Department of Education, we provide information and training, at no cost, to educational entities on how to make electronic and information technology accessible to people with disabilities.

The Shodor Education Foundation, Inc.

923 Broad Street, Suite 100
Durham, NC 27705
(919) 286-7878
www.shodor.org
Contact: Kent Robertson

SUCCEED-HI: An online set of middle/high school science lessons, designed to teach science content and also introduce the new field of computational science and computer modeling to deaf students.

Vcom3D, Inc.

3452 Lake Lynda Drive, Suite 260
Orlando, FL 32817
(407) 737-7310
www.vcom3D.com
Contact: John Edelson, Danny Roush, and Wendell Lancaster, Jr.

Vcom3D is revolutionizing education, training and accessibility for the deaf. Sign Smith™ software products utilize 3D animated characters who communicate using ASL or Signed English, and deliver rich, accessible content.

MCI – IP Relay

1921 NW 87th Avenue
Miami, FL 33172
(305) 908-2791
www.ip-relay.com
Contact: Lissette Molina and Margie English

Website-based online relay service.

Commercial Exhibitors (continued)

Organization/Business

Product/Service Description

RIT Campus Connections
RIT Campus Connections
Rochester, NY 14623
(585) 475-2504
www.bookstore.rit.edu
Contact: Janice Decker

Campus Connections, one of RIT's campus stores, is wholly owned and operated by RIT.

Closed Caption Maker
1500A Lafayette #226
Portsmouth, NH 03801
(800) 527-0551
www.ccmaker.com
Contact: Walter Gallant

Closed Caption Maker adds closed captions to video produced by others. We also sell a turnkey system so a college can do the captioning themselves.

1450, Inc./I Communicator
7108 Fairway Drive, Suite 101
Palm Beach Gardens, FL 33419
(561) 630-5077
www.1450.com
Contact: Gail Rosenberg

Exclusive distributor providing Assistive Technology for the Deaf/Hard-of-Hearing to convert speech into sign language and text simultaneously.

National Technical Institute for the Deaf
52 Lomb Memorial Drive
Rochester, NY 14623
(585) 475-6400
<http://ntidweb.rit.edu/>
Contact: Robert D. Borden and Allen Vaala

The National Technical Institute for the Deaf (NTID) is the world's first and largest technological college for students who are deaf or hard-of-hearing. It is one of eight colleges of Rochester Institute of Technology (RIT), a privately endowed, coeducational university that is student centered and career focused. Its goal is to provide deaf and hard-of-hearing students with outstanding state-of-the-art technical and professional programs, complemented by a strong liberal arts and sciences curriculum that prepares them to live and work in the mainstream of a rapidly changing global community and enhances their lifelong learning.

PEN-International
NTID/RIT
52 Lomb Memorial Drive
Rochester, NY 14623
(585) 475-2939
www.pen.rit.edu
Contact: Corinne Heschke

The Postsecondary Education Network International (PEN-International) is the first-of-a-kind international partnership of colleges and universities serving the postsecondary education needs of deaf and hard-of-hearing students. Web technology, faculty training, telecommunications technology, information technology and instructional technology are being used to:

- Improve teaching and learning for students
- Increase the application of innovative technology to teaching students
- Expand career opportunities to deaf and hard-of-hearing people.

Taiko Drumming Performance



Dr. Robert Davila accepting Taiko Drums from Mr. Yohei Sasakawa, President, The Nippon Foundation and Ms. Kazuko Shiomi, President, Nippon Taiko Foundation



Members of Koshu Roa Taiko, a Deaf Taiko Team from Japan



Taiko Drumming Community Workshop

One of the highlights of the Symposium was the Taiko Drumming Performance. Three world-famous Japanese Taiko drumming troupes, Koshu Roa Taiko, Amanojaku, and San Francisco Taiko Dojo, appeared at the Symposium courtesy of the Nippon Taiko Foundation. Two of the groups were hearing and one group was deaf. Their unique blend of cultural artistry and athleticism provided superb entertainment for both participants and the Rochester community at large.

“Taiko was amazing!”

2003 Symposium Participant

“I thought the Taiko drummers added something special to this year’s Symposium.”

2003 Symposium Participant

“The Taiko performance was amazing, and my children had the opportunity to learn a few Taiko drumming techniques. It was a lot of fun.”


Community Resident

Planning for the 2005 Symposium is Underway

Send Me Information

To receive information on the upcoming Symposium in 2005, visit the Symposium Web Site <http://www.rit.edu/~techsym>. Click on “**Send Me Information**” link and complete the brief contact form. You will receive all Symposium information and materials as they become available. Or, if you prefer, please call (585) 475-4661 to be placed on the 2005 Symposium information distribution list.

An International Symposium
Instructional Technology and Education of the Deaf



Sponsored by
National Technical Institute for the Deaf at Rochester Institute of Technology
The Nippon Foundation of Japan and PEN-International

June 27 - July 1, 2005
<http://www.rit.edu/~techsym>

Send Me Information

Overview
Call for Papers
Registration
Housing
Online Opportunities
 Recommendation Form

2005 Symposium Scheduled
Plans are underway for the 2005 Symposium. Mark your calendars for June 27 - July 1, 2005. To receive email updates regarding the 2005 symposium, click on "Send Me Information" to the left.

2003 Symposium Resources Available Online
To learn how to access the 2003 schedule and online resources, read "[How to Access Symposium Presentation Resources on the WWW](#)". This document describes how to view, online, all presentation summaries, abstracts, media files, captions and video files.

Symposium a Success!

Registration and Housing

Symposium

- ❖ Registration \$275
- ❖ Early Registration \$225
- ❖ Students \$125

Post-Symposium Two Day Workshop

- ❖ Full Day \$150 per Session
- ❖ Half Day \$75 per Session

Housing

- ❖ Single Room in Local Hotel Approximately \$125 per Day

Registration includes a daily

- *Buffet Breakfast*
- *Lunch*
- *Afternoon Reception*



PEN-International
National Technical Institute for the Deaf at
Rochester Institute of Technology
52 Lomb Memorial Drive
Rochester, New York 14623 USA
585-475-4661 Voice & TTY
Fax: 585-475-6544
Email: techsym@rit.edu
<http://www.rit.edu/~techsym>

PEN-International is funded by a grant from The Nippon Foundation of Japan to NTID

Keeping the Boat Afloat and Enjoying the Trip: What do Coordinators Want/Need From Service Providers and What do Service Providers Desire from Coordinators?

Carole M. Collier

University of Iowa

Iowa City, Iowa

Abstract

Provision of services such as interpreting and CART, C-Print and Typewell is happening on our campuses but how can we improve it? What makes an interpreter or transcription provider valuable to the institution? Why would one interpreter be rehired and another not? What can coordinators do to improve the quality of “the job” for the service provider and improve retention?

This session combined directors, coordinators, and schedulers with interpreters, reporters and transcription providers for an interactive discussion of specific qualities that are held as valuable. Starting with responses from a survey of the list serve, a discussion was initiated around a basic question for each group.



Question to Coordinators

If you had the opportunity to tell interpreters/transcriptionists what makes them the most valuable to you, what would you say (what is the most important quality of an interpreter/transcriptionist working for you – other than skill)?

The directors, coordinators, and schedulers in the session agreed with those who responded to the question on the PEPNet list serve. The way the most valued qualities were phrased varied, but we were able to group them into the following categories: Flexibility, Attitude, Cooperation, Trust and Other Qualities.

Flexibility

“I was in a situation where another entity had hired a pair of interpreters for a workshop at their institution. It turned out that no deaf person showed up, so the coordinator asked the interpreters to cover other interpreting duties at the same institution so that her interpreters could attend the event. They refused to do so, stayed the required 20 minutes and left. It was not an issue of skill, but of, “that’s not what we were hired for.” They, of course, billed for the full three hours. Those are interpreters I’d never hire again.”

“Suppose you hired a plumber for a job and he/she arrived and you had fixed the problem in the meantime but another problem arose. Would he/she tell you I am sorry but you hired me to fix your faucet not the stuck drain? He leaves and gives you a bill. I don’t think that would fly with too many people. If I was paying them directly, not through an agency, I would not pay them. If they refused to work for me again then I would not mind at all since I would not hire them again.”

“What I appreciate most from the interpreters I supervise is their flexibility to meet student needs during our ODD hours! as well as those who PUSH the extra mile on becoming a

better interpreter and representing the interpreting profession (we have some who are just here to pay their rent/bills/etc, most of us work for that reason but don't have the attitude of it)."

From the audience:

"Being willing to go where I need them to and also being willing to work with a student who needs services that the interpreter doesn't want to work with." "Working with students and disciplines they don't want to work in as well as working with a certain team member."

Attitude

"I understand protecting what I do, but as a coordinator, I appreciate interpreters with a good attitude. One of my interpreters e-mailed me, saying they had worked with the same team and student for three years and thought it was time to switch. No criticism. That attitude did wonders for me! I have already started thinking of switching. She was doing a difficult assignment for me that it was hard to get people for. We have that sometimes. I depended on her, and I did not realize to what extent."

"It's the old 'chestnut', but I would add Attitude. Valued interpreters don't whine. They view each assignment as important and worth doing well."

"Top three things: Attitude, attitude, attitude."

"Positive, upbeat attitude and willingness to work and receive feedback are more important than skill, if you ask me."

From the audience:

"It fits with flexibility. When I ask you don't go, "OH ALL RIGHT!!!" I don't want someone looking for all the negative stuff! I want someone who makes me smile instead of cringe when they walk in!

Cooperation

"Good attitude covers most things but cooperative is my key word."

Ready to fill-in when necessary (even offering to help in the office).

Willing to draw a diagram if it helps in class.

Positive attitude viewable on the face (pleasant to watch).

Gives positive feedback to the team interpreter.

Will answer the ringing phone in the office when others are busy.

Dresses professionally.

Prepares for tough classes.

Helps pass out a test when there is a team interpreter.

Willing to attend skill building workshops.

Looks for solutions when bringing a problem to the office.

From the audience:

"That dovetailed with flexibility. You have many assignments and want cooperation."

"My answer was team work (cooperation). I want my interpreters and me to be a team. Our goal is to have everyone remember we are a team providing our students services. I have flexibility in my job and I expect equal flexibility and fairness."

Trust

“Honesty and being able to trust them and their judgment (when it comes to accepting assignments, assessment of their skills, dress, etc).”

“Integrity.”

“I have to be able to trust them

to tell me when there are no-shows.

to make good judgment calls.

to let me know when communication problems arise, etc.”

From the audience:

“I was thinking that I am not with them every minute so I trust they will let me know when someone does not show up. I trust them to page me during gap time instead of sneaking out for five hours!”

“Reliability and dependability are so important! Don't call me at midnight and ask about your 8 o'clock class! I need to trust they will be there when they are needed.”

Other Qualities

“I know I really appreciate them taking the initiative in bringing me concerns/issues as they come up.”

“Interpersonal skills”

“From provider and late-deafened consumer perspective(s) I definitely agree that interpersonal skills are critical.”

“Teaming . . . without a doubt . . . some can and some can't.”

“Attention to details. I need them to give attention to details not only on the team with whom they are working in the classroom so they are aware of what's going at all times and can assist at the drop of a hat, but I need them to give attention to arriving on time and each day the class meets, giving attention on when to turn in time sheets, giving attention to the dates of the semester, etc. This is an invaluable skill for any interpreter and it takes practice to develop it.”

“I would say the most important quality is dependability.”

“The ability to be non-partisan but to work equally for the benefit of both deaf and hearing consumers.”

“The desire to work in Post-secondary settings. I had an Interpreter interview who said, ‘I don't like educational interpreting. It feels too robotic.’ Hmmm, sorry, but that's mostly what we do here at this Educational Institution.”

From the audience:

“The agency I use has a 20 minute wait policy. My Deaf students are notoriously late. I do not understand why the interpreters, 15 minutes after class starts, are in my office. They are getting paid for 2 hours and want to rush out. Even though they know the students are notoriously late!”

Question to Service Providers

What are the qualities/characteristics that you most value in an interpreter services coordinator/scheduler and how can we as coordinators/supervisors/schedulers better serve you as interpreters and transcriptionists?

Without a doubt, the number one answer from interpreters and those providing transcriptions was – in the immortal words of Aretha Franklin – R E S P E C T. Other categories included Be Friendly, Listen, Communicate, Pay Attention to Details, Be Accessible, Give Feedback and Followup, Be Flexible, Be Fair, Be a Staff Advocate and Be Knowledgeable.

Show Respect

- Respect for credentials and seniority.
- Values my skills.
- Appreciates the hard work and time I put into providing quality service.
- Respect for colleagues, the students/clients/the profession.
- Trust in my expertise and insights.
- Trust makes me more responsible for my job (even without supervision).
- Encourages a sense of teamwork.
- Treats us as professionals – (regardless of administration’s position).
- By establishing professional guidelines & standardizing these practices, coordinators may recruit more highly qualified service providers and a respectful, steady work environment may result.

Be Friendly

- Personable and “user friendly.”
- Friendly in person & phone.
- Orientation toward connecting rather than setting up the road-worn “us against them” situation.
- Excellent “people” skills-someone you (D/deaf/hh, seasoned interpreter, newbie, etc.) can come to and get advice, easy to take advice from, open to others ideas and concerns, etc.
- Personality is a big one – being able to enjoy a laugh.

Listen

- Listen, stay open, be light on your feet, remember that the great majority of the time, no one dies if his/her interpreter/transcriber is late/having an off day/missing. Listen.
- Listen for what is said and what is NOT said. Express what is needed to make things work, not just what is NOT making it work.
- Provide timely responses to my questions (location, contact info, etc.).

Communicate

- Clear, consistent communication – openness to discussing issues and frankness regarding concerns.
- Open communication – I like to be honest in terms of how I feel in the classroom without worrying about her judgment.
- Good communicator, fluent in the language of these communities, a good listener, expresses one’s expectations, instructions and feedback clearly & concisely.
- Good communication skills – no beating around the bush.
- Tactful.

Pay Attention to Details

Provide as much THOROUGH information as possible and THOROUGH directions.
Don't mess up details...if you do fess up.
Inform the student/faculty.
Takes my (and the students) personal needs into consideration .
Clarity.
Helps to know who my team is.
More attention to detail.
Try to schedule early.
Have resources available (books and tapes).
Keen insight into the strengths and weaknesses of each provider.
Stay in touch with professors.
Make sure the schedule is reasonable and feasible (time from one place to another).
Keep in touch with concerned parties.

Be Accessible

Easy to contact-responds to calls/pages/emails in a timely manner.
Easily approachable.
Availability to consult on a regular basis.
Can reach her when needed.
Open door policy.

Give Feedback and Followup

Constructively critical, providing positive remarks as well as areas for improvement.
Phrased in a POSITIVE, HELPFUL, way (destruction lasts forever) and being acknowledged once in a while for a job well done, for going that extra distance, giving that extra effort.
Offer to counsel when needed with an open ear.
We need nurturing contact from the facilitator.
I have felt disenfranchised. There should be at least occasional contacts, checkups, communications.
During the first part of semester, get and provide student feedback on the services.
Make sure the transcriber is connected to a live reader ASAP.
Hold the providers to a standard of professionalism.

Be Flexible

Consideration for the providers' preferences for specific assignments.
Creative in his/her ability to problem-solve, flexible, adaptable, firm yet reasonable in his/her demand for quality, reliability, honesty, etc from staff.
Schedule me for classes that interest/challenge me as well as matching my skills to the students' needs.
Understand when a very occasional conflict in schedule occurs and a substitute is needed.
Willing to make changes when conflicts arise.
Ability to respond quickly to a request.
Flexible in scheduling. Flexible with time.
Flexibility – easy to work with.

“I think the most valuable service for a coordinator is an open mind...and ear...regarding scheduling. ...allowing us input even when it takes some juggling to cover everything. Willing to be flexible if we think there’s a better plan of action. Willingness to listen when we snivel!”

Be Fair

The ability to act with equity and dispatch.

Detachment.

Fairness in distribution of the requests.

Keep a “human” perspective in mind while scheduling.

I respect the reciprocity of getting some of the great, fun, interesting work as a “reward” for doing the sometimes not so great, fun, interesting work that needs to be done as well.

Be a Staff Advocate

Be a strong support administrator – someone who will act on my concerns.

Support – going to bat for us.

Provide opportunities for formal and informal training.

Encourage skill building.

Provide skill enhancing ideas and resources.

Advocate regarding policies and pay.

Work to standardize practices (cancellation policies, time between classes, prep time, etc.).

Work to create full-time positions with benefits.

Be Knowledgeable

Of profession as well as Deaf culture and community.

Of educational system and how providers fit into the “big picture.”

Of scheduling skills.

Of interpreting from both a technical and ethical standpoint.

Of current and future trends – keep up to date (pay, teaming, technology).

Competent.

Time efficient.

Put teams together that really match.

In total support of the interpreting team and skilled in managing the “red tape” associated with making necessary administrative changes.

Other Characteristics Valued

Reliability.

Honesty.

Commitment – to students and providers.

Orientation toward finding solutions.

Resourcefulness.

Trying – not perfect but trying.

Professional – striving to be an example of excellence.

Finally, “Captain Carole” had a few “C’s” to add

Communication: Keep the coordinator in the loop...lets all stay on the same page.

Commitment: Be here for more than just the money...what an exciting occupation we have!

Coordination: Help the scheduler out by informing as much in advance as possible of absences...try to offer alternative solutions. (Johnny has a test on Thursday-we don't need a team...that's the day I'll take my doctor's appointment).

Criticism: accepting it in a positive way.

Charity: have a little patience/pity/understanding and forgiveness for the person scheduling.

One more very important thing to remember whether you are a coordinator/scheduler or an interpreter or transcriptionist –

YOU ARE VALUED. THANK YOU!

Serving and Instructing Students Who Are Deaf-Blind

Amanda Covington

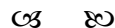
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Abstract

In serving or instructing students who are Deaf-Blind, it is important to be familiar with communication modalities, reasonable requests for accommodations, how Deaf-Blindness impacts the classroom experience, and how to best manage a classroom to make it Deaf-Blind accessible. These topics as well as teaching strategies and adaptive technology were the focus of this presentation and are the focus of this paper.



Causes of Deaf-Blindness

There is no *one* cause for all deafness and/or blindness. The etiologies can range from genetic to illness. Common causes of deafness or blindness are Usher Syndrome, cataracts, macular degeneration, glaucoma, or pre-natal accidents or illnesses.

Usher Syndrome

Usher Syndrome is of the leading causes of Deaf-Blindness and currently has three distinct categories, although as research continues more are being developed. A broad definition of Usher Syndrome is a diagnosis of retinitis pigmentosa (a degenerative eye condition) and deafness. The order of the sensory loss determines the category of Usher Syndrome and can help determine communication preference.

Usher Syndrome I – Congenitally Deaf/Adventitiously Blind. Therefore a signed system (ASL or Signed English) will *normally* be the native language.

Usher Syndrome II – Congenitally Blind/Adventitiously Deaf. The consumer may be oral/aural or use Signed English. Sign language proficiency may vary due to age of hearing loss.

Usher Syndrome III – Adventitiously Deaf AND Blind. The consumer may be oral/aural or use Signed English. Sign language proficiency may vary due to age of hearing loss.

Anticipated Needs

With so many variations in Deaf-Blindness, what kind of services should the Disability Support Office provide? Following are ideas of “typical” accommodations.

Sign Language Interpreter – Interpreters convey spoken information *as well as* environmental information. This slows the interpreting process and causes a higher fatigue factor with interpreters. Two interpreters are required for any assignments over 30 minutes. Interpreters working with Deaf-Blind clients need to be familiar with interpreting accommodations such as smaller signing space, including environmental information, and tactile communication.

Speech to Text Transcriber – Transcribers type what is being spoken *as well as* environmental information when time allows. Again, there is a high fatigue factor and two transcribers are recommended for assignments of 30 minutes or more.

FM System – An FM System is a popular choice for students who prefer auditory input. The instructor/speaker wears a transmitter, a small lapel microphone attached to a box by a small wire. The student wears a receiver consisting of a small box with a large wire loop that the student wears around their neck. This system cuts down on environmental noises and helps amplify the speaker's voice. Ensure that the speakers' face is visible (for lip-reading) and that the microphone gets passed around as other students make comments.

Note taker – A note taker is crucial to student success. When students attempt to take notes and watch an interpreter, information is missed. The notes provided need to be in an accessible format for the student.

Alternate (Accessible) Format – When creating handouts or exams, consider the form most accessible for the student. The student might require the information in Braille or simply in large print format. For tip, refer to the later section entitled "Creating Electronic Documents". For handouts or exams, consider placing the handout/exam on a disc or printing them on a light pastel colored paper to reduce glare. Consider soft colors such as beige, yellow, blue, green and pink. Another option is to use e-mail for assignments, handouts, or papers.

Additional Testing Time – When a student is using a large print or Braille version of an exam, it generally takes more time to access the information. Be sure the student has the proper clearance with instructors *before* exam time. The student may also require special accommodations while testing (more lighting, CCTV, reader and scribe, or Braille Note).

1:1 Assistance – Allow students to turn in assignments to instructors *early* for preliminary proofing/feedback.

Tutoring – Allow for a set number of tutoring hours per week. It benefits Deaf-Blind students by connecting the chunks of information from class. Tutors help the student review the material and fill in the gaps from the classroom.

Basic Communication Considerations

Aside from basic accommodations, here are a few considerations that will make your classroom Deaf-Blind friendly.

Is there too much glare on the paper? For some Deaf-Blind students, white paper might cause too much glare and make it difficult to read the print. Consider using light colored pastel paper (light yellow, blue, green or pink) with a **thick, bold, dark** marker to make the writing more visible.

Is there too much background noise? If a student is using an FM system or has residual hearing, background noise might interfere with his/her ability to understand speech. Check with the student and be aware of environmental noises (air conditioning coming on, sirens going by, construction noise, or people in the hall or outside the window).

Is there too much/not enough light? Standing in front of windows or other light sources might be problematic for a student with a vision loss. Try to stand against a dark or neutral background away from a light source. White boards (dry erase boards) sometimes cause glare. Some lecture rooms tend to have very dim lighting, which might prove to be problematic. Talk to the student and the department about potential accommodations if you have a student that will be placed in a classroom where these issues might arise.

Is distance vision a problem? Can the student see the board? Can the student see the interpreter/transcriber/speaker? Can the student see overheads? Can the student see the movie or film clip I plan to show? The solution might be previewing the presentation with the student or providing a paper copy of what is being presented in advance.

Teaching Strategies

Professors that tailor teaching styles for students who are Deaf-Blind find that *all* students benefit from these accommodations. Some beneficial methods include: using several methods of teaching (visual, auditory, kinesthetic); encouraging class participation; ‘chunking’ information on handouts and using bullets; show *then* tell or tell *then* show; describe visual information; assess and reassess what is working and modify as needed; and check in to make sure students are understanding.

Additional strategies to help ensure the students all have access to the same information are as follows:

Turn Taking. Be sure only one person at a time is speaking. When several people talk at the same time, the student misses information. Interpreters will end up picking and choosing which person to interpret and the consumer is unable to participate. Ask students to raise their hands before speaking. This will help the instructor control the flow of conversation.

Identify Yourself Before Speaking. It is helpful for the Deaf-Blind person if the speaker will identify himself or herself before beginning to speak. For example, “This is Amanda speaking. I agree with your comment that...”

Allow time to read materials. If materials are passed out during class that the student did not receive before class, allow time for reading. The student who is Deaf-Blind can not take in the information from the page AND the lecture simultaneously.

Be aware of the interpreting process. Occasionally check with the interpreters making sure the pace is manageable or that the student is finished reading a handout. Realize the student may be a few seconds behind the group in receiving the information. Hold peoples’ questions or responses until the student has a chance to catch up and equally participate.

Group the student with peers. Allow the student to interact and participate in the same manner as all other students. Interpreters will facilitate the communication process and the consumer can alert you to any problem areas.

*Show **then** Tell or Tell **then** Show.* The visual student will be watching the interpreter and cannot see what is being shown unless the instructor pauses. The tactile student relies on the interpreter to describe what is being shown. The instructor must allow adequate time for the description to occur. Allow the Deaf-Blind student to handle/explore the object during the pause. For students with low vision, place the object in a location where there is good lighting and contrast. Make objects available for students to explore more fully before or after class.

Allow students to record lectures on tape. Laws that entitle people with disabilities equal access entitle students to tape record lectures. If there is concern about copyrighted materials or

materials that may be published in the future, the student can sign an agreement not to release the recording or to erase it at the end of the semester.

Make sure handouts are legible. Black print on white paper provides the best contrast for most people. However, softer colors may be appropriate. Be prepared to make large print copies or provide handouts on a computer diskette if requested.

Give specific verbal descriptions. When using the chalkboard or other visual aids, give specific verbal descriptions of what is being shown. Ideally, this information should be provided to the student in an accessible format before the class period.

Use the object name. When pointing to an object of discussion, use the name of the object instead of “this” or “that.”

Reference text by chapter and paragraph. If reading from a textbook in class, remember that the page numbers in the teacher’s book may not correspond to large print or Braille versions. In addition to giving the page number, it is helpful to provide descriptive information about the sections being read, such as “the fourth paragraph in Chapter 6.”

Seating arrangements. Be aware that some students may choose to use note-taking devices that make some noise. Some of these devices may include a Braillewriter, a laptop computer, or a slate and stylus. Discuss seating arrangements to minimize the impact on other students.

Advanced planning for activities. Inform students of field trips or laboratory activities in advance. The student may need to arrange for a sighted guide or to become familiar with the new setting prior to the class visit.

Maintain academic standards. Competency standards apply to all students. Make modifications in the presentation of materials and student evaluations, not academic standards or course content. This ensures that all students receive the same quality of education.

Computer Users/Creating Electronic Documents

Faculty can provide handouts or exams on diskette or via email for students who need Braille or use screen reading software. This is much more expeditious and accurate than scanning print documents, and eliminates the need for reading the handouts onto audiotape. Documents saved in ‘text only’ format translate easily into Braille and are compatible with screen readers. However, there are some pitfalls to watch out for. Something as innocent as typing “_____” (repeated underscore characters) to designate a place for students to write in information is problematic for Braille, and screen readers would read the line as “underscore underscore underscore” etc. A better approach would be to use the word “blank” instead. Here is an example: *The largest state in the United States of America is (blank).*

Tables should be avoided, as translation into Braille is difficult, and they do not work well with screen readers either. Layout is also important.

Here are some examples of what does not work, and the preferred format:

Format to avoid:

<u>Office</u>	<u>Building</u>	<u>Room number</u>
Academic Advising	Jones Hall	202
Admissions	Smith Hall	111
Records	Adamson Hall	104

Preferred format:

Office, Academic Advising, Jones Hall Room 202

Office, Admissions, Smith Hall, Room 111
Office, Records, Adamson Hall, Room 104

Format to avoid:

- | | |
|-------|-------|
| a. 1 | c. 10 |
| b. 52 | d. 42 |

Preferred format:

- a. 1
- b. 52
- c. 10
- d. 42

Text from multimedia programs, such as Microsoft PowerPoint© and Corel Presentations©, can be saved into text files; otherwise they are inaccessible to screen readers. A word of caution: text placed in text boxes may not transfer, so they must be handled individually by either retyping the information or copying and pasting.

Finally, the student may be able to provide other tips to improve his or her ability to access materials.

Summary

Most classroom accommodations and teaching strategies benefit *all* of the students you teach. Taking the extra few minutes to change the approach to the material will make the classroom more accessible and enjoyable for all. Find out what *each individual* student requires from the class/instructor and be open to feedback throughout the process.

Resources

SKI-HI Sensory Perspectives – www.hopepubl.com

Typewell Transcription – www.typewell.com

C-Print Transcription – www.ntid.rit.edu/cprint/

Bridging the Transition Gap: Building a Comprehensive College Experience Program

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Abstract

The E.H. Gentry Technical Facility at the Alabama Institute for the Deaf and Blind offers three comprehensive programs for students who are deaf or blind. The four-week summer *Life Skills Adventure* focuses on developing independent living, career exploration, job readiness, leadership and communication skills, and self-advocacy skills. The *Collegiate Adventure I* evaluates a student's potential to enter college and provides basic college information, assistive technology, and independent living classes to juniors and seniors. Classes address learning styles, study/test/note taking, Math and English remediation and other necessary skills for college. *Collegiate Adventure II* individually tailors classes in independent living and technology. Guidance is provided to ease the transition to college. While students are enrolled at the E.H. Gentry Technical Facility, they may also take a college class. Support is given in learning the college entrance process, completing the financial aid applications and accommodation forms, etc. Follow up is provided to all students for a period of two years to ensure success and retention in college.



Introduction

The purpose of the program offered at the E.H. Gentry Technical Facility is to give the students a realistic picture of what the college experience is about, develop skills that will assist them in becoming independent, improve access to technology, and improve retention and completion rates of students in the post-secondary setting. This program has a holistic view of meeting the student's needs while making recommendations to the student and vocational rehabilitation counselor that will ensure college completion and student success.

Successfully learning the skills needed to transition from high school to an academic or vocational setting are essential to success. *Life Skills and Academic Learning Center for Excellence* is a four-week summer comprehensive diagnostic program for juniors and seniors who are deaf or blind to explore careers, learn independent living, and evaluate the potential to enter a post secondary setting.

The Life Skills Adventure, an experiential learning environment, is designed for students whose focus is attaining vocational training or a job. Emphasis is on learning independent living skills: household management, accessing community agencies, career exploration, self advocacy, job readiness, time management, building leadership skills. Student plan budgets as if they were living independently on a college campus. They plan menus, draft budgets, create utility bills, make deposits, balance check books, obtain school meal tickets, and go on a grocery store road

trip to learn to estimate food costs. Students complete an intake form that contains their social security number, health insurance card, car insurance information, emergency contacts, and medical information, such as allergies, current medications, etc.

Collegiate Adventure I is designed to evaluate a student's potential to enter college. Participants take remediation classes in English, math and "Becoming a Master Student", while learning the foundations of living independently. Other areas addressed are learning and personality styles, self-advocacy, career exploration, note/test/study techniques, stress/time management, college basics, adaptive technology, leadership and communication skills, and accommodations critical to college success. This program helps students define personal objectives for entering college. Students participate in career fairs and college/technical school tours as well as become involved with a college student mentor forum with various colleges such as Auburn University, University of Alabama, Jacksonville State University, and the National Technical Institute on Deafness (NTID). Classes include discussions in setting goals for a college education, choosing the right schools, making the most out of college campus tours, learning what are colleges looking for in prospective students, understanding what it is like to live on college campus, and identifying academic opportunities beyond the classroom. The students are involved in a critical thinking project where they participate in debates and essays on addictions, including models of addiction treatment, effects on family, and whether or not marijuana should be legalized. The use and misuse of alcohol in college, videos on addictions, and family dynamics are also included.

Collegiate Adventure II is offered in the fall on a semester basis that addresses individual needs in math and English remediation and independent living. In conjunction, classes are taken at a local college. Support is given to ease the transition to college.

The need for a comprehensive college preparation program has been well documented over the years. In 1992 the American Association of Community Colleges (AACC) cited 1989 enrollment data from the National Center on Education Statistics indicating that 63% of all public higher education students with disabilities were enrolled in community colleges. Among the 547 two-year colleges that categorized students by disabilities, the AACC found that the following information:

- 35% had learning disabilities,
- 21% had orthopedic/mobility disabilities,
- 16% had chronic illnesses or other,
- 7% had hearing disorders, developmental disabilities,
- 5% had visual impairments, behavioral disorders,
- 4% had head injuries, and
- 2% had speech and language disorders.

The AACC found that only two percent requested support services. According to Barnett (1993), the 10 most prevalent disability services and accommodations needed were:

- Registration assistance (83%),
- Counseling (82%),
- Alternative exam formats or times (81%),
- Notetakers, scribes, readers (80%),
- Disability support services offices (70%),
- Learning center lab (70%),
- Adaptive equipment (69%),
- Taped texts (65%),

- Interpreters (65%), and
- Tutoring (60%).

It is imperative that programs are in place to assist disabled students achieve success in the educational arena. Only 52% of Alabamians between the ages of 25 and 64 with disabilities have a high school diploma, compared to 74% of all state residents in that age group (U.S. Department of Commerce, Bureau of the Census, n.d.). Only seven percent of disabled persons are college graduates, compared to 18% of the population statewide. Approximately 12% of disabled individuals under the age of 65 live alone.

Approximately two-thirds of American college campuses offer some kind of freshman orientation. About 70% can be categorized as extended or full-semester, credit-earning courses. This is a strong indicator that most students find transition from high school to post-secondary education confusing, to say the least. Students who are deaf or hard of hearing often have experiences that are haphazard and many times traumatic. The estimated withdrawal rate of deaf and hard of hearing students in two-year colleges is 60%, and may be up to 72% in four-year colleges (Foster & Walter, 1992). Research has shown that orientation programs, especially those that last for an entire semester, are effective in promoting student persistence and academic achievement (Cuseo, 1991). To assist students who are deaf, hard of hearing, or blind experience a smoother transition and persistence to graduation, a program must be implemented that meets all of the students needs and is designed in an applied learning process. The topics of classes were chosen based on the transition goals of vocational rehabilitation counselors, with input from college instructors who teach deaf and hard of hearing students, education coordinators and professionals from various areas of the southeast region of the United States. In addition, research findings recommended these areas as top-priority content for inclusion in a freshman orientation course (Cuseo, 1991).

Lastly, the course supplements include a sample syllabus, involvement activities, the benefits and goals of a college education, student evaluation examples, and a list of major resources and information about where they can be obtained. The involvement activities are vital to learning and are interspersed throughout the curriculum to provide maximum opportunity for the development of relationships with peers and the instructor. These relationships are instrumental in encouraging students to persist in college and building relationships with their college professors.

New endeavors are being investigated to expand the services to parents, students, and educators. A website link is being built at <www.AIDB.org> that will allow students, parents, and college professors to obtain information on issues relevant to them. Students will have a monitored listserv site to discuss college-related issues. This discussion forum will serve in a mentoring capacity and as a support mechanism to circumvent potential issues that could lead to dropping out of college. Parents will have a link added for them to understand the necessity of starting early in the transition process, financial options for college, technology, rights and responsibilities, and support and referral sources.

A site for instructors and academic advisement professionals will be provided to enhance their knowledge of working with students with sensory impairments. The barrier to providing access to advanced telecommunications for students with disabilities most frequently cited by schools was lack of sufficiently trained special education teachers (National Center for Education Statistics, 1996). Schools were asked to list five possible barriers of use of their communication resources utilized by students with disabilities. They were ranked as follows:

1. Moderate or major barriers were teachers not being trained in using advanced telecommunications (47%).
2. Inadequate evaluation and support services to meet the special technology needs of students with disabilities (39%).
3. Not having enough computers with alternate input/output devices for students with disabilities (38%).
4. Not having enough computers available for disabled students (34%).
5. Administrators do not see telecommunications as relevant for students with disabilities (16%).

With these statistics in mind it is easy to see why students with disabilities need assistance with the processes involved in entering, retaining, and completing college. It is imperative that students can obtain the necessary services to get a college education; and it is also necessary for the professionals in the colleges to be aware of new technology available to these students to accommodate their needs. It is anticipated that this program can be replicated throughout the nation to ensure that all students who have a disability will be able to succeed in college.

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Demystifying Assistive Listening Devices: The Devil is in the Detail

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Abstract

Oftentimes service providers do not understand why individuals who are hard of hearing need any accommodations in classroom settings. The student may have been able to communicate very well with the service provider on the phone or in her office. Some people believe that hearing aids and speechreading together are adequate for classroom communication. Others may think that only those with profound losses are really in need of assistance. Still others may not understand why the student seems to hear well in some situations but not others, or understands one individual and not another. This article will help the reader to understand how these seeming inconsistencies can exist, and will focus on how assistive listening devices can be extremely useful in classroom settings, even for those with milder hearing losses.



Why use ALDs?

People who are hard of hearing are not just hearing speech that is softer. Because some speech sounds are softer than others, such as s, f, and th, these individuals hear softer speech with parts of words completely missing. Students who are hard of hearing depend both on what they can see (for speechreading) and what they can hear for their receptive communication. However, because they are students, they will be in many situations where much of the vocabulary is new to them. It is even more difficult to speechread unfamiliar words.

Sound is measured in frequency (high and low), and intensity (loud or soft). Hearing aids help individuals by increasing the volume in the range of frequencies he has trouble hearing. Unfortunately, hearing aids cannot discriminate between the sounds one wants to hear, and those one does not want to hear. Classrooms and other group settings are extremely noisy situations. It is not just that the teacher may not be speaking loudly. There are 50 other students in the room getting books out and shuffling papers. The air conditioning system and the fan on the overhead projector add to the noise. Although newer hearing aids with directional microphones have improved listening in noisy environments, not all students will have this technology. In addition, this technology is less effective when the person you want to hear is farther away. Hearing aids typically amplify all sounds within the prescribed frequency range within about 20 feet of the

student, making hearing in noisy environments extremely difficult. To make matters worse, acoustics are usually poor in classrooms.

Research has shown that students with normal hearing can hear clearly if what they want to hear is 6 dB louder than the background noise (Signal to Noise Ratio). Students with a hearing loss need not a +6 dB SNR, but a +15 to +25 dB SNR to achieve the same results (Blair, 1990). Hearing aids do nothing to improve the signal to noise ratio; in fact, they can make it worse by amplifying everything.

How do ALDs help?

ALDs consist of a microphone, a transmitter and receiver system, and a coupling device, such as headphones. The instructor speaks into the microphone. The microphone is attached to a transmitter, the transmitter sends the signal to the receiver that the student has with him at his seat. The only sounds that are being transmitted are those coming through the microphone. The student's receiver picks up the signal and sends it to the coupling device, such as headphones. There is a volume control on the receiver, so that the student can adjust it as needed.

What do ALDs do? ALDs help minimize background noise and maximize the target sounds you want to hear. The instructor speaks into a microphone, and the student can turn up the volume. In effect, ALDs help the student to "turn down" the background noise, and to focus in on what they want to hear (that is, the instructor's voice). It's that simple.

Who would benefit ALDs? People with mild to profound losses can use them. The benefit received depends on the severity of the loss. ALDs aid in speech reading in more severe losses, and help reduce dependence on speechreading for milder losses. For more severe losses, ALDs may only help the individual pick up voice inflections (which can help the individual interpret meaning). Individuals with and without hearing aids, and individuals with cochlear implants may also benefit from ALDs (those with cochlear implants would need to use the appropriate patch cords to be able to take advantage of them with the implant, or they may use the ALD with the aided ear). Finally, because ALDs help bring the target speech directly to the ear and thus help reduce auditory distractions, they may also help certain individuals with learning disabilities and attention deficit disorders. The bottom line is that educational settings are communication intensive environments, and ALDs can be beneficial to individuals with a wide range of hearing losses.

Assistive Listening Device Systems

There are three major ALD transmission systems. This variety is useful, because there are advantages and disadvantages inherent to each system. There are both large area and small, personal versions available in each transmission system. Range varies with the system from under 100 feet to more than 500 feet. The receivers generally run off batteries, as do personal FM transmitters. With the *appropriate* coupling device or listening option, each system can be used with or without hearing aids.

FM. The personal FM transmitter is about the size of a pager, and has an on/off switch and a jack for a microphone. The instructor plugs in the microphone and clips it close to her mouth, turns the transmitter on, and begins speaking. The FM receiver looks very similar and, like other receivers, has an on/off/volume control, and a jack for headphones or other listening device. The student wears the receiver, which intercepts the signals. The listening device carries the signal from the receiver to the ear.

FM uses radio waves to transmit the signal across the distance. It helps to think of the system like a radio station. The receiver and transmitter must be tuned to same frequency to work. It provides the greatest amount of decibel output, and so it may be preferable to those with more severe losses. FM allows for a great deal of freedom of movement. In fact, you can leave the room and still pick up the signal. (Instructors should be aware that, unless they turn off their microphone, when they *leave* the room they will still be transmitting the signal!)

FM systems are susceptible to interference from other devices using FM radio waves within close frequency ranges, such as pagers, walkie talkies. Similarly, in order to be used in two rooms that are side-by-side, there must be at least one free frequency between the two transmission channels or there may be some bleedover of the signal between the two rooms. If you pick up traffic from other devices, ask the manufacturer to recalibrate yours (or the ones causing the interference) to a different frequency. If you will be using this type of equipment in a high traffic area, purchase equipment that is narrow band, or super narrowband. These transmit on different frequencies and are much less susceptible to interference from other traffic.

There are hearing aids that have built-in FM receivers. Others can be fitted with an FM boot that fits over the bottom of a behind-the-ear aid. These will have a separate microphone/transmitter that can be worn around the speaker's neck or propped up on a table.

Infrared. Infrared uses infrared light to transmit the signals, similar to remote controls and VCRs. While you must have a direct line of sight with remote controls, infrared systems have a wider area of coverage than this. Some older systems will require a more direct line of sight than the newer systems. Light does reflect off surfaces, so the signal can often be picked up from a variety of directions.

There are a variety of styles of infrared emitters; some look like panels and some look like pyramids. They are all identifiable, though, by the rows of diodes or eyes covering them. Infrared transmitters must be plugged into a power source. Most of them are plugged into an existing PA system (although there are home versions that are used with television sets).

There are also several different versions of IR receivers. All will have a light-intercepting diode on them. This diode must not be covered or the signal will be blocked. (So, unlike FM receivers, the student would not be able to put the infrared receiver in her pocket or clip it to her belt like a pager.) Some are worn like headphones and have the diode on top, others are worn like a stethoscope and the diode hangs under the chin. Still others look similar to the receivers described above for personal FM systems (except that they have a diode) and can hang around the neck or be placed on the desk. This last type is the most versatile. Individuals who wear hearing aids often have problems wearing headphones or the stethoscope-type headsets (covering the hearing aids with headphones often causes them to feed back). When you purchase receivers, make sure that a variety of coupling devices can be plugged into them (such as neckloops or headphones). Be forewarned: some come with this extra jack, others do not.

Infrared may be susceptible to interference from high frequency lights or direct sunlight (although indirect sunlight does not usually cause problems). Check with manufacturer about systems that work with high intensity lighting. Also, many multiplex movie theaters use the system because the signals do not pass through walls, and therefore can be used in adjoining rooms.

Electromagnetic Induction Loop. This is the only system that is properly referred to as "a loop." The system consists of a loop of wire that is powered by an amplifier, and a microphone. The amplifier must be plugged into a power source. The wire loop transmits electromagnetic waves that carry the signal, not unlike stereo or telephone speakers. An area as

small as a table or as large as a room can be looped. Professionals should set up large areas, as dead spots (areas where no signal is picked up) can result.

If the user's hearing aid is fitted with a device called a telecoil, he will not need an external receiver. He would enter the looped area and flip a switch on his hearing aid to "T" to pick up the signals. Not everyone has this option on their hearing aids. In order for those without hearing aids (or those whose hearing aids do not have telecoils) to use the system, you should also have a supply of induction receivers on hand. These receivers look like the FM receivers described above, and headphones can be plugged into them. (These receivers are also useful to service providers in other troubleshooting situations described below.)

Unfortunately, everything that is powered by electricity gives off some electromagnetic energy that can result in interference in the form of static or a hum. Some sources of interference are noticeable, while others are not. This is not the system to use in a computer lab. With some sources of interference, such as lighting ballasts, simply changing seats helps.

Application

The systems are relatively simple in concept, but application to real-life situations may require some troubleshooting. One person speaking is easy to set up, because you have only one person to mic. **What if there are questions from students in the class?** The hard of hearing student would not be able to hear the question because it was not spoken into the microphone. The teacher should repeat questions into mic, or pass mic to student for long comments. **What if there is not just one speaker, but, for example, a panel?** If the speakers are taking turns, you could pass the microphone to each speaker. However, if it is more of a discussion, you should have multiple microphones. Check with your audio-visual department to help with setting up multiple mics and plugging the transmitter into PA systems. Otherwise, check with manufactures to find out about other options. The WROCC Outreach Site at Western Oregon University maintains a website that lists companies selling assistive equipment, along with their websites and phone numbers. It can be found at www.wou.edu/nwoc/ald.htm.

What if the teacher shows a video? Use a patch cord to plug the transmitter into the auxiliary out on the TV or VCR for the best quality. If this is not possible, place mic next to the television speaker. If the student is watching the video alone, the transmitter could be plugged into the headphone jack. However, this will cut the sound off for anyone not wearing the receiver and headphones. Finally, you can't speech read an off-screen narrator, so the video should still captioned. The website listed above also lists suggestions for post-production captioning.

What if the student does not want to wear, or cannot wear headphones? If the student does not have hearing aids or if he wears hearing aids but the hearing aids do not have telecoils, the student is limited to headphones or earbuds. Earbuds are single-ear versions of headphones. Some clip on, others must be held up to the ear.

If the student has hearing aids with telecoils, there are 2 other options. One is the neckloop: It is plugged into the receiver in the same place as the headphones (make sure your jacks are the same size by checking with the manufacturer) and is worn around the neck. It can even be worn under clothing, depending on strength of telecoil and severity of loss. As with the induction loop system, using the neckloop requires that the student flip his hearing aid to "T".

Silhouettes look like flattened, behind the ear hearing aids and they hook behind the ear (just like a BTE hearing aid). Because they are closer to the hearing aid than a neckloop, they provide stronger signal to the telecoil.

Using the telecoil further reduces room noise because you can turn off the hearing aid microphone to flip the hearing aid to telecoil. Now you only pick up what is coming across the teacher's microphone. With the hearing aid microphone off, you will not be able to hear the room noise or anything that is not said into the microphone.

Notice that the neckloop and silhouette are *coupling devices* or listening options, not methods of transmission. They can be plugged into infrared or FM receivers. Just like with the loop system, though, telecoils may pick up electromagnetic interference. Just as you would experience problems using a loop in a computer lab, you would experience problems using a neckloop in a computer lab, even though the transmission system might be FM or infrared. In both cases, you are using your telecoil, and the telecoil would pick up the interference.

One final note about coupling devices. Silhouettes, neckloops and headphones can be used to deliver sound to both ears instead of just one. Many people find that this greatly helps with comprehension.

What if the hard of hearing student is called on to respond? This is a problem because on some hearing aids with telecoils, you can use the mic or the telecoil, but not both at the same time. This means the student may not be able to hear his own voice because his hearing aid mic is turned off. He is only picking up what comes into the teacher's mic. A receiver that has two jacks, one for the coupler (like the neckloop) and one for another "environmental" mic is the answer. This mic will pick up the student's voice. This mic also allows the student to hear comments from neighbors. It also works well if the class is split into small groups. Be sure to comparison shop for these items. There can be a \$150.00 difference in prices between catalogs on this item.

What if the student is reluctant to use ALDs, even though you feel certain they would receive some benefit from them? Many times students who are unfamiliar with ALDs will be reluctant to use them. Encourage students to try out the equipment in safe environments outside of the class, for example, in a meeting with you in your office. Once they understand how helpful they can be, they will be more willing to use them. Also, explore with students to find out their fears. Provide them with the coping skills they need to gain confidence so that they can handle any problematic situations that may arise. Support groups are great places for students to get used to the idea of using ALDs, and great places for students to learn more about how to live with hearing loss from others in the same situation. Self Help for Hard of Hearing People and the Association for Late Deafened Adults are two such groups. If there are no SHHH or ALDA groups in your area, if the student is uncomfortable, or just too busy, e-mail lists may be the perfect option. The website mentioned above includes a list of related e-mail lists, and how to join them, including two excellent ones: Beyond Hearing and Say What Club.

What if the student complains of getting interference? How do you evaluate it if you do not wear hearing aids? In general, plug the headset into the receiver and see if you can hear any problems. You should be able to tell if there are any problems. If not, it may be the student's hearing aid. (In fact, some automatic room controls, such as those for heating and lighting, can cause hearing aids to hum and deplete the batteries. See Cederbaum [1996] for more information.)

If the student is using telecoils and a neckloop instead of headphones, or if the room is looped, what do you do? This is where the induction receiver described above comes in handy. Plug headphones into the induction receiver, and have someone speak into the microphone of the system. You should be able to hear what the student would be hearing coming across the loop system. You might try this in rooms even if they are not looped. You can turn on the receiver and

walk around and pick up areas of static around the room. If you hear static, this may be what the student is picking up through his telecoils in using a neckloop. You may notice that some areas of the room are static free, for example away from the light fixtures. Let the student know where the good areas are. In some cases, you may need to change rooms, transmission systems, or coupling devices.

You can also use the induction receiver and headphones check to see if a neckloop or silhouette is working properly. Just place the receiver next to the loop while it is plugged into the system. Have someone speak into the mic. You'll pick up whatever is coming across the neckloop and be able to listen to it over the headphones.

One final question people often have about students using assistive equipment is this: **Is it ever appropriate to provide ALDs and notetakers or ALDs and a speech-to-text service?** The answer is absolutely. ADA requires that you look at each individual case to make a determination about appropriate accommodations. Notetaking is almost always appropriate, because you cannot take your own notes and read lips without missing something. Speech reading is still vital. Notetaking alone, though, may not be enough for *communication* access. Notes do not provide you with the information you need to be able to join in the discussion or to ask questions for clarification in real time.

How do you, as a service provider, determine if a speech-to-text accommodation (e.g., CART, C-Print, TypeWell) is appropriate? You cannot judge by severity of hearing loss, since speech reading skill will also be a factor. You cannot judge by how clearly a person speaks. It is not necessarily true that students with less of a hearing loss will have better speech. So, what should you be looking at? Is the course in a large room with many students? The student may not be able to sit close enough to speech read. Does the instructor have an accent or facial hair? These both make it difficult to speech read. Likewise, does the class require that the instructor is providing demonstrations and looking down, or is the instructor's speaking style such that she does not face the class much of the time? Does the instructor speak rapidly? Is the class heavy in vocabulary, such as biology? Unfamiliar vocabulary is difficult to speech read. Is there a lot of interaction or class discussion? The student cannot use sound to locate the speaker, and therefore will not be able to follow the discussion. In any of these cases, it would be entirely appropriate to provide a speech-to-text service, such as C-Print, TypeWell, or steno-based realtime transcription in addition to ALDs. (See the Speech to Text Services Network website www.stsn.org for more information about these options.)

Conclusion

People who use ALDs often describe the impact they have had on their lives as 'life altering.' The most common reasons people do not use ALDs are that they have never used them before and/or that they do not know how to use them to get the most benefit. More information about ALDs for faculty, students, and service providers can be found on the WROCC at WOU website training module entitled "Demystifying Assistive Listening Devices." Many other materials can be found on the PEPNet website at www.pepnet.org in the PEPNet Resource Center. Be sure your students know how to make the best use of this equipment to get the most out of their education and to increase their employability.

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Speech-to-Text Service Network: A New Professional Organization

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Abstract

A new professional organization, of and for speech-to-text service providers, has been established called STSN: Speech-to-Text Service Network. Its goals include providing information about speech-to-text services to consumers, administrators, and potential service providers; supporting credentialing; supporting a CEU system; supporting a Code of Ethics; and supporting high quality speech-to-text services for consumers who are deaf.

This group is similar in function to RID for interpreters. At present the group is comprised of administrators and service providers from CART, C-Print, TypeWell, and various automatic speech recognition (ASR) and remote systems. The six months leading up to this presentation was spent designing and developing this national organization, which was opened up for membership at the PEPNet Biennial Conference in April, 2004.



Speech-to-Text Service Network: A New Professional Organization

STSN: Speech-to-Text Services Network is a new professional organization that has been established for users and providers of speech-to-text services. Its goals include providing information about speech-to-text services to consumers, administrators, and potential service providers; supporting credentialing; supporting a CEU system; supporting a Code of Ethics; and supporting high quality speech-to-text services for consumers who are deaf.

This group is similar in function to RID for interpreters. At present the group is comprised of administrators and service providers from CART, C-Print, TypeWell, and various ASR and remote systems. The six months leading up to this presentation were spent designing and developing this national organization, which was opened up for membership at the PEPNet Biennial Conference in April, 2004.

Statement of Need

Speech-to-text systems convert spoken language into words on a computer or projection screen, as the words are spoken. These include the traditional verbatim court reporter stenography systems; more recent, non-verbatim meaning-based systems; and even more recent, automatic speech recognition systems.

There is a growing use of these speech-to-text technologies to provide communication access in classes and meetings for individuals who are deaf or hard of hearing. These include CaptionMic®, CART, C-Print®, RapidText®, TypeWell® and others.

A professional organization has been needed for speech-to-text providers that provide information, resources, educational guidelines, and best practices to administrators and consumers. The reasons are abundant: Speech-to-text services are being used more by deaf and hard of hearing students. The field of speech-to-text transcription is relatively new, and experience with more established support services (e.g., interpreting), does not always directly apply. A variety of systems are being used across the country of which similarities and differences are not readily apparent. Service providers in this field tend to work in isolation, and few opportunities exist for professional development. Administrators need information about speech-to-text services, but the information they find currently is incomplete. And perhaps the most important reason, consumers need to be assured that the services being provided are of high quality.

At present, it can be difficult to know what service matches the students' particular need in specific classes. With sign language interpreters, administrators have an idea of what and who is appropriate because of accumulated experience over many years, and the certification system in place. Therefore, the information provides outsiders an idea of a person's level of skill. At present, some speech-to-text systems have certifications in place, some are working on it, and some don't have any means of certifying service providers.

Administrators need help to determine what services to provide and how to determine if a person is skilled and qualified to provide speech-to-text services. Quality of services is improved when informational resources, educational guidelines, and best practices are available to everyone. This is the role STSN will fill.

STSN is a broad-based, nonpartisan organization established to provide resources and guidelines to a new and growing field. STSN is the place for service providers, consumers, and administrators to go to have their questions answered. Now is the time for such a professional organization.

Our beginning

A steering committee of eleven professionals was established in the fall of 2003 to get us to where we are today. There were a couple of criteria used in choosing people for this committee. One was diversity of systems used or represented. We were able to get equal representation of all the systems to perpetuate our goal of having a nonpartisan organization.

Secondly, professionals were recruited from various regions in the country to participate. The following people made up the initial steering committee:

Sharon Downs, Lead STSN Facilitator, the coordinator of the Arkansas SOTAC (State Outreach and Technical Assistance Center) and Specialist in Deafness at the University of Arkansas at Little Rock.

Shannon Aylesworth, a C-Print captionist with the University of Wisconsin, Milwaukee.

Keith Bain, the International Manager of the Liberated Learning Initiative, an automatic speech recognition educational project headquartered at the Atlantic Centre of Support for Students with Disabilities at Saint Mary's University in Halifax, Nova Scotia.

James Bell, a C-Print captionist and interpreter at Virginia Tech in Blacksburg, Virginia.

Judy Colwell, the Coordinator of the TypeWell Speech-to-Text System.

Cheryl Davis, the Director of the Regional Resource Center on Deafness at Western Oregon University.

Pam Francis, the Coordinator of C-Print Development and Training at NTID.

Patricia Graves, an experienced CART provider and recent head of National Court Reporters Association Educational CART task force.

Robert Sidansky, the Administer of Student Services at National Center on Deafness at California State University, Northridge.

Cheryl Thomas, an interpreter, TypeWell transcriber, trained C-Print captionist, evaluator and educational consultant working in Central Arkansas.

Marcia Kolvitz, Associate Director of PEC (Postsecondary Education Consortium), the STSN liaison to the directors of the other three regional sites within PEPNet.

This committed group worked in committees on establishing a website, reviewing credentialing systems already in use, reviewing codes of ethics used in the profession, reviewing CEU systems, and looking to establish professional development opportunities for providers.

By going through this process, an abundance of valuable information was collected. The group discovered that needs are abundant in the area of speech-to-text that are being met, and that are left unanswered. That is why STSN is needed at this time. Professional organizations need a solid foundation, which means a bigger group of people working together to confer on important issues like codes of ethics, grievance procedures, and mission statements. This is the direction STSN is going.

Website

An informative website has been established: www.stsn.org. A team of professionals in the field collaborated to make information available for service providers, consumers and administrators on such topics as credentialing, codes of ethics, and continuing education. The website is a warehouse of information concerning the range of speech-to-text options useful to administrators, disability service coordinators, STSN service providers and consumers. Besides information on the STSN organization, links to the various speech-to-text services and codes of ethics are provided. Also under development is information on credentialing and CEUs. This collection of information will make researching the various options much easier for both

consumers and service providers. This website will be continually updated to reflect the most updated and comprehensive information available regarding speech-to-text services.

Credentialing

Initially the goal of STSN was to review credentialing systems currently in place and design one to present at the PEPNet Biennial Conference in April, 2004. In doing our research, it became clear that designing a credentialing system for STSN should come much later, when the organization has had a chance to mature and grow. And it is possible that an STSN credentialing system may never be developed. In the area of credentialing, STSN may just serve as a resource for consumers and administrators, informing them of the credentialing used by the various systems.

Time will tell what STSN's role will be, but credentialing will remain an issue of very high importance for speech-to-text providers. The rationale for credentialing is protection for the consumer and the institution. Both the consumer and the institution need to know that the information they're receiving is accurate, complete and consistent, and it's being delivered by professionals. The output has to be measured in quantifiable ways. Asking students and professors to evaluate the service provider is helpful to a point, but the fact is the student may not know what is being missed. There needs to be quantifiable measures in place to know what is being said compared to what is being presented to the consumer.

The role of STSN at this time with regard to credentialing is to educate service providers, administrators and consumers. Administrators need to know that there are certification systems in place, so they can encourage their service providers to take these tests and improve their skills.

Code of Ethics

There are many reasons for having a code of ethics. A code of ethics provides a guide for decision-making. It provides a collective recognition of what services are being provided, and what the consumer's responsibility is. It provides a norm of ethical behavior so that all parties involved know what is expected of a person in that role. A code of ethics also assists in guiding a provider in determining the appropriateness of behavior in a given situation, and how to alter behavior in the future. A code of ethics is an educational tool. It is an assurance to others that you will have professional behavior. And finally, a code of ethics lets administrators know what to expect from service providers.

At present many of the speech-to-text services employ a code of ethics. At some point, STSN will likely investigate establishing a code of ethics for everyone to follow. It will be voted on by the membership, thus making it binding for members.

Grievance Procedure

After establishing a code of ethics, another area that STSN will be exploring is establishing a grievance procedure. This will help make persons in our field more accountable, and will be empowering to both consumers and administrators who use speech-to-text services.

Although several of the speech-to-text systems have a code of ethics in place, only the National Court Reporters Association CART system has a system for dealing with individuals who violate that organization's code of ethics. For the other systems, there are no consequences for those who violate the code.

There is no overreaching organization that provides a grievance procedure at this point. All that can be done at present is for organizations and institutions who hire speech-to-text

providers to adopt a code of ethics into their policies and procedures. Then if the code of ethics is violated, thus violating the policies and procedures, action can be taken. A further complication is that many providers work as free-lancers. Professional behavior is much more difficult to oversee for these providers.

Continuing Education

After initial training, most speech-to-text providers have no other continuing education requirements. As we know from working with sign language interpreters, continuing education is a critical component to ensure quality services. One of the areas of focus for STSN will be reviewing various continuing education systems in place, and proposing one for our organization.

Future Directions

As a burgeoning organization, STSN has three obvious tasks facing it. The first is to establish a more formal structure for the organization. This will enable future elections of persons to various positions of leadership, to help STSN to grow in membership and reputation, to recruit and organize members, and to decide exactly what STSN's role will be in the field. The second task is to conduct a needs assessment for service providers, consumers and administrators, to guide the organization's development. And third is to maintain a focus on continuing education, to include planning a pre-conference at the PEPNet Biennial Conference in 2006. This will enable STSN to gather the membership together for training and also to increase the visibility and awareness of the organization.

Job Search Strategies for a Smooth Transition from School to Work

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Abstract

This workshop is for people who want to take the lead in encouraging students to make a smooth transition from school to the work environment. Some of the challenges students face upon graduation is conducting a successful job search and communicating effectively with hearing co-workers. This workshop will focus on techniques and strategies that can be used to give students the tools they need to find and maintain employment. Activities and discussion will cover the use of on-line employment applications, business e-mail etiquette, electronic portfolios, communication strategies and current technology that is available to aid in a student's job search and employment. Empower yourself to become a resource to your students as they leave school and enter the job market.



Introduction

The National Technical Institute for the Deaf (NTID) is one of eight colleges that make up the Rochester Institute of Technology (RIT) in Rochester, New York. NTID's Center on Employment (NCE) assists deaf and hard of hearing students in their transition from the college environment to the world of work. During this presentation we will share information on the strategies and services NCE provides our students to help them develop the job search skills they will need when they are ready to find employment.

The NTID Center on Employment Services

Job Search Process

Many B.S. level students attending the RIT are required to attend a brief orientation on resume and cover letter writing. However, all A.S. level students who attend NTID are required to take a Job Search Process course that gives them the tools needed to conduct a successful job search. This is a ten-week course for two hours a week. The scope of this course ranges from having students collect the information that is needed to successfully complete a resume and employment applications to practicing a job interview. At the end of this course, students have a resume, cover letter (that can be personalized for specific employers and positions) and a reference list that can be submitted to employers. This course also teaches students how to conduct company research to identify appropriate employers to contact, how to use their network to find employment opportunities and how to "sell" themselves in an interview.

In addition to the Job Search Process course, the NCE also offers one-on-one employment advisement to A.S., B.S. and masters level students. Each student is assigned an Employment Advisor who works with the student on an individual basis. Many students have different employment situations and questions that need to be addressed. Employment Advisors are available to give students the individualized help they may need in their job search whether the student is still in or has completed the Job Search Process course, or has completed the orientation at RIT. Assisting students in developing the job search skills they need to conduct a successful job search is an on-going process.

Emphasis is placed on the development of interviewing skills for students at NTID. The Job Search Process course requires each student to successfully complete a videotaped interview. The videotaped interview is conducted in an on-campus studio and a Sign Language interpreter is present during the interview to facilitate communication, as well as to give students the opportunity to practice introducing and explaining the role of the interpreter to the interviewer. Often, volunteers from the business community with knowledge of the student's academic major conduct the interviews to provide a realistic slant to the practice interview. Students can be hesitant to do practice interviews and will put it off because they are nervous or have never had an interview before. Making this activity a requirement of the Job Search Process course gives students exposure to the interview process and helps them to understand what to expect in a real interview. This practice helps students to have more confidence with the interview process. In addition to the videotaped interview required for the Job Search course, the NCE also coordinates practice videotaped interviews that are open to any student on campus who is deaf hard of hearing. Interpreters are also available for these open practice interviews for students.

Videotaped Practice Interviews

Videotaped practice interviews are an important tool to use to help students refine their interviewing skills. Once students complete their videotaped practice interview, they review the tape to identify things they thought were good and areas that can be improved upon for a real interview. Students are strongly encouraged to meet with their Employment Advisor to review the videotape together to get the Advisor's feedback on how they answered questions, how they represented themselves to the interviewer and what they could do in the future to ensure a successful interview. Students are encouraged to do several videotaped interviews during the course of their academic studies. Students can compile their practice interviews on a videotape that can then be reviewed by the student to see the progress being made in his or her interviewing skills. Prior to a real job interview, students are asked to watch their videotaped interviews and read any comments provided by the interviewers or Employment Advisor to help them prepare.

Network of Employers

In addition to preparing students for their job search, the NCE is also responsible for developing a network of employers who are willing to hire students. The NCE is constantly expanding this network of employers. Certain sections of the country and Canada contribute large numbers of students to NTID. We carefully target these sections to conduct employer network development. Companies in a targeted area, are identified, contacted, met with and educated about NTID's students, programs and services with the goal of developing a solid relationship with these companies that will lead to the hiring of more students.

Educating employers about hiring individuals that are deaf or hard of hearing is another responsibility of the NCE. Often employers have questions about communication on the job

between deaf and hearing employees. The NCE provides information on communication strategies and technology that is currently available that can be used to facilitate communication at work.

NTID Job Fair

For the past three years the NTID Center on Employment, in conjunction with the New York State Department of Labor, has organized a job fair on campus for students. This job fair is held in the beginning of December and is also open to deaf members of the community. The number of employers that have attended this job fair over the past three years has increased from 17 the first year, 24 the second year and 27 (30 is the maximum number we can accept) last December. The employers that participate in the job fair are from across the country and Canada and are committed to hiring a diverse workforce. Employers have been very supportive of this job fair as it provides a pool of qualified candidates with a known disability at a single event. Prior to the start of the job fair, the NCE conducts a workshop with participating employers to increase their awareness of deafness and to discuss the various communication strategies that can be used on the job between deaf and hearing employees.

Career Development Workshops

Another way the NCE helps to prepare students for their transition to work is through workshops that are offered several times a quarter (NTID is on the quarter system) that cover various topics related to employment. The workshop topics range from how to fill out an on-line application to how to network at job fairs. One of the more popular workshops we offer explains differences between hearing and deaf cultures and how these differences can have a negative impact on the job. Many students are unaware of these cultural differences and may not realize that providing an honest answer to a hearing co-worker's question may come across to the hearing person as rude or inappropriate. Another example is asking a hearing person questions that may be considered too personal (for example, asking a person how much they paid for their car). As new employment related topics arise, NCE develops workshops for the students to keep them updated on new information.

Cooperative Work Experience

Another way to help a student transition from school to work successfully is to have the student do a cooperative work experience in their field of study. All students at NTID are required to do a cooperative work experience, usually for 10 weeks during the summer. The co-op helps to transition students into the world of work. It also helps a student to know if they've chosen the right career path for themselves and allows employers to see what the student is capable of doing on the job. Co-op employers often hire students in permanent positions after graduation. Many of the students receive a visit from a faculty or staff member of NTID when they are on co-op. This visit provides feedback on how a student is doing on the job. It can be used to address and resolve any problems a student may be having on the job and can also be used to ensure that academic curriculums keep current with the technology being used by employers.

NCE's Website

The NCE has a website that provides useful information to deaf job seekers and employers and can be accessed by anyone. The website address is www.eit.edu/ntid/coops/jobs. The website is divided into two sections: job seekers and employers.

Job Seekers

The job seekers section provides useful job search information for individuals who are deaf and hard of hearing. There are tips for finding a job, knowing how to network, what to do at a job fair and information sheets about how to interview with or without an interpreter. Students who are deaf or hard of hearing and members of the community who contact the NCE for job search advice are referred to the website which is constantly updated with new information. There are also links to other job websites (such as Monster.com, Hoover's on-line and many other websites) that are useful in a job search. The website also has a list of companies that have worked with the NCE. This list is often used by people who are deaf and hard of hearing from across the country to help them identify "deaf friendly" companies they can approach in their job search.

Employers

Employers can also post positions they want NTID/RIT students to know about through the website. The NCE will often send out announcements to students requesting their resumes for specific positions employers have available. The resumes are collected from interested students and forwarded to the employer by the NCE as a "resume package". Employers will then review the resumes and determine which students will be interviewed. The NCE will also arrange on-campus interviews with employers, as well as use video teleconferencing equipment to set up interviews where the student is on campus and the employer is in a different city or state.

Resumes

Employers are requesting electronic resumes more than ever before. It is important that students understand that there are certain rules that need to be observed to ensure that a readable and appropriately formatted electronic resume will be received by the employer. Students are encouraged to send their resume electronically to several people to proofread and to ensure that the resume format transmits correctly. Using plain text only (word document, text only, ASCII) will help to ensure that the format of the transmitted resume will be appropriate. As with the traditional paper resume, proof reading is critical to ensure that there are no grammar or spelling errors. Use of the spelling and grammar check key on the computer is not a fail-proof method. Students are advised to have someone in a professional position (teacher, counselor, parents) proofread their resume before it is given to employers.

E-mail Etiquette

Business e-mail plays a crucial role in the job search and on the job. Students often don't understand the difference between business and casual e-mail etiquette. When conducting a job search via computer e-mail, it is essential that an appropriate e-mail address be used. Students often use e-mail addresses that are acceptable in casual correspondence to friends and family members for all of their e-mail correspondence. However, inappropriate e-mail addresses, such as partyanimal@123.com, can give an employer a negative impression of the student even

before the employer opens the student's e-mail message. Students are strongly encouraged to set up an e-mail account with a professional looking e-mail address, such as masmith@123.com, that will be used strictly for their job search correspondence.

Business E-mail

Students also need to be coached on how to write an appropriate business e-mail to an employer. There are differences between business and casual e-mail of which students may not be aware. The Salutation of "hey" or "yo" is acceptable when corresponding with friends, but not for an e-mail being sent to the CEO of a company thanking him for an interview. As with the resume and cover letter, e-mail messages sent to an employer must also be free of grammar or spelling mistakes and the message should be brief. Students are encouraged to send their e-mail message to someone for proofreading before they send it to the employer.

As e-mail systems are vulnerable to viruses and people are suspicious about opening e-mails they find questionable, students also must be aware that they need to include an appropriate subject line on e-mails they send to employers if they want their e-mail read. A blank subject line with an inappropriate e-mail address is a sure way to have a student's e-mail deleted before the employer even opens it.

On-Line Applications

Many companies are requiring job seekers to apply for positions on-line through the company's website. This can be a challenge for many students. There are several different ways to apply on-line (adobe PDF image form, Adobe PDF online interactive form, MS Word online interactive form, Web form, attach a letter and resume) and students need to know how to successfully complete each of these on-line applications. The NCE regularly offers a workshop to students that explains each type of on-line application and gives students the opportunity to practice completing an on-line application. Students need to remember that accuracy of information, spelling and grammar is crucial on these forms. These applications need to be complete and all the questions on the form answered. Again, students are strongly advised to have the information they entered onto the application proofread by someone who is good with spelling and grammar structure before submitting the application. Also, students are encouraged to print out a copy of their on-line application, if possible, for future reference.

Portfolios

Students at NTID develop an interview binder (portfolio) during the Job Search Process course that contains examples of the students course work. The binder is a visual way to showcase a student's technical skills during an interview and can assist with communication during the interview. Binders include the student's resume, reference list, several examples of projects the student successfully completed related to the major and information about the student's academic program. Students can use the binder to help explain their technical skills in an interview, as well as show specific examples of their work to an interviewer.

In addition to the traditional binder, students that have course work or projects that can be shown on a computer, often create electronic portfolios to use in an interview. Students majoring in the Art field tend to use electronic portfolios. These electronic portfolios can be stored on CD-ROMs, a laptop or computer discs that can be brought to the interview. Students can also develop a webpage that contains a portfolio that can be viewed by an employer at any time.

Communication on the Job

The NCE often gets inquiries from employers about the types of technology available to facilitate communication between deaf and hearing employees. E-mail and instant messaging are often used on the job. A text pager can also be used as a mode of communication. Also, as with a pen and paper, the word processing system on a computer can be used to communicate information.

NCE Employer Services

While the NCE Employment Advisors work diligently to prepare students for their transition from school to work, the NCE is also providing consultation to employers who have any questions before, during and after the hiring of an employee who is deaf or hard of hearing. The NCE also offers the “Working Together: Deaf and Hearing People” workshop to employers. This is an interactive workshop that uses activities, videotapes and open discussion to educate employees about deafness, and provides strategies that will help facilitate communication between deaf and hearing workers. This is a half-day workshop that can be modified and shortened to meet the specific needs of the employer.

Student’s Responsibility in Making a Smooth Transition from School to Work

While the NCE can provide students with the skills and knowledge needed to make the smooth transition from school to work, it is really the student’s responsibility to make this happen. Students who are motivated to work and are willing to be flexible in their job search will have a successful transition from school to work. Also, students need to be aware of their communication needs during the job search and on the job so that they can communicate effectively. Finally, students need to be realistic in their employment goal and pursue opportunities that match the education level, experience, skill and ability they can bring to a job.

Is Automatic Speech Recognition Ready for Direct Use by Classroom Teachers?

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Abstract

An experimental classroom for implementing the direct use of automatic-continuous speech recognition in English language reading and writing courses by a teacher who is concurrently using simultaneous communication with deaf and hard-of-hearing students is described. The results of various hardware/software combinations that were analyzed for ease of use and recognition accuracy is presented. A discussion of the demands placed on ASR (Automatic Speech Recognition) systems and users in this environment are included, and solutions are offered.



Is Automatic Speech Recognition Ready for Direct Use by Classroom Teachers?

Speech recognition devices have a long history in education of deaf and hard of hearing students. Fay (1883) wrote about an experimental mechanical device used to transcribe human speech, and said "...it is not unreasonable to hope that some instrument will yet be contrived..."¹

Science fiction authors also envision successful machine speech recognition, "The pen was an archaic instrument, seldom used even for signatures...Apart from very short notes, it was usual to dictate everything into the speak-write..."²

NTID (National Technical Institute for the Deaf) offers courses in reading and writing English for deaf and hard-of-hearing students so they can improve their English reading and writing skills to a level that allows them to succeed at college. Deaf students must rely on sight to learn a language, and reading and writing is a visible form of English. Many of the students are fluent users of American Sign Language (ASL), and so we can use ASL to talk about English, but we cannot use ASL to communicate in English. Psycholinguists recognize that learners must have access to and use a language in order to learn it.

One purpose of this project was to evaluate the potential use of ASR for teaching English and to determine under which conditions this technology is now practical for use in English language classrooms. To improve access to English, language teachers could use continuous speech recognition to communicate in English to deaf students. We know the technology is not yet at a stage where a teacher and students can plug in a head set, begin speaking and depend entirely on a computer to produce readable text, but it is time to begin studying how ASR can be used to improve our students' access to English through print communication. If the instructor's words appear in print for reading and writing instruction, deaf students would have a visual display of the target language as it is being generated, thus allowing the teacher's portion of the

dialogue that occurs in the language classroom to be in English. This arrangement would permit students to see in print the vocabulary and grammatical structures as they are used and taught.

Related Work

ASR is currently being used in mainstreamed classes with deaf students at RIT (Rochester Institute of Technology).^{3,4} What is different about these applications is (1) these are not English language courses, (2) the students are already proficient readers, (3) an intermediary speaks for ASR, not the teacher, and (4) a sign language interpreter is interpreting spoken utterances into sign language and deaf students' signed utterances into speech. The ASR intermediary, called a captionist, says the words or summarizes the information uttered by the teacher and by the students while speaking into a Mini Mask⁵. The captionist also inserts punctuation marks and line breaks. The captionist is usually in the classroom so students' utterances are transcribed as well as those of the teacher. Preliminary reports indicate this procedure is averaging accuracy rates between 94% and 98%.⁶ To improve accuracy, the captionist may use C-Print⁷, a shorthand typing system, in combination with ASR.

There are also two integrated systems available for delivering ASR text to deaf students and other students who depend on vision for learning. These systems include hardware and software components that schools or other organizations can purchase to begin using ASR.^{8,9}

Figure 1. ASR Classroom/Lab



English Classroom/Lab

An experimental English language classroom/lab was designed for this project. In this environment, all class participants can see each other, the teacher, an individual computer screen, and a large computer display in the front of the classroom. (Figure 1) There are 10 student stations and one teacher station. The teacher station has ASR capability.

The teacher station includes SMART Board software and connections to a SMART Board¹⁰ at the front of the class. The SMART Board with touch-screen capability gives the teacher access to the computer without returning to the teacher station. The teacher can also use electronic pens to write on the SMART Board screen. This feature enables the teacher to indicate errors and make changes.

The teacher station also includes a smart lectern capability, which enables the teacher to send the teacher's display or a student's display to any or all of the other stations or to the

SMART Board. The teacher station computer is a PC, Pentium III, 900 MHz processor with 256 MB RAM, using Microsoft's Windows 2000 Professional operating system. A comparable PC Pentium III notebook computer was also available operating with Windows 2000 Professional. Dragon Naturally Speaking 5 and IBM ViaVoice 9 were installed on these computers. Later, another comparable notebook computer was upgraded to Microsoft's Windows XP Professional, and Microsoft's Office XP speech recognition features were installed. The teacher used three different microphones – Labtec LVA8450, Andrea NC-61, and Shure Wireless Microphone Headset WH20.¹¹

English Classroom/Lab Teacher and Students

In the project, I (Kathleen Eilers-crandall) was the teacher. I am a native speaker of American English who uses ASL as a second language. I trained the three different ASR software programs used in this study. The training consisted of reading four of the several passages provided for training with each of the three ASR programs. All training occurred in the classroom/lab environment with a noise level similar to that present during class sessions.¹² I planned to use three different noise canceling headset microphones for the study. However, use of the two microphones that were not wireless was soon discontinued because of the need for greater mobility in the classroom/lab. All experimentation reported here is using a Shure Wireless WH20

The students in the classroom/lab were young adult college students who are deaf or hard-of-hearing. There were all enrolled in NTID's Level A nonfiction reading and academic writing courses. These courses are designed for students whose English reading and writing skills are at the lowest quartile of entering students. The focus of these courses is on the development of frequently occurring vocabulary, simple and compound sentence patterns, and paragraph structure.

Procedures

This portion of the study was conducted to determine whether an acceptable recognition level for the speaker/teacher's utterances was obtainable. An accuracy level of 95% was determined necessary for a language-learning situation.¹³

Data from twelve, 8 to 10 minute speaking sessions were collected to represent two speaking styles – six conversation sessions and six dictation sessions. Three different ASR software programs – Dragon Naturally Speaking 5 with Dragon Pad, IBM Via Voice 8 with Voice Pad, and speech recognition in Microsoft Office XP SP-2 with Microsoft Word 2002 – were used for these sessions so that there were four samples – two conversation sessions and two dictation sessions – for each program. At least one participant was always present as an audience. The speaker applied no corrections during these sessions.

Since I normally teach at NTID with simultaneous communication (speaking English while using ASL with English word order), data for the above sessions were collected while using this communication mode. I conducted four additional speaking sessions in which I used spoken English only. Two of these sessions were in dictation style and two were in conversational style.

The dictation style included speaking from notes in outline form, punctuation at sentence ends, and planned two-way interactions. This is the style of speaking ASR software designers advocate. Speakers do not normally use this style; a speaker must learn a dictation style. For a speaker to become skilled at dictation and to maintain that skill, the speaker must practice.¹⁴ The

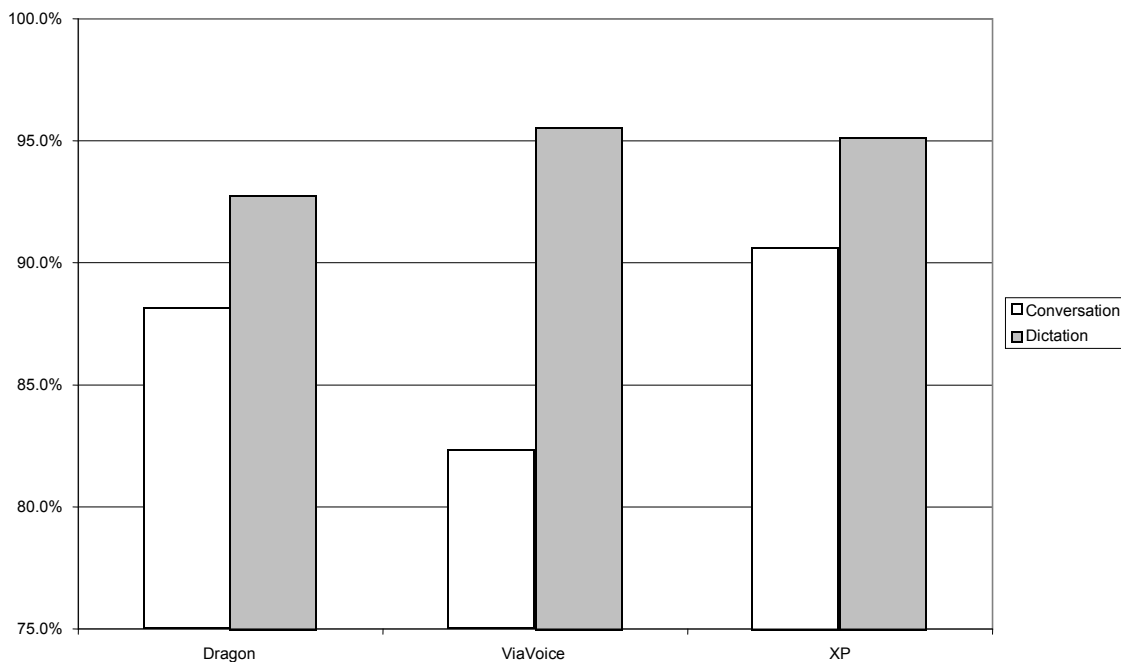
conversation style included extemporaneous speech not following prepared notes, little or no inserted punctuation while speaking, and more unplanned two-way interactions between participants.

A language complexity level was obtained for each of the speaking sessions. A Flesh-Kincaid¹⁵ grade level was calculated for the text that resulted from each speaking session. The purpose here was to learn if there was a relationship between accuracy and language complexity. Good language teachers tend to use utterances that are optimally ahead of those of their students. This afford students the opportunity to make new hypothesis that are more reliable than when they are exposed to utterances below their own or very much more advanced than their own.¹⁶

Results

Figure 2 shows the accuracy rates¹⁷ obtained using two speaking styles with the three ASR programs. The results for speaking style are expected; each of the ASR programs works better for the purpose intended – dictation. The average accuracy rate of the dictation style was 94.5% and that of the conversation style was 87.1%.

Figure 2. Accuracy Rates for Conversation and Dictation Styles for Three ASR Programs



The accuracy rates for IBM ViaVoice and for Microsoft XP achieved the 95% level, the minimum level thought necessary for language learners to comprehend text. Even though Dragon Naturally Speaking and Microsoft XP performed considerably better with conversation than did IBM ViaVoice, the accuracy rates were not at the level desired for language instruction. Furthermore, a text without punctuation markings, especially for language learners, is not readable.¹⁸

Figure 3 shows the accuracy rates obtained when the teacher used speech only for ASR input and when the teacher used simultaneous communication. In both of these conditions, the accuracy rates for dictation style exceeded 95%. Again, when using a conversational style, the accuracy rates are 6 to 10 percentage points lower. This result indicates that a teacher who is

reasonably skilled in simultaneous communication can continue to use this mode with ASR. There was insufficient data to determine reasons for the lower accuracy rate for simultaneous communication in conversation than for speech only in conversation. Perhaps, at least for this user, there was a change of focus when using simultaneous communication in a conversational style.

Figure 4 shows accuracy rates for language complexity. Again, we see the same pattern. A dictation style is superior to a conversation style. The consistently higher accuracy rates obtained for a dictation style may be at least in part due to the training protocol, which is entirely in a dictation style.

While language complexity did not affect accuracy rates for conversational speech, language complexity may affect dictated speech. Accuracy rates were approximately two percentage points better for sessions with a higher overall language complexity.

Figure 3. Accuracy for Conversation and Dictation Styles by Communication Mode (Simultaneous Communication and Speech Only)

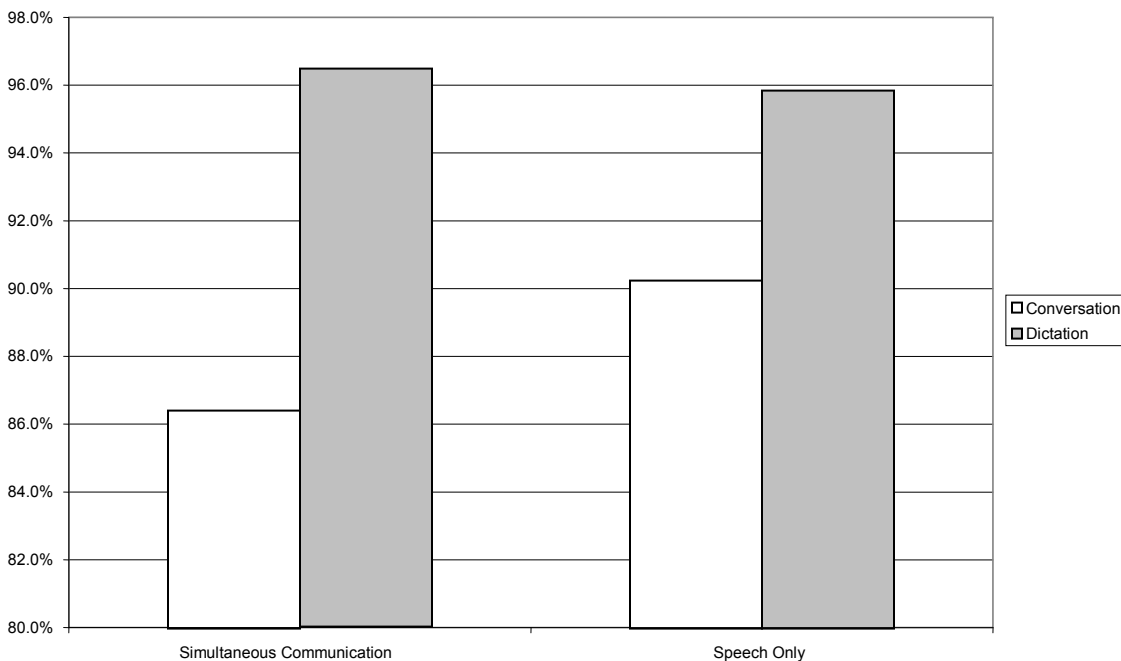
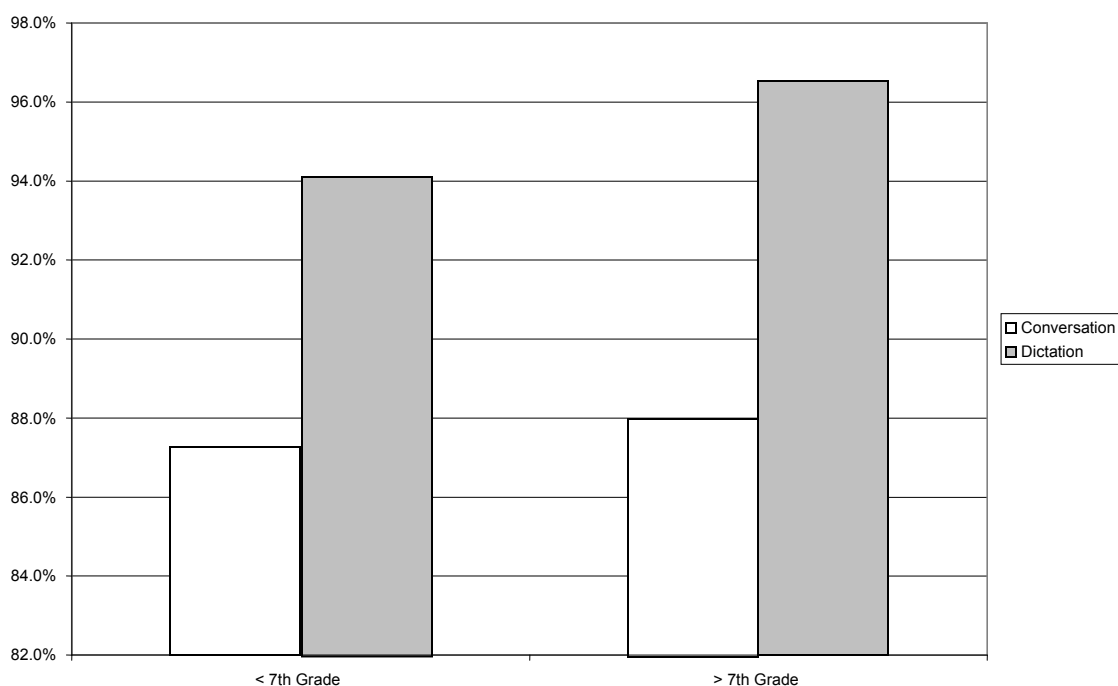


Figure 4. Accuracy Rate for Conversation and Dictation Styles by Language Complexity



If the ASR program is making selections based on probabilities for possible word combinations, then a more complex utterance may provide richer data and thereby yield increased accuracy.

Conclusions and Discussion

Classroom Use - The results suggest that ASR may be ready for some applications when used directly by a teacher in a classroom. These applications would best be limited to those times when the teacher is able to use a dictation-like style. I am now able to begin incorporating ASR into my teaching for a few classroom activities. In these situations, I am using notes, an outline, or samples of a student's written work as guides for my "dictated speech."

The use of ASR is very demanding on a teacher especially one teaching deaf and hard-of-hearing students. The teacher has to triple-think utterances – their educational content, how to speak them so they have a high chance of appearing accurately in print, and how to sign them accurately. At the same time, the teacher must attend to the reactions of the students to provide clarifications and address students' questions. With these demands placed on the teacher, ASR can only be used for limited periods during the class session.

Figure 5 illustrates teaching with ASR. Notice that an outline is present on the right and the teacher's dictated speech is on the left. I am eliciting responses from students; most students respond in ASL, and I speak their utterances as they would be spoken correctly in English.

As you can see, the students can see my face, my signs, and the printed text on the screen. If students prefer, they can view the text on the computer at their student station. Figure 6 illustrates that option. The same display is on the screen at the front of the room and the screen at the students' desks.

Figure 5. Teaching with ASR and sign language from a prepared outline



Figure 6. Students watch teacher or their own computer



Corrections - There is an important difference between the purpose for which ASR programs were designed and their use in a classroom. When dictating for a written report, the reader does not need to apply corrections until the dictation is completed. However, when dictating with the intent of producing text that will be immediately read, corrections to be useful need to occur as soon as possible. Currently, the ASR correction process is visible to the reader unless an intermediary is able to apply some corrections before the text is displayed to the reader.

Procedures for direct correction by the teacher need to be investigated. Which correction procedures are the most effective and the least disruptive? Which correction procedures can be done quickly and accurately? Which types of errors detract from message intelligibility, and which types of errors affect language learning? We also need to learn whether the disruption caused by visible correcting procedures is deleterious to the language learning process.

Microphone Headsets - Another difference between the typical dictating setting and a classroom setting is the movement of the speaker. In a classroom, the teacher is less sedentary

than a person sitting at a desk dictating. Microphone headsets do not remain positioned optimally when the teacher is active. Microphone headsets can also obstruct a student's view when the student is looking to the teacher's face for speech reading (lip-reading) clues. Some microphone headsets allow placement of the microphone on only one side. In doing this study, I learned that I tend to sign more often to the right than to the left; a microphone on the left would be less likely to interfere with my signing. Could microphone headsets be much smaller and less visually distracting? Would a high-quality lapel/lavaliere microphone with noise canceling features work?

Transcription Accuracy - We are currently finding an accuracy rate with a dictation style of speaking that averages around 95% to 96%. This appears to be a high accuracy rate. However, this accuracy rate produces approximately errors in 1 out of 20 words. Thus, if a speaker is speaking at 150 words per minute, there are over seven errors per minute! Not many teachers would enjoy displaying so many errors that often. The errors include bound morphological mistakes that a speech recognition engine that is doing some language checking before displaying text would not allow. For example, in one sample, "these microphones are" was displayed "these microphone are." Why does this type of error occur?

ASR is not highly accurate with conversational speech. Would training with passages that resemble conversational speech improve the accuracy rate of conversational speech? The training passages now included with ASR programs do not include such passages. Will advances in natural language processing (NLP)¹⁹ significantly improve the accuracy of conversational speech recognition?

Errors in transcription can lead a reader in the wrong direction. In many cases, a word blank rather than an incorrect word would be less disruptive to the reading process. Would the speech recognition programmers consider adding an option so a user could request blanks when a word's accuracy probability is below a certain point?

Tips for Improving Accuracy

Power - Use a powerful computer (at least a 2.0 GHz processor with at least 512 MB RAM (physical memory) with available Virtual Memory and Page File Space greater than 1GB). You can check out the performance of your system (Start, All Programs, Accessories, System Tools, System Information) to see specs on these features.

Software - If using MS Speech, get Office 2003 – The Microsoft Speech Engine in Office 2003 is Microsoft Speech Engine 6.1 and has been updated from Office 2002 which uses the 5.1 speech engine. The updated version is improved and contains a more complete complement of commands.

No other programs - When a system is over utilized, clipping occurs and speech engine accuracy suffers; you can monitor system performance (Start, Administrative Tools, Performance); however, just using this will consume some resources.

Microphone and Sound Card - Use the best noise canceling speech microphone you can get, one which is easily placed near the mouth, and is stable and comfortable. If the computer has a poor sound card, use a USB microphone.

Environment - It should be relatively quiet. You will need to train and save profiles for each environment you use.

Training - You will need to do more than one training session. After one session, you can only expect 85 to 90% accuracy. Also, after a dictation session going through errors and correcting them improves accuracy in future sessions.

Profile - You can save and copy your speech profile for backup purposes. There is a new utility available for this purpose on the MS website.

User groups - These are very helpful. We can all learn from each other as we use this exciting technology.

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⁶ Francis, Pamela, personal correspondence, October 24, 2002.

⁷ Stinson, et al., accessed April 20, 2004, <http://cprint.rit.edu/>

⁸ iCommunicator, accessed March 30, 2004. In this system, a wireless microphone communicates directly to the person's hearing aid or cochlear implant. The words are also translated into written text using Dragon Naturally Speaking and into sign language with a text-to-sign program and both are displayed on a computer screen. http://www.mycommunicator.com/product_info.html

⁹ Liberated Learning Environment, accessed October 24, 2002. <http://www.liberatedlearning.com>. The web site indicates this system is being used at St. Mary's University, Halifax, Nova Scotia. This system was developed: to provide an alternative to conventional note taking for students with disabilities. Teachers lecture with wireless microphones, and IBM ViaVoice software converts their speech into text. A utility was developed with IBM so a break is automatically inserted when there is a pause to make the display of text more readable.

¹⁰ SMART Board, accessed April 20, 2004, <http://www.smarttech.com/>

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- ¹³ Considerable classroom time is consumed making ASR corrections when language learners are likely to experience difficulties with speech recognition errors. For information on the reading skills needed to perform on CLOZE exercises, accessed 3/30/2004, <http://www.nuis.ac.jp/~hadley/publication/nucloze/NUCLOZE.htm>.
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Development of the C-Print® Captionist Certification Exam

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Abstract

This paper describes the development and features of the new C-Print® Certification Exam for operators (captionists) of this realtime speech-to-text support service. C-Print is one of several such services. The paper describes the certification exam, testing procedures, scoring procedures, and steps in obtaining certification. It also reports recent exam development activity, including the collection of normative data and the determination of proficiency levels. This certification exam is being developed to help ensure that students receive quality services and benefit to the maximum extent possible. Both typing and voice captionists can use this exam to document captioning skill. The exam allows captionists to demonstrate their knowledge of the C-Print system and their proficiency as captionists.



Development of C-Print Certification Exam

Since its initial development in 1989 at the National Technical Institute for the Deaf at Rochester Institute of Technology, the C-Print® speech-to-text support service has grown in its capabilities and in its popularity. Today, over 800 C-Print operators or “captionists” have been trained to provide speech-to-text support services in a variety of settings all over the world (A. Alepoudakis, personal communication, May 28, 2004; Elliot, McKee, & Stinson, 2002). While C-Print speech-to-text support can be used in diverse settings, its primary use to date has been in postsecondary classrooms, providing speech-to-text support services to deaf and hard of hearing students in mainstream classrooms (Elliot et al., 2002). Due to the increased popularity of the service, and the growing recognition of the need for a standardized evaluation for professional service providers, the C-Print team is in the process of developing a tool that can evaluate one’s ability to capture the spoken word. This paper covers the following topics: why have an exam,

exam components, exam development process for practical and written exams, progress to date of exam development, and exam preparation.

Why Have An Exam?

Creating a certification exam for C-Print captionists serves a number of different purposes. First, results received from the test provide feedback to captionists on their practical skills as well as their general knowledge of deafness and issues surrounding deaf education and C-Print implementation. When a captionist has this knowledge about her/his skills, the captionist is better able to make decisions about such issues as professional development and continuing education needs. Second, exam results provide employers with feedback about their employees' skills relative to other captionists in the field. Results from a test such as the certification exam might provide employers with information that they could use to evaluate their employees' performance for promotion or salary review or professional development needs. Third, results from such a test could provide prospective employers with information that they could use in making hiring decisions. When a captionist applies for a job, an individual who has the experience needed to take the test and the demonstrated competence from a passing grade on the test may be preferred over an applicant who does not have similar credentials. Finally, creating a standardized test for captionists suggests that as a profession, captioning has matured and captionists themselves have an acceptable standard for reasonable performance. A passing grade on the captionist exam indicates to the field that there is a standard expectation of the quality of work that one must do in order to provide reasonable service to those who need it.

Exam Components

The certification exam is designed to assess both the captionist's ability to capture the spoken word as well the captionist's knowledge of issues related to deafness, education, and C-Print implementation. The exam is designed to be taken as a whole; captionists take both parts of the test on the same day. Each section of the test takes approximately one hour to complete, for a total of two hours. The exam may be taken by captionists who use either typing-based (abbreviation) or voice recognition forms of C-Print.

The practical exam requires captionists to capture the dialogue of a videotaped college lecture. The individual practices with the practice portion of the video for a 10-minute warm-up, has 10 minutes to enter vocabulary into her or his dictionary, and then captions for 20 minutes. The 20-minute captioned segment is saved on an external disk only. This disk is collected by the test administrator and then sent to the C-Print office in Rochester, NY for scoring by a team of trained scorers. Each captionist's transcript is evaluated for the number of idea units captured on the transcript using the procedure for determining idea units as described by Stinson & McKee (2000).

The written exam consists 75 multiple-choice questions on the following topics: basic computer technology relevant to the captionist's work; federal statutes relevant to deaf education; medical and cultural aspects of Deafness; implementing C-Print in the classroom; and captionist ethics. Captionists are given one hour to complete the multiple choice exam. Scores on the written exam are based on the percentage of items that were answered correctly.

Exam Development Process

Practical Exam. The practical exam has been developed over the course of two years. A number of steps have been taken to assure the representativeness of the lecture as a typical

college lecture. First, the test developers identified approximately ten college professors who regularly taught courses in which C-Print had been used as a support service. Of those ten, 5 professors agreed to have a class session videotaped. Once the courses were videotaped, each tape was reviewed by a selection committee. The committee evaluated the tape with a number of criteria in mind. First, the class needed to be predominantly lecture, with no movies or other audio-visual media aids (e.g. computer labs or PowerPoint presentations) used during the class session. Second, student comments, if any, needed to be reasonably audible or the professor needed to repeat them so that the dialogue would be picked up by the videotape recording. Third, the professor's lecture pace needed to be a reasonable speed, approximately 140 words per minute. Fourth, the number of specialty vocabulary words needed to be minimal. Fifth, the professor needed to spend most of the time of the lecture discussing content, as opposed to digressions, and, sixth, the professor needed to be lecturing for a minimum of 20 minutes in order for the captioning segment to be created. After the selection process was concluded, the test videotape was created from the desired portion of the lecture tape, and the audio was extracted from the videotape. A verbatim transcript of the audio portion of the tape was made. Using the verbatim transcript, a team of trained coders divided the verbatim transcription into idea units using the procedure described by Stinson & McKee (2000). Once this key was prepared, this portion of the exam was ready to be administered to the pilot exam group.

Written Exam. The written exam was created by the developers of the training program for C-Print speech-to-text captionists. An initial list of captionists' core competencies was identified based on the knowledge of the developers of the training and by referencing C-Print captionist training materials. Multiple-choice questions were written and reviewed by other members of the C-Print development team that are familiar with test development. Once the questions were prepared, this portion of the exam was ready to be administered to an initial pilot exam group.

Exam Piloting Process

The pilot process allows test developers to refine and modify questions as well as develop scoring procedures, forms and test administration details. Pilot exams have been administered to 28 pilot participants to date. Following the accumulation of a minimum of 30-40 pilot tests, test developers will be able to finalize scoring procedures as well as determine appropriate cutoff scores for each portion of the certification exam. It is anticipated that the pilot process will be concluded during the summer of 2004.

How to Prepare for the Certification Exam

A prerequisite to taking the certification exam is that the captionist must have minimum captioning experience of at least 200 documented hours of classroom time; editing time does not count in the determination of captioning time. In addition to the practical experience of captioning, the captionist may want to prepare for the test using the following resources. It is recommended that the captionist review her or his C-Print captionist training materials. Other valuable resources can be found at the PEPNet website:

<http://www.pepnet.org/train.asp#orientation> and at the Jacksonville State University disability services office website: <http://dss.jsu.edu/pec/projects.html>.

Conclusion

The development of the C-Print Certification Exam signifies another milestone in the creation of speech-to-text captioning as a profession. C-Print is in the process of developing a rigorous test that will provide captionists and their employers information about captionists' skill and their knowledge of information pertinent to deaf education and the implementation of C-Print.

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Author Note

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Promoting Positive Outcomes for Deafened Students

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Abstract

Accommodating students who are deafened or experiencing a progressive hearing loss offers challenges to Disabled Student Services (DSS) offices. Most coordinators for services to deaf and hard of hearing students have minimal training, information or experience dealing with students who are deafened or with a progressive hearing loss. Information is needed on adjustment themes for deafened persons and how deafened students have been provided information on Communication Assistance Realtime Translation (CART) services, remote technology and support groups for deafened students. With proper support, deafened students are able to achieve positive outcomes.



Steve Larew: The goal of this presentation is to share information on working with deafened students as opposed to students who are Deaf. We will share information on the personal adjustment issues faced by deafened students, classroom access issues, and methods of encouraging student interaction that allow for positive outcomes. Information will be shared on a model of services offered at the University of Central Florida. Hopefully you will be able to use the information to modify or establish services at your educational program.

In 1991, Zieziula and Meadow identified five adjustment themes experienced by deafened students. These themes are not necessarily experienced in consecutive order but describe experiences/emotions of deafened persons. The experiences will vary according to the etiology of the hearing loss. Some students will have acquired hearing loss suddenly, due to illness or other affliction while other students have a progressive hearing loss.

The five themes are: Emotional Responses, Secondary Losses, Confusion of Identity, Acceptance, and Need for Competent Professional Assistance. I will explain the themes by applying them to my personal experiences. I became deaf at 18 years of age due to a fever and a viral infection. That was in 1971 when there were fewer services available to persons who were deaf. I became deaf at the beginning of the second semester of my first year of college. I knew I was becoming deaf internally but did not tell anyone. I was denying my hearing loss and hoping it was a temporary occurrence rather than permanent. I would sit in the classroom and attempt to hide. I could not understand the lectures or classroom discussion.

At the age of 18 years, people do NOT want to be deaf. It is a time when students want to be having fun, leading an active social life, and participating in favorite activities. When you do

not have effective receptive communication skills, it is difficult to participate in a “college student” lifestyle. The adjustment to hearing loss and a change in receptive communication methods is difficult. The emotions experienced include anger, denial, depression, fear, isolation, and numerous others.

Secondary losses include the impact of the hearing loss on the student’s relationship with family, friends, and significant others. The student may be self-occupied, dealing with the hearing loss, and unable to maintain a relationship with others. I know I did not consider the impact my deafness had on my family and friends from high school. I was dealing with my own issues and not considering other people. If you can no longer communicate with your family and friends, the relationships will change. There is a tendency for deafened students to withdraw into an isolated lifestyle. Certain activities, such as listening to the radio or talking on the phone are no longer possible. Today, technology makes it possible to replace these activities with text pagers and the internet, but there is still an adjustment to be made.

The identity issue involves finding a community where the student feels comfortable. Is the student able to identify as being deaf or hard of hearing. Does the student socialize with hearing students or with other students with hearing loss. Many deafened students are not aware there are other persons who are deaf. On your college campus, it may be beneficial to provide the opportunity for deafened students to meet and interact with the other deaf students.

Acceptance occurs when the student has adjusted to hearing loss and is utilizing services or accommodations that provide the greatest benefits. In my situation, the acceptance became easier after meeting other deaf students at Gallaudet College, now Gallaudet University. I arrived at Gallaudet knowing only basic sign language. I could sign “My name is S-t-e-v-e”. I was in awe when watching other students communicate with each other in ASL. It was at Gallaudet that I came to discover that I was a capable individual, even though I could not lip read well and did not receive substantial benefit from a hearing aid.

The fifth and final theme is the need for competent professional assistance. A deafened student needs good information. That is your role as an employee providing services to students with disabilities. The student needs information on ALL the technology and services that are available- TTYs, pagers, visual signal devices, captioned TV, CART (Communication Assistance Realtime Translation), assistive listening devices, C-print, sign language classes, tutoring, and other equipment/services too numerous to mention. Like it or not, the student will see YOU as the main resource. It is important that you are able to provide complete information and not simply tell deafened students they must learn sign language so they can utilize interpreter services. I can provide you with many stories about professionals who did NOT provide me with appropriate information.

A good resource for students is the Association of Late Deafened Adults (ALDA). The organization has a website, an email exchange group, newsletter and an annual conference. The communication philosophy of ALDA is “Whatever works” and that is a philosophy that should be encouraged by service providers and college disabled student services offices.

Deborah Kamm: Having worked as an interpreter, service provider and educator for many years, providing accommodations seemed simple to me; when a student with any hearing loss entered my office, I thought I knew what to do. But, in the past two years I have found that students who are deafened have a unique set of circumstances and limitations; they have unique needs. Thus the approach of providing accommodations to students who are late deafened must be highly individualized.

By the time I see a late deafened student, they may have been sitting in the classrooms without any awareness that the Disability Office existed. They often are already in academic difficulty and may be reticent to accept accommodations. One of my responsibilities is to work with them where they are and to educate them to the possibilities.

When a student comes to the university and is Deaf, raised in the culture, they most likely have awareness of the accommodations available to them; they expect to have access to an interpreter and a note taker, at a minimum. But what happens to the student who has recently lost their hearing? They know they are having trouble communicating, personally and in class. They finally get the nerve to come see me. They don't even want anyone to see them walking into the disability office! Then they have to present documentation and then, traditionally, we then ask them, "What kind of accommodations do you need?" The truth is that they may not know!

One student who came into my office was a perfect example. If I had not known Steve and had not become aware of the adjustment issues for students who are deafened, I would never have known how to deal with this situation. The student was so angry and blaming everyone else for his communication problems and academic situation. He would say, "That professor cannot talk right!" He was confused because he could communicate with me fine. I had to explain to him the dynamics of conversation in a one to one situation in my quiet office and the impact of a noisy, large room. I showed him the assistive listening device (ALD) and discussed real time captioning with him. He had never heard of these accommodations!

This particular student had already gotten into academic difficulties before he knew about modifications or accommodations. The university was ready to exclude him but given the experience and information from Steve and the ALDA (Association of Late Deafened Adults) publications, I was able to make a case that explained his situation and the university appeals committee gave him another chance. I am generally not the type to advocate for every student who wants a second chance but, in this case, I knew that his inability to see the impact of his hearing loss had greatly contributed to his situation.

Students who are late deafened usually have no problem providing us with documentation. One thing they have is access to doctors. Once they provide us with the audiogram we can inform them of a variety of services. It is critical to have a range of services available because the needs will vary as well. One student may only need access to a note-taker; one may need real time captioning or an assistive listening device or sign language interpreter, and another may want only support and information. It may be appropriate to consider a course substitution or other program modification. Students who have lost their hearing may have a functional limitation in a foreign language or music based course. This student may be unaware of substitutions or modifications that are available. It falls to us to bring these issues to light.

Another student has attended UCF for several years. She has functioned as a Hard of Hearing person for many years, using only note-takers and occasionally asking for clarification of communication. She recently lost a significant amount of residual hearing and is facing many challenges. She and I have experimented with various accommodations. Because of the intense demands of her graduate work and the technical nature of her classes, we have decided on real time captioning (CART) for her. She had one course that had a multimedia component. One of the assignments was to search the web for video stream clips and to insert them into a PowerPoint presentation. How is she supposed to search the web when many clips are not captioned? We worked together and were able to identify the Caption Media Program to help her search for material for her projects. Her class was also introduced to captioning programs and captioned video streaming through NCAM's MAGpie program. So, not only did the student

benefit but all the students in her class learned from the experience. These situations can be very challenging; we learn to be creative.

Steve mentioned ALDA and their motto for communication services is, “Whatever works for you.” That is what I am doing now. Whatever works in that situation- that is what we need.

Another aspect that must be considered is the mode of communication. Will the student remain oral or are they going to learn to sign? How old were they when they lost their hearing? How much residual hearing is left? These are personal questions that the students must answer for themselves. My job is to give them the information. Students who are deafened need to know about technology: TTY, Assistive Listening Devices, CART, C-Print, Alarm clocks, as well as support services.

I think it is important to recommend support organizations. I have been very impressed by the support system of organizations like ALDA and I refer my students for personal support. It is not required by law, of course, but these students may have no knowledge about the support services that could be lifelines to them. People who have experienced the same loss and learned how to cope are the strongest advocates. These groups can provide personal support and sometimes avenues of financial scholarships. They also can help you educate the student to their rights and to the possibilities.

Steve Larew: ALDA is a comparatively young organization that was established in 1987 or thereabouts. The organization has a web site (www.ALDA.org) that provides an e-mail exchange group called LDACHat, links to past presentations at conferences, membership information, and links to local chapters. Peer interaction is, and always will be, one of the key factors in helping individuals adjust to hearing loss. Having other individuals with whom you can share experiences and ask questions provides an internal comfort level that is difficult to describe.

ALDA continues to be a volunteer organization with no paid staff. The primary activities include a quarterly newsletter and an annual convention. The convention can be addictive. I have attended every year since 1990. The workshops provide the opportunity to learn new information but the primary benefit is the opportunity to interact with your peers, relive your hearing days through karaoke songs, and to share your experiences with others.

Deborah Kamm: I will warn you, if you refer your students to ALDA or other support groups, they come alive! One person got involved with ALDA and really found her place. She now is involved with their newsletter and writing articles about the services for better or for worse! The personal support is important.

Another thing I get involved with in a small way is career guidance. I fully believe it is not my task to tell a student what they can and cannot do. However, it is important for us to let them know the different options that are available to them. When a student is deafened, they should know the options available.

There is one young lady, who is an honors student, very oral, and she was losing her hearing. She came in and wanted a note-taker for her class lectures. I introduced her to CART and the assistive listening device. I think she was only 18-19. At that age, they don't want people to pay attention to them, at least in that way. She did not want to use the CART services. She touched me because she fully believed that she couldn't pursue her life's dream of becoming a lawyer “because she was going deaf”! I strongly challenged that assumption and gave her the names of some deaf-lawyer advocacy groups and now, hopefully, she has become convinced she can be whatever she wants.

Traditional service delivery models in the disability office provide accommodations for *requested* services. We were not in the habit of coming up with and offering the accommodations without the student thinking of them first. But, educating students about various options of appropriate accommodations is not just a nice thing to do.

At one of our regional campus' disabilities office, a student, recovering from an illness, had lost her hearing. There were problems between her and the professor and other staff. She used only the requested note-taker since she had no idea what else was available. Quite frankly, the disability counselor didn't know either and unless you have some training in the area, you would not be aware of how to accommodate. During the semester, her hearing aids broke. Being unable to hear and to keep up with only a note-taker, she flunked the class and filed a grievance.

When it came up to the EEO office and referred to our office, we were able to implement CART services for her. The student was thrilled. The professor and even the regional disability counselor were thrilled.

Then the student became really angry! The institution had failed to lay out the options. If the regional campus had been aware of the services for students who were late-deafened, she might have had a different semester. So now when students come in to see us, they find out about all the services we have available, whether it is C-Print, CART, Assistive Listening Device or services such as note-takers.

We use onsite captioning. I happen to have the world's best CART person. I wish I could claim some wonderful feat at finding her but it was luck and networking. I went to a workshop and saw her doing CART and starting talking to her. She also happens to live near the university and likes working there. We do like to use her services, even at \$90 an hour.

Sometimes I have to convince students to use CART. I have one student using a team of ASL interpreters. He took a specific class and failed. I offered to provide CART in that class, as the course was very vocabulary specific. The student turned me down; he likes using the interpreters. He was failing and withdrew the second time. When he retakes the class, I hope to give him CART and he says he will try it. Often students don't want it because it draws too much attention to them. It works for some, not for others.

I am going to close with some of the positives and negatives that we have found using CART. For the positives, it is accurate, word for word. My students are thrilled! Especially students in the graduate or doctorate programs, they want to know everything that is being said. They want the terms and vocabulary to be very specific. The students and faculty both love getting a transcript of the lesson.

What are some of the problems with it? Finding qualified professionals is difficult. In some areas, remote CART services can be effective. I am fortunate that I have an agency nearby that provides our service. CART also comes with a verbatim transcript at the end of the lecture. For some, the resource is wonderful, but others may feel that there are too many pages to peruse.

I want to leave you with one last thing; when you are in administration it seems that you only see your students when there is a problem. If they need something or get in some type of academic problem or conflict, they would come see me. I didn't think that was a good way to build the relationship. Research has shown that hearing students are retained when they have a relationship with faculty or staff. Students need someone to talk with on the campus, whether it is a counselor or professor. But when a student is deaf, they can be isolated and miss that communication. So in talking to Steve, he shared with me some of the things he has found to work for him.

We have found it critical for student success to provide some sort of social outlet. So one

thing we do is to get together and have lunch socials. I send out mass emails to all of the students and interpreters to find out what time they can meet. Offices usually don't have extra money anymore so we just meet at a central location, usually the Student Union, and people bring their own lunches. On occasion we even met for dinner. This has been a very positive experience. We sit, laugh and talk. This has been very good for the interpreter/student relationships as well as for my own stress level.

Our school has 42,000 students and with only 6 deaf students, they often don't get to know one another. Through our lunches a few of them have become good friends. Now there are more opportunities to socialize. The high schools in our area invite us to silent dinners. I send these, via email, to the students and interpreters. I also try to promote accessible events on and off campus. We recently had a play sponsored by a campus department, Victim Services, a type of crisis unit on campus. It was for a good cause and some of our interpreters got involved. So, each performance was interpreted. This was a great event and I think that it helps to build relationships to have these opportunities outside of class.

The bottom line is that when students do nothing but show up for class and never speak to another person, retention is an issue. Much of the solution is in relationships. When you stop to think about it, that is why we are doing this. A nurturing, not enabling, but a nurturing environment helps to promote good will and relationships, thus retention.

Students who are late deafened have unique needs that can only be met on an individual basis. It is important for service providers to be aware of and to make the student aware of options that increase the student's access to communication. That, however, is just the minimum. Students who are late deafened may need much more information, referrals and maybe even personal support in order to remain in school and become successful.

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Deaf Students' Composing Processes: What Do They Actually Learn?

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Abstract

This paper presents the results of a longitudinal study of deaf students' expository writing. Two sets of writing samples were obtained from students at the National Technical Institute for the Deaf (NTID). The first sample was taken at the entrance and the second upon completion of the third or fourth writing courses. Samples were scored following the NTID Writing Test Scoring Categories. Results show that while errors remain in language and vocabulary use, students' compositions improved in organization and content.

This presentation reviews literature on deaf adolescents' writing before exploring the structural gains the students in this study demonstrated. Sample papers and their rating scores will be used.



Deaf Students' Composing Processes: What Do They Actually Learn?

Historically, deaf students' written language has been analyzed in terms of syntactic and lexical development at the sentence level. Their written language has been generally characterized as shorter (Bochner & Albertini, 1988). This brevity results from a variety of characteristics. These characteristics include a sparser use of intersentential cohesive devices (Albertini & Schley, 2003), fewer clauses and fewer words per T-unit than their hearing peers (Klecan-Aker & Blondeau 1990).

More recent literature has focused on students' texts, rather than sentence production in part for the purpose of identifying deaf students' successes and failures in generating texts. That is, what are they doing well and where and how do their messages break down?

Albertini (1990) examined the internal organization of two deaf writers' journal entries through a schema called a "given-new contract" or an expectation of readers that the writer will present given information prior to introducing new information. Results of the study showed that the writers followed one or more of the organizational patterns of the given-new contract, producing texts which were coherent and organized despite surface linguistic errors (Albertini, 1990, p.127).

Other recent studies relied on rubrics for purposes of text analysis. Gormley and Sarachan-Deily (1987) examined deaf high school students' writing using a feature analytical scoring guide with three categories: content, linguistic considerations and surface mechanics. Results of the study showed that when comparing the texts of good and poor writers there were significant differences in content and linguistic considerations. Errors in surface mechanics, however, were similar in both groups.

Heefner and Shaw (1996) conducted a study to determine whether a *Six-Trait Analytical Scale* developed by Spandel and Stiggins (1990) for hearing students was valid and reliable as a

diagnostic instrument for deaf students' writing. To that end, written narratives were collected from 206 students twice a year from 1990 to 1994 and scored by raters using the six trait scale. Results of the study suggest that the *Six-Trait Analytical Scale* is reliable and valid when used with deaf students' texts. Evidence of reliability in the rubric was suggested by the high per cent agreement between the two raters. Validity was described in terms of student growth in the rubric categories. Students demonstrated the greatest growth in ideas and organization and the least growth in conventions (p. 159).

Musselman and Szanto (1998) assessed the writing of 69 deaf adolescents from various educational settings for the purpose of describing their written language. Their research had a dual focus – student performance on measures of conventions, semantics and syntax, and the effect of genre on the aforementioned components. The study design compared skills of students from Auditory/Oral (A/O) programs with those from Total Communication (TC) programs.

A five point rubric was used to score the writing samples, each subcategory measuring a different aspect of written language as follows: contextual style, contextual spelling (conventions related to print), thematic maturity (semantics at the text level), contextual vocabulary (semantic development at the word level) and syntactic maturity (grammatical knowledge) (p. 248). The samples were also scored holistically for the purpose of measuring the interaction of form and content in a specific genre (p.249). Results of the study showed that students scored higher on semantic measures than syntactic ones and higher on the text-level semantic measure than the word-level measure. These results suggest that despite their difficulties with vocabulary and syntax, deaf students can convey content with greater success than expected given their language skills.

Schirmer, Bailey and Fitzgerald (1999) assessed ten deaf students' writing using the rubric adapted from the Glencoe English Series. The purpose of the study was to assess the value of a writing rubric as a teaching strategy to help children attend to specific aspects of their own writing and to become metacognitive writers. Results of this study showed that use of the rubric as a teaching strategy significantly improved in topic control, content, story development and organization. However, use of the rubric did not improve performance on traits of voice/audience, word choice, sentence structure and mechanics.

The literature, then, though not abundant, suggests two notions. First, the use of rubrics as a diagnostic tool can show strengths and weaknesses in deaf students' texts. Second, while deaf students' syntax and mechanics continue to be problematic, students can communicate their ideas in writing surprisingly well, primarily because of success with organization and content. The purpose of this investigation, then, was to see if and to what extent, the organization and content of deaf students' texts improved over time when analyzed using a four point rubric.

Method

Subjects

The subjects in this study consisted of 27 students at the National Technical Institute for the Deaf (NTID), admittance to which depends in part on a hearing loss of 70 db or higher, unaided. All of the students entered NTID in either 2000 or 2001 and all had tested into either a level A or B writing course upon entry at NTID. That is, they had scored either 39 or below out of a possible 100 points on the NTID Writing Test (Albertini, Bochner, Cuneo, Hunt, Nielsen, Seago & Shannon, 1986) (Level A) or between 40 and 49 (Level B). Entry at these levels meant the students would have received at least two quarters of direct writing instruction in the English Department before writing the exit paper.

Procedure

First year students at NTID produce a writing sample prior to the start of their first term for purposes of placement in the English Department program. To this end, students are given the NTID Writing Test. Their writing is based on a prompt intended to elicit an expository essay based on personal experience (see Appendix A). They have approximately 30 minutes to complete the writing sample. They are encouraged to produce their best work and use the full amount of time. The writing sample is scored by three trained raters and given up to 25 points in each of the following areas: organization, content, language use and vocabulary. There are descriptors for each of the above areas as well as number guides to assist the scorers (Appendix B). The sub-scores are added for a total score. The totals from each of the three raters are then averaged to determine a final score. Students receiving an overall score of 39 or below are placed in Level A writing. Those receiving an overall score of 40 to 49 are placed in Level B. Those receiving 50-59 are placed in Level C and those receiving 60-67 are placed in Level D. Students receiving a score of 68 or above have satisfied the academic writing requirement of the department.

For the past two years, faculty members in the English Department at NTID have been assessing student readiness for Level D writing by eliciting a writing sample from students in Level C near the end of the term. Students are given three topics, told to choose one and spend the class (approximately 50 minutes) writing on their chosen topic. Papers are judged by the Writing C level instructors using a three-point system: ready (for Writing D), marginally ready, or not ready. The prompts are intended to elicit an expository essay of approximately four paragraphs based on personal experience.

Because the exit writing sample was only scored on a readiness scale, it was necessary to score the samples again using the rubric designed for the NTID Writing Test. Following the procedure used with the NTID Writing Test, each sample was scored by three raters and the results averaged to obtain a final score.

These two writing samples, the placement test and the Writing C exit paper, were used for purposes of comparison.

Results

The students' average scores on each of the four rubrics from the NTID Writing Test were compared with those on the Writing C exit paper. The complete results are presented on Table 1. An overview of this table shows that students' organization improved an average of 4 points, content improved an average of 3.5 points, language improved 2.4 points and vocabulary improved 2.8 points. These numbers, then suggest that students made slightly greater gains in the areas of organization and content than in language and vocabulary.

In organization, the greatest individual improvements were found with Students E and F who showed a gain of 8 points, while students N and P showed the least improvement, gaining only 1 point. Student E made the greatest improvement in content, gaining 7 points while student N lost 2 points in the same category. Student F made the greatest improvement in language, gaining 6 points while student N again lost 2 points. Student E also made the greatest improvement in vocabulary, gaining 7 points while both Student S and Student N showed no improvement.

An average overall gain of 12.7 points was made across all four areas. Since 10 points separate each level for purposes of placement, such a gain would be sufficient to move a student to the next level, that is, say, from Academic Writing B to Academic Writing C.

Discussion

The purpose of this investigation was to compare samples of deaf students' writing taken over time and using a four point rubric to see if, and to what extent, the students' writing improved in organization and content. A comparison of the scores from the NTID Writing Test and the sample taken at the end of Academic Writing C showed slightly higher gains were made in organization and content than in language and vocabulary. Even slight gains, however, may not be surprising if the focus of the courses align with such gains. While it is certainly true that organization and content are taught at all four levels in the English Department, it is by no means all that is taught.

Both grammar and vocabulary also receive planned and incidental instruction. Students receive direct instruction on grammar rules and have follow-up practices. In addition, points for remediation are raised and discussed in class. Similar approaches are taken with vocabulary. The structure at each level of the Academic Writing courses, therefore, mimics the rubric used to assess student texts.

The issue of validity of the rubrics used is also important to the discussion of the results. According to Gormley & Sarachan- Deily (1987) there are only two methods for evaluating writing that produce consistency in results. The first kind is general impression or a holistic approach, and the second is feature analytical scoring. Feature analytical scoring, or rating sub-skills, provides a frame for deeper textual analysis because it allows the rater to focus on different aspects of the text and evaluate them differently (p. 158).

While feature analytical scoring provides a frame for analysis, it is important that such a scoring method be valid. Bochner, Albertini, Samar & Metz (1992) found that raters could not selectively score the quality of the four sub-skills used in the NTID Writing Test. Using a principal component analysis (PCA) on the subscale ratings for the categories of organization, content, language use and vocabulary, these researchers found that each subscale "measured essentially the same underlying dimension of writing skill as every other subscale" (p.306). According to these researchers, their findings do not obviate the notion that organization, content, vocabulary and language form the basis for quality writing. The results of their work, rather, show that raters in their sample were not successfully able to separate the quality of one sub-skill from another when forming their opinions.

In terms of internal validity, a difference between the findings of Bochner et al (1992) and those of Heefner & Shaw (1998) may lie in the kind of data used for analysis. Bochner et al (1992) used information collected from raters scoring a single set of writing samples. Heefner & Shaw (1998), on the other hand, collected writing samples over a period of four years. These researchers used student growth over time as the indicator for rubric validity.

Even if the categories used for assessing student writing samples are not used diagnostically, the results of this study can be viewed in terms of trends. The differences in scoring results between the two sets of writing samples suggest that students generally made gains in all four areas. The numbers also suggest that the area of greatest improvement was organization. Whether looking at categories of the rubric or the overall score, the numbers show that deaf students are able to make gains in written English in a relatively short amount of time.

Suggestions for Further Study

Research (Gormley and Sarachan-Deily (1987); Heefner & Shaw, 1996; Schirmer, Bailey & Fitzgerald, 1999) has shown three analytical scales valid and reliable as diagnostic tools for deaf students' writing. Further, researchers have noted greater gains in specific areas of student texts, the result of which is greater readability. This study compared students' texts written over time to see where gains were greater.

The sample studied here was small. A logical next step would be to attempt replication of the results with a larger sample. In order to alleviate the problem of diagnostic validity with the individual categories in the rubric, the scoring itself also could be changed. According to Albertini (personal communication, January, 2004), a more precise way to measure kinds of gains in student writing would be to use organization as the construct. That is, have raters score the pairs of writing samples with only a view to organization. If the trends described here could be confirmed through the use of a larger sample and through alternate scoring, educators of the deaf would have a better understanding of approaches to help students achieve greater clarity in their writing.

Appendix A

The NTID Writing Test

Directions:

1. Use a pen; do not use a pencil
2. You have 30 minutes to write.
3. Your test score will help place you in a writing course

Topic:

You are in a new place. Write an essay on your opinions of NTID and the people here. Give reasons and examples.

Appendix B

NTID Writing Test

Scoring Categories and Descriptors

Organization (25 pts.): This includes such features as:

- Clear statement of topic placed appropriately
- Intent is evident to readers
- Plan of paper could be outlined by reader (i.e., paper is unified and coherent)
- Appropriate transitions (i.e., transitional markers and clear paragraphing)

Content (25 pts.): This includes such features as:

- Paper addresses the assigned topic
- Generalizations are supported by examples
- No extraneous material
- Pertinence and noteworthiness of ideas

Language Use (25 pts.): This includes such features as:

- Correct use of grammatical structures (sentence and discourse level) and punctuation
- Correct use of complex structures
- Intelligible spelling
- Clarity of style and expression
- Clarity of reference

Vocabulary use (25 pts.): This includes such features as:

- Appropriate semantic use of vocabulary
- Consistent register
- Sophisticated choice of vocabulary
- Appropriate use of figurative and idiomatic expressions

Table I

NTID Writing Test Scores (SVP) and Academic Writing 3 (AW3) Scores

Student	SVP Org.	AW3 Org	SVP Con.	AW3 Con.	SVP Lang	AW3 Lang	SVP Voc	AW3 Voc	SVP Total	AW3 Total
Student A	10	14	10	14	13	13	12	13	45	54
Student B	10	13	8	12	8	12	8	11	34	48
Student C	11	13	10	12	10	12	10	13	40	51
Student D	10	14	10	14	10	11	10	12	40	51
Student E	9	17	9	16	11	17	9	16	37	66
Student F	7	15	8	14	9	15	9	15	33	59
Student G	10	15	10	14	11	15	9	14	40	58
Student H	8	12	8	11	9	10	9	11	34	45
Student I	10	16	9	17	10	12	10	13	39	57
Student J	11	16	11	15	10	14	10	14	41	59
Student K	7	13	6	11	7	10	7	11	26	45
Student L	10	14	9	12	9	11	9	12	37	49
Student M	8	11	8	11	9	11	10	12	35	46
Student N	10	11	10	8	11	9	11	11	42	39
Student O	11	14	11	13	11	14	12	13	46	54
Student P	10	11	7	11	7	11	8	13	32	46
Student Q	10	13	7	10	7	10	8	11	32	44
Student R	9	11	9	11	10	10	10	12	37	43
Student S	12	14	12	13	12	12	12	12	47	51
Student T	10	15	10	15	13	14	12	14	45	58
Student U	6	12	5	10	6	9	6	9	23	39
Student V	11	16	11	14	12	15	12	13	46	58
Student W	10	14	10	14	12	15	12	14	45	57
Student X	11	13	11	13	10	11	11	12	44	50
Student Y	8	16	9	14	8	13	10	12	35	55
Student AA	10	14	11	13	9	12	9	13	38	52

Table 2

Percent Change from NTID Writing Test Scores to Academic Writing 3 Scores

Student	% change in org.	% change in cont.	% change in lang.	% change in vocab.
Student A	16	16	0	4
Student B	12	16	16	12
Student C	8	8	8	12
Student D	16	16	4	8
Student E	32	28	20	28
Student F	32	24	24	24
Student G	20	16	16	20
Student H	16	12	4	8
Student I	24	32	8	12
Student J	20	16	16	16
Student K	24	20	12	16
Student L	16	12	8	12
Student M	12	12	8	8
Student N	4	-8	-8	0
Student O	12	8	12	4
Student P	4	16	16	16
Student Q	12	12	12	12
Student R	8	8	0	8
Student S	8	4	0	0
Student T	16	12	4	8
Student U	24	20	12	12
Student V	16	8	12	12
Student W	16	16	12	8
Student X	8	8	4	8
Student Y	24	20	20	12
Student AA	16	8	12	16

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Finding Funding: Grantwriting Fundamentals for Financially Challenged Service Providers

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Abstract

Every year millions of dollars are awarded to social service agencies, colleges, and universities for special projects, equipment, research, and other institutional needs. The federal government, private foundations, and corporations routinely solicit grant proposals from all over the country. Social service providers can successfully compete for and obtain grant funds once they learn the fundamentals of effective grantwriting. The mystique of obtaining grants is debunked by a step-by-step process that must be addressed to achieve results. Successful proposals depend less on literary style and more on procedures and measurable outcomes. Proper planning, providing sources, utilization of facts, a demonstrated need, a clear plan, and an orderly presentation are critical issues to consider.



Introduction

As resources become more limited, there seems to be an increased emphasis on seeking external funding to meet the growing number of needs identified by colleges, universities, and social services agencies across the country. The federal government, private foundations, and corporations routinely solicit grant proposals from all over the country. Every year millions of dollars are awarded for special projects, equipment, research, and other institutional needs. External funding may facilitate the development of additional training opportunities through trainee stipends or specialized programs, provide services to enhance the development of target populations, or enhance the learning environment by providing state-of-the-art equipment and technology.

While there may be an emphasis on seeking external funding, care must be given to ensure that the type of funding sought and the kinds of projects developed are in accordance with the vision and mission of the institution or agency. As one begins to explore the availability of grants, contracts, and cooperative agreements, it is important to consider the identified needs and scope of the proposed project, their relationships with the overall mission and vision of the institution, and the impact of a successfully funded project on the resources of the institution.

Benefits and Drawbacks of External Support

Groups may seek external funding for a variety of reasons. It may help address unmet needs or expand opportunities for research on a given topic. External funding may also provide financial support for an organization, or support ongoing professional development through travel and presentations at professional meetings. Although the funding may be for a short period of time, it may enable the staff to pursue challenging opportunities or create new programs or areas of expertise.

While external funding may create new opportunities, it also comes with additional responsibilities and potential drawbacks. The project director assumes additional managerial and legal responsibilities, in addition to increased paperwork in reporting the project activities. Because space may be scarce on many campuses, project staff may find their work area fairly limited or less than desirable. Additional support may be difficult to get from the host institution. Funding is usually available for a limited period of time, and attracting talented staff members may be difficult without the promise of continued employment beyond the project cycle. The uncertainty of funding and the time pressures associated with funded projects may create stress within the work environment.

Types of Funding Requests

Funding may be made requested for a variety of purposes. Endowment funds may be generated through planned gifts to support a specific program or agency, but are generally not used for operating purposes. Capital funds are used for provided for construction, renovation and equipment while operating funds cover the day-to-day costs of running an institution. Some types of external support require that the host institution match the funds proportionally through actual funds or in-kind services. Generally, external funding may function as seed money and is not expected to be long-term, and institutions receiving funds are usually encouraged to develop plans to sustain the program or services after the funding period is over.

Exploring Funding Sources

In order to better assess the types of funding that might be possible, it would be helpful to first identify the projects within the college that are currently funded, their funding periods, the goals and objectives of each project, and their major activities. By identifying the funding sources, it may be possible to explore other types of funding offered by the same agency. Contacting the project officer may be one way of determining the future of currently funded projects.

It may be that there are few, if any, funded projects within the college. The task of the grant writers may be to develop these. After identifying the needs and issues to be addressed and considering the possible solutions, the grant writers may choose to contact colleagues at other institutions to see if they experience similar problems and how they might be addressed. Not only does this approach expand the pool of ideas for the grant writers, it also links them to a network of people who have similar interests and concerns. This may increase the possibility of future collaborative activities. Along a similar line, grant writers may review presentations at annual conferences of professional associations. Since grantees may be required to disseminate the results of their activities, this might be an excellent forum to meet this objective. Copies of funded projects are also available upon request and can serve as a model for developing a proposal as well as a source of ideas for future projects.

Once other projects have been identified, the grant writer may use the *Catalog of Federal Domestic Assistance (CFDA)* for additional information on programs that are supported by the Federal government. The *CFDA* provides an overview of federal support programs and includes more than 1,300 programs in 51 agencies. The *CFDA* may also be of benefit if the grant writers are charged with securing outside funding, but have not yet developed any plans. It can provide a good overview of what types of projects are funded, the level of funding typically provided, and may lead to contact information with project directors who can provide additional insights into each program.

Another valuable resource for grant writers is the *Federal Register*. Published daily, it includes information such as Presidential documents, proposed rules and regulations, final rules, notices, and Sunshine Act meetings. By reviewing the *Federal Register* and the *Catalog of Federal Domestic Assistance* on a regular basis, a grant writer can become aware of proposed legislation, offer comments regarding different pieces, become aware of funding opportunities, and prepare well in advance of notice. Since much of the research and preparation of a grant proposal takes a great deal of time, it is possible to gather information and develop a tentative plan if one studies what is likely to be the focus of future funding opportunities.

In addition to the sources provided by the federal government, there are numerous services that regularly review these resources and report them to readers on a subscription basis. Subscription services may include sources that the grant writers did not initially include in a search. Depending on the subscription service, additional information and tips may be provided that could enhance the likelihood of being funded.

In addition to federal resources, funds may be available from state or local government departments or agencies. Although there is no one central publication that lists funding priorities for local, state, or regional projects, it is relatively easy to search the internet for funding sources.

Private foundations and corporations often identify certain priorities or target populations and offer funding to address issues and concerns. While some grants may be offered by individuals, these are very rare and usually very specialized. Libraries typically maintain publications to help identify foundation resources, including publications such as *The Foundation Directory*, *Corporate and Foundation Grants*, and *Who Gets Grants/Who Gives Grants*.

Factors to Consider

Institutional considerations. When considering the possibility of external funds, there are many issues to consider. Even though the grant developers may be encouraged to seek external funding, it is necessary to assess the institution's resources, philosophy, and attitude toward this type of assistance. Is the institution aware of their responsibility as a potential collaborator in the project? As resources become scarcer, there seems to be a trend toward more institutional involvement, including in-kind contributions and donations of staff and faculty time. If the project is funded, can the institution realistically carry it out? Staff may need to be hired and offices provided, in addition to other types of support that are necessary.

One trend seems to be in developing collaborative efforts with other agencies and institutions whose goals may be similar. Does the philosophy of the institution support collaborative efforts? Moreover, is the attitude of the college one that encourages and supports these types of interactions?

Another issue that must be considered is the type of funding that is available. Some sources offer seed money, expecting that over the course of the funding period, the project will

be assumed by the grantee and continue past the project period. These types of start-up funds need the commitment of the institution to continue the project prior to applying for funding. Not continuing the program may disrupt the provision of services to the target population who may have been depending on it.

Logistical considerations. After reviewing the RFP or the application packet, many issues may come to light. Grant writers should note the amount of funding available, the average award, and the length of the project. Are these resources sufficient to develop the type of project initially envisioned? Do modifications need to be made in order to better fit the project specifications?

If the project previously had been funded, it is important to note the average number of applications and the number of projects funded. If the ratio between the number of applicants to the number of funded projects is too great, inexperienced grant writers may reconsider applying for this particular project.

Due to other commitments and obligations, it may seem impossible to meet fairly short application deadlines. Before committing time and resources toward writing a proposal, there should be an honest assessment of what can be done by the people involved. It may be possible to tap into experienced grant writers from within the institution to assist with the development of the proposal.

Developing the Proposal

Conceptualize the project. While a grant writer might have many good ideas, they must match the overall purposes and goals of the funding agency. Before considering external funding, it is necessary to identify a need or a problem, and consider how the issue can best be addressed. What types of projects or activities could assist in resolving the problem? What is the size and scope of the project? Could it be addressed by other projects that are already in place? The project developers might consider visiting similar projects in other locations to analyze their plans in relation to what other might have done. Obtaining copies of proposals from other funded projects could assist the developers in planning and writing a proposal for their project.

Funding sources. After determining if a project could be developed, the next step is to look for funding opportunities to address this need. The potential grantee will need to consider if local, state, or federal funds might be appropriate for the project. Funds might be requested from a private foundation. Once a potential funding source has been identified, the project officer is available to answer questions about the philosophy and scope of the funding agency, specific questions about the application process, and a variety of other issues. Potential grantees should explore any requirements and regulations listed by the funding source and determine if they indeed are eligible for funding.

Commitment from contributors. Are there faculty and staff members who have the interest and expertise to assist in developing the project? Do they have time and energy to become involved in the process? If the project is funded, what will their role be?

Institutional support. While there might be interest from different faculty and staff members in developing the project, it is critical to determine whether or not the institution will support externally funded projects. Will there be release time given to develop the proposal? Are there any internal guidelines or regulations that must be noted? If institutional resources are expected as part of the application (in-kind contributions, actual monetary contributions), is the institution will and able to assist? In addition to the commitment and contributions from the faculty and staff members involved in the project, clerical support is essential during the development and writing processes.

Addressing the requirements. The grant writers must obtain a copy of the application or request for proposals (RFP) from the funding source. In this, the grant writers will note the various sections that must be addressed, encompassing areas such as project goals and objectives, anticipated impact of the project, management plan, evaluation plan, the selection of participants, quality of key personnel, and budget. They need to outline clearly what the proposal intends to accomplish, as well as describe how the project will be carried out and evaluated.

Conducting necessary research. While one person may be responsible for writing the entire proposal, responsibilities may be divided among members of a team. Depending on the project, it may be necessary to provide supporting documentation regarding the need for the project, the current status of services, historical information that may have had an impact on the target population, and/or the types and availability of services to this point in time.

Writing the Proposal

The purpose of the proposal is to convince the funding source the idea presented is valuable and that it is within the scope of the mission of the funding source. It also can show that the grantseeker is knowledgeable and that the cost of the project is justified by the anticipated results. The major components of the proposal include the abstract, introduction, statement of need, project design, budget, and appendices.

Abstract. Usually limited to one or two pages, the proposal abstract is often the last section written, but the first section read by reviewers. It provides a brief overview of the project, its purpose, the activities proposed, the target population, and outcomes.

Introduction. The introduction gives the reviewers an understanding of who the grantseekers are, what the goals of the institution are, and how the project idea can be carried out. Essentially, it's a place to establish the credentials of the grantseekers and support their credibility.

Statement of need. The funding source needs assurance that there are unmet needs related to its mission that can be addressed by the project. Therefore, the grantwriters must demonstrate the need for the project, describe its causes, and identify a target audience that could benefit from intervention. The need for the project can be documented quantitatively by included statistical information regarding demographics and the incidence or prevalence of the situation. Other references and research findings should be included to support the need for the project. Grant writers may choose to reference the limitations of existing programs by indicating how they don't meet the needs of the target area. Conducting surveys of professionals or consumers, or documenting waiting lists for services also provides support for the project.

Project design. This is a plan to achieve the desired outcomes and includes the overall goals and objective of the project. Goals are more abstract and broader in scope than objectives. Goals are also less subject to direct measurement and focus on long-term perspectives. Objectives are more specific and concrete than goals. They are more likely to address short-term accomplishments and are more likely to be measurable.

The project design includes the plan of operation, management structure, evaluation, and any special information about the project. It describes how the project will be carried out. It includes an explanation of who the staff will be, what the project activities are, and the timelines for carrying out the work. There should be a clear description of how the objectives relate to the purpose of the program and how the project staff and resources will be used to achieve each objective. Since space is often limited in the proposal, PERT charts and timelines can give the reviewer a clear picture of the plan.

Budget. Budget information and guidelines are often included as part of the information packet from the funding source. This may include information about direct and indirect costs, any requirements for cost sharing, funding range and limitations regarding budget size, and allowable budget items. The budget provides a fiscal explanation of the project and must support the activities outlined in the narrative. Funding sources usually expect to see budget items related to personnel, including staff salaries, fringe benefits, and consultant fees; equipment; supplies; travel expenses; and other expenses, such as postage, printing, or communication expenses. It's likely that the budget proposal will be examined carefully by the reviewers, and the grantwriters should follow the proposal guidelines carefully. Figures should be as precise as possible and costs should be reasonable.

Appendices. Because the funding source may limit the number of pages in the actual proposal, additional information can be included in the appendices. Although this information may strengthen the proposal, any essential information should always be included in the proposal itself. The appendix section typically will include staff resumes, letters of commitment or support, charts and tables, and sample agreements of collaboration or partnerships.

Refining the proposal.

Writing a grant proposal is very similar to writing other types of research papers. Once a rough draft is developed, it is reviewed and edited on an ongoing basis. Special care is given to ensure that it meets the guidelines of the funding agency. The final copy should be in a format that not only follows the agency's guidelines, but is also easy for the reviewers to read and locate pertinent information. Is it necessary to submit a short proposal or abstract first, and then wait to be invited to submit a full proposal? This is the case for many FIPSE (Fund for the Improvement of Postsecondary Education) projects or funding through private foundations. Is there a page limit that must be followed? Does the funding agency specify in what order the sections must be arranged? Some grant writers who also have participated as grant reviewers have noted that the review sheets do not always follow the same order or format as the requirements included in the RFP. Consequently, it may be necessary to clearly indicate in several ways how the proposal matches the requirements listed in the RFP.

Submitting the proposal.

The grant writers must carefully note the deadline for submitting the proposal and work within institutional guidelines for processing it. All necessary signatures must be obtained before submitting the proposal. Carefully follow guidelines for sending copies to the funding agency for review.

Implementing the Project

Physical concerns. Once a project is funded, a great deal of work must be done to get it operating as soon as possible. Office space must be located, and equipment and supplies must be allocated for the project's use. While some projects may allow the purchase of equipment, it may be stipulated that the institution is responsible for office furniture and furnishings. Depending on the nature of the project, classroom space, resource areas, and storage must also be planned.

Fiscal issues and record keeping. A budget must be immediately established within the institution to process the financial matters of the project. A record keeping system also must be established that includes not only budgetary issues, but also documents the activities and accomplishments of the project. An audit or a site visit might be part of some projects.

Additionally, information must be kept in order to prepare an annual progress report for continuation of the funding.

Staffing. Staff must be hired and trained to conduct project activities. Since they are paid and receive benefits from the hosting institution, internal guidelines are generally followed in this process.

Developing an evaluation plan. While a plan for evaluating the project was outlined in the application, it must be fully developed during the implementation stage. Evaluations should be both formative and summative, and follow the guidelines put forth by the funding agency.

Conducting activities. Following the management plan submitted as part of the proposal, the staff should begin conducting the activities specified. This may involve providing direct services to the target population, developing curricular materials, or providing technical assistance and outreach services. As the activities develop, it is important to work closely with the business manager to stay within the approved budget.

Closing the Project

Final evaluation and report. When terminating a project, a final evaluation and report must be submitted within a given period of time, usually 90 days after the end of the funding cycle. Not only does the final report reflect the last year of the project period, it also includes the accomplishments during the entire funding period. The final evaluation should be formative and summative.

Fiscal issues, record keeping, and personnel. A final financial report should be submitted within a given period of time, usually 90 days after the end of the funding cycle. Records should be maintained for five years. While it may be possible for project staff to be assigned to other areas within the institution, those without appointments should be terminated according to the policies established by the institution.

Distribution of equipment. The project officer should be contacted to discuss the use of any equipment purchased by the project. Depending on the circumstances, equipment may be returned to the funding agency, used by another funded project, or used within the institution.

Future funding opportunities. As the project approaches the end of its funding period, the project director should be in close contact with the project officer to determine the possibility of future funding opportunities. In some cases, it may be possible to submit a new application to fund the same project, not interrupting services to the target population.

Terms to Know

Grant: awarded based on an *application* developed in response to a Request for Applications (RFA)

Contract: awarded based on a *proposal* developed in response to a Request for Proposals (RFP)

Program: the agency's large -scale initiative

Project: developed to carry out the purposes of the agency's program

Proposal: a formal written document developed according to specific rules or guidelines

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Auxiliary Aids and Services for Postsecondary Students with Disabilities: Higher Education's Obligations Under Section 504 and Title II of the ADA

U.S. Department of Education

Office for Civil Rights

Washington, D.C.

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Section 504 of the Rehabilitation Act of 1973

In 1973, Congress passed Section 504 of the Rehabilitation Act of 1973 (Section 504), a law that prohibits discrimination on the basis of physical or mental disability (29 U.S.C. Section 794). It states:

No otherwise qualified individual with a disability in the United States . . . shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance

The Office for Civil Rights in the U.S. Department of Education enforces regulations implementing Section 504 with respect to programs and activities that receive funding from the Department. The Section 504 regulation applies to all recipients of this funding, including colleges, universities, and postsecondary vocational education and adult education programs. Failure by these higher education schools to provide auxiliary aids to students with disabilities that results in a denial of a program benefit is discriminatory and prohibited by Section 504.

Title II of the Americans with Disabilities Act of 1990 (ADA) prohibits state and local governments from discriminating on the basis of disability. The Department enforces Title II in public colleges, universities, and graduate and professional schools. The requirements regarding the provision of auxiliary aids and services in higher education institutions described in the Section 504 regulation are generally included in the general nondiscrimination provisions of the Title II regulation.

Postsecondary School Provision of Auxiliary Aids

The Section 504 regulation contains the following requirement relating to a postsecondary school's obligation to provide auxiliary aids to qualified students who have disabilities:

A recipient...shall take such steps as are necessary to ensure that no handicapped student is denied the benefits of, excluded from participation in, or otherwise subjected to discrimination under the education program or activity operated by the recipient because of the absence of educational auxiliary aids for students with impaired sensory, manual, or speaking skills.

The Title II regulation states:

A public entity shall furnish appropriate auxiliary aids and services where necessary to afford an individual with a disability an equal opportunity to participate in, and enjoy the benefits of, a service, program, or activity conducted by a public entity.

It is, therefore, the school's responsibility to provide these auxiliary aids and services in a timely manner to ensure effective participation by students with disabilities. If students are being evaluated to determine their eligibility under Section 504 or the ADA, the recipient must provide auxiliary aids in the interim.

Postsecondary Student Responsibilities

A postsecondary student with a disability who is in need of auxiliary aids is obligated to provide notice of the nature of the disabling condition to the college and to assist it in identifying appropriate and effective auxiliary aids. In elementary and secondary schools, teachers and school specialists may have arranged support services for students with disabilities. However, in postsecondary schools, the students themselves must identify the need for an auxiliary aid and give adequate notice of the need. The student's notification should be provided to the appropriate representative of the college who, depending upon the nature and scope of the request, could be the school's Section 504 or ADA coordinator, an appropriate dean, a faculty advisor, or a professor. Unlike elementary or secondary schools, colleges may ask the student, in response to a request for auxiliary aids, to provide supporting diagnostic test results and professional prescriptions for auxiliary aids. A college also may obtain its own professional determination of whether specific requested auxiliary aids are necessary.

Examples of Auxiliary Aids

Some of the various types of auxiliary aids and services may include:

- taped texts
- notetakers
- interpreters
- readers
- videotext displays
- television enlargers
- talking calculators
- electronic readers
- Braille calculators, printers, or typewriters
- telephone handset amplifiers
- closed caption decoders
- open and closed captioning
- voice synthesizers
- specialized gym equipment
- calculators or keyboards with large buttons
- reaching device for library use
- raised-line drawing kits
- assistive listening devices
- assistive listening systems
- telecommunications devices for deaf persons.

Technological advances in electronics have improved vastly participation by students with disabilities in educational activities. Colleges are not required to provide the most sophisticated auxiliary aids available; however, the aids provided must effectively meet the needs of a student with a disability. An institution has flexibility in choosing the specific aid or service it provides to the student, as long as the aid or service selected is effective. These aids should be selected after consultation with the student who will use them.

Effectiveness of Auxiliary Aids

No aid or service will be useful unless it is successful in equalizing the opportunity for a particular student with a disability to participate in the education program or activity. Not all students with a similar disability benefit equally from an identical auxiliary aid or service. The regulation refers to this complex issue of effectiveness in several sections, including:

Auxiliary aids may include taped texts, interpreters or other effective methods of making orally delivered materials available to students with hearing impairments, readers in libraries for students with visual impairments, classroom equipment adapted for use by students with manual impairments, and other similar services and actions.

There are other references to effectiveness in the general provisions of the Section 504 regulation which state, in part, that a recipient may not:

Provide a qualified handicapped person with an aid, benefit, or service that is not as effective as that provided to others;

or

Provide different or separate aid, benefits, or services to handicapped persons or to any class of handicapped persons unless such action is necessary to provide qualified handicapped persons with aid, benefits, or services that are as effective as those provided to others.

The Title II regulation contains comparable provisions. The Section 504 regulation also states:

[A]ids, benefits, and services, to be equally effective, are not required to produce the identical result or level of achievement for handicapped and nonhandicapped persons, but must afford handicapped persons equal opportunity to obtain the same result, to gain the same benefit, or to reach the same level of achievement, in the most integrated setting appropriate to the person's needs.

The institution must analyze the appropriateness of an aid or service in its specific context. For example, the type of assistance needed in a classroom by a student who is hearing-impaired may vary, depending upon whether the format is a large lecture hall or a seminar. With the one-way communication of a lecture, the service of a notetaker may be adequate, but in the two-way communication of a seminar, an interpreter may be needed. College officials also should be aware that in determining what types of auxiliary aids and services are necessary under Title II of the ADA, the institution must give primary consideration to the requests of individuals with disabilities.

Cost of Auxiliary Aids

Postsecondary schools receiving federal financial assistance must provide effective auxiliary aids to students who are disabled. If an aid is necessary for classroom or other appropriate (nonpersonal) use, the institution must make it available, unless provision of the aid would cause undue burden. A student with a disability may not be required to pay part or all of the costs of that aid or service. An institution may not limit what it spends for auxiliary aids or services or refuse to provide auxiliary aids because it believes that other providers of these

services exist, or condition its provision of auxiliary aids on availability of funds. In many cases, an institution may meet its obligation to provide auxiliary aids by assisting the student in obtaining the aid or obtaining reimbursement for the cost of an aid from an outside agency or organization, such as a state rehabilitation agency or a private charitable organization. However, the institution remains responsible for providing the aid.

Personal Aids and Services

An issue that is often misunderstood by postsecondary officials and students is the provision of personal aids and services. Personal aids and services, including help in bathing, dressing, or other personal care, are not required to be provided by postsecondary institutions. The Section 504 regulation states, "Recipients need not provide attendants, individually prescribed devices, readers for personal use or study, or other devices or services of a personal nature." Title II of the ADA similarly states that personal services are not required.

In order to ensure that students with disabilities are given a free appropriate public education, local education agencies are required to provide many services and aids of a personal nature to students with disabilities when they are enrolled in elementary and secondary schools. However, once students with disabilities graduate from a high school program or its equivalent, education institutions are no longer required to provide aids, devices, or services of a personal nature.

Postsecondary schools do not have to provide personal services relating to certain individual academic activities. Personal attendants and individually prescribed devices are the responsibility of the student who has a disability and not of the institution. For example, readers may be provided for classroom use but institutions are not required to provide readers for personal use or for help during individual study time.

Questions Commonly Asked by Postsecondary Schools and Their Students

What are a college's obligations to provide auxiliary aids for library study?

Libraries and some of their significant and basic materials must be made accessible by the recipient to students with disabilities. Students with disabilities must have the appropriate auxiliary aids needed to locate and obtain library resources. The college library's basic index of holdings (whether formatted on-line or on index cards) must be accessible. For example, a screen and keyboard (or card file) must be placed within reach of a student using a wheelchair. If a Braille index of holdings is not available for blind students, readers must be provided for necessary assistance.

Articles and materials that are library holdings and are required for course work must be accessible to all students enrolled in that course. This means that if material is required for the class, then its text must be read for a blind student or provided in Braille or on tape. A student's actual study time and use of these articles are considered personal study time and the institution has no further obligation to provide additional auxiliary aids.

What if an instructor objects to the use of an auxiliary or personal aid?

Sometimes postsecondary instructors may not be familiar with Section 504 or ADA requirements regarding the use of an auxiliary or personal aid in their classrooms. Most often, questions arise when a student uses a tape recorder. College teachers may believe recording

lectures is an infringement upon their own or other students' academic freedom, or constitutes copyright violation.

The instructor may not forbid a student's use of an aid if that prohibition limits the student's participation in the school program. The Section 504 regulation states:

A recipient may not impose upon handicapped students other rules, such as the prohibition of tape recorders in classrooms or of dog guides in campus buildings, that have the effect of limiting the participation of handicapped students in the recipient's education program or activity.

In order to allow a student with a disability the use of an effective aid and, at the same time, protect the instructor, the institution may require the student to sign an agreement so as not to infringe on a potential copyright or to limit freedom of speech.

What if students with disabilities require auxiliary aids during an examination?

A student may need an auxiliary aid or service in order to successfully complete a course exam. This may mean that a student be allowed to give oral rather than written answers. It also may be possible for a student to present a tape containing the oral examination response. A test should ultimately measure a student's achievements and not the extent of the disability.

Can postsecondary institutions treat a foreign student with disabilities who needs auxiliary aids differently than American students?

No, an institution may not treat a foreign student who needs auxiliary aids differently than an American student. A postsecondary institution must provide to a foreign student with a disability the same type of auxiliary aids and services it would provide to an American student with a disability. Section 504 and the ADA require that the provision of services be based on a student's disability and not on such other criteria as nationality.

Are institutions responsible for providing auxiliary services to disabled students in filling out financial aid and student employment applications, or other forms of necessary paperwork?

Yes, an institution must provide services to disabled students who may need assistance in filling out aid applications or other forms. If the student requesting assistance is still in the process of being evaluated to determine eligibility for an auxiliary aid or service, help with this paperwork by the institution is mandated in the interim.

Does a postsecondary institution have to provide auxiliary aids and services for a nondegree student?

Yes, students with disabilities who are auditing classes or who otherwise are not working for a degree must be provided auxiliary aids and services to the same extent as students who are in a degree-granting program.

For More Information

For more information on Section 504 and the ADA and their application to auxiliary aids and services for disabled students in postsecondary schools, or to obtain additional assistance, see the list of OCR's 12 enforcement offices containing the address and telephone number for the office that serves your area, or call 1-800-421-3481.

Something for Everyone: Products to Improve Services to Students who are Deaf or Hard of Hearing

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Abstract

Extra! Extra! Read all about it – the progress of the Arkansas products and their impact on faculty, service providers, interpreters, and students. Find out how the *A Closer Look* sign language vocabulary development CDs are impacting postsecondary and secondary education programs, why it is being developed, what topics have been and will be produced, and how to obtain a free copy of the instructional manual for others interested in developing similar products. The *Make a Difference* video series for faculty has grown through a collaborative project with Project PACE at the University of Arkansas at Little Rock. Three videos are now available on VHS or CD-ROM with accompanying handbooks.



Something for Everyone: Products to Improve Services to Students who are Deaf or Hard of Hearing

The Arkansas State Outreach and Technical Assistance Center (SOTAC) believes team work is required to positively impact the educational success of postsecondary and secondary students who are deaf or hard of hearing. This team consists of many individuals: the student, faculty members, disability support service providers, and interpreters. With this multifaceted team in mind, we strive to assist all members and provide materials and/or training that will be most beneficial.

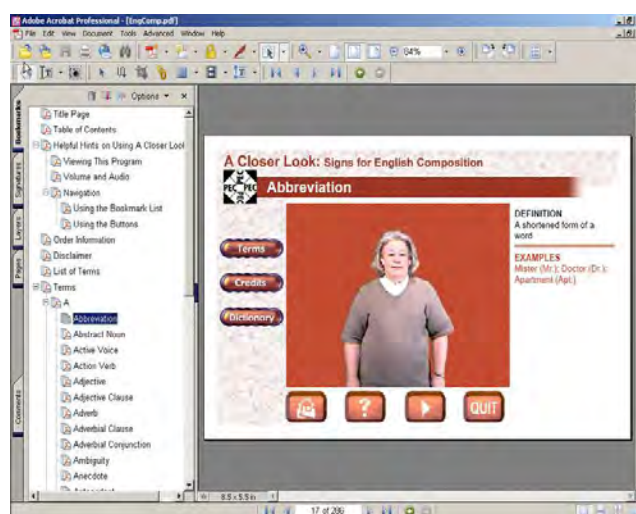
In 2001 the Arkansas SOTAC began developing a series of CD-ROM to help students, interpreters, and teachers of the deaf to develop sign vocabularies for specific topics. The rationale for developing this specific series include: 1) interpreters and deaf students are unfamiliar with sign vocabulary for college-level courses, 2) interpreters and deaf students invent signs that are not standardized for use in class, 3) substitute interpreters do not know these invented signs, and 4) students may not connect the ASL signs and English concepts which is reflected through test results.

If an interpreter and/or the student do not know the vocabulary for a specific topic, in English or ASL, often during the first few weeks of class these two individuals develop their

own signs for the terminology. While this process does get the students through class, the signs are not standardized and the much of the course content is missed during this time. Once the interpreter and student have developed their own signs, then the student is no longer exposed to the English word, only the sign they have come up with. Thus, the student may never connect the English word and ASL sign together, creating a gap in their understanding. If the interpreter should miss a class, a substitute interpreter must cover the class. But the substitute interpreter has no idea what signs were invented to specific terminology. Again, course content is missed because of the necessity to work on vocabulary.

This CD series is a way of presenting standardized signs, allowing interpreters and students to begin a class with the same knowledge of signs, and the class content to be conveyed as it is presented. Since the signs are standardized, substitutes can quickly learn the vocabulary as well. In an effort to avoid including regional signs in the series, individuals from various areas of the country assist in the content review. The information in each CD is presented with ASL and English together. The term is presented in English, along with definitions and context examples. A video clip demonstrates the correct sign production. Because the CD is interactive, a user can choose to view the content in sequence or randomly. Each video clip can be viewed as many times as the user desires, with the simple click of the mouse. A separate dictionary is also included for study purposes. (Figure 1)

Figure 1: Screen Shot



To date, three CDs have been produced: *A Closer Look: Signs for American National Government*, *A Closer Look: Signs for Idioms*, and *A Closer Look: Signs for English Composition*. Three additional topics currently in progress are: sports, algebra and geometry, and technology and distance education. The Postsecondary Education Consortium (PEC) duplicates each CD and distributes it through the PEPNet Resource Center. Our hopes are that interpreters, students, and interpreter education programs will be able to build personal libraries to include all the CDs. (Figure 2)

To help others who may be interested in developing similar-type products and as a way of documenting our efforts for developing the first CD, we developed a “how to” manual



Figure 2: CD Covers

entitled *Creating Interactive CD-ROMS - Instructional Manual*. This manual includes information about technology (hardware and software), expenses and guidance through the development process. This manual is available as a free download from the Arkansas SOTAC website: www.ualr.edu/sotac. (Figure 3)

In 1999, the video *Make a Difference: Tips for Teaching Students Who are Deaf or Hard of Hearing* was produced by the SOTAC on the University of Arkansas at Little Rock (UALR) campus. An accompanying handbook was also developed. Available from the PEPNet Resource Center on VHS or on CD, this video talks to faculty in secondary and postsecondary about accommodations for students who are deaf or hard of hearing. For ordering, please refer to the PEPNet Resource Center website: <http://prc.csun.edu/>.

In 2001, another grant-funded project at UALR, Project Postsecondary Academic Curriculum Excellence (Project PACE) approached PEC to develop a collaboration between the two entities. Project PACE was developing similar videos for faculty on the topics teaching students who are blind or have low vision, or with learning disabilities. Permission was granted by PEC for Project PACE to use and continue the theme title of *Make a Difference*. By the end of 2002, the two additional videos with accompanying handbooks were developed. As a culmination of the 3-year Project PACE grant, a faculty development package was authored at the end of 2003 – *Make a Difference: Tools for Enabling Faculty to Teach Students with Disabilities*. This package includes the following CD: Tools, digitized videos and accompanying handbooks - *Make a Difference: Tips for Teaching Students Who are Blind or Have Low Vision*, *Make a Difference: Tips for Teaching Students Who are Deaf or Hard of Hearing*, *Make a Difference: Tips for Teaching Students Who Have a Learning Disability*. An additional video currently in development – *Make a Difference: Tips for Teaching Students Who Have Psychiatric Disabilities* – will be mailed upon completion to all who have purchased this package. For more information about Project PACE or this product, please refer to the website: www.ualr.edu/pace. (Figure 4)

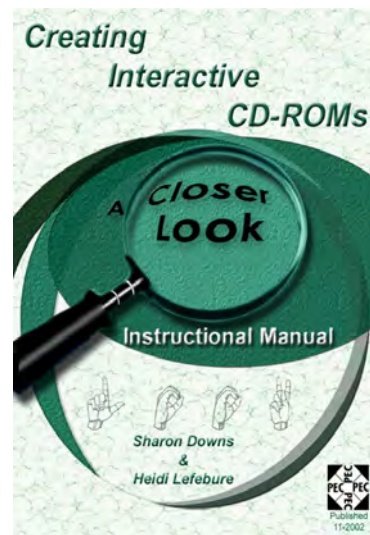


Figure 4: Package Cover and CDs

By providing tools to assist all the team players involved in the educational process of students who are deaf or hard of hearing, we believe that each individual will have a richer experience and students will have a great possibility of success in not only their academic endeavors, but throughout their life journey.

Accessing Healthcare- We're Not Just Consumers Anymore

Kim Dodge

Veterinarian
Rochester, New York

Danielle Rastetter

Veterinarian
Dayton, Ohio

Beth Marks

Nurse
Evanston, Illinois

Bo Byun

Dentist
College Park, Maryland

Michael McKee

Physician
Rochester, New York

Raylene Harris

Predoctoral Psychology Intern
Rochester, New York

Martha Smith

Oregon Health & Science University
Portland, Oregon

Abstract

This interactive panel is comprised of individuals representing a wide variety of health care professions. Topics such as preparing for application to professional programs and how to approach the unique challenges faced within these programs and after graduation will be discussed from a variety of perspectives.



Martha Smith

Today we are featuring a group of people who have some exciting stories to share. Before we hear from them, I'd like to give you a bit of background information first. As you might know, I'm not a doctor or a nurse or a veterinarian, but I have been working in the disability field for about 20 years. Four and a half years ago, I was able to work on a grant that specifically

focused on working with faculty in medical schools, dental schools, and nursing programs across the country. The focus was helping faculty understand how to work with students with disabilities in these professional programs. I found out that this is a huge issue. As people with disabilities have made their way through educational systems, more and more doors opened. This includes the doors to professional training. Individuals who are deaf and hard of hearing are saying, "I want to be a doctor," or "I want to be a nurse," or I want to be a dentist." Why not? But in many cases schools are not quite ready yet, so there is a lot of educating that needs to go on.

All of our panel members will share some of their experiences. I'd like you to remember a few things. One is that our panel represents a very, very small sample of the variety of deaf and hard of hearing professionals that are in the health care industry. So just because someone is not here who is a surgeon doesn't mean that there is not a deaf or hard of hearing surgeon out there. The other thing to remember is that our panelists represent a wide range of hearing, or non-hearing, experiences, as the case may be. So just because there might not be a panelist who signs does not mean that a particular profession might not be represented somewhere across the country with a deaf individual who does sign, or by another hard of hearing individual, or by someone who is oral deaf. The range among health care professionals is huge, and our panel just represents a small portion.

I'd also like to offer you a little bit of a paradigm shift. Many of us are used to working with faculty and educational systems from the perspective of considering how a person who is deaf or hard of hearing might do particular tasks or assignments. We get into our problem-solving mode, or try to eliminate barriers. Most of us have been acculturated to think that in order to become a doctor, a nurse, or a dentist, you have to be able to hear. So the paradigm shift needs to be that if a person experiences things differently, it still needs to be learned even if it's done in a different manner. Being deaf isn't a barrier or a problem, but it's an opportunity. It brings incredible experiences and value to the professions that they work in.

Finally, there are resources and materials in the back of the room. These were in the exhibit area during the conference. Some of the materials, such as the videotape "Achieving Goals! Career Stories of Individuals Who Are Deaf and Hard of Hearing" featuring Kim Dodge, are available through the PEPNet Resource Center. The videotape "Profiles of Health Sciences Professionals with Disabilities" is available through the Oregon Health Sciences Faculty Education Project

Without further ado, I'd like the panelists to introduce themselves briefly, and indicate what their professions are, where they went to school, and what level of hearing loss they have.

Dr. Kim Dodge

Thank you, Martha, for that very nice introduction. I am Kim Dodge, and I have a Bachelor's of Science degree in Zoology from Michigan State University. I have a Doctor of Veterinary Medicine (DVM) degree from MSU as well. My parents are deaf, but I was born hearing. I developed a hearing loss and became deaf by the time I was 8 years old. Now I have a total profound hearing loss. I have no ability to hear at all any longer. I am a veterinarian.

Dr. Danielle Rastetter

My name is Danielle Rastetter and I am from Dayton, Ohio. I earned my degree from the Ohio State University. I have a progressive sensori-neural hearing loss, and I am post-lingually deaf. When I was about 2 or 3 years old, I started losing my hearing. It culminated in severe-to-

profound deafness in my undergraduate college years and got a little bit worse over the next few years. I went through all of my postsecondary education and training with a severe-to-profound hearing loss. I received a cochlear implant two years ago, and now aided I have only a moderate hearing loss. Even though I am doing very well right now, it's very different for me. It was much harder before. Some of what I will talk to you about comes from the perspective of the difficulties that I had during my training.

Dr. Beth Marks

My name is Beth Marks and I am a research professor at the University of Illinois in Chicago. I am not sure when I acquired my sensori-neural hearing loss in my left ear. It was at the severe-to-profound level before the age of 5. I have a mild-to-moderate hearing loss in my other ear. At the time, my parents were advised to put me in the school for the deaf, but that idea was dropped and nothing more was said about it. I went through my undergraduate program with no accommodations at all, and actually didn't experience any major issues until I did my graduate work.

Dr. Bo Byun

My name is Bo Byun, but most people call me Dr. Bo. I'm from Maryland where I work as a dentist in Rockville and College Park. I graduated from the University of Pittsburgh's dental school, but did my undergraduate work at the University of North Carolina at Chapel Hill. I became deaf at the age of 4 or 5, but no one really knows why. I was having some speech problems and then they realized I was deaf. I went through speech therapy and learned to speak very well.

Dr. Michael McKee

I am Michael McKee, and I'm getting close to finishing my last year of my residency. Later this summer, I will move to Rochester, New York. Growing up, I didn't know what caused my profound deafness. It wasn't until I was about 21 years old when I found out that it was genetic. I was raised oral but later started learning to sign.

Raylene Harris

I am Raylene Harris and I am in my final year of the Clinical Psychology program at Gallaudet University. As a Ph.D. student, I am writing my dissertation and completing my internship at the University of Rochester Medical School. I work at the Deaf Wellness Center and see both deaf and hearing patients. I am profoundly deaf and went to a deaf school. I work with interpreters with patients who do not sign.

Martha Smith

Some of the audience members may not be aware of particular issues in health sciences programs. As part of the application process and initial requirements, students are required to meet technical standards to get into their programs. These are all of the non-academic requirements. While we won't address this in depth, suffice it to say that technical standards and students with disabilities is a very hot topic across the country. Typically a single-page document, the program's technical standards are distributed to incoming students who must read it, sign it, and return it...and then everything's wonderful. In reality, the language of most technical standards documents is awful. Typical statements include, "Must be able to hear

enough to determine if someone has a heart murmur,” or “Must be able to lift 50 pounds while standing without any assistance,” or “Must be able to see through a microscope,” or “Must be able to communicate with patients and family members without any assistance.” For students with disabilities, those are huge issues in terms of trying to get admitted into a program. So if the panelists mention technical standards as part of their presentations today, this explanation provides a bit of background information.

At this time, I’d like to give each panel member an opportunity to share some of their school and work experiences with the audience. The first question I’d like to ask is about school. How did you decide to be what you became? What types of accommodations or strategies did you use to be successful at school? How did you work with faculty? What did you do in clinical settings? In particular, how did you work with your fellow students?

Dr. Danielle Rastetter

As I said earlier, I had a mild loss that progressed to a severe loss. Back in elementary school, I started using FM systems. I didn’t get too much attention with that – and that’s really important for you to understand because of what I’ll explain to you in a few minutes. College wasn’t a big issue either. I went to a liberal arts school that was a liberal arts school in every way. There was a lot of diversity which was good. When I applied to veterinary school, I was lucky that the mother of one of my undergraduate acquaintances was a veterinarian on the admissions committee at the Ohio State University. When I sent in my application, I was concerned because my verbal scores on the test were not that good. Anyone who has worked with hard of hearing people knows that we don’t overhear conversations and can miss a lot of the English language that others naturally pick up. My disability services officer wrote a letter explaining that to the admissions committee. I got an interview. I believe in full disclosure, and even though the admissions committee could not legally ask me any questions, I always made sure to end every interview by asking them if they had any questions for me about my hearing loss. My philosophy is that I wanted everything to be upfront and I wanted to know their thoughts and concerns. That was my perspective when I interviewed them. Yes, they had questions and concerns. While I was prepared for their questions, I probably wasn’t as prepared and informed as I should have been, and I didn’t have all of the answers. I knew that there were amplified stethoscopes available, but I was still researching things. I knew about CART. The committee could see that I was being proactive, and I found out that they felt more comfortable working with me because they knew I was going to be part of the team. I wasn’t going to sit back and expect everything to be done for me. Technical standards weren’t an issue for me; I don’t even know if OSU had any. They did talk with my disability counselor once, but it never really became a big issue. My training was very supportive. The dean of students was behind me one hundred percent. I guess I was lucky.

There was only one professor who did not stand in the front of the room, but walked back and forth. They had to talk with him about it a few times, and that was an ongoing struggle. As Sam Trychin indicated earlier, we can remind faculty, but we have to remind them again 30 seconds later.

Since I had grown up with hearing loss that gradually got worse, I didn’t attract much attention, even when I used CART. However, when I started clinical training when I was part of group rounds, I went through a major transition. This required communicating with owners, learning to use a stethoscope, etc. There is a sign that Kim showed me years ago, which is “hearing” (speaker signs “think hearing”). Honestly, I thought I was hearing. I was raised orally

and in a mainstream environment. But when I got to the clinical year, I realized how much help I needed. I went through a severe depression. I would go in the back of the barn where they kept the hay and just cry. Luckily, I got through that and got the help I needed. I founded a list serve called “NOISE” that evolved into a great support group. This eventually led to the development of a non-profit organization for medical professionals with hearing loss. Although I got through this part of my life, faculty and staff need to be aware that students may go through some difficult times. They may need you or some additional help, but may not realize it.

Dr. Beth Marks

As I mentioned before, I went through my undergraduate education essentially “passing.” I never really thought about my hearing loss before I started college. Remember, I went through my undergraduate and master’s program before the ADA was passed. My uncle, who is a physician, talked with my mother about what I would need in order to be able to hear. So I found a very good stethoscope (at the time) and never mentioned it to anyone. The first time my hearing became an issue was when I started in clinical practice. However, any issues were quickly resolved because I worked on a medical-surgical unit. I made sure that the environment was conducive to me. I would use lipreading and some hearing to understand patients.

Educationally, my hearing loss became a big issue when I started my master’s program. Graduate school is set up with smaller groups of people, and it’s necessary to hear group discussions. That was the first time that I got hearing aids. The small group situation occurred during my doctoral program at the University of Illinois, but there were also lots of international students and quite a few dialects and accents to hear. Even today, keeping up with group discussion is important in professional circles.

Dr. Bo Byun

I didn’t grow up in a deaf school – I was mainstreamed. Although I didn’t have any assistance in high school, I did very well. But when I got into college, I finally realized that I needed help. I went to the disability services office and they provided me with a notetaker. There was really one tough class that I really hated – physics. I needed it for my major in chemistry and I wanted to be a chemistry professor because I really liked it. I really enjoyed seeing some of the wonderful things that could happen with chemistry. I hadn’t thought of being a dentist then.

In college, I felt isolated. There weren’t many students who would speak to me. I tended to be a really shy person, and I wasn’t very outgoing. I knew I needed to be more outgoing, so I reviewed my priorities and thought about my goals starting in my sophomore year. I considered law, but thought I might be too shy. I looked at the MCATs and that test includes four categories: math, science, reading, and vocabulary, plus an essay. I was concerned about the essay because I couldn’t think what I would write about. I worried that time would run out and I just decided that I didn’t want to do that. I looked into nursing and medical technology. The dental school admissions test is the DAT, and it also has four parts. But there isn’t an essay part. The fourth part is a perceptual aptitude test. I really enjoyed that; I enjoyed the challenge. I wasn’t sure about becoming a dentist. I had done some volunteer work in the hospital dental clinic, and I’d gone to the dentist myself. My second brother also considered becoming a dentist, but changed his mind a few times. So even before graduating from college, I looked at different dental schools and noticed that some didn’t require a bachelor’s degree, just a certain number of credits completed. I met with my advisor and figured out that I only needed two courses to graduate and

I could complete these during my first year of dental school. As a back-up, I would have a bachelor's degree in chemistry.

The first year of dental school was really tough. It's primarily book classes from 9:00 until 5:00 with no real breaks. There was a lot to study every night. The second year was more of the same, but the final year is clinical experiences. That was the easiest part for me.

Coming to the University of Pittsburgh for dental school interested me because it's a very deaf-friendly town. I considered both Pittsburgh and Indianapolis because both cities had schools for the deaf there. While I didn't go to a deaf school myself, I really wanted to be involved with the deaf community. During the interview in Pittsburgh, I mentioned that there was a deaf school nearby. The University of Pittsburgh also had experience with a deaf student in the dental hygienist program. One of the professors was also married to a woman who taught at the school for the deaf. They had a collaborative program with the Western Pennsylvania School for the Deaf, so it gave me a connection there. I think that the dental school was a really wonderful environment. I was ready for it and realized it was what I wanted to do.

Dr. Michael McKee

Growing up an oral student, I was also mainstreamed. Throughout high school and at the beginning of college, I didn't realize that I needed any help. I was an avid reader and that always got me ahead of the game. After I started college, I realized that I might need some additional services because of my hearing loss. When I meet people, I like to let them know about my deafness and let them know what, if any, services I might need. I went to a very small university that I selected because it had small classes. Usually, I was able to sit in the front and understand the teacher quite well. I met with someone in the disability services office to request a notetaker. When classes started, I remember sitting in the front of the room and the teacher said he had an announcement to make. He said, "We have a student who is deaf. Do we have any volunteer notetakers?" Oh, I was embarrassed. This was my first day of college. Unfortunately, no one volunteered except the woman sitting next to me, and she came from Spain, so her English skills also weren't that great! *(laughter)*

Over time, my knowledge of Section 504 of the Rehabilitation Act and the ADA has grown quite a bit. At first, it grew out of necessity. I think it's very helpful for students to be aware of their rights. My major in college was political science, and then I added chemistry. It's kind of an odd combination. As I went through college, the notetaker services improved once I became more demanding. There were a few classes in which the notetaking services were not adequate, and I requested a transcription service. At that time, I was not completely comfortable using sign language interpreters even though I was interacting with deaf people and using sign language in social situations.

During my third and fourth years of college, I was trying to figure out what I'd like to do for a career. I'm the kind of person who enjoys a variety of things, so it was hard to narrow my selection to one career. So I spent time with different careers during the summer before my senior year. One of the people I spent time with was a family practitioner in my town. I enjoyed the interaction with patients and thought it would be a career I would enjoy. I also had a few experiences with my family related to medical situations. My parents had another son, and my grandmother was diagnosed with cancer. I also thought it might be a rewarding experience to work with deaf patients, so I started thinking seriously about going to medical school. When I talked with my advisors about it, they said a career in medicine wouldn't be possible for someone like me. I never really had a lot of support. I used the internet to try to find other deaf

doctors; and when I contacted them, they were supportive. I think it's important to be able to give back to people who are coming up and be a role model to support their goals.

Once I learned about amplified stethoscopes and other technology, I knew there would be opportunities for me. I took my MCATs rather quickly and did well. Then I applied to medical school. I really wanted to go to the University of Florida, and I ended up interviewing there. Prior to the interview, I sought additional information about the stethoscopes, how I would be able to hear heart sounds, and how I would be able to interact with patients because I wanted to go into the interview well prepared. I disclosed my hearing loss and described how this could be a benefit because of my ability to work with deaf patients. I think I have a unique approach because I have a better understanding of how to work with patients with disabilities. Two people interviewed me, and one of them was a pediatrician who worked with students at the Florida School for the Deaf and Blind in St. Augustine. The second interviewer also had interactions with deaf patients and saw the benefit of me becoming a doctor. A short while later, I was accepted, which was very exciting to me.

The summer before I started medical school, I met with the staff in the Office for Students with Disabilities to discuss my needs. For the first two years, I used transcription services. In fact, the whole class had it because there was so much information presented, so I just went along for the ride. During my third and fourth years of medical school, however, my needs changed because of clinical rotations. I met with the sign language interpreter three or four months before the rotations started and worked with the interpreter to learn medical signs. It was very important to be well-prepared before the rotations started. It was a great experience. I actually had three interpreters who were with me during the daylight hours. They weren't with me when I was on call. But it all worked out really well and I did well in my classes. Although I did well on my clinical rotations, I always had to prove myself on the first day of each one. On the first day, I'd let the faculty member know that I was deaf, and they'd always ask me, "How are you going to do this?" Since all of the other medical students were advancing, I had to prove myself to get to that level. There were some faculty members who simply believed that a deaf person could not become a doctor, and one of them was a pediatrician. Although I expected that the surgery rotation to be one of the most difficult because of communication issues, I encountered the most difficulties with a pediatrician. One time, he told me, "You know, you have a severe handicap. You should not be a doctor. And I don't want you on my rotation." That was the only time I had to contact the ADA office at the University of Florida to get something fixed. The law supported me, and knowing the law was very helpful to me.

Raylene Harris

I grew up in a deaf school, so most of my role models were actually deaf. Most of my friends went on to work in deaf schools, and I felt that being a schoolteacher at a deaf school were one of the few career options available to me. But I knew I would not enjoy disciplining grade school students, telling them not to do this or that. I wondered what my other options might be.

I went to Gallaudet University and took a variety of classes and considered several majors. I enjoyed one class in particular, and that was the Introduction to Psychology class. I had an outstanding teacher who motivated me to major in psychology. I was not sure about the career options for deaf psychologists and what they would be doing. I knew I wanted to work with and around deaf people. At that time, I did not personally know of any deaf psychologists. I decided to apply to the clinical psychology program at Gallaudet University because I knew that the

program were oriented towards serving the deaf population, and accessibility and communication would not be a major issue. I was one of the few deaf applicants accepted into the program at that time.

During the interview, the faculty brought up concerns regarding my culturally Deaf upbringing and that it might cause difficulties for me in the program due to different philosophical viewpoints on how to best serve the deaf population. I responded to that by assuring them that I was there to learn and not to have philosophical debates. There were more obstacles than I expected in my program at Gallaudet. Comparing my graduate experience with my undergraduate experience, there were so many more hearing students in graduate school while the undergraduate population is made up of deaf students like myself. Many of my classmates in graduate school were still learning sign language, and required the use of interpreters to interpret what they were saying into ASL and what the deaf students were saying into spoken English. Also, during my first semester, it seemed that I had a headache everyday because I wasn't used to learning from professors who sign and speak at the same time. This method is used to accommodate both deaf and hearing students in the same class. I talked to my advisor about the communication issue, and I indicated that I was having a difficult time with teachers who use SIMCOM (simultaneous communication). My advisor was puzzled about my difficulties understanding the professors who sign and speak at the same time. I explained that it wasn't the information that I was having a problem with, but it was the manner in which it was delivered. The faculty then carefully considered my recommendation, probably because I did not take an accusative approach, but instead approached this as a problem that the faculty and I both could work together to resolve.

During the practicum part of my program, I had opportunities to go out in the community and work with deaf patients and consumers. Then it was time to plan my year-long internship, and I was looking for a deaf-friendly site to do my internship. There is a listserv available for individuals who work in the field of psychology and deafness, and that was helpful. I had to be careful about the selection of my internship site because the internship site also has to be approved by the American Psychological Association. I considered about 20 programs, but ultimately decided to apply to 8 programs because these programs worked with the deaf community. During the application process, I never hid the fact that I was deaf and an ASL user. I was invited for an interview to only four sites. So I went from 20 possibilities to eight and then to four. I thought I would have quite a few interviews available to me, and I was a little bit disappointed that I only had four. But ultimately, I decided that the best fit for me in would be the University of Rochester Medical Center.

My internship at the Deaf Wellness Center at the University of Rochester has been quite an interesting experience for me. The director believes strongly in having deaf interns who work not only with deaf patients but also with hearing patients. Having both of those options provided to me has been an eye-opening experience for me. An interpreter and I work together as a team when I work with hearing patients, staff, and supervisors. Communication has not been a concern for me because I have many interpreters available, due to a large interpreter community in Rochester. I've really enjoyed the experience that I've had at the University of Rochester. I learned for myself that I don't have to limit myself to just deaf patients, and I have the opportunity to also work with hearing individuals. The DWC has provided me with a very supportive environment and this has allowed me to experience a variety of clinical settings.

Dr. Kim Dodge

When I was a little girl, I thought, "Maybe when I grow up, I will become a doctor." There many doctors in my family, and I thought that I eventually would become some type of doctor. Because I wanted to work with animals, I decided to become a veterinarian.

I'm from a small town of about 300 people. I went through public schools without any communication support; when I started and was diagnosed with hearing loss, we didn't know if I would be hard of hearing or become deaf, so we just kind of went with the flow. Things were very different when I went to college. I selected Michigan State University (MSU) which is a very large college with about 44,000 students. What a culture shock! In high school I had 10 to 20 people in my classes, but in college I had about 400 in some of the lectures. I began using sign language interpreters in college.

During my undergraduate years, I was pretty lucky. One summer, I participated in a program for disadvantaged and minority students interested in veterinary medicine. We were exposed to different types of veterinary medicine. Some activities were fun, and other activities showed us the rigors of being in veterinary school. People told me, "Oh, you can do this." They provided interpreters and gave me exposure to all sorts of situations. It was a preview of what veterinary medicine might entail. We learned about different fields of veterinary medicine and gained exposure to a variety of veterinary situations. The staff at MSU could see how I approached various situations and how I could go through the program with interpreters. It gave me a fabulous background, and I believe that they could see that deaf people could actively participate. Looking back now about when I applied to school and went through the interview process, I must say that I didn't believe my deafness would affect anything that I would do there.

I was accepted into the program. At one point I sat down with the dean to discuss some of the faculty's concerns. They were wondering how I would listen to the breathing of the animals. And, you know, I as a deaf person just assumed I could do anything. I would get along just fine.

It was difficult. I had to confront some problems head on, but everything did work out to the best. For vet school, I had some problems with accessibility. The program was very interactive, and I had to be involved a lot in discussion groups, and obviously there were issues there. There were also some vocabulary issues that occurred. While I had interpreters during the first year, there were some problems. I learned a valuable lesson. While my classmates and professors looked at the interpreters and thought that they were doing a great job because they were signing and it "looked" great, the interpreters were actually missing or misinterpreting a lot of what was being said.

It became so much more work to try to sort things out that I finally gave up using interpreters and switched to CART instead. The benefit of using CART is that this is something that hearing people can evaluate fairly accurately, because they can read what is being typed. I ended up having a similar problem with CART that I had with interpreters – the information that I was getting was often wrong, but this time my classmates could read the notes for me and tell me how much I was missing. It turned out I was only getting about 40% of what was going on in class and lectures with CART. Using CART also didn't work well in the barns! I stopped using CART at that point and went through the rest of my schooling without any accommodations. It was really difficult in situations like surgery. I had to do a lot of reading to compensate, but I missed a lot of the little things that you can't learn from the books.

Michigan State's vet school has a large number of foreign residents (people completing advanced training in their specialties), and I really enjoyed working with them. They were often more patient with me than my American colleagues were. They took the time to explain things to

me, write notes for me. I think that their experiences struggling with another language made them more understanding of how it was for me. I really enjoyed working with those residents, I learned so much more from them than I would have learned otherwise. So, I was very lucky that MSU really encourages participation from international students; I felt a spirit of camaraderie with them.

Martha Smith

I'd like the panelists to make a few more points, and touch upon some of the topics that might be raised by faculty. They may be concerned about patient safety. Some may raise issues about having students participate in an intensive training program when they doubt their ability to become employed in the field. Other concerns may be related to doing your job effectively. Please also describe some of the strategies you use to do your job successfully.

Dr. Beth Marks

Regarding patient safety, I remember when I was doing my post-doc at the University of Illinois and my advisor told me about a wonderful article for me. It was in a nursing journal of education and was about the ADA. The focus of the article was on the deaf or hard of hearing student, and included stories of working on a clinical floor and safety issues. It was such a mind shift for me because I had worked as a nurse in a variety of settings and had already gone through my Ph.D. program in nursing. In all those years, I never thought about my hearing loss as a liability. Growing up in the mainstream, I didn't have a lot of deaf and hard of hearing friends. It was usually just me. I read the article over and over again, almost to the point of memorizing it.

I still am kind of shocked that patient safety is even an issue for health care providers. When I was a practitioner, one of my strategies was to tell people exactly what I needed. For the most part, people needed to speak directly to me and not speak behind my back. If they did that, they learned quickly that it wasn't effective in getting my attention. I guess I believed that if people wanted to talk with me, they wouldn't yell or do obnoxious things to get my attention. So I didn't really have many issues as a practitioner. I don't believe that safety is anymore of an issue for me as a nurse than it is for some of my other colleagues with whom I worked on the floor. They have been much more likely than I was to ignore patient call lights, to ignore machines going off, etc. I was always so hyper-vigilant that I would attend to things like those. I'd pace up and down the hallways to make sure I didn't miss anything.

Dr. Michael McKee

I agree that patient safety issues are not a big deal, at least from my standpoint. From a student perspective, I really think that it's beneficial for the student to be enthusiastic. I was really very excited about medicine and I thought it was a privilege. Having that kind of enthusiasm will help you get through difficult situations. You will be more willing to tolerate certain situations that come up, and hopefully, will get them addressed. But at the same time, you have to be knowledgeable about accommodations in order to describe what you need. I knew that I was the first deaf student that the University of Florida Medical School had ever had, so I figured that issues would come up. It wasn't anyone's fault, but at the same time we needed to tackle them head-on. The faculty needs to be aware of things, and the student needs to participate in increasing awareness.

There were 120 students in my medical school class, and I was very willing to talk with them. I felt it was an honor to be there, and I tried to take advantage of the opportunity to teach every one of those students. Now there are 120 doctors going into practice who have a greater awareness of disabilities and patients who have hearing losses. I'm hoping that this will start some sort of a ripple effect. There will be a few bad apples, and I did meet a few of these myself. It's very important to have a network with others who will root for you, cheer you on, and offer you solid solutions to issues you face.

Now that my residency is almost finished, I already have a job lined up. So employment hasn't really been an issue for me. When I started planning my residency, I basically was honest about who I was. I was very excited about medicine and I think they picked up on that. I told them what I had to offer and what I would need. I think I was very honest and upfront about everything, and that helped resolve some of the uneasiness that some of the people may have felt. I enjoy working with people and I think that carried me through. It's ironic, though, when I look back at medical school. I never really had problems with any of my patients. They seemed to enjoy working with me, and I got good reviews from them. The only people that I had difficulty working with were the doctors themselves. If you consider medicine, we're serving a patient population, and that should really be the main point. I thought it was ironic that the physicians were the ones concerned about patient safety and patient satisfaction, and that never was an issue. Most of the faculty learned that quickly.

Dr. Danielle Rastetter

Patient safety is a concern for everybody. I hope this won't come as a shock for some of you, but veterinary medicine is a bit different than human medicine. We don't have all of the equipment that human medicine has. It's not unusual during surgery with gas anesthesia to have someone watching the animal's chest rise and fall. We always don't use EKG machines or Doppler. I was lucky that I chose clinics that had some of the monitoring devices that supplemented what I might miss. You can turn up a Doppler pretty loud, and I could hear the heart pulse. In some cases, I could put my hands on the animal and feel it. Part of it is training the staff with whom you're working. They know what they can do to help me.

I also think that it's important to emphasize that transition periods in jobs are very difficult. I've had two "real" jobs and I know that the first year is always the hardest. A lot of the people with whom you work haven't worked closely with someone who is deaf or hard of hearing. Basic communication issues come up again. Because you're out of school, you need to handle this yourself without being able to bring in the university's disability counselor anymore. You need to learn how to advocate for yourself.

The other thing about veterinarians is that we have to worry about our safety! Hopefully, physicians don't have their patients biting them. *(laughter)* So I learned body language very well. I'll be the first one to put a muzzle on a dog. I'm not going to take the risk for myself or for anybody else.

Dr. Bo Byun

I have been bitten once! *(laughter)* I had my thumb in the way and I told the patient not to bite. The patient didn't understand me and bit me! Now I use a guard so I can't be bitten. I use it for my safety and for my patient's safety.

Naturally, safety is a concern for everyone. Things aren't perfect, but we do our best. We sometimes find ourselves in dangerous positions because our jobs require that. There are things

that can injure patients and other thing that can injure practitioners. We have to take courses to help review patient safety. Our re-licensure process requires this. The staff that we work with also addresses patient safety. Dental assistants and dental hygienists must be certified in order to do certain procedures.

Raylene Harris

I work with patients in a variety of settings, including the psychiatric emergency room at the Strong Memorial Hospital, and at a psychiatric inpatient hospital. The Deaf Wellness Center is located in the Strong Memorial hospital, and the hospital serves both hearing and deaf patients. The psychiatric emergency room is a place for patients who come in for a variety of psychiatric reasons including being a threat to themselves or others. I did a rotation there and worked with patients with an interpreter, and my job was to get the basic information from them during a clinical interview. Most of the patients were there to get help, and it did not make a difference to them that I was deaf. There was not one time that they brought up concerns regarding my deafness.

Doing my internship at the Deaf Wellness Center has been a wonderful situation for me, as they provide me with the training and accommodations that I need to work on other rotations with hearing patients. Patient safety is not compromised because of my deafness, because the interpreters I work with at the hospital are highly trained in psychiatric settings and we make a wonderful team. There have been some times that my lack of experience working with hearing patients through an interpreter was difficult for me, and the interpreters have helped with that due to their previous experiences working with psychiatric patients in a hospital setting with previous hard of hearing interns and deaf patients. With the team that I have there, I feel much more confident working with hearing patients than when I first came to the University of Rochester Medical Center.

Dr. Kim Dodge

I remember when I first sat down with my dean, and there were concerns about whether or not I would be safe with some of the animals in my care. Maybe a horse would kick me or maybe I would get bitten, but I wouldn't hear any advance warning sounds. Well, sometimes my mouth gets me in trouble, and I asked, "But if a horse is planning to bite or kick you, how would you be forewarned?" (*laughter*) Obviously, the horse isn't going to say, "Excuse me, but I am going to kick you now." It's just going to rear back and kick you. Their job was to teach me how to handle animals safely, and my job was to learn those things. We need to think about clues that let us know that we're in imminent danger. I pick up safety tips from my co-workers and notice their reactions. We need to keep the working environment safe for everyone involved, period. Nothing more, nothing less. Hearing is not the issue; it's doing our job correctly that's the paramount issue.

Martha Smith

One of my favorite stories was from a deaf nurse. When she was doing a clinical rotation in the emergency room, someone asked her, "How are you going to know if they call a code? How will you know if there's an emergency?" She responded, "Well, when you see people running down the hall, doesn't that tell you something?" (*laughter*)

We have time for a few questions from the audience. Are there any?

Audience member

I apologize if I missed this, but I've discussed the issue of listening to lung sounds with my sister who's a veterinarian. I've also interviewed a veterinarian in my area who is hard of hearing, and she also brought up the same issue. How do you address it? Is there special technology to amplify the sound or are there ways other than listening to learn information about lung sounds?

Dr. Kim Dodge

I can't hear at all, so it's not even an issue for me. I observe my patients. I've taught myself to feel and do things tactilely. I worked hard to develop a technique that would work for me. In school there was always someone around who would assist me by describing the differences in the way the patient was breathing. I learned to feel everything going on with the patient: the vibrations, any raspy qualities, etc. I learned different approaches with different animals, even with sheep that are very woolly.

Dr. Danielle Rastetter

There are many different types of stethoscopes available. Please understand that different stethoscopes work differently for each person. Don't go out and buy the same one for all of the deaf and hard of hearing students because it may not be the best one for each individual. Becky Morris talked about stethoscopes in her presentation. Buying a new stethoscope is similar to what I do when I buy a new phone: I keep a list of different stethoscopes and buy about five of them. I try them all and see which one works best for me, and send the rest back.

Because I now have a cochlear implant, I'm trying out a new stethoscope. Every time we get a patient with pneumonia or asthma or a heart murmur, my boss calls me in because he knows that I want to listen to it. Because my equipment has so much amplification, I've actually picked up murmurs that he missed. More than anything, it's important to work with other people in your group and ask for help when needed.

Martha Smith

From what I hear around the country, one of the most common questions asked of deaf and hard of hearing students in health sciences programs is, "How do you deal with stethoscope issues?" The answers that Danielle and Kim gave rang true: no one works in isolation. People work with teams. It doesn't matter if someone has a hearing loss or not, working with team members is very important. People help each other. They gather information from a variety of sources. Listening to lung sounds is not the only factor in making a diagnosis. All of the information gathered plays a part in making a diagnosis. It's not uncommon for people to zero in on one aspect, like stethoscope use, when talking about students who are deaf or hard of hearing. That's isolating one piece of the process and no one works that way.

I'd like to thank all of our panelists for participating today. We're glad to have had the opportunity to share information and experiences with you.

A Model for Success of Hard of Hearing Students in a Synchronous, Internet-based Graduate Program

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Abstract

As more and more college courses are offered over the Internet, the need for information describing how to provide accommodations to students who are hard of hearing (HOH) or deaf is important. Although there are several college programs and thus quite a bit of information available regarding support services for asynchronous courses, there is not as much information about synchronous courses. The Rehabilitation Counselor Education (RCE) master's program at Utah State University (USU) provided real-time Internet-based accommodations for an HOH student starting fall semester 2002. Presented in this paper is an illustration of a model for providing accommodations. This model can be applied in a variety of learning situations for students with a broad range of disabilities.



Definitions

It is necessary to clarify the difference between synchronous and asynchronous Internet courses. According to the glossary page at E-learningGuru.com, asynchronous learning or education is, "A learning program that does not require the student and instructor to participate at the same time." This may include self-paced tutorials or threaded discussions in which an instructor posts a topic in a discussion group and students post their responses at any time. Synchronous learning on the other hand is defined as, "A training program in which the student and instructor participate at the same time." (<http://e-learningguru.com/gloss.htm>, May 2004) This includes live chats with the instructor and students typing comments back and forth to one another; or, as in the case of the RCE program, a live, streamed audio and video lecture with a chat where students ask questions and make comments.

The terms, distance education and distance student, are used in this paper to refer to students accessing RCE classes via the Internet. In reality, this terminology is more often used in general terms to refer to any type of distance education—from students taking classes using traditional technologies, such as sending materials back and forth through a postal service, to those taking synchronous or asynchronous Internet-based courses. Please note that the terms captioner and transcriber are used interchangeably throughout this article. Although, it is understood that captioners typically accomplish word-for-word captioning, while transcribers accomplish thought-for-thought transcription.

Background

In 1989, the RCE program started with a grant from the Department of Education's Rehabilitation Services Administration (RSA) to educate rehabilitation counselors in Region VIII (North Dakota, South Dakota, Montana, Wyoming, Colorado, and Utah). Since then, the student population has grown to include individuals from all over the U.S., Canada, and a few countries overseas. A distance education model was followed in designing the program that incorporated three main components for each distance class: live lecture, supplementary video, and other support materials such as textbooks and course readers. As indicated, this paper addresses the live component of the model.

From the outset of the program, it was important, as a matter of convenience to non-traditional students who typically hold full-time jobs and have family commitments that students participate in the live component of class from their homes or offices versus traveling to a group meeting place. In 1999, after implementing various delivery methods such as satellites and teleconferences, RCE learned of a virtual classroom program that included the following components: streamed audio and video for the lecture, a chat for student questions and comments, and a slide presentation feature to accompany the lecture.

Over the years, RCE has been highly committed to providing accommodations to students with disabilities. An average of 37% of RCE students has disabilities. (Since rehabilitation counselors work with clients who have disabilities, it is natural that some of these clients are attracted to the profession of rehabilitation.) The USU program works closely with the students who have disabilities and with the Disability Resource Center (DRC) on campus in order to provide accommodations. However, prior to 2002 the students who were HOH or deaf were on-campus and not distance students. Therefore, accommodations provided were standard and included interpreters, note-takers, and FM systems.

In the summer of 2001, RCE received its first inquiry from a prospective distant student who was HOH. Initially, faculty and staff addressed these concerns: How can RCE accommodate a student who is HOH without compromising (1) its successful and proven model, (2) the integrity of the live, synchronous courses, and (3) the student's level of interaction? The program set about to answer these questions and the model started to take shape.

Model Development

Organizing the model chronologically, in the order that tasks are accomplished, appears to be the most functional approach in which to present and apply the model. Using this chronological model, there are three distinct stages: *Before*, *During*, and *After Classes*. (See *Figure 1: The Model*.) Each stage will be discussed in order.

<i>Before Classes</i> Consider: Requirements of all Needs of student Skills of student Establish: Responsibilities of all Implement: Training/orientation Technology	<i>During Classes</i> Ensure: Participation of all Support Communication/ collaboration Accomplish: Formative evaluation	<i>After Classes</i> Accomplish: Summative evaluation Model refinement
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Figure 1: The Model

Before Classes Phase

This first step in the model is the most critical. If requirements cannot be met by all of the entities involved, then there is no reason to proceed through the process. Requirements may be extensive and include the following:

- Consider graduate school requirements. Does the student meet these requirements? If not, can/should an exception be granted?
- Consider DRC requirements. What documentation does the university disability service provider require? Does the office have the documentation it needs, or is it possible to obtain the needed documentation?
- Establish program technology requirements. Does the program have minimum computer hardware requirements for distance students? If so, does the student have or can the student acquire a computer that meets these requirements?

At this point in the process, as the university's disability service provider prepares to invest in a new or upgraded service for students with disabilities, it is important that the groundwork has been laid to gain administrative support. Although universities are required by law to accommodate students with disabilities; the process may be easier if there has been prior administration advocacy from the college, department, and disability service office.

When these university requirements are met, the next step in the process is to move to the top of the list in considering the needs of the student. Student needs, of course, include finding specific accommodations that work not only for the student, but in the case of RCE, address the questions that were asked in the previous section. For our new HOH student, it was mutually determined that the best accommodation was a real-time captioning service that would allow the student to follow the lecture and also participate in the live class chat with other students. In RCE classes, student questions and comments may either be typed directly to the instructor or in response to other students' questions/comments. Simply providing an audio or video recording of the class was not considered to be adequate accommodation because students with hearing impairments cannot respond to the classroom discussion as it is taking place.

As student needs are addressed, specific student concerns may arise. With the RCE program, it is interesting to note that in addition to typical concerns of most master's level students such as, "How will my disability affect my participation in courses?" and, "How will I balance my family and work obligations with school requirements?" there are other concerns associated with the Internet-based technology. They include trepidations such as, "How do I use all this technology?" "How do I communicate during class and after class with professors/students?" "How will the professors and other students know who I am? (e.g., will I be just a nameless face?)" An additional question might be, "How will I know who my classmates are?" Answering these questions and offering encouragement to the student are vital to the success of the entire process.

At this point, the technological skills of each student are assessed and gaps in required skills are filled. For example, does the student have the basic computer skills to use the software? If not, what type of training and/or orientation will be necessary? Does the student have access to technical support from his or her home base? In addition to evaluating the student's technical skills, it is important to evaluate skills such as communication. Is the student comfortable and proficient with English? If not, what needs to be done so professors and classmates are sensitive to limitations? Does the student offer information freely or is some

encouragement necessary? What is the student's communication preference for receiving information outside of class—TTY, phone, e-mail, web-cam, or some combination? Besides giving information to the student, it is advantageous to utilize any knowledge that the student may have to facilitate the process. For example, this incoming RCE student had considerable experience with various up-to-date accommodations and technology for individuals who are HOH or deaf. Therefore, the technical staff was able to take advantage of this knowledge.

Some steps in this model occur simultaneously. One such example is the clear-cut definition and allocation of the responsibilities of everyone involved—students, captioners or transcribers, professors, technical support personnel, etc.—while, at the same time, implementing the training and technology. Establishing responsibilities of the various individuals involved can be quite extensive. The following is a brief outline of the responsibilities:

- Program personnel design and schedule the software orientation. This includes orientation to the virtual classroom software and the captioning software, if they are separate programs.
- If the student's computer does not meet specifications, the student upgrades computer equipment and downloads required software.
- Transcribers update their computer equipment and ensure sure their needs will be met in the classroom (i.e., is there access to an Internet connection?). They should make sure that software licenses on their computers and the student's are up to date. There needs to be a system to archive files and send them to the student. Finally, transcribers are responsible to learn class vocabulary, such as definitions of terms utilized in the coursework. It is imperative that the transcriber relays accurate information because the HOH student will be using the transcript to complete assignments and study for exams.
- Professors need to share course information with the transcribers such as syllabi, textbooks, suggested readings, and web-based course information in order to enable transcribers to gain familiarity with course vocabulary and profession-related terminology.
- Technical support personnel need to be prepared to devise solutions and alternatives to problems that may arise.

In the *Before Classes* phase, the second to the last step is implementation of technology. It is imperative that field testing be conducted well in advance of the start of classes for at least two reasons. First, if more than one service technology is being evaluated, a decision regarding which service technology best meets the needs of both the master's program and the student will become necessary. Second, if any problems or questions arise, adequate time will be required in order to address them. If problems are not addressed prior to the start of classes, course delivery to all students may be interrupted. If possible, the student should be involved in field testing, especially if he or she is comfortable and competent with using the various technologies. After a service technology is selected and purchased, it is important that everyone who needs it has it installed on their computers before proceeding to the last *Before Classes*' step.

How does one go about finding a service technology? Contact national organizations or other institutions that may have experience with the accommodation. For example, RCE contacted PEPNet (Postsecondary Education Programs Network, <http://www.pepnet.org>) since they have experience with Internet-based video conferences that include live captioning. RCE also contacted Tech Connections (<http://www.techconnections.org>), a non-profit organization that provides information about a variety of assistive technologies.

Finally, a short time before classes start, any necessary training or orientation to the new technology should be accomplished. All individuals should be included, such as the student, class facilitators, instructors/professors, and captioners. For the RCE program, the orientation included an introduction to both the virtual classroom software and the captioning software. At the conclusion of the orientation, all questions are answered and everyone is ready to start class. To summarize the *Before Classes* phase of the model:

- Answer student questions.
- Coordinate software/hardware and work out any technological problems.
- Assure everyone is “on the same page.”

During Classes Phase

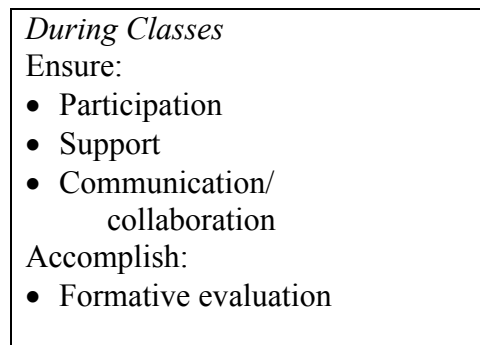


Figure 2: During Classes

As with most classes, student participation is essential in order for synchronous on-line courses to be successful. For professors, this means that they may have to adapt their teaching style to minimize some of the vagaries of the technologies. For example, one of the RCE professors has a rapid rate of speech. Therefore, this professor slowed down his delivery in order to allow the captioners to keep up with him. Another example with the RCE program is the delay that distance students experience from the time the professor says something to the time distance students actually hear and see it. (The delay varies and includes time for compression and decompression of the audio/video signal, time for slow connections, and Internet traffic.) The delay is typically only a few seconds, but this delay can be substantial, at times more than 20 seconds. To adjust for the delay, professors, instead of asking for questions and then immediately proceeding if there are none, ask for questions and pause for about a half minute. This not only adjusts for the delay, but gives distance students time to start typing their question into the chat room.

Providing adequate student support also helps ensure student participation. Support should be provided both during and after classes. During RCE classes, there is a separate chat to which students can be transferred to if they are having technical problems. While in the technical chat, students work one-on-one with a technician who walks them through whatever they need to accomplish in order to get back into class. The RCE technician attempts to return students to class as quickly as possible; therefore, some solutions may be stop-gap. Although while in the technical chat, students can still see and hear the lecture and/or read the captions, it is difficult to keep track of all the input. If students miss something while they are in the technical chat, they can go back and read the transcript later and/or listen to the lectures, which are recorded and posted on a course web page. Students may also call the technician during class. However, most students prefer using the technical chat.

After-class support can be more extensive and complete than the stop-gap measures that may be necessary during class. This after-class support may be accomplished over the phone, via e-mail, or using other communications methods with which the student is most comfortable. In addition, support includes providing students with class materials in a timely manner so that they are prepared for each class. For example, RCE has course pages that include copies of the PowerPoint™ slides that professors will be using during each class period, contact information for professor and technical support staff, and, as mentioned, recorded lectures. Immediately after classes, while still connected to the Internet, captioners e-mail class transcripts to students who need them. This may include students with learning disabilities in addition to the student who is HOH.

One final note on support: It is important to stay on top of technical issues, not only actual problems as they arise, but also potential problems. Have technicians brainstorm possible problem scenarios and solutions before hand. Such a proactive orientation allows easier and faster resolution of problems. Regardless of how well prepared a program is or thinks it is, issues are going to come up once classes start.

One way in which to stay on top of technical issues is through communication and collaboration—the next step in the model. This may well be the most important step. Communication and collaboration are essential throughout all phases of the model, although they first appear at this mid-point in *During Classes*. Whoever is driving the technologies should be the force behind communication. In the RCE master's program, the technical support coordinator has the responsibility to choose and maintain the technology and, therefore, it is she who provides the communication framework. Communicate with everyone—the student, captioners, professors, and technicians. Ask questions; make sure everything is working in the way it should be, that people are getting the information they need, that the professor is comfortable with the classroom situation, and that the technology is working for the student. Telephone, e-mail, follow through, and be persistent in obtaining needed, relevant information. This is where understanding the preferred communication methods of the student, faculty and staff provide returns, and understanding communication styles of each individual proves valuable.

Carry communication a step further and collaborate. When implementing something new, such as this captioning technology, the individuals involved will usually have ideas on how to improve the process. Including people in collaboration allows them to feel a part of the process. Involvement leads to commitment and helps ensure success.

The final step in this phase of the model, involves completing a formative evaluation. Something informal, such as a meeting at the end of the first semester, is probably adequate. If possible, involve everyone in the meeting. If someone is unable to participate, as in our case with a distance student over 1,000 miles away, it is important to solicit his or her input in order to be part of the formative evaluation. Use suggestions and improvements to refine the model, and, if necessary, generate specific guidelines. For example, in order to facilitate the captioners, guidelines were created outlining who was responsible for each task and the timelines (i.e., class materials are forwarded to the captioners at least two weeks before classes start, and captioners review the materials before classes start).

A summary of the second phase of the model is very simple: Identify problems and find solutions.

After Classes Phase

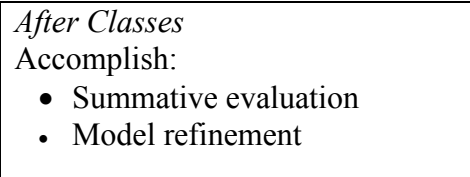


Figure 3: After Classes

Each semester brings new questions and challenges. For instance, some classes require group work, which necessitates finding a mode of communication that works for all group members. Accomplishing a summative evaluation at the end of the school year makes it possible to incorporate observations and insights learned throughout the process into the model. The final evaluation can be informal, such as another meeting; or the final evaluation can be formalized, such as a questionnaire or interview. Regardless of the method chosen, the information garnered from the evaluation should be compiled and used to refine the model. As time allows, the model may be cyclic, with each iteration fine tuning the process. As the RCE student involved in the process, Twyla Niedfeldt said this about the model, “I think that the success of our model is a result of all parties being pro-active, creative, and flexible.”

Summary

Certainly each situation for accommodating students with disabilities is different. Capabilities and experience of all students vary widely; technologies change and evolve faster than most people can track, and university courses require updates and revisions each time they are taught. However, each step of this model can be generalized to work in a variety of situations, although the experience and examples provided here were specific to an HOH student and a particular method of course delivery and accommodation. As mentioned earlier, good communication has been key to the success of this model and the success of the student for whom the model was created.

Maneuvering the FM System Maze

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Abstract

There are many challenges facing disability service providers who provide services to students who are hard of hearing. Choosing an assistive listening system doesn't have to be one of them. Not all assistive listening systems are the same and the choice of a new system for a student will depend on that individual's hearing needs and the hearing aids they use. Also, while your first priority is to make the classroom accessible, you will also need to consider activities outside the classroom.

Become comfortable with the technology that is available. We'll cover all the major manufactured systems. Understand how to use an assistive listening system to enhance hearing aid performance. We'll discuss the key options on hearing aids and cochlear implants that interface with assistive listening systems. Learn to gather the answers you need to choose the most appropriate assistive listening system for a student.



Background

Many students have no idea what an assistive listening system is or how it can benefit them. This is especially true of adult students. Often the disability service provider is the first professional to ever introduce the technology. Many disability service providers learn about the technology by 'the seat of their pants' as they accommodate a student for the first time. There is confusion in knowing how to gather the necessary information in order to make a wise choice of an assistive listening system.

This presentation focuses on students who are hard-of-hearing, wear hearing aids and can use an assistive listening system. We'll focus on how important the interface between the hearing aid and assistive listening system can be for effective use.

The outline below summarizes basic concepts in order to prepare for a deeper discussion.

1. Assistive listening systems enhance hearing aid performance in specific situations.
2. Types of assistive listening systems (we focus on FM systems).
3. Basics of hearing aids and cochlear implants.
4. Listening options, how the FM system gets the sound to the ear.
5. FM systems available and the all important microphone options.

How an Assistive Listening System enhances hearing aid performance

Hearing aids generally work best in one-on-one and small group situations. The classroom poses challenges to a hearing aid user; distance from the speaker, instructors who

move around while speaking, reverberation, room acoustics, trying to follow a group discussion and background noise. FM system use can overcome these challenges.

Classroom lecture in mid-size rooms can be difficult for a student who wears hearing aids. While they can sit close to the front to aid in speech reading, it can be difficult to take notes at the same time. Add an accent, facial hair or movement while speaking and the person with hearing loss may need to work harder to just hear the sound, much less process what was said.

Classroom lecture in auditoriums or lecture halls can be difficult because of the size of the room. Even favorable seating in front may not be close enough just because of the room size. Acoustics and distance from the speaker can interfere with the ability to understand speech.

Classes with interactive group discussions can be difficult because it is challenging to hear where the sound is coming from and what is being said and by whom. The student must be able to hear the instructor as well as spontaneous discussion from the class. This situation can even be difficult for a student who has normal hearing in one ear and poorer hearing on the other side who otherwise has few problems.

Special events in auditoriums and gymnasiums can be difficult because of the size of the facility and room acoustics. These are generally more crowded venues with a greater degree of background noise.

Assistive Listening Systems

All assistive listening systems use a similar format. The instructor wears a microphone that ‘transmits’ sound to a student. The student ‘receives’ the sound signal. Assistive listening systems vary in how they deliver the sound. The receiver sends the sound to the ear by a variety of listening options.

An FM system uses radio frequency to get the sound from the transmitter to the receiver. A personal FM system uses a transmitter worn by the instructor and delivers the sound directly to the receiver. A large area FM system works with the existing PA system to pick up sounds from all the microphones tied to the PA system and delivers the sound directly the receiver.

Infrared systems work the same way as an FM system. The system sends a signal from the transmitter to the receiver except that it uses infrared light beams to carry the signal instead of a radio frequency. The ‘emitter panel creates the signal to the receiver.

A Soundfield system uses either FM radio frequency or infrared light beam to deliver the signal from the instructor’s transmitter to a portable speaker to create a ‘mini’ PA system.

Induction Loop systems deliver sound from the transmitter’s microphone to a loop of wire that is placed around the room. Any student sitting within the loop can turn on their hearing aid telecoil to pick up the ‘induction’ signal for the hearing aid to receive it.

Basics of Hearing Aids and Cochlear Implants

Hearing aids and Cochlear Implants come in different styles and options. One of the most used options is called the telecoil. The telecoil is a loop of wire within the hearing aid or cochlear implant BTE case that will pick up an electromagnetic signal and convert it to sound. When a person flips on the telecoil switch, the hearing aid’s microphone is turned off so that the sound being picked up is the electromagnetic signal. Induction is the term for transporting the sound signal to the hearing aid’s telecoil.

Only in-the-ear (ITE) and behind-the-ear (BTE) aids have the telecoil option. One BTE speech processor has the telecoil option. Another option for BTE and CI users is direct audio

input (DAI). A connector (called an audio shoe or audio boot) snaps onto the bottom of the hearing aid. It allows a cable to run directly from the FM system to the hearing aid.

FM System Listening Options – How they get the sound to the ear (or hearing aid)

FM systems have various listening options available to effectively get the sound to the ear, hearing aid or cochlear implant.

An Earbud is good for a personal listening option for those without hearing aids. It delivers good sound because it sits down into the ear canal. There are single and dual earbuds.

Headphones are good basic option for those with no hearing aids (and mild loss) and for in-the-ear hearing aids without telecoils. The sound to the headphones doesn't need to be loud, it is just delivering the sound so that the hearing aid can process it.

A Stetoclip is another good option for those without hearing aids. It looks like stethoscope eartips. It is more sanitary because it has silicone eartips.

An Earhook is basically half of a headphone. It is more discreet and will bring sound to one ear only. It works better for mild loss or for the need for participating in group discussions.

A Neckloop is a loop of wire placed over a user's head that hangs around the neck. It creates the sound signal that a hearing aid telecoil can pick up. There are no wires from the ear to the receiver. It uses induction to process the sound signal. Only hearing aids with telecoils will benefit. A down side to a neckloop is that you can't hear your own voice or those around you because your hearing aid is turned off when the telecoil is on.

A Silhouette is a wafer-thin earpiece that slips over the ear and hangs directly next to a behind-the-ear hearing aid. It can be more effective than a neckloop if the person's telecoil is not strong, or if the FM system is not strong enough. It is an induction earpiece. The silhouette can also be used with one of the cochlear implant BTE speech processors that has the telecoil option.

Direct Audio Input (DAI) is a feature that only works with BTE hearing aids that are DAI capable. The audio shoe is attached to the hearing aid case. Either a cable can run from the receiver to the audio shoe, or a wireless FM receiver can plug into the audio shoe. Direct audio input is most often used for wireless FM receivers like the Microlink or Lexis or for a direct cable to a traditional FM receiver. It can be especially useful if a person has very poor speech discrimination and you want the best sound signal possible.

FM Systems and Microphone Options

There are several well-known and reliable FM systems on the market. It is important to understand some general guidelines on when each type of system will be most effective. It is my opinion that the environmental microphone option is most useful for classroom situations that include group discussion. It allows the user to have access to 2 microphones. One microphone is on the transmitter with the instructor and the other one is on the receiver to pick up sounds around the student.

Another useful microphone option is the conference microphone. This microphone is designed to sit on a hard reflective surface like conference table and pick up sounds 3-8 ft. in circumference. It performs better than setting a lapel microphone on the table. It can be plugged into the transmitter's microphone jack or the receiver's environmental microphone jack. It adds flexibility to any system.

The transmitter and receiver must be on the same FM channel. Some systems allow you only one channel. Other systems will give you access to unlimited number of channels and the

ability to match the transmitter to the receiver. These systems will give you more flexibility if you are managing many different FM systems.

Williams Sound FM Systems are also known as Hearing Helper systems. The PFM300 is the basic model that includes a transmitter with lapel microphone and a receiver with a listening option. This is an excellent system for people with mild-to-moderate hearing loss and is good for lecture situations.

The PFM350 model is enhanced with an environmental microphone on the receiver. This allows a person to monitor their own voice as well as those around them at the same time they hear the instructor. It is especially useful for hearing aids with telecoils.

The Phonic Ear Easy Listener system is a basic model that includes a transmitter with lapel microphone and a receiver with a listening option. This is also an excellent system for people with mild-to-moderate hearing loss. It does not have an environmental microphone.

Listen Technologies has an FM system that is designed for mild-to-moderate hearing loss. It consists of the transmitter with lapel microphone and receiver with choice of listening option. It does not have an environmental microphone. This system is somewhat unique in that you can press a 'scan' button on the receiver (similar to your car radio) and it will find the transmitter's frequency and lock on to it. This allows you to walk into any room and press the seek button to match up to the transmitter. The system comes in either the 72MHz or 216MHz frequency bands.

The Comtek Companion AT72 system is the next level of FM system, especially if a student uses one of the above systems with a neckloop and feels that the system doesn't seem strong enough. It is appropriate for people with moderate-to-severe hearing loss and delivers a stronger induction signal through the neckloop. The system comes in single fixed channel and has an option for an environmental microphone (called Smart Mic).

Comtek AT-216 system allows for frequency selection. This system is on the 216 MHz frequency band. It provides more flexibility with the channel availability that helps avoid interference. You simply match the transmitter and receiver frequencies. It also has the environmental microphone option.

Phonic Ear's Solaris FM system is a powerful FM system that is designed for severe-to-profound hearing loss and use with either a neckloop or direct audio input. It is frequency selectable in the 72MHz range and you simply match the transmitter and receiver frequencies. An environmental microphone is built into the receiver.

The Phonak Microlink or the Lexis wireless FM systems have receivers that boot directly on the hearing aid. They use direct audio input to the hearing aid. The new Phonak products are frequency selectable, the others are fixed channel. Both operate on the 216MHz frequency. The transmitters have built-in microphones that hang with a lavalier cord around the instructors neck. They can also be placed on a table for group discussions. These systems allow the user to flip on FM only for the instructor – or to both FM and hearing aid microphone to pick up discussions as well.

There is a question from the audience about whether the Microlink or Lexis system is a 'personal' system or one that must be made available by the institution. The only part of the FM system that is truly personal is the audio boot that must match the user's hearing aid brand. The receiver that plugs into the audio boot and the transmitter are standard FM systems. The drawback is that only students with BTE hearing aids that have DAI capability can use them by purchasing the audio boot that matches their own hearing aid.

Another question from the audience is about Telex systems. Telex has their own distributors and while I know it is a good system also, I do not have personal experience with them as I do with the others mentioned today.

A Practical Tool – What Every DSS Should Know about a Student’s Hearing Loss

I have developed a tool that is designed to ask all the pertinent questions to the new student who is hard of hearing so that a disability service provider can choose the most effective system for that student.

A standardized form is always a good way to gather data. It asks the same questions to each student and does not depend on the knowledge level of the person who obtains the data. All of the information requested about the hearing aid or cochlear implant and the options will help determine the most effective system. Especially the question about what systems a student has used before that they have found useful. Armed with these answers, a disability service provider can seek recommendations from their vendor and be confident they’ve made a good investment

This tool is available on the website www.BeyondHearingAids.com in the Disability Service Providers section to be printed for anyone to use.

In Summary

An FM system can greatly enhance a student’s listening ability and maximize the use of the hearing aid or cochlear implant. It provides a remote microphone to pick up the desired sound source and eliminate the challenges of background noise, distance from the speaker and room acoustics. Even students with mild loss or unilateral hearing loss (poorer hearing in only one ear) can benefit from the improved signal-to-noise ratio provided by the FM system.

You can contact Becky Morris at beckym@beyondhearingaids.com as a resource to questions about FM systems.

Literature and Film: A Critical Thinking Course that Leads to Lifelong Learning

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Abstract

Our literature and film courses encourage students to understand the world through multiple perspectives in order to become successful, independent and open-minded learners. The courses guide students through stages of critical thinking and encourage them to accept the responsibility for their learning. Many of the activities improve students' reading, writing, and thinking abilities as we teach them how to question, contrast/compare, analyze and evaluate their surroundings and what they view. Thus, they engage in meaning making activities as they connect the known (their worlds) with the unknown (new texts, new views, and new experiences). We engage students in these critical thinking activities and ask them to share their ideas about how they have become successful, accepting and independent learners.



The purpose of education, finally, is to create in a person the ability to look at the world for himself. James Baldwin

Discussing Literature and Films in our Classes

For the past several years, Jane Nickerson, Paige Franklin and Karen Kimmel have been using various media to make connections from texts and films, to history, culture, and citizenship. We encourage our students to improve their questioning strategies, analytical skills and critical thinking skills. In our classes, students are able to view the world through multiple perspectives while they learn about various social issues discussed in the films. All of these enable our students to become more independent and open-minded learners.

Blending Film and Text

We often ask students to read a text and then view the film in order for them to compare and contrast these two different versions of the same piece of literature. For example, students read the life of Sir Thomas More and viewed the film *A Man for All Seasons* (Zinnemann, 1966),

the story of More and his stance regarding King Henry VIII and his refusal to accept the Catholic Church's view of divorce and remarriage. The questions, "What would you have done if you were Thomas More? His daughter? The King?" are woven into the discussion. The politics between church and state and the effects on history are brought to the discussion. Examples of other films used in our classes are discussed in a later section.

SQ4R

One method that works well is to ask students before they read to survey the title and any photos to anticipate what the reading is about (SURVEY). Based on these observations, they are to develop questions they might have about the reading (QUESTION). The Questioning Strategies are a good guide to help students when they develop these pre-reading questions (see below). Students try to find the answers to their questions as they READ. Often more questions surface as they read. Students are encouraged to write in the margins or a paper next to the text. Upon completion of the text, students review what they have read. Did they answer all of the questions? Do they need more information? What kind of information? What remaining questions do they have? Finally, students walk away from the text and REFLECT on what they have read. What do they remember? What do they think about the text? Do they agree? Disagree? Was anything compelling or confusing? This reading activity approach is based on the study skill, SQ3R, developed by Frank Robinson (1970).

Questioning Strategies

As they read text and view the film students are asked to employ these questioning strategies.

Lower Level:

Memory Questions:

Who? What? Where? When? Why? How?

Higher Level:

Definitions of Terms:

What is the author's meaning of the term?

What is your meaning of the term?

Does the term change meaning in the article/film?

Generalizations:

What events led to this situation?

In what three ways does this situation resemble . . . ?

How do these events cause change?

Values:

What is said about this topic? Do you agree?

What kind of person supports this topic?

Did anyone say or do something that you wouldn't do?

Translations:

- Retell this situation in your own words.
- What kind of diagram could you use to illustrate this concept?
- How could we restate these ideas for a person from another culture?

Comparisons:

- How is this idea like . . . ?
- How does this idea today compare with ideas of 20 years ago?
- How does this idea in the U.S. compare with ideas in another country?
- Which three ideas are most alike?

Implications:

- What will these ideas lead to . . . ?
- What justification does the author/film give for these ideas?
- If these ideas or events continue to happen, what will result?

Applications:

- How can these ideas be applied to life here in school?
- How can we show from this story that we need . . . ?
- What would be necessary if we wanted to . . . ?

Analyses:

- Discuss the statement, "ASL is not a language."
- Some people think that English skills deteriorate when Sign is used, on what do they base this assumption? What do you think?

Evaluation:

- What do you think of the person or situation; why do you feel this way?
- Find the opinions; find the facts. Are the supporting reasons logical? emotional? ethical?

Improved thinking skills

Students are asked to think about what they read and see. We challenge them to think critically for each class. Critical thinking skills tap into creativity and higher level thinking skills which students need as they enter today's workforce. Dr. Wilma DeLorbe, Executive Vice President of Human Resources of Pharmacopeia indicates that one of the most useful skills any student can acquire is the ability to think critically and creatively (2004). These are the skills that enable research to continue, new discoveries to be made, institutions to grow, and individuals to lead a productive life.

To this end, in our literature and film courses, we ask students to write critiques of the films they see and the texts they read. When students complete their critiques, they contrast and compare points with film critiques from newspapers and magazines. Part of one assignment asks students to place the More/Henry VIII situation in today's context. Would the response be the same? Why or why not? What social/ethical/political situations differ today in England? in the United States?

Improved writing skills

Students are asked to write film critiques which help them hone their writing and analytical skills as they learn to become film critics. Assignments ask students to pretend that they write for *The Washington Post* or *Entertainment Weekly* and provide rationale for why people should or should not watch particular films. When students complete their critiques, they contrast and compare points with film critiques from newspapers and magazines.

Literature and Film as a domain for social issues discussion

Students in our classes are asked to read books or short stories and view films to discuss how directors tell stories. Students view a variety of films such as *Citizen Kane* (Welles, 1941), *Sense and Sensibility* (Lee, 1995), *Erin Brockovich* (Soderbergh, 2000), *Like Water for Chocolate* (*Como agua para chocolate*) (Arau, 1992), and *Road to Perdition* (Mendes, 2002). After students watch these films, they often discuss how society is reflected in them. They discuss how characters in these films portray qualities that good citizens demonstrate while other films have characters who portray qualities that are not what good citizens demonstrate. Students are asked to analyze what they read and see. We encourage them to read film critiques that have been written by professional critics and to think about how they can write recommendations for others about the films they watch. Some of the films we used in our courses are discussed in the next sections.

***Citizen Kane*.** Students are asked to watch *Citizen Kane* (Welles, 1941), and analyze the story and film techniques that Orson Welles used in his film. After students watched *Citizen Kane* (Welles, 1941), they asked many questions. How does this film portray wealthy people? Is this film really based on William Randolph Hearst's life? Why was this film almost banned from theatres? Why does Orson Welles use shadows when the reporter, Mr. Thompson, is interviewing people about Charles Kane's life? What impact does the lighting have on audience members? Students also analyze the film in depth and discuss social themes that include money, love and emotions, material goods, power, and family. When the film opens and ends with a shot of a "No Trespassing" sign outside Xanadu, the Kane mansion creates the feeling of Kane's isolation from society and his removal from interpersonal relations, which is one theme, discussed throughout the film.

***Sense and Sensibility*.** Students read and discussed Jane Austen's novel entitled *Sense and Sensibility* (1811/1995). After students watched the film *Sense and Sensibility* (Lee, 1995), they developed many questions about the film and how the themes related to society. How has the treatment of women changed since the late 1800s? What were the differences between the various social classes discussed in the novel and shown in the film? Why did people marry? Did they marry for love or money? Students also discussed many issues in the films that included morals, parallels in the lives of the characters, relationships, and social classes in English society in the early 1800s. The students enjoy looking at the differences between English and American society. They realize that ideas about women in society were completely different than they are now. Students often like Marianne, one of the women in the novel and film, as she showed that she wanted to marry for love instead of money.

***Erin Brockovich*.** Students expressed many concerns and asked questions after they watched *Erin Brockovich* (Soderbergh, 2000). They wondered what happened to all of the people who lived in the area where dangerous chemicals had been dumped and if they were they relocated. They also asked these questions: Why didn't the company deal with the problems that surfaced? Did the company end up paying for the medical bills for some of the people who

became ill? Students discuss many issues from this film that include problems that single parents face, the “little person” vs. the big company, right vs. wrong, and persistence as well as perseverance. Students enjoyed watching this film since it was based on a true story. The students were truly inspired by the film because they felt that one of the themes in the film was that all of us could be strong and accomplish something if we set our minds to it.

Like Water for Chocolate. Some of the questions asked by students after they read and watched *Like Water for Chocolate* (Arau, 1992) is as follows: How does this novel portray Mexican people? How is Mexican culture shown in the film? How is Mexican culture different from American culture? Why are the recipes so important to the main character named Tita? Why do Tita and her mother have a difficult relationship? They discussed a variety of themes for this novel and film including, society in Mexico in the early 1900s, relationships and family. Students realize that family relationships are very important in this piece of literature. Conflicts between the mother and the daughters in the story are described in detail so students can see how controlling the mother in the story is.

Road to Perdition. After students read the graphic novel and watched the film entitled, *Road to Perdition* (Mendes, 2002), they formulated many questions. How much of this is based on history? What symbols are used in the film to show good versus evil? How are the characters developed in the film as compared to the graphic novel? Before students viewed this film, they read the graphic novel and they saw how ideas were presented. When students were asked to compare the illustrations in the graphic novel to the shots in the film, they realized that many of the images seen in the graphic novel were similar to those in the film.

All of the texts and films used in our classes enable students to compare what they read with what they see in films. We also assign other texts that focus on a variety of themes related to history. The next section focuses on how literature can be used when teaching students about history and other social issues.

Literature as a domain for history and social issues discussion

Literature is a great space for history. Students are assigned texts that tell a lot about the history of America and elsewhere. “*Father and Son*” by Langston Hughes is an excellent source for racism in post slavery America in early 1900’s. While reading a history book or watching a documentary may be dry for some people, literature in text and film is an alternative way of teaching history. While racism is a large part of this paper, we mention gay issues, military history, disability studies, and more, which are also richly theorized in literature and film.

“*Father and Son*” by Langston Hughes, originally published in 1933, has been reprinted recently and can be used to discuss history and social issues.

“Father and Son” (Hughes, 1990)

Before starting to read, students

Look at the title, teacher-generated questions and the summary of the story.

Discuss what they think it will be about and share what they already know about the subject and what they want to learn as they read.

Read a brief summary of the story and history of post-slavery days in 1890’s in the South.

Review a list of unfamiliar words, “Words to Watch,” intended to aid reading comprehension.

“Father and Son” During Reading

Students read for pleasure at home. They do not answer any questions.

Students come to class and pair up with their classmates.

They attempt to answer the questions together. We assist them with general reading comprehension and vocabulary questions.

Issues in “Father and Son”

Racism

Identity crisis and skin color

Father/Son relationship

Psychology of being

A colored son of a white father

A white father of a colored son

Standing in society

History of

Sexual relations between masters and their slaves

Structure of families within the master’s household

“Father and Son” Sample Question

In the beginning of the story, Colonel Norwood acts very busy, ignoring the homecoming of Bert, even though Bert is his son. Why does Colonel Norwood do that? Do you think that he would have ignored Bert if he were 100% white?

Racism

Social standing as a mixed child

“Father and Son” Sample Question #2

Colonel Norwood feels some emotions as he sees Bert on page 212: “The Colonel took this to be his son, and a certain vibration shook him from head to foot.” 1) What is the Colonel feeling? 2) What happens when the Colonel and Bert face each other? 3) What does not the Colonel shake his son’s hand? 4) What do you think Bert feels after the Colonel refuses to take his son’s hand? 5) How does the Colonel feel after refusing to shake his son’s hand?

Psychology of Father/Son relationship

Discussing Social Issues in Literature and Films

We read a variety of writings, including:

We Two Boys Together Clinging (Whitman, 1855)

Gay issues in 1850’s

Power struggle

Born on the Fourth of July (Kovic, 1976; Stone, 1989)

Vietnam war

Disability studies (paralysis)

Eastern Sun, Winter Moon: An Autobiographical Odyssey (Paulsen, 1993)

World War II

Death and dying

“*The Lottery*” (Jackson, 1948)
Definition of “lottery”
Tradition (preservation vs. change)
Ethical issues (when is it ok to kill someone?)

Lifelong Learning with Literature and Film

All of the above ideas have been generated in our classes in which we encourage our students to become critical thinkers. We hope that our students have improved their reading writing abilities, developed their questioning and analytical strategies, and that they have learned about citizenship and social issues. The critical thinking skills that the students develop in our classes enable them to continue learning after they complete our classes. Our intention is that students will transfer and use these improved skills and new knowledge in order to become lifelong learners!

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Ownership Comes with Holding the Pen: Best Practices for Tutoring Deaf Students in English

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Abstract

Bergen Community College's Center for Collegiate Deaf Education located in Paramus, NJ, serves fifty deaf and hard of hearing students who attend courses with their hearing peers. Many of these students have a difficult time expressing themselves in written English. These students are sent to The Tutoring Center with an interpreter for remediation without any substantial improvement. Typically their papers are simply corrected for them, or they are prompted to answer questions and these responses are translated into the correct English structure by the interpreter and written down by the tutor. The end result is that the student is frustrated and has not learned anything from their time at the tutoring session and will likely make the same type of grammatical errors in the next writing assignment. This situation needs to be changed by educating the students, interpreters and tutors about basics in American Sign Language, use of a signed English system in a limited context, and the power of holding the pen.



Ownership Comes With Holding the Pen Best Practices for Tutoring Deaf Students in English

At Bergen Community College in Paramus, NJ, there are approximately fifty deaf and hard of hearing students attending courses with their hearing peers. These students are pursuing associate degrees in various areas and many hope to transfer to four-year schools. They go to class accompanied by an interpreter and have various accommodations provided for them by the Center for Collegiate Deaf Education/Office of Specialized Services. These accommodations include, but are not limited to, extended time for tests, note takers, use of a specialized computer lab, priority registration, use of The Tutoring Center, etc. Aside from these services, the students are treated very much the same by their professors as their hearing peers.

Most recently, it has been observed that a good number of the students are coming from foreign countries and have little, if any, background in the use of English. Their use of American Sign Language is weak and their understanding of the parallel structures is almost non-existent. When deaf and hard of hearing students turn in assignments in which they are asked to express themselves in grammatically correct English, the results are often disastrous. Students tend to rely on the structure of their mode of communication, either American Sign Language (ASL), or a sign system that they have combined together that doesn't adhere to all of the rules of ASL. Papers written make little sense to professors and students are quickly referred to The Tutoring Center for additional help.

“Deaf Writing” can be very confusing for a person who has never worked with this population. Professors do not know where to begin. For example, when writing about how a dog ran, a student wrote:

Dog he fast fast fast

Their target sentence was really:

The dog runs very, very fast.

When many of these sentences are connected, it is hard to understand the intentions of the student and then the student is sent for extra help.

The student now needs to set up an appointment at The Tutoring Center and make a request for additional interpreting services. The student may also be frustrated and embarrassed because they may have been experiencing grammatical difficulties for many years without any improvement. The student heads into the appointment already feeling like a failure.

During the tutoring session, there are many problems that go unnoticed. The tutor sits down with the student and interpreter and will often address the interpreter instead of the student. The interpreter will ask the tutor to look at the student instead and inform the tutor that they will sign everything the tutor says and will also interpret the student’s expressive language by voicing everything that the student signs. The tutor takes the student’s paper and begins to read and, very much like the professor, is unable to make sense of a large part of the writing. The conversation will typically go as follows:

Tutor reads: Alandra feel sad always mother never see.

Tutor asks: What do you really mean here?

Interpreter signs the question to student in ASL, or the signed system that the student is most comfortable with.

Student signs in ASL: Alandra-herself-sad sad sad why? Mother not look her.

Interpreter voices: Alandra feels very sad that her mother never seems to notice her.

The tutor then says that “*Yes, that sounds right*” and copies the new sentence on to the paper *unaware* that the student has not signed the English translation voiced by the interpreter. The tutor is convinced that the student has learned the appropriate English and moves on to the next sentence and will continue to work through the essay one sentence at a time. The interpreter is bound ethically not to interfere. This type of work frustrates all parties involved.

The end results for the student, tutor, and interpreter are not very positive. The student now has corrected grammar and will turn in work that is not his/her own. The student has not learned anything and will most likely repeat the same errors in the next situation. The student is also feeling like a failure because he/she knows he/she has not learned anything and any grade that is earned is not really something worked for. For the tutor, he/she has spent a great deal of line-by-line work with the student’s essay. This can be very tedious and time consuming. The

tutor is unaware that the student isn't learning anything. They will also see the same student repeating the same errors in the next tutoring session. Finally, the interpreter understands the communication, but is not allowed to interfere and voices his/her frustration later to their supervisor.

The main goal of our new model for tutoring deaf students in English is to improve communication, to educate the students, tutors, and interpreters about the differences between English and ASL and to increase the power students feel during their tutoring sessions. There will be orientation meetings for students, interpreters and tutors to help ease into this new model as well as increased responsibilities for students.

First and foremost is communication. Tutors must face the student and speak directly to the student and not look at the interpreter as the student. The student should be referred to in the first person and not the third such as: *tell him or her to do this or that*. The student needs to address the tutor directly to ask questions.

When the student is communicating about concepts or ideas, they should sign in the language that they feel most comfortable with (ASL, etc.). When they are working on grammatical structures, they will be instructed to sign in an English signed system to convey their thoughts and the interpreter will voice exactly what the student is signing. It is important to know that this is a very unique situation and the student will only be asked to sign in an English word order to the best of their ability in this context only. The tutor will be able to hear and understand via the interpreter what the student believes the appropriate English to be and the real work can begin.

For the tutor and the student, it is important to know that there are significant differences between English and American Sign Language as exemplified in the following table:

English	American Sign Language
Aural/Oral	Visual/Gestural
Written Component	No written component – only use of “glossing.”
Has rules of grammar	Has rules of grammar.
Subject-Verb-Object order	Time frame-Subject-Object-Verb
No classifiers	Strong use of classifiers.
Plural = add “s”	Plural = repeat sign or add number sign
Use of pronouns	Pronouns indicated by use of location.

The tutor and student will now be able to discuss some of these differences between their languages and make better sense of the student's original text.

Now that the student and tutor have established clear communication and a basic understanding of each other's languages, they need to negotiate who controls the session. In the past, sessions have been tutor-directed, but in this new model, students will assume new responsibilities that will increase their sense of control and power.

The students need to come to the tutoring session prepared with the following items: a clear understanding and copy of their assignment, pens, pencils and highlighters, extra paper, and the assignment on diskette. The student will be responsible of writing on their own paper or if they are working on a computer, controlling their own keyboard.

To help teach a specific feature, the tutor will teach the feature using examples other than the student's writing on additional scrap paper. The tutor will also ask the student to hold his/her own pen and to make his/her own changes on the work. The student will also be responsible to make several appointments for one assignment. This means that the student must get to work on their writing assignments right away.

The final piece of this project is the evaluation process. To date, we have informally evaluated students, tutors, and interpreters, but we plan to set in place evaluations that all parties must complete three times a semester. They will complete one after the orientation session, midway through and at the end of the semester. Through these evaluations we will make changes to increase the productivity level and decrease the frustration level of deaf students in English. Additionally, statistical information will be collected through the English Department and professors will be interviewed for anecdotal information. Students who participate in this project will be tracked and their grades will be recorded to see if there are any signs of improvement.

This is a very new project and is in its infancy. At this point we have identified a very real and serious problem and are in the beginning stages of collecting data. We are certain, however, Deaf students are not learning very effectively or efficiently and a new model for learning is necessary. It is only in this way that we can hope to have more students become fluent in English and move on to graduate from two and four-year schools.

Faculty, tutors, students and interpreters will be given the following brochure during orientation sessions to help clarify goals and responsibilities.

Student Testimonials:

"Working with the tutor is now a very positive experience. She asks me so many questions. She helps direct me so that I can almost figure out the answers myself. The tutor is able to pull so much good information out of me. And my vocabulary is improving, too!"

I think going to The Tutoring Center every week is helpful. It is hard work. The tutor asks me to explain my thoughts and the I have to write more. I think I understand a little better now."

I have always had trouble writing English. It takes a long time to get my ideas together. The tutor is patient and helps me organize my thoughts. Then we work on grammar."

Additional Resources:

- <http://jpepnet.org/>
- <http://p3.csun.edu/p3access>
- <http://depts.gallaudet.edu/>
- <http://www.bergen.edu/lowt>
- <http://www.rit.edu/~seawww/index2.html>



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Bergen Community College

"Ownership Comes With Holding the Pen"

Best Practices For Tutoring Deaf Students in English

Created by Beth Pincus and Kelly Keane of BCC's Center for Collegiate Deaf Education

Tutoring Center

Communication:

- Keep eye contact with student and address student directly.

Responsibility:

- Have student explain the nature of the assignment.
- Have student assess where they need help.
- Identify only one or two skills to work on.
- Remediate any skill on a third sheet of paper instructing student about: organization, coherence, clarity, grammar, etc. and allow student to apply what they have learned in their own work.

Evaluation:

- You may be asked several times during the semester to fill out an anonymous survey about your work with Deaf students and interpreters this semester.

Student

Come Prepared:

- Understand and be able to describe your assignment
- Bring a hard copy of your rough draft typed
- Bring a pen, pencil and highlighter

Communication:

- When discussing ideas and concepts, use the language that you are most comfortable with.
- When discussing grammatical features, you will be asked to sign in your best English sign system. The interpreter will voice the exact word for word representation of your signs.

Responsibility:

- You will hold the pen at all times and be the only person making any markings on your paper.
- You may need to schedule more than one tutoring appointment for each assignment that you need help with.
- Plan on scheduling weekly tutoring sessions for greater success!

Evaluation:

- You may be asked several times during the semester to fill out an anonymous survey about your work with The Tutoring Center and any progress you have made.

Interpreter

Communication:

- Interpret using student's most comfortable language during the discussion of concepts and ideas.
- Voice gloss student's language during grammar instruction.

Evaluation:

- You will be asked to fill out an anonymous survey regarding the clarity of communication between the student, interpreter and tutor.

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Using Instant Messaging (IM) in the Classroom to Facilitate Deaf and Hearing Student Interaction

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Abstract

This session focused on the process of engaging students, both in and out of the classroom, using Instant Messaging (IM) technology as the vehicle. Using laptops with participant involvement, presenters demonstrated and shared techniques they employ for establishing and monitoring in-class on-line IM discussion groups, out-of-class discussion/study groups, providing instant feedback to students as a classroom assessment tool, and for providing students with opportunities to interact with professionals at a distance through IM discussions. Perceived benefits to students who are deaf and hard of hearing (homogeneous classroom context), students who are deaf and hard of hearing in an inclusive environment (heterogeneous classroom context), and benefits to teaching faculty were discussed.



Program Summary

It has only been seven years since the AOL subsidiary ICQ filed in 1997, for a patent on Instant Messaging (IM) technology. In that short time, IM has become infused in both the business community and the social communication fabric of our society.

For individuals who are deaf and hard of hearing, the emergence of IM and digital pagers has been perhaps the greatest liberating communication technological breakthrough since the advent of the TTY. Instant messaging has evolved into a compelling “real time” communication mode for students. In fact, IM and digital pagers (as well as cell phones) have occasionally presented a distraction in the classroom, necessitating new guidelines for classroom behavior. These presenters intend to harness the technology and the inherent student motivation to use it in an attempt to improve deaf student learning and to facilitate greater interaction between students

who are deaf and hard of hearing and students who are hearing in a "real time" educational context.

Session Description

Using several laptop computers with participant involvement, presenters demonstrated techniques they have employed for establishing and monitoring in-class on-line IM discussion groups, out-of-class discussion/study groups, providing instant feedback to students as a classroom assessment tool, and for providing students with opportunities to interact with professionals at a distance through IM discussions. Examples of IM classroom "chats" in various homogeneous (all students who are deaf and hard of hearing) and heterogeneous (mixed students who are deaf and hard of hearing and hearing) instructional contexts were shared. Perceived benefits to homogeneous groups of students who are deaf and hard of hearing, and heterogeneously grouped students who are deaf and hard of hearing and hearing students in an inclusive environment (e.g., significantly reduced communication "lag" time), as well as, benefits to teaching faculty (e.g., compressed learning time) were discussed. Finally, insights into hardware and software facilitators and barriers were described.

Summary

Teaching faculty constantly strive to pay attention to emerging technologies and to experiment with classroom applications. Although in its infancy, instant messaging is proving to be beneficial in terms of fostering interactions for students who are deaf and hard of hearing that have previously been challenging to facilitate. Presenters are continuing to experiment with applications of IM technology. They will soon be recommending specific classroom applications, as well as, cost effective hardware and software technology to support these teaching/learning activities in various classroom and work environments.

A Model for a National Collaborative Service Delivery System

Serving low functioning deaf youth and adults to assist them to be meaningfully employed and function independently at home and in the community

Position Paper

May 17, 2004

Serving Individuals who are Low Functioning Deaf

Executive Summary

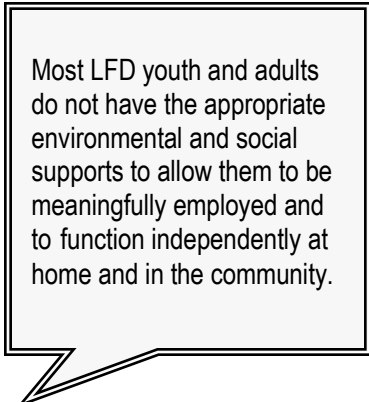
Current population estimates indicate that there are approximately 54 million Americans with disabilities (U.S. Civil Rights Commission, 1998). A report by Holt and Hotto (1994) estimated that nearly 43 percent of these individuals are deaf or hard of hearing. In fact, individuals with hearing loss comprise the largest chronic disability group in the United States today. Within the population of individuals who are deaf or hard of hearing are a group of individuals with inadequate or no environmental supports whose functional skills and competencies are considered to be significantly below average making them the most at risk and underserved portion of the overall deaf population. These individuals, over the years, have been given a variety of labels, including underachieving, multiply handicapped, severely disabled, minimal language skilled and traditionally underserved, in addition to the current label of low functioning deaf (LFD). None of these labels adequately describe the population.

The LFD population is estimated between 125,000 to 165,000 individuals. While all members of the LFD population share the common characteristic of hearing loss, this population is also presumed to experience a number of risk factors, mostly environmental, that can affect their academic, social and vocational competence. These risk factors can include any one or combination of the following: the presence of secondary disabilities, being foreign born or having English as a second language, a lack of family support, inappropriate diagnosis, substance abuse, discrimination, inappropriate education and residence in a rural or low income urban setting.

As a consequence of these risk factors and lack of appropriate environmental and social supports, LFD individuals often have limited communication abilities, experience difficulty maintaining employment, demonstrate poor social and emotional skills and cannot live independently without transitional assistance. Most LFD adults read below the second grade level with academic achievements below the fourth grade. These individuals are not likely to have high school diplomas and are typically unable to participate in college and other post secondary vocational programs.

In contrast, today the majority of social supports and services available to deaf and hard of hearing youth and adults are targeted to those individuals who are able to participate in post secondary training and education programs. These programs are not able to effectively serve individuals who are not college bound, who are most at risk, or who have been identified as 'low functioning'. Unfortunately, there is no parallel system of financing from federal, state and local governments for post secondary training at non-college or vocational programs.

The LFD population is one of the most underserved components of the nation's disability population. There are no federally-funded rehabilitation centers and few state and local resources that can effectively address the needs of these individuals. State-to-state differences with regard to policy, resources, funding mechanisms and the role of the state agencies have limited access to appropriate services for the population. Federal funding for direct services targeted to the population has been without consistent intent, continuity or clearly defined expectations. The 'musical' grants (time-limited pilot projects) for programs serving the LFD population have led to restricted eligibility and services.



Most LFD youth and adults do not have the appropriate environmental and social supports to allow them to be meaningfully employed and to function independently at home and in the community.

In addition, fees for services from state vocational rehabilitation (VR) agencies are not sufficient to address the long-term comprehensive needs of the LFD individual, and few Centers for Independent Living provide services to individuals who are deaf or hard of hearing, and, among those that do, fewer provide services to this population most at risk. The problem is compounded by differences in the levels of skill and expertise of professionals working with the population and the availability of those professionals across the country.

Federal and state efforts to serve this population have been further hindered by the lack of consistent and clear criteria for identifying LFD individuals, resulting in unreliable demographics and estimates of the population. Yet federal resources have not been available for a coordinated study of population characteristics, and service delivery methods and outcomes. Research efforts related to the LFD individual have been limited to a single five-year project.

Changes in federal direction over recent years put the population even further at risk. Today's legislative policies emphasize quick results and competitive outcomes. The focus of Congress, the current Administration and the federal government continues to move away from national service delivery systems that offer specialized direct services toward decentralized generic systems that shift service provision responsibility to the state and local level.

The Workforce Investment Act (WIA) of 1998, which reauthorized the Rehabilitation Act for another five years, creates demands at the state and local levels for partner programs, such as the state VR program, to provide core services, coordinate common functions and share costs. While the one-stop model is designed to offer a wide range of service options to the general population, the system lacks the capacity to provide the kind of specialized services required by the LFD individual.

As another example, the Ticket to Work and Work Incentives Improvement Act (TWWIIA) makes it possible for millions of Americans with disabilities to join the workforce without fear of losing their Medicare and Medicaid coverage. The legislation does this by creating new options and incentives for states to offer a Medicaid buy-in for workers with disabilities and extending Medicare coverage for an additional four and one-half years for individuals on disability insurance who return to work.

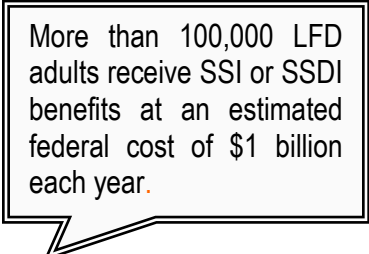
The legislation includes a Ticket-to-Work program, which enables individuals receiving Supplemental Security Income (SSI) or Social Security Disability Insurance (SSDI) benefits to obtain VR and employment services from their choice of participating public or private providers. However, the average cost of services to the individual identified as LFD is much greater than the outcome payments offered by the Social Security Administration (SSA) to the service provider participating in the Employment Network system.

The LFD student will also be disadvantaged by the ‘high stakes testing’ option that many states are implementing under the 2002 No Child Left Behind Act. Secondary schools already face significant challenges in reconciling the needs of the LFD student with the need to fulfill certain academic requirements. High stakes testing poses additional challenges by requiring schools that receive federal funds to achieve certain academic standards, including the requirement that students achieve 10th to 12th grade literacy to receive a high school diploma. In the past, deaf and hard of hearing individuals with fourth grade literacy achievements generally received a diploma. Under the new mandate, those individuals will now receive a certificate of completion, further limiting the post secondary training and employment options available to them. No new curriculum has been developed to enhance academic achievement of these students.

These legislative actions, while intended to improve quality of services and enhance the outcomes of federally sponsored programs, do not address the specific supports and services needed by individuals identified as LFD.

The challenges LFD youth and adults face in their daily lives are a result of a failure on the part of national service delivery systems to provide access to appropriate services and environmental supports that will assist these individuals to become meaningfully employed and to function independently at home and in the community.

Consequently, most LFD adults do not work and are dependent on welfare. Research indicates that more than 100,000 LFD adults are dependent on federal programs, notably SSI and SSDI. In addition, the number of LFD adults is projected to increase by 2,000 individuals each year due to the influx of new immigrants and high stakes testing requirements in public schools.



More than 100,000 LFD adults receive SSI or SSDI benefits at an estimated federal cost of \$1 billion each year.

National consumer groups, federal policy makers, researchers and concerned professionals in the field have struggled with how to best provide services and social supports to this population since the 1940s. One area of consensus among these groups is clear – the needs of the LFD population will continue to go unmet through existing service delivery systems. Now is the time to mobilize the deaf community, policy makers and federal program professionals toward the establishment of a coordinated, national approach that will assist LFD individuals who are most at risk to achieve optimal personal functioning and an enhanced quality of life through both meaningful employment at the workplace and independence in the community.

A Model for a National Collaborative Service Delivery System

When comprehensive, specialized services are provided by skilled professionals in conjunction with appropriate environmental and social supports, LFD youth and adults can become economically and socially self-sufficient and lead full and productive lives. The model for a National Collaborative Service Delivery System outlined below provides the framework for meeting that goal.

The National Collaborative Service Delivery System will build upon the expertise of service providers and programs already in the field as well as establish additional service components where necessary to ensure a full range of comprehensive services are available to the LFD population nationwide. The design for the proposed system will take into account existing model programs, such as the Helen Keller National Center and the Postsecondary Education Programs Network (PEPNet), to maximize lessons learned, replicate effective practices and build upon already established linkages.

The proposed system is based on the establishment of a National Center, which will provide national leadership and operate an on-site training and rehabilitation facility where LFD individuals and service providers can receive intensive specialized services; a network of Regional Centers which will provide referral and counseling assistance to LFD individuals and technical assistance to service providers; and development of an Affiliate Network of public and private agencies that provide services to LFD individuals at the state and local level.

Linking the activities of the National Center, the Regional Centers and the Affiliate Network through the national system will maximize efforts, reduce duplication, facilitate information sharing and improve overall consistency in the provision of services to the LFD population.

This important linkage will ensure that capacity building occurs at all levels – nationally, regionally, state-by-state and in the local community.

Through services provided at the National Center, through the Regional Centers and at the Affiliate Network level, the national system will work one on one to teach, educate and rehabilitate LFD individuals according to their specific and unique needs. For the first time, LFD youth and adults will have access to a full range of appropriate and effective services that will lead to constructive participation in the home and community, increased employability and other development pertinent to their rehabilitation.

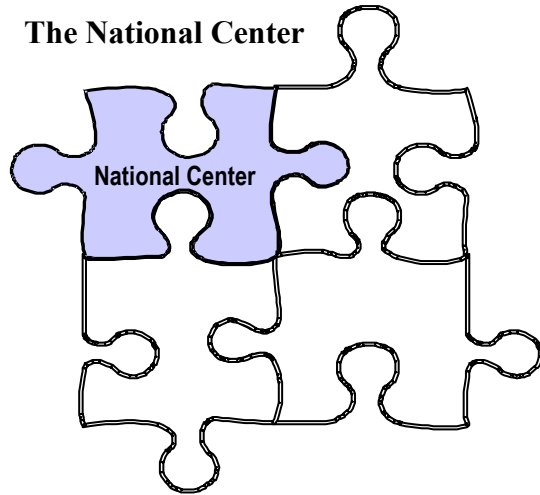
Mission

Every low functioning deaf youth and adult will be able to live and work in the community of their choice, through access to optimal environmental supports and services.

Core Values

- Equal Opportunity
- Equal Access
- Optimal social and environmental supports
- Non-duplication of resources
- Communication that is fluent, direct and defined by the consumer
- Services that are consumer directed, person-centered and emphasize consumer choice
- Multi-agency coordination and collaboration

The National Center



The National Center will serve as the headquarters and the primary point of coordination and collaboration for the National Collaborative Service Delivery System. The center will be responsible for establishing a national technical assistance delivery system; promoting research and data collection to identify population characteristics and service delivery methods and outcomes; providing technical assistance, training and outreach to service providers; and coordinating a nationwide system of direct services and supports for LFD youth and adults.

Responsibilities of the National Center will include convening national consumer groups, experts from the field, policy makers, federal program managers and LFD individuals and their families to establish service delivery priorities at the national, regional, state and local level. The National Center will also establish an LFD Advisory Board comprised of leaders in the field of deafness, service providers, national consumer groups and LFD individuals and their families. Representatives from the National Center, Regional Centers and Affiliate Network will also participate on the LFD Advisory Board. The LFD Advisory Board will work to build consensus among the deaf community and key stakeholder groups in order to advocate with one voice to local, state and national legislators on issues related to the LFD population, including the need for a permanent stable funding base.

Through its national leadership role, the National Center will establish linkages and partnerships at the federal, state and local levels to maximize efforts, reduce duplication of effort facilitate information sharing and improve overall consistency in the provision of services to the population. This will include promotion and establishment of formal, collaborative, interagency agreements aimed at improving the provision of appropriate services. The National Center will also develop policies, standards and procedural guidelines to ensure optimal levels of service are available and accessible across the entire National Collaborative Service Delivery System.

The National Center, in coordination with the LFD Advisory Board, will also have responsibility for developing a national research agenda that identifies research priorities and will lead to the development of up-to-date information and statistics on the LFD population and its needs. The center will also institute methods to evaluate the effectiveness of direct services, training and technical assistance offered through the National Center, the Regional Centers and the Affiliate Network to ensure that services are responsive to the population's needs. This will entail establishment of a national database to capture information related to individuals served, their characteristics, types of services provided and future needs. The National Center will also institute evaluation techniques to ensure processes of continuous quality improvement are implemented at all levels of the National Service Delivery System.

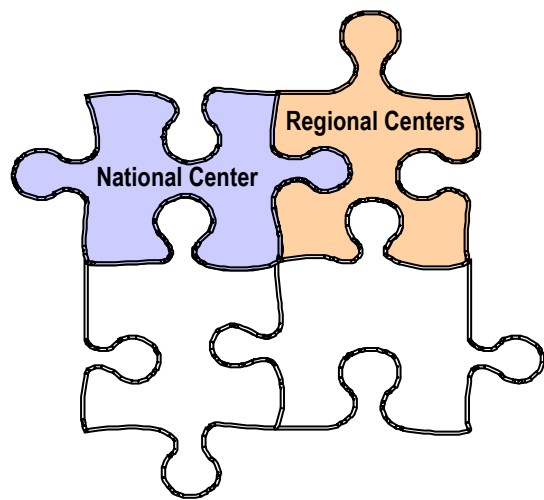
Some direct services will be offered through an on-site program established at the National Center's residential program. While the objective is to ensure direct services are available at the local level, the National Center will serve as a testing ground for new techniques in order to establish "best practices" and model service delivery standards through direct services to a small group of consumers. Those techniques and practices can then be adopted at the

regional, state and local level. Highly skilled professionals competent in linguistic and communication skills will provide direct services.

The National Center will offer technical assistance and training to the range of individuals and organizations that provide services to LFD individuals in the field. These professionals and para-professionals will learn new techniques and effective service practices through the program at the National Center that they can then take back to their local service delivery systems. The center will also provide consultation and training to consumer and parent groups, advisory boards, affiliate organizations and other private and public agencies.

To further facilitate the dissemination of relevant information, the National Center will establish and maintain a national clearinghouse of information. The center may also initiate special projects and conduct grant writing and fundraising to build a permanent funding base for the national system.

Regional Centers



Regional Centers will be established across the nation based on geography and population characteristics. These centers will work directly with the National Center to establish policy and set national priorities as well as coordinate efforts at the state and local level to ensure access to effective services for the LFD population within their region. The primary responsibility of each Regional Center will be to establish a regionally-based Affiliate Network of public and private service providers.

Each Regional Center will establish a Regional Advisory Board comprised of representatives from its Affiliate Network and other

key stakeholders in the region. In conjunction with its Regional Advisory Board, each Regional Center will conduct ongoing assessments of the specific needs of individuals, communities, and states within their region, and developing strategies of collaboration, coordination, and cooperation to meet those needs.

Each Regional Center will use funds appropriated by the National Center to establish and support its Affiliate Network, including providing seed money to state and private agencies to establish or expand programs for LFD individuals within the region. Since the geography, population of LFD individuals and existing levels of service will vary from region to region, the manner in which each Regional Center establishes its Affiliate Network, and the composition of organizations participating in that network, will differ.

Another primary role of the Regional Centers will be the establishment of partnerships at the regional, state and local levels, including partnerships with state VR agencies, independent living centers, state education agencies, local education agencies, community service providers and State Coordinators for the Deaf (SCDs). In particular, each Regional Center will be responsible for establishing a memorandum of understanding with the state VR agencies in the region to build the link between Regional Center activities and activities of the state VR agency as they pertain to services provided to the LFD population.

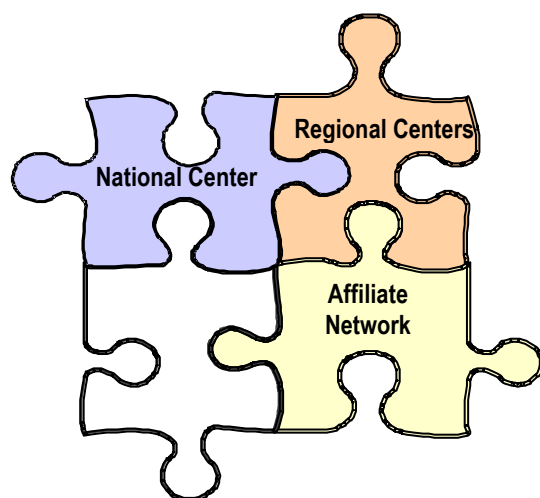
The most important responsibility of the Regional Centers will be to build the capacity of its Affiliate Network. To that end, Regional Centers will provide training, technical assistance and outreach to the management and staff of its affiliates. This will include consultative assistance in the administration of programs providing direct services, and the promotion of collaborative, interagency efforts aimed at increasing the range of services available. Regional Center staff will also provide consultation and training to employers, state VR programs, mental health workers and special education programs in developing direct service plans for LFD individuals served by those programs.

To facilitate the national systems approach, each Regional Center will network within and among the regions through the conduct of forums, conferences and other mechanisms designed to share information and identify effective practices. The Regional Centers will also conduct ongoing resource development activities, including assisting the National Center with grant writing and fundraising.

Regional Centers will offer some specialized services provided by skilled professionals with the language and technical skills necessary to effectively train and communicate with LFD individuals. Regional staff will also provide counseling, information and referral for LFD individuals and their families. In addition, the centers will work with family members and target activities to build parent advocacy skills. In addition, each Regional Center will collect and report information to the National Center to assist in the identification of individuals served, their characteristics, types of services provided and future needs.

All of these activities, including developing a “menu” of services and expanding available resources, will be based upon the needs within the particular region and focus on developing appropriate environmental and social supports for the at risk LFD population in that region.

The Affiliate Network



The Affiliate Network will build the capacity of the state and local levels to better serve LFD youth and adults in their communities. Affiliate organizations may include local community service providers, independent living centers, state VR agencies, state and local education agencies and residential schools for the deaf. The primary role of the range of public and private organizations participating in the Affiliate Network will be the delivery of comprehensive, specialized services to LFD youth and adults.

Public and private service providers will enter the Affiliate Network through a funding process established by each Regional Center. Applicants may be rated by a panel comprised of individuals from the National Center, the Regional Center and experts in the field of deafness and services to the LFD population. Criteria for funding may include ongoing coordination with

other service providers, parents, consumers and educators, and the applicant's ability to continue the services as the funding stream changes within the agency.

Examples of direct services available at the local level through the Affiliate Network may include: communication skills, emotional and behavioral modification, health and mental health services, physical therapy, independent living skills training, adaptive technology, work experience and transitional programs to prepare LFD youth and adults for the workforce and to live independently.

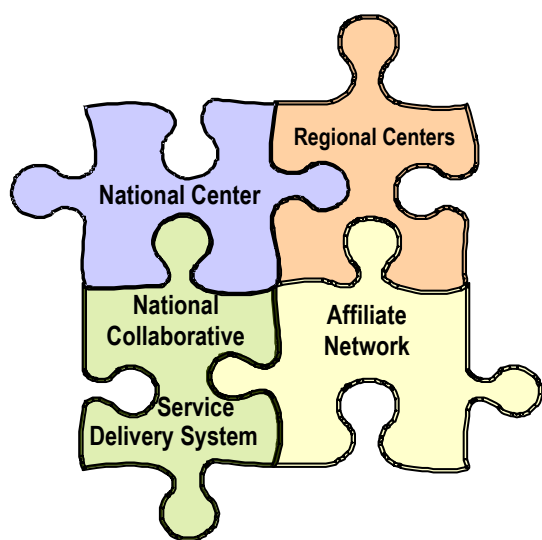
Another important aspect of the affiliate role will be the provision of employment related services. Each affiliate organization will develop a plan for working closely with local VR counselors to identify employment opportunities and services that can be provided through the VR program. Affiliates will also be responsible for securing long-term consumer support both in employment settings and within the community.

Each affiliate provider will be expected to identify the LFD population in their area and develop appropriate services and environmental supports to meet the particular needs of that population. Each affiliate will also be charged with case finding, consumer evaluations and assessments, screening and overall case management.

Because the majority of services will be provided through the Affiliate Network, affiliate members will be responsible for providing skilled professionals with the language and technical skills necessary to effectively train and communicate with LFD individuals.

Members of the Affiliate Network will be required to maintain communication and collaboration with the National Center, their designated Regional Center and the other affiliates in the region. Affiliates will also be responsible for collecting and reporting information to the Regional Center with regard to number of individuals served, their characteristics, types of services provided and future needs.

Envisioning the Future



The needs of this population of deaf and hard of hearing individuals most at risk have not been appropriately addressed for decades. It is time to mobilize the deaf community, policy makers and federal program professionals toward the establishment of a National Collaborative Service Delivery System. Through its National Center, Regional Centers and an extensive Affiliate Network of public and private service providers, the national system will provide LFD individuals with access to a full range of appropriate supports and effective services that can lead to increased employment, independence in the home and community and an enhanced quality of life.

Envisioning the National Collaborative Service Delivery System is only the first step

toward realizing this goal. Much still needs to be done to educate Congressional decision-makers and to achieve the buy-in and support of the deaf community. In addition, federal

program managers across multiple agencies will also need to work together to discuss how best to collaborate and coordinate programs so that LFD individuals stop falling through the cracks.

It is worth the journey. Experience and research have demonstrated that when comprehensive, specialized services are provided by skilled professionals with the language and technical skills for effective training and communication, LFD youth and adults can become economically and socially self-sufficient and lead full and productive lives. The “vision” of the National Collaborative Service Delivery System provides the framework for meeting that goal.

LFD Strategic Work Group

The LFD Strategic Work Group was convened by the Postsecondary Education Programs Network (PEPNet) and sponsored by the Rehabilitation Services Administration, a component of the Office of Special Education and Rehabilitative Services in the U.S. Department of Education.

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Preparing Parents of Deaf and Hard-of-Hearing Students for the Transition to Postsecondary Education

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Abstract

Deaf and hard-of-hearing students who decide to attend a postsecondary institution must make many decisions before leaving the secondary school environment. A transition plan must be established for these students to help ensure their postsecondary success. Parents play a critical role in the development of transition plans; however, they often are unprepared to play this role, and may not have the information and tools they need to assist their child through the transition phase. This project reviews current literature on the subject of parental roles and transition, and outlines a series of workshops designed to train parents on effective transition planning for their deaf or hard-of-hearing student. A training manual has been developed as a result of this research.



Introduction

Students graduating from high school experience a variety of challenges. Decisions must be made concerning whether or not to attend a postsecondary or training program. Parents must guide their son or daughter through the experience of deciding where to live, establishing financial independence, and achieving goals for the future. The time of transition is intimidating for most students; but for students who are deaf and hard of hearing, the nature of their disability presents unique challenges to the transition process. Language and communication may cause difficulties, and deficits in the areas of life skills, role expectations, and work ethic can complicate transition efforts. Parents of deaf and hard-of-hearing students may hold unrealistic expectations of their adolescents (Starnes, 2001). These parents often want to participate fully in the transition process, but they may lack the information and tools necessary to do so. Students who are deaf or hard of hearing must receive guidance from parents during the transition process in order to achieve success in the postsecondary environment. With proper guidance and training, parents will be equipped to assist their deaf and hard-of-hearing students more effectively during the transition from secondary to postsecondary education.

Purpose

This project examines current research regarding the needs of parents of deaf and hard-of-hearing students as they prepare these students to transition from the secondary to the postsecondary environment. The following research questions are addressed:

- How can parents help ease transition problems related to obstacles deaf and hard-of-hearing students face during the transition process?
- Why is parent training related to transition necessary?

- What issues/questions do parents have regarding the transition process?

Training materials have been developed to teach parents the skills necessary to assist students in the transition process. The skills presented during this training will empower parents to guide their deaf and hard-of-hearing adolescents into the postsecondary arena successfully. The workshop training materials focus on educating parents concerning the following topics: (a) information regarding postsecondary education including legislation relevant to transition, (b) skills to help students choose an appropriate postsecondary institution, (c) tools for preparing students for college success, and (d) establishing appropriate boundaries to foster student independence.

The design of the training workshops allows them to be presented throughout the transition process. In order to maximize the benefit of the training sessions, the workshops should be presented to parents early, as they begin to work with their adolescents in developing the Individualized Transition Plan. Best practices suggest that transition plans should be addressed by the time a student reaches the age of fourteen (Janiga & Costenbader, 2002).

Literature Review

Transition services are crucial for students who have disabilities (Edmonson & Cain, 2002; Gallivan-Fenlon, 1994; Garay, 2002; Janiga & Costenbader, 2002; Price-Ellingstad & Berry, 1999/2000; Starnes, 2001). Transition services help to address the diverse needs of students who have disabilities as they prepare to enter either the world of work or as they enter a postsecondary educational institution. Transition services are defined as "...a coordinated set of services taking into account the student's preferences and interests...designed to facilitate movement from school to postschool activities before the student leaves the school setting" (Price-Ellingstad & Berry, 1999/2000, p. 3). Transition services are mandated by the 1997 Amendments to the Individuals with Disabilities Education Act (IDEA), and must be addressed during Individualized Education Program (IEP) meetings when a student reaches the age of fourteen. At this time, if appropriate for the student, an official statement of transition services should be included in the IEP (Price-Ellingstad & Berry, 1999/2000). Transition plans should address several areas, including postsecondary education and training opportunities, independent living, and the skills necessary to obtain employment (Rubin & Roessler, 2001).

Transition planning must address both short and long-term goals. Students and parents work in conjunction with professionals such as teachers and counselors to develop transition plans. Such extensive planning is necessary, since many students with disabilities are at a significant disadvantage when compared to their peers. According to the results of the National Longitudinal Transition Study released in 1993 (Edmonson & Cain, 2002), students with disabilities were more likely than students without disabilities to experience poverty, and to become unemployed or remain underemployed. Additionally, students who have a disability have fewer opportunities to live independently and may not be fully integrated into their community. Preparing for life after finishing school helps students make decisions related to obtaining postsecondary training. Participating in some kind of training after high school significantly increases the odds of success for a student who has a disability; this is particularly true for students who are deaf and hard-of-hearing. According to research conducted by the National Technical Institute for the Deaf (NTID) and the Social Security Administration, having a high school diploma or less greatly increases the chances that persons who are deaf and hard of hearing will depend on government assistance. Those who receive a bachelor's degree are more than three times less likely to be receiving SSI or SSDI into their adult years than those

possessing a high school diploma or less (Clarcq & Walter, 1999). Transition planning offers a student the opportunity to explore postsecondary options and can impact on future employability.

Parent-involvement significantly improves the results of transition planning (Benz & Blalock, 1999; Garay, 2002; Green, 1998; Ochs & Roessler, 2001; Schildroth, Rawlings, & Allen, 1991). According to Schildroth, Rawlings, and Allen (1991), parent involvement is stronger than work experience or training as a predictor for determining a positive transition outcome. These authors reported that students whose parents are involved in the educational process are more successful than their peers whose parents are not involved in educational planning. Equal participation by students and parents is necessary to ensure the success of the transition process. Parents should allow students to make decisions during transition planning meetings and should reinforce students' decision-making skills (Garay, 2002).

Parents must recognize that students who are deaf and hard of hearing face unique challenges during the transition process, including communication and language issues, lower academic achievement levels, struggles related to literacy skills, and poor self-advocacy skills (Garay, 2002). In addition to communication barriers, deaf and hard-of-hearing students may struggle with difficulty accepting feedback and inadequate social skills. Students who have disabilities other than deafness also experience the same types of difficulties (Lemaire, Mallik, & Stoll, 2002). There is a significant academic gap between deaf and hard-of-hearing students and their hearing peers. Deaf students may be placed in non-academic tracks that limit their opportunities to improve their academic skills. State-mandated competency tests are problematic for many deaf students because of literacy issues. Deaf and hard-of-hearing students are more likely to graduate with diplomas in states that do not require these tests. Forty-eight percent of deaf and hard-of-hearing students leave school without a high school diploma (Schildroth, Rawlings, & Allen, 1991). Because deafness is considered a low-incidence disability and because physical appearance is generally considered normal, teachers in mainstream settings often under or overestimate a student's abilities. Deaf students in the mainstream may be passed even when they are failing academically, and they frequently experience social isolation (Starnes, 2001). Some students who are deaf or hard of hearing may have difficulty obtaining services based on a lack of standardization of the definition of a hearing impairment (Sendelbaugh & Bullis, 1988). Deaf and hard-of-hearing students may struggle to communicate at school, and there may be communication issues with parents as well. Powers, Turner, Matuszewski, Wilson, & Loesch (2001) reported that such communication issues may negatively impact student achievement: "The prevalence of ...communication barriers further exacerbates the dependence of adolescents with disabilities as do negative attitudes regarding their worth and potential for achievement" (p. 13). These communication issues can cause students to feel isolated or experience depression, which often is overlooked by both parents and educators. This issue develops when general educators and parents do not fully understand the extent and impact of a student's hearing loss. Comparisons with hearing peers often cause a student who is deaf or hard of hearing to experience anxiety and stress. Problems with role expectations, work ethic, life skills, and an uneducated public may make success more difficult for students who are deaf and hard-of-hearing. Communication barriers may make such skills as budgeting, paying bills, and using ATM machines problematic. These skills often are learned through incidental learning, and may be overlooked by parents of deaf and hard-of-hearing children (Starnes, 2001). Students who have a disability might not be taught how to advocate for accommodations, which may limit their opportunity to participate in empowering experiences (Powers et al., 2001).

Parental expectations for success also can limit the achievement of deaf and hard-of-hearing students during the transition process. Encouragement and assistance from parents is crucial for these students, since parents' expectations and opinions significantly influence whether or not a student pursues a postsecondary education (Schildroth, Rawlings, & Allen, 1991). According to Dooley-Dickey (1991), low expectations from counselors, teachers, and parents can create serious psychological obstacles for the students who want to pursue higher education (as cited in Stodden, 2001). Encouraging parental involvement can positively impact their expectations, since many parents do not understand the options available to their deaf and hard-of-hearing students upon the completion of secondary education. Involvement in the transition planning process can help parents develop realistic expectations, and will inform parents of postsecondary options for the student (Garay, 2002). Parents should be encouraged by teachers and educational personnel to participate in educational and career development discussions and activities in the home. Such discussions help parents develop the positive expectations necessary for student achievement. These discussions also help parents foster positive expectations within the deaf and hard-of-hearing students. According to Ochs and Roessler (2001), "Counselors and parents must not only change their low career expectations for students with disabilities but also the low expectations held by students themselves" (p. 175).

Once a student decides to pursue a postsecondary degree, this decision must be addressed in the transition plan. The transition plan must be developed to ensure that the course of study will prepare a student for postsecondary work (Janiga & Costenbader, 2002). The necessity of meeting prerequisite academic requirements necessitates beginning transition planning early in a student's educational career. Delaying transition planning can cause anxiety and confusion for both the student and the parents, and may limit postsecondary opportunities for the student. Many transition-planning meetings are not held until as late as the spring semester of the student's senior year of high school (Gallivan & Fenlon, 1994). Garay (2002) proposed that transition planning begin as early as middle school. Edmonson & Cain (2002) suggested that beginning transition planning in elementary school could improve student outcomes. Beginning the transition planning process early for deaf and hard-of-hearing students also helps parents keep necessary assessments current. Assessments such as audiograms must be kept current to provide appropriate documentation in order to request accommodations at postsecondary institutions. Early transition planning also can assist parents in the financial planning process, since arrangements must be made for paying tuition, obtaining financial aid, applying for scholarships and work-study opportunities, and financing the student's living expenses during the college years (Price-Ellingstad & Berry, 1999/2000).

Parent involvement in transition planning is crucial, but parents often are unprepared for their role in the transition planning process. A thorough review of current literature related to parent-involvement in the transition process supported the need for further training development to address parental needs (Brinckerhoff, 1994; Edmondson & Cain, 2002; Gallivan-Fenlon, 1994; Powers et al., 1999; Roessler & Peterson, 1996; Roessler, Shearin, & Williams, 2000; Rotter & Bailey, 1997; Sendelbaugh & Bullis, 1988; Starnes, 2001). The time of transition is significant for both parents and students, but schools are not providing enough assistance for these groups during the transition process. Parents do not report getting appropriate information and assistance concerning transition from school personnel. Often, they are unaware of a transition plan, or their legal rights regarding their involvement in the transition planning process. Parents may depend on teachers or counselors to make decisions during the transition process. Consequently, this leads to low parental participation in the transition planning process

(Gallivan-Fenlon, 1994). Parents must be taught how to work appropriately with teachers and counselors, since they tend to become less involved in their child's education the older s/he becomes. Additionally, parents of students who are deaf and hard of hearing may be accustomed to abdicating decision-making to school professionals, and they may not have the appropriate knowledge of their child's skills and abilities (Starnes, 2001).

Although parents frequently participate in the development of the Individualized Education Program (IEP), this involvement does not ensure that they are being provided with information regarding the provision of transition services. Roessler & Peterson (1996) reported that fewer than eighteen percent of parents involved in the study mentioned discussing transition issues during the IEP meeting. Issues such as a student's future goals, career opportunities and goals, continuing education, prerequisite courses, and appropriate accommodations and services were overlooked (as cited in Roessler, Shearin, & Williams, 2000). In a similar study related to student involvement in transition planning, Powers et al. (1999) found that although parent involvement was emphasized by both students and parents, most educators emphasized the importance of the school's involvement rather than family participation. Most teachers interviewed for the study reported a reticence to involve parents, and indicated their belief that parents were already over involved and making all of the decisions. In the same study, students' caseworkers disagreed with the teachers concerning parent involvement. One caseworker suggested, "Maybe there could be a program for parents on how to help your child get a job or pursue a career or something like that" (p. 24). Clearly, this caseworker supports parent involvement, and the development of training programs such as the one contained in the manual.

Several authors proposed establishing parent groups to provide support and information during the transition planning process (Gallivan-Fenlon, 1994; Roessler, Shearin, & Williams, 2000; Sendelbaugh & Bullis, 1988). Such groups would be led by school personnel or parents, and would provide orientation to the transition process as well as valuable information concerning parents' roles and responsibilities. This information would allow parents to participate more effectively in transition meetings, and would increase the likelihood that parents would attend transition- planning meetings (Roessler, Shearin, & Williams, 2000). Providing information and support for parents empowers them to participate in the transition process. Parents often have a different perception of transition planning than the other members of the transition team. They also may have limited knowledge concerning available options for their deaf or hard-of-hearing student; information groups can bridge this gap (Gallivan-Fenlon, 1994). Providing information to parents of deaf and hard-of-hearing students attending public schools is particularly important, since mainstream students are not as likely as residential students to receive transition services. Many public schools lack transition coordinators to oversee the provision of transition services (Sendelbaugh & Bullis, 1988). Parents must be educated concerning the importance of advocating for transition services. After years of struggling through a system laden with a multitude of rules and regulations, filling out massive amounts of paperwork, and advocating with a variety of professionals to ensure their deaf or hard-of-hearing student receives appropriate services, parents can become overwhelmed and overlook vital transition services (Edmonson & Cain, 2002).

Parent participation in the transition-planning process can be improved if professionals understand the reasons why parents typically hesitate to become involved. These reasons include a poor relationship with school personnel, a lack of information concerning transition, a lack of communication about the IEP/transition planning process, insufficient information concerning community resources, and excessive control of the IEP/transition-planning process on the part of

professionals (Salembier & Furney, 1997). Training programs for parents can help in several of these key areas. During planning meetings, parental involvement can be improved by professionals encouraging parents to ask questions and to explore both short and long-term goals for the student (Green, 1988). Additionally, professionals should follow-up with parents after transition meetings to see if parents have any questions or if they need additional services (Roessler, Shearin, & Williams, 2000). These best-practice suggestions have been incorporated into the workshops contained in the training manual.

Parents who are involved in the transition process may have many concerns that professionals can help address. Some parents of deaf and hard-of-hearing students may need training to help foster self-determination skills in their children. An emphasis on self-determination benefits both the student and the parent as the student learns to transition to an adult role. As students develop self-determination skills and learn to advocate for themselves, traditional parent-child roles will need to be redefined. This role shift may be difficult for the parents, since parents of students who have a disability may be used to having high levels of involvement in their child's educational services. Training can facilitate a smoother transition and help parents and students develop skills for coping with these types of role shifts (Field, 1996). Parents should be taught how to work with deaf and hard-of-hearing students instead of making all of the decisions for them. If parents do not allow students to make decisions, students may not develop the skills necessary for success in the postsecondary environment. The goal of parent training is to teach them how to support their students advocating for their own services in the postsecondary arena.

Parents also must assist deaf and hard-of-hearing students in learning to request accommodations at the postsecondary institution of their choice. The procedure for obtaining support services is dramatically different upon exiting the secondary school environment. The parents and the student may be frightened at the prospect of changing from a structured system where services are provided, to one where the student must now advocate for him or herself and request services. Upon entering a postsecondary institution, students must demonstrate eligibility for services and accept responsibility for requesting them (Edmondson & Cain, 2002). Parents often are unaware that this change will take place, and may try to facilitate the service provision for the student at the postsecondary level. When visiting the support services office or going on a college interview, parents frequently ask the questions. Unfortunately, this type of assistance may be perceived as interference. According to Brinckerhoff (1994), university staff that may not be familiar with working with students who have a disability may resent what they view as excessive parental involvement (as cited in Fields, 1996). Training during the transition period can help parents understand the student's responsibilities when entering a postsecondary institution. At the postsecondary level, students must inform the appropriate school personnel of their disability, provide documentation, and propose appropriate accommodations that will help them succeed in their programs of study (Stodden, 2001). Parents must be aware of policies and procedures when helping their deaf or hard-of-hearing student choose a postsecondary school. Although postsecondary options for deaf and hard-of-hearing individuals have increased, some schools are still more accessible than others (Schildroth, Rawlings, & Allen, 1991).

Training Workshops

The four training workshops included in the manual should be presented as a series; however, each workshop can be presented independently if necessary. The first three workshops have been designed specifically for parents of deaf and hard of hearing students. The fourth

workshop facilitates parent/student interaction and discussion. Ideally, this workshop would be taught to both parents and students, but it can be modified for use with parent-only groups. Each workshop is preceded by a facilitator's instruction sheet that contains information needed to lead the session. An agenda for each workshop has been included, but each facilitator can modify the workshop to fit his or her individual needs. In addition to the facilitator's guide and the agenda, each workshop includes handouts and topics for further discussion, and a resource list at the end of the manual provides facilitators with additional information. Although the workshops contained in the manual focus specifically on parents of students who are deaf and hard-of-hearing, it is conceivable that the workshops could be adapted to meet the needs of parents who have a child with a different disability. For more information about this project, parent training workshops, or the training manual, contact Lisa Rimmell at <lrimmell@yahoo.com>.

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Remote Access Interpreting: Providing Service and Training for Interpreting Interns

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Abstract

Remote access sign language interpreting through the use of video conferencing technology is beginning to emerge on college campuses and in K-12 settings. Through the use of laptop computers, Polycom ViaVideo cameras and Tandberg units; interpreters are able to provide interpreting services to remote locations for deaf and hard of hearing students.

Through this pilot project it has been determined that remote access interpreting can be provided through video conferencing technology. The pros and cons of utilizing this mode of delivery are discussed. In addition, the benefits of providing ASL/Interpreting interns with the opportunity to utilize this technology, under supervision are also described.



Remote Access Interpreting: Providing Service and Training for Interpreting Interns

The face of deaf education has changed dramatically in the past thirty years. No longer do the majority of K-12 students attend residential schools; rather, they are included in public school settings. According to the National Clearinghouse for Professions in Special Education (1997) 80% of deaf and hard of hearing students are enrolled in inclusive settings. This has prompted the need for a myriad of support services, including the request for the skills of highly qualified sign language interpreters.

Educational interpreters must be skilled and knowledgeable about education and the field of educational interpreting to work as competent members of educational teams (Maroney, 1995). A report by the National Task Force on Educational Interpreting (Suckless, Avery, & Hurwitz, 1989) discussed concerns about the failure of school systems to provide certified and qualified educational interpreters to the growing number of deaf and hard of hearing students being educated with the related services of educational interpreters. As local public school systems work to comply with federal mandates to serve students who are deaf and hard of hearing in general educational classrooms, the need for educational interpreters increases.

Although the metropolitan areas may frequently have enough skilled professionals to meet this demand, the rural areas often find themselves with no qualified individuals. As a result students are either bused to adjacent school districts where services are available or they are placed in classrooms with "signers" who have marginal sign skills. In the worst case scenarios deaf students remain in classrooms where they rely on their speech reading abilities and teacher and /or student generated notes to access classroom information. In essence, these students are denied equal access to their education.

Using Technology to Provide Interpreting Services at the College Level

In an attempt to examine ways to help alleviate this problem a pilot project was initiated in the fall of 2002 at Valdosta State University. Using video conferencing technology, remote sign language interpreting services were provided to a college student enrolled at South Georgia College. Initially one college class was interpreted in the fall. However, by the spring, 2003 three additional courses in three different locations were added to the slate of those being remotely interpreted.

It was determined that this would be undertaken on a small scale in a setting where an interpreter could easily enter the classroom and provide traditional interpreting services in the event that the equipment did not function properly.

Technology Requirements

For the initial pilot project, Polycom ViaVideo cameras were used by both the interpreter and the deaf consumer. The interpreter worked from a PC while the deaf consumer connected the ViaVideo camera to a laptop. The Polycom ViaVideo is a very small, lightweight camera that fits easily into laptop cases making portability possible. The student would arrive in the classroom five to ten minutes before the class would start, connect the camera to the laptop and call the interpreter utilizing an IP address.

Throughout the project both computers operated on Standard IP protocol. The computers will function best with a minimum of 256 MB RAM and although the system will function on other operating systems we have found that they have worked best for us on the Windows XP Professional operating system. If the computer system will meet the system requirements for the Windows XP operating system the camera and software should work fine. We have also found that additional RAM can improve performance. During the setup for Polycom both software packages should be set to use the same transmit speed. We have used 384 mb and the quality is very good. The speed could be reduced to 256 mb but that should be as low as one should go. Any lower and the quality is degraded too much for reliability.

Initial Trial and Error: Discovering Problems – Finding Solutions

A developmental reading class was selected for the pilot project. The classroom, in which it was housed, provided a challenge for both the technicians and the interpreter. Located in one of the older buildings on campus, the classroom was designed with linoleum floors and no acoustic tiles in the ceiling. In essence, it provided an acoustic nightmare. Chairs moving across the floor were amplified, the instructor's voice echoed, and when she moved throughout the room her voice was not audible.

In an attempt to enhance the sound quality the project team began experimenting with both directional and lapel microphones. Of the two types of microphones that were used, it was determined that in this setting the lapel microphone was the most effective. Thus, the instructor utilized one for the duration of the semester. In addition, throughout the same time the technicians experimented with upgraded sound cards to see if they could enhance sound quality.

Throughout the duration of the pilot project the quality of the video was clear with very little evidence of time delay or robotic signing. However, it was determined for this to be successful and effective that the quality of the instructor's voice would have to be enhanced.

Spring Semester, 2003: Providing Additional Remote Interpreting Utilizing Video Conferencing Technology

In the spring the deaf student was enrolled in an Algebra class, a history class and an economics class. All of these courses were scheduled in two different buildings on campus. Furthermore, all of the classrooms where the student's courses were taught were equipped with carpet and acoustic tile. This made a tremendous difference in the sound quality. For the first time the instructors could be heard through the microphone housed within the camera, thus eliminating the need for the lapel microphone.

At the conclusion of the spring semester, 2003 it was determined that remote sign language interpreting using video conferencing equipment could be successfully implemented at the college level. At that point it was decided that another institution of higher education would be contacted to ascertain if there was another deaf college student attending classes on their campus who would be willing to receive remote interpreting services.

Using Technology to Provide Remote Interpreting in the Public Schools

However, before that call could be made a technical assistance request was received in the fall, 2003 by the Georgia State Outreach and Technical Assistance Center (SOTAC/PEC/PEPNet) from a rural school district in Georgia. The school district contacted the SOTAC because they had been unsuccessful in recruiting a qualified sign language interpreter. The SOTAC Outreach Specialist discussed the possibility that Valdosta State University might be able to assist them in providing remote interpreting services for the deaf student enrolled in their school. At that point the SOTAC Outreach Specialist became the liaison between the school district and the university. After engaging in several conversations with the Superintendent of the school district, it was agreed that remote interpreting would be provided for a sixth grade student enrolled in a public school approximately 70 miles from Valdosta State University.

Student Characteristics

The student engaged in the project was enrolled in the sixth grade in a rural public school in South Georgia. She was fully included throughout the day, and followed a typical schedule of a middle school student. She had previously attended a school in a district that employed full-time sign language interpreters and was accustomed to receiving her instruction through this mode of communication. Because the school district had not been able to locate an interpreter at the beginning of the school year, she had been relying on an amplification system to access classroom instruction.

Prior to the initiation of the remote interpreting, the interpreter, who would be providing the service, and the technician, from the local school district, met with the student and the teachers at the school to explain what was involved. At that time two classes were identified as ones that would receive remote interpreting services. They included a language arts class and a science class. Each provided instruction using different formats that provided the interpreter with the opportunity to test the video conferencing technology under varying classroom conditions.

Interpreting in a Language Arts Setting

The instructor in the Language Arts class followed a very organized schedule that consisted of a combination of instruction, student interaction, and seat work. She quickly

became accustomed to repeating student responses when they were directed from the back of the room and not clearly audible. She also became very adept at describing information that she wrote on the board. The textbook for the class was given to the interpreter to use throughout the duration of the course. This was extremely beneficial, especially when students read selections from the text.

Within this classroom, the laptop and Polycom ViaVideo camera were located at the front of the room across from the student's desk. This setup enabled her to see the instructor as well as the interpreter. The instructor was very instrumental in integrating the technology into her classroom, demystifying it for the students thus providing them with a learning environment whereby they could continue with their daily routines. Furthermore, her acceptance of the technology enabled the interpreting to take place with minimal intrusion or disruption in the classroom.

Interpreting in a Science Classroom Setting

Interpreting for this science class was particularly challenging. Seated at small tables, students frequently engaged in interactive discussions, science experiments, and small group work. Frequently the instructor would begin the class by having the students read from the book and then assign activities for them to complete. Oftentimes these activities included hands on experiments and group discussions.

The computer and camera were located on one side of the room several feet from where the instructor was lecturing. This, required the student to sit at the side of the room where the computers were located, rather than joining her peers at the small tables. In essence, she was not automatically included in classroom activities and had to divide her time between watching the computer screen and interacting with her peers.

Students would respond to questions in a rapid fire manner making it difficult for the interpreter to hear clearly all of the comments. As a result, occasionally the class had to be interrupted while the interpreter asked for clarification. Unlike the language arts class where students responded in an orderly manner, in this situation overlapping conversations were frequently heard. Although the quality of the video remained clear, the format of instruction that occurred in this classroom was not as conducive as the language arts class to lending itself to effective interpreting. Oftentimes, student comments were lost in a sea of voices, providing the student with only partial information.

The intent was to have student interns interpret these same classes the following semester. However, in January of 2004 the school district determined these services would no longer be needed.

During the same month, the Department Chair of the Department of Special Education and Communication Disorders received a call from another rural school district within Valdosta State University's service area stating that they had received a grant and would like to donate a Tandberg unit to the Interpreter Training Program. In return they requested that interns enrolled in the interpreting program be allowed to complete some of their internship hours interpreting for deaf students attending their school.

As a result the Tandberg unit was installed and three ASL/Interpreting interns, under the supervision of a nationally certified interpreter began taking turns providing remote interpreting services for two students.

Utilizing a Tandberg to Provide Remote Interpreting Services

The Tandberg is a brand of video conferencing equipment we have used successfully. It is a system that does not require a computer. It does, however, require a television with RCA inputs. The system has other external inputs that make it possible to use various other teaching aids such as the input from a PC. It has a camera that is controllable on 3 axis. It has pan, tilt and zoom controls that can be controlled at the local level as well as from the remote user. This is a very desirable feature as it allows the remote user to adjust the camera position for the best viewing (with obvious limitations). We have found it to be most useful installed on a mobile cart so it is easily moved from room to room. When connected in this manner we only have to connect to a power source and the network. The unit also has a wireless network capability so if one had a wireless network system installed, one would only have to connect the power source.

Spring Semester, 2004: Using a Tandberg Unit to Provide Remote Interpreting Services

Throughout the spring, 2004, two deaf students enrolled in another rural public school in South Georgia began receiving interpreting services through video conferencing technology. During an eight week period daily remote interpreting was provided to both students attending classes in a resource room. For two hours every afternoon these students received instruction in reading, math, spelling and social studies.

All of the instruction was highly interactive thus creating an atmosphere for both the instructor and the students to engage in frequent dialogues. This afforded the interpreters the opportunity to assess the quality of the equipment from both a sound perspective as well as a video perspective.

Student Characteristics

During the time that the interpreting took place two students were attending class in the resource room. One was a Hispanic male enrolled in the sixth grade with a moderate hearing loss in his right ear and a profound loss in his left ear. His right ear was aided and supported with an FM system. He followed a regular education curriculum with the support services of a full time sign language interpreter.

The second student was a Black female enrolled in the eighth grade. She experienced a severe to profound bilateral hearing loss, was aided bilaterally and was also supported with an FM system. She followed a special education curriculum with the support of a full time sign language interpreter.

Both students received instruction simultaneously from the instructor through the sign language interpreter. This allowed them to interact with each other and well as with the instructor. Initially, video segments would freeze and packets were dropped. However, once the run speed was adjusted between both computers, the clarity of both the audio streams as well as the video streams was markedly improved.

Valdosta State University ASL/Interpreting Students: Practicum Experiences

The interpreting program at VSU is designed to give practicum students the opportunity to observe working interpreters for the duration of one semester in preparation for their internship the following semester. As a result, throughout the fall semester, 2002, when this project was initially undertaken, three senior students enrolled in the ASL/Interpreting practicum had the opportunity to observe a nationally certified interpreter using this cutting edge technology to interpret the initial reading class that was interpreted utilizing video conferencing

equipment. This provided them with the opportunity to become familiar with the student's signing style and the technology.

Then, with the onset of the spring semester, 2003 the three interns again had the opportunity to remotely observe this same college student who was enrolled in three additional classes. As the semester progressed, the interpreting interns eventually assumed the role of the interpreter under the direction of a nationally certified interpreter. At a halfway point in the semester the interns were afforded the opportunity to provide traditional interpreting services in the classroom while their instructor observed them and served as a team member providing them with signs as needed. This afforded them interpreting experiences both in a traditional and a non-traditional setting.

Beginning in the fall, 2003 three additional interpreting practicum students had the opportunity to observe the deaf student enrolled in the public school where the equipment was initially field-tested off campus. Toward the end of the fall semester, they were provided with the opportunity to interpret, under supervision, the language arts class.

In the spring, 2004 the interns were again given the opportunity to interpret, under supervision for the two students attending class in the second rural remote location. By the end of the semester, the interns had assumed full responsibility for the interpreting at this remote location.

Additional Uses of the Video Conferencing Equipment

During the initial project year, two practicum/intern sign language interpreters who were enrolled in Valdosta State University's ASL/Interpreting program were also employed by two different school districts as full time interpreters. In order to observe these students at remote sites the video conferencing equipment was further utilized. This permitted the University supervisor to evaluate their interpreting skills. Equipped with a laptop and Polycom ViaVideo camera, interpreting students would set up the equipment in the classroom with the camera focused on them. This allowed the University supervisor to complete her evaluations remotely without intruding on the dynamics that were taking place within the classroom. It also afforded the opportunity to provide feedback to the interpreting intern at the end of the session once the students had exited the room.

Insights into the Pilot Project: Positive Aspects, Drawbacks and Limitations

Valdosta State University has only begun to explore the possibilities of using video conferencing technology to provide remote access interpreting in both the K-12 and the postsecondary settings. However, during this limited amount of time several insights have been gained into the overall process.

On the positive side it has been determined that interpreting services can be successfully delivered on both a college campus and in public school settings utilizing both Polycom ViaVideo cameras and Tandberg units. It has also been demonstrated that the clarity of both the audio streaming and the video streaming enables both the deaf consumer and the interpreter the opportunity to engage in successful communication exchanges.

Limitations of this project include time and class constraints. To date, only a few classes have received interpreting services by using this type of technology. Additional classes will need to be interpreted and studies conducted to further test the validity of facilitating communication through this domain. Furthermore, it has been determined that depending on the type of equipment used student interactions, particularly among hearing students can be difficult

to hear if the speech is soft or if the students are sitting in a location out of the range of the microphone.

It has also been ascertained that in the event the instructor writes large amounts of information on the board, a camera that can be controlled at the interpreter's site is a necessity. Without being able to see what the instructor is referring to makes referencing in ASL difficult, if not altogether impossible.

Additionally, although small group discussions can be interpreted utilizing this equipment it requires that group members must assemble around the computer and camera or someone in the class must move the equipment to where the discussion is being conducted.

Conclusion

Video conferencing technology is beginning to find its way into the educational arena. As technology continues to improve it will provide the conduit for rural areas to access the services of highly qualified interpreters. Furthermore, it will eventually afford sign language interpreters the opportunity to work from remote sites thus eliminating the need for extensive travel. This in turn will provide both a savings in time and travel costs for service providers. In addition, it has the potential to connect content specific qualified interpreters to facilitate communication in remote rural areas where skilled professionals are not available.

Remote video interpreting provides a very unobtrusive way to provide support services to students in educational settings. Through the use of a laptop and camera students can access information without drawing attention to the interpreter standing in front of the classroom. A great deal of research needs to be conducted into the effectiveness of utilizing this equipment in educational settings. However, the amount of success that has occurred throughout this initial pilot project indicates that the use of the technology merits further study.

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Computer-assisted Writing Instruction

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Abstract

We will demonstrate how we apply technology to the writing process in teaching deaf college students. Our primary instructional tool is the personal computer connected to a projection device. In this paperless process, each student displays his or her work from disk, which then becomes the primary instructional material. Because student writing is projected for all to see, group brainstorming and peer review occur in a supportive and creative environment. During this display sharing, compositions are developed, edited, and revised. Students are encouraged to take over the keyboard to make changes and suggestions. An Internet connection adds value to this particular setup in offering access to online resources, such as grammar and vocabulary checkers.



Introduction

We are living in an age in which computer technology infuses almost every aspect of our lives. Because it is so ubiquitous, its influence on the writing process is significant. Many of us who are old enough look back with incredulity on the days when we used longhand and typewriters as our composition tools and sought print materials as our reference tools. Today's students enjoy a more "seamless" encounter when they engage in the writing process, using the computer to produce text and the Internet to access information. While the field of writing instruction will always be about "process and product" and what methods work best, now more than ever the role of technology in the writing classroom is being examined, discussed, and tested. Specifically, the role of the computer and the Internet in teaching writing to deaf students provides many opportunities for successful classroom experiences.

Computer-assisted instruction

The two of us have taken a leadership role at NTID in applying computer-assisted instruction to the writing process with our own students. Our experience has shown us that students are very comfortable with computers and the Internet, using instant messaging, videoconferencing, and on-line bidding software with much greater ease than either of us ever experienced in figuring out how to program our now-almost-defunct VCRs. This kind of

technological interaction and comfort level is the springboard from which we try to move our students into the more traditional arena of academic writing. Our methodology includes preserving and teaching familiar genres of college writing while also bringing in elements of students' computer-based milieu to enhance their learning experiences in our writing courses.

For us, applying technology to the writing process in teaching deaf college students involves the personal computer along with a projection device to allow display sharing. In this paperless process, each student displays his or her written work from disk, and the writing becomes the primary instructional material. Because student writing is projected for all to see, group brainstorming and peer review occur in a supportive and creative environment. During this display sharing, paragraphs and essays are developed, edited, and revised. Students are encouraged to take over the keyboard to make changes and suggestions. An Internet connection adds value to this particular setup in offering access to online resources, such as grammar and vocabulary checkers.

The Smart Classroom

At NTID, we teach various developmental writing courses ranging from the very basic to the more advanced courses designed to prepare students for entry into the RIT writing curriculum. In terms of incorporating technology into the classroom dynamic, the ideal classroom is what we call the "Smart Classroom." Imagine this as a "lab" with a bank of computers; however, we try to avoid the term "lab" because it suggests a room where students go to surf the Web and to work independently without any guided instruction. In actuality, our Smart Classroom looks like a lab, but functions like a classroom. It is where we teach English interactively. The room consists of 10 networked computers. In this context, the term "networked" goes beyond the "wired for web connectivity" definition. These computers are networked for display sharing, which means that each student's work can be displayed on the other students' computer screens.

In this Smart Classroom, the entire class gives feedback related to a peer's writing. So, display sharing is really the room's key feature because of the class collaboration it fosters. This type of peer review goes beyond two students or a small group exchanging papers. This process is very public in that the entire classroom community is seeing a classmate's writing and responding to it at the sentence level, paragraph level, and essay level, depending on the assignment. This display sharing process on the computer is very natural in that a student can revise/edit in "real time" while other students watch. In this dynamic, students not only see a peer's product but also the actual *process* of revising the product. When strong students are composing in real-time for other to see, there is a kind of "organic modeling" which occurs that has proven to be an invaluable instructional technique.

However, funding a Smart Classroom can be prohibitive, making this type of classroom an inaccessible model for many schools. Furthermore, one Smart Classroom will only support a limited number of writing sections, as is the case at NTID where oftentimes we are forced to teach in traditional classrooms due to scheduling conflicts, which in our eyes, is not exactly the ideal. As a result, we have implemented Smart Classroom dynamics into the traditional classroom by incorporating one laptop computer and a projection device. It's what we like to call a compromise between the ideal and the real, yet student learning is not compromised. Interestingly, we have seen the same positive results with this set-up as in the Smart Classroom.

The next-best thing: Single laptop with display in a traditional classroom

As the “next-best thing,” laptop use and projection in the writing classroom enables the entire class to review and respond to a peer’s work. Real-time revision can happen just as it does in the Smart Classroom, as students watch their peer on the laptop make changes and solicit feedback as changes are being made. From our experiences, the “real time” revising/editing part of the writing process encourages the entire class to participate actively as they watch a peer making changes to his or her text. It’s a very student-driven process, as students become the teacher, commenting on a range of topics from grammar errors to need for transitional words to suggestions for idea development regarding a particular paragraph. So, in brief, the Smart Classroom and the traditional classroom with laptop projection have a similar dynamic in that students in both settings are observing and participating in real time composing at different stages (pre-writing, drafting, editing) and at different rhetorical levels (grammar, paragraph, essay). However, the big difference is that equipping a traditional classroom with laptop projection is much more cost effective.

Writing from visual prompts

The laptop is great for downloading and showing [video](#) clips. No VCR is necessary in the classroom using a laptop with display. Students can watch a brief video stored in the laptop and projected to the class, and then write a description of what they’ve seen along with their opinions about it.

Working at the sentence level

With display sharing on the laptop, teaching grammar becomes less of a chore because students work more interactively. Since the process is student-driven, they often seem more interested in learning from each other’s mistakes. Students take turns on the laptop, helping each other with various grammar exercises such as how to use an on-line grammar resource to recognize and correct word form mistakes. In addition, something as confusing and challenging as active voice vs. passive voice exercises can become much more interesting—and even fun—to students as they watch each other try to wrestle with the sentence structure of active vs. passive voice and offer helpful suggestions to whoever is displaying his or her work.

Substance and style at the sentence level

Students in developmental courses often have a problem with writing complete sentences. We tell students that of course we want substance: we want the correct answer to the question. However, we also point out that since they are in a *writing class*, we expect them to express themselves completely in their writing. Therefore, incomplete sentences are strictly taboo. So, this is another activity that lends itself well to display sharing, whether it’s in a Smart Classroom or the laptop-equipped room. Students are projecting, sharing and comparing answers that they have written to questions based on a reading. And, when necessary, they are making changes to those answers—changes that involve style (making a sentence complete perhaps by borrowing key words from the question) and/or changes that involve substance (focusing on accuracy and clarity)—in real-time, in front of their peers. The process is very interactive, inclusive, and invaluable.

Writing at the paragraph level

At the paragraph level, students first create outlines for a paragraph to be written on a given topic and then share these outlines via the laptop with the class. At this stage, the emphasis is not on grammar but on clarity of the controlling idea, relevance of the supporting details, and quality of organization. Feedback is given to each student displaying his or her outline on the laptop and revisions are made. This process of outlining improves the chances for a successful paragraph to be written later. While displaying his or her outline on the laptop, a student can, in real-time, use the copy/paste functions to begin to create a paragraph from the outline in a very seamless way as other students watch. And, at this point, students have an opportunity to discuss how the ordering devices in the outline (numbers and letters) can be converted into transition words in the paragraph and which transition words would make sense.

Writing essays

In composing an academic essay, prewriting strategies are very helpful. Strategies can include outlines, lists, webs, and other graphic organizers. These are all ways of visually organizing information before beginning to write an academic essay. Students vary widely in their choice of graphic organizers, and some prefer not to use one, but generally, those who do use some prewriting strategies or graphic organizers produce better essays. In an essay, coherence and organization are essential, and working toward these goals together with visual material displayed on the laptop pushes students' thinking.

In this kind of classroom, we rely heavily on peer review of essays from beginning to end. Students brainstorm their ideas and possible approaches, and share, model, and revise their outlines and essay drafts in real time before submitting their final essays. We can see the graphic organizers, then proceed to rough drafts and review and revise them repeatedly until the final essay version is ready for submission. In this entire process, students see the evolution of their own and their peers' thoughts and support one another in developing concepts and fleshing out ideas.

We begin with establishing a thesis statement, the controlling idea of an essay. This thesis statement basically provides the purpose and context of the essay, the reason for writing the essay. Developing a clear thesis statement is a difficult challenge that is perfect for this kind of interactive, visual setting, where students can discuss the ideas and the concepts they want to write about.

Then we consider the points that support the thesis statement. Typically, in an academic essay using the traditional 5-paragraph rubric (introduction, three supporting paragraphs, and conclusion), each supporting point will have its own paragraph. And each paragraph consequently must have a clear topic sentence to establish that supporting point or controlling idea, which ties back to the thesis statement. Then each topic sentence must be supported by details that explain the controlling idea within the paragraph. All of these elements in the essay generate lots of discussion and revision, pushing students' thinking.

We can see each step of this process on the laptop display in real time, and we all can work collectively to push the development of the essay toward a nice final version.

Benefits of laptop display in the traditional classroom

In brief, these are some of the advantages of using a laptop display in the classroom:

- Motivates all students to participate, making the classroom more student-driven.
- Reduces passivity.

- Allows for “real-time” composing and revising.
 - Increases the chances that students will internalize the modeling that they observe.
 - Enables students to compose using the same techniques they use on their own machines.
 - Allows students to see peer work and feel more confident about their own work.
- Is much less expensive to implement than a writing lab.

Cost of equipping a classroom

The basic costs of equipping a classroom for laptop display are as follows:

Laptop	\$2,300
Projection Unit NEC MT-1065	\$3,500
Extron Interface and Cabling	\$1,300

In terms of set up and support, the equipment could be set up by the user with limited support either through phone support or the local dealer. NTID permanently mounts the projection systems both for consistency and security.

How Many Deaf and Hard of Hearing Students are There? Implications for Program Planning from a Demographic Update: A Public Forum

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Abstract

This paper presents evidence that there are now more than 414,000 college students with hearing loss, a figure much larger than the presumed 28,000. The reader is taken step-by step through the methods used to determine this estimate and a review of related research. It is believed that the primary reason for the larger estimate is that students who are hard of hearing are not requesting support services and thus are overlooked by DSS program staff. The significance of these numbers for future programmatic planning is described. Session participants discussed issues related on how to identify and reach this invisible population of unserved students.



How many deaf and hard of hearing students are there? Implications for program planning from a demographic update: A public forum

The National Census of the Deaf Population (Schein & Delk, 1974) was one of the most significant research projects ever done on Americans who are deaf. Their estimate of more than 400,000 pre-vocationally deafened individuals (before age 19) doubled prior assumptions of about 200,000 such persons. The NCDP totally changed how people viewed the nation's deaf population in the early 1970s. Since then we have experienced a widespread expansion of postsecondary and other programs. The differences between 1972 and 2004 are amazing. PEPNet is an excellent example of these changes.

About five years ago the PEPNet program directors convened 30 professionals to look at issues facing postsecondary education. One product of this group was a National Research Agenda for the postsecondary education of students who are deaf and hard of hearing (Schroedel, Watson, & Ashmore, 2003). This publication noted that the most frequently cited numbers were 20,000-25,000 students enrolled on the nation's campuses. However, other studies showed there were many more students who were not being considered. The purpose of this

paper is to examine these numbers and discuss what they mean for future delivery of services to college students with hearing loss.

This session will not be entirely about demography. We want your feedback and ideas on what does all this mean for improving and changing the ways we deliver support services to college students who are deaf and hard of hearing. Your participation is the key to the success of the paper resulting from this presentation. Why should you be thinking about these numbers? One reason is to be more aware of how many students on your campus are deaf and hard of hearing students. There are more than you might think. Knowing the true size of your program's target population will assist you in more accurately assessing their needs to better serve them. Program changes may also include staff training. Being up to date with the larger numbers of deaf and hard of hearing students on your campus will enable you to more aptly inform college administrators of the need for more resources and funding for your DSS program or for any other advocacy purposes.

Making Estimates from Samples

It is vital to understand that the NCDP was a term used to induce deaf people to participate in the study. About 1,800 pre-vocationally deaf Americans were interviewed (Schroedel, 1977). After this sample was evaluated to be representative of the nation's deaf population, it was then estimated that 410,000 such persons resided in the 50 states. This was a demographic estimate, not a census, survey, or head count. It would be prohibitively expensive to interview 410,000 deaf persons. At the same time households were selected in randomly determined geographic areas across the nation for a parallel study, the 1971 National Health Interview Survey (NHIS). The term random is important because it means everyone had an equal chance of being included which makes a sample representative of its population. Almost 240,000 persons in the general population were interviewed including with scales assessing their hearing ability (Ries, 1994). This NHIS estimated that there 13.2 million Americans with loss of hearing in 1971. More will be explained about these procedures of estimating the size of a population from an interviewed sample. *Most of the research studies cited in this paper used projective estimates drawn from samples.*

We estimate there are 29 million individuals with a hearing loss three years or older in 2004 (see Table 1). The main target for vocational rehabilitation services is the working age group (18-64 years) comprising about 15 million Americans, whereas the primary group for postsecondary training is those 18-44 years of age. Another 5% are under age 17 and almost 45% are 65 and older. This pattern reflects the increase in prevalence of hearing loss as people get older. This estimate is based upon the 1991 NHIS, the most reliable demographic data on hearing loss, which also used identical research methods in 1971 and 1977 (Ries, 1994). This 1971-1991 trend line in the number of Americans with hearing loss provides a benchmark to conservatively project these numbers to 2004. Coincidentally, Kochkin (2001) independently determined that 28.6 million Americans had a hearing loss in 2000.

We will focus on the first three age groups in Table 1 to get a better idea of the college student population. During the 1990s various surveys estimated that the number of students who are deaf and hard of hearing increased from about 17,000 in 1990 to 28,000 in 2001 with 25,000 being the most widely circulated number. Several of these surveys were performed by a private research organization (Lewis & Farris, 1994,1999), whereas others were done by PEPNet (Billies, Buchkoski, Kolvitz, Sanderson, & Walter, 2003, Hopkins & Walter, 1998, 1999). Meanwhile the National Postsecondary Student Aid Studies (NPSAS) estimated that were

346,000 deaf and hard of hearing college students enrolled in 1986 and 258,000 in 1990 (Greene & Zimbler, 1989; U.S. Department of Education, 1993). The discrepancy in these estimates is due to differences in research methods perhaps such as questions defining hearing loss. The primary reason for the PEPNet research surveys was to gather information on services being delivered and the technical assistance needs of colleges with deaf and hard of hearing students enrolled. This is very relevant information enabling personnel at the Technical Assistance Centers to more effectively perform their work.

Table 1
29 Million Americans Have a Hearing Loss, 2004

Age Group	Percent of 29 Million	Number
18-24	3.2%	928,000
25-34	8.2%	2,378,000
35-44	11.7%	3,393,000
45-54	13.0%	3,770,000
55-64	16.1%	4,669,000
Total	52.2%	15,138,000

What factors explain the enormous disparity between one set of estimates ranging between 17,000-28,000 and another set varying between 258,000 and 346,000? One major observation is that most students who are hard of hearing are not requesting services, thus do not come to the attention of campus DSS programs. Hard of hearing students are a heterogeneous group with diverse behaviors: (a) many decline to disclose their hearing loss or are confused by its varying effects on communication and social interaction, (b) are unaware about special services and assistive technology or do not know how or where to ask for them, or (c) consider themselves to be normal persons who hear without a disability (Schroedel, Kelley, & Conway, 2002, 2003). Kochkin (1997) determined that among persons needing hearing instruments, 72% had a mild loss (35dB-45dB), 21% a moderate loss (46dB-65dB), and 7% a more severe impairment (66dB-100+dB). His survey used the same measure of hearing loss as did Ries (1994), an interview protocol with responses cross-validated by audiometric criteria.

Moreover, it may be presumed that many students who are hard of hearing do not need assistance. However, only 5% of persons 18-34 years of age own hearing aids (Kochkin, 2001). An unassisted hearing impairment, even of mild severity, can create numerous problems. Such students may mishear conversations, then miscommunicate or respond inappropriately. Too many of these mishaps may lead such students to socially isolate themselves, thus becoming prime candidates for quitting college. Large-sized classes and rooms with poor acoustics can aggravate these problems. Being able to understand teachers and having peer support are essential factors in college retention.

Estimating the number of college students with hearing loss

The first step in this estimate is determining the total number of all students attending the nation's 5,000 colleges and universities. The second step is breaking out this total into age groups because prevalence rates of hearing loss change in different age groups. Most of the information in Table 2 is derived from studies conducted by the National Center for Education Statistics (U.S. Census Bureau, 2002, 2003). The rightside column contains the percentages of each age group that attended college during 2004. These rates decline with increase in age as do the corresponding numbers enrolled on campus. The exception is the larger enrollment number for those 35-44 years of age that is based upon a larger underlying population. Thus, an estimated 15.9 million students were attending college during 2004.

Next is the question how many of these students have a hearing loss? Ries (1994) reported the best available age-related prevalence rates for auditory disorders from the 1990-1991 NHIS. However, these estimates are dated and more recent evidence indicates that there may be fewer persons in our key age groups during 2000 compared to 1991 (Kochkin, 2001). Thus, to be conservative we used slightly lower rates: 23.5 per 1,000 persons 18-34 years of age in the general population and 39 per 1,000 persons 35-44 years of age. Applying these rates to the age groups in Table 2 generated a total estimate of 414,300 college students with hearing loss as shown in Table 3. The large number over 34 years of age probably include many persons who have returned to college for job retraining after experiencing a mid-career onset of hearing loss.

Table 2 College Students who Hear by Age and Attendance Rates, 2004		
Age Group	In College	Attendance Rate
18-19	4,624,000	61.2%
20-21	3,030,000	44.1%
22-24	2,551,000	24.6%
25-29	1,914,000	11.4%
30-34	1,276,000	6.7%
35+	2,551,000	1.9%
Total	15,946,000	

Among these projected 314,300 students what can we determine about differences among those with a less or more severe hearing loss and an early or later onset of this loss? The best available sources of determining answers to these questions come from the 1990-91 NHIS survey (Ries, 1994) and the 1987 NPSAS survey (Greene & Zimble, 1989) that report almost identical proportions of persons who are deaf and hard of hearing. The results from these reports, applied to the numbers from Table 3, are shown in Table 4: 305,300 students are hard of hearing at any age of onset, 101,500 are deafened after age 19, and 7,500 deafened before age 19. The NHIS survey defines a hard of hearing person as "one who has difficulty understanding speech"

and a deaf person as “one who is unable to understand speech” (Ries, 1994). These definitions refer to not using a hearing aid. However, only 5% of persons 18-34 years of age use hearing instruments (Kochkin, 2001).

Several presumptions were made about the estimates reported in Table 4. For example, the overall levels of academic achievement, college admissions, and college persistence for hard of hearing and late-deafened students are the same as for their peers who hear. We know that three of every four students who are pre-vocationally deafened (before age 19) quit college before earning a degree (Stinson & Walter, 1992,1997). There is no research on retention among students who are late-deafened and hard of hearing. It is also reasonable to presume that few of these hard of hearing or late-deafened students received K-12 services under IDEA or follow-up vocational rehabilitation services. It thus follows that most are unaccustomed with DSS support services and how to obtain them. It is also possible that our estimate is too conservative and there may be as many as 468,000 deaf and hard of hearing students as previously suggested (Schroedel, Watson, & Ashmore, 2003).

Table 3 College Students with Hearing Loss, 2004	
Age	Number
18-19	108,700
20-21	71,200
22-24	59,900
25-29	45,000
30-34	30,000
35+	99,500
Total	414,300

Table 4 College Students by Severity of Hearing Loss, 2004	
Hard of hearing	305,300
Deafened after age 19	101,500
Deafened before age 19	7,500
Total	414,300

Audience Discussion of Demographics

Co-presenter: Do you have any questions about this demographic information?

Participant: We have statistics in Canada that are going up and down. I am wondering if the statistics in Table 3 include students who have been accepted, but not yet enrolled on campus?

Co-presenter: These are students who are actually enrolled. Studies have been published during 1989 and 1990 on the transition of students who are deaf and hard of hearing after high school, however, I have not looked at those recently

Participant: I am from LaGuardia Community College in New York City. Do the numbers include continuing education students on campuses?

Co-presenter: The numbers include full-time and part-time students. I consider those who are part-time to be continuing education students. Approximately 60% of college students with or without disabilities are part-time students (U.S. Census Bureau, 2002).

Participant: So these numbers do not include non-degree students?

Co-presenter: I think they include both degree and no-degree students. I assume many of those who are over 35 years of age went back to college not to get a degree, but to get new job-specific skills to adjust to their recent onset of hearing loss.

Participant: I am from the University of Colorado. I want to ask if the statistics are based on two-year, four-year, private, or public colleges and universities?

Co-presenter: The numbers represent 5,000 academic programs including all of the types you mentioned, but exclude 5,000 for-profit vocational training programs.

Participant: I am Vice President of the consumer watch-dog group in Canada. This presentation is shocking to me. I expected the numbers to be declining because the IDEA numbers are decreasing. In Canada, we lack a VR system and we cannot serve high school and college-level students. Student loans, money for interpreters, and scholarships are taxed. We have declining resources. I came here to see if you have similar situations, so I can take the statistics back home. The numbers are wonderful and could give me information that I need. I have found hope, thank you.

Implications: What does this mean for changing campus service programs?

Co-presenter: We are aware that many students who are hard of hearing are not requesting campus services. Perhaps part of this is because a lot of these students do not consider themselves disabled and are ‘turned off’ by programs named Disabled Student Services. This raises the dilemma: how do we form a critical mass or sufficient number of students with a hearing loss on campus to justify cost-effective delivery of services? How do we identify these students or encourage them to come forward? What needs to be done to enhance outreach and “marketing efforts” to publicize campus services?

Participant: I work at the University of Arkansas at Little Rock (UALR). I really like what you said about how to involve the students who do not want to identify with the DSS program because of the label. What can we do about this problem because our administrators will not let us spend money without documentation?

Participant: I had a mild hearing loss when I went to college for the first time, then, I went back to get a master's degree. I also have two deaf children. I never went to the DSS program because I felt services were so scarce that deaf students needed them more. So I did not ask for accommodations. I am just wondering, as an outreach problem, are there a lot of other students with less than severe hearing loss who might feel guilty for asking for services because there is not that much money?

Participant: I work at the University of Colorado. I want to discuss how to identify people who have applied and been accepted to college. They are not allowed to ask that on the application, so we do not know if they are deaf and hard of hearing. They are the ones that have to search us out. Is there any way to let us know if a student who is deaf and hard of hearing has been accepted? Is it impossible because of confidentiality issues?

Co-presenter: We need to do more teamwork. The DSS people need to work with VR and VR needs to get into the high schools. Then DSS and VR professionals need to work with audiologists to learn more about the latest advances in communication technology.

Participant: How do we identify people who do not want to be identified?

Participant: I am from Columbus State Community College in Ohio that requires students to identify themselves to access our services. Our college like most others throughout the country tends to be very proactive and provide information about DSS services, for example, in the syllabi of professors' courses. When we get information about students with disabilities we put it into the system. I do not know how they record the information where people self-identify, but there needs to be an information retrieval system.

Participant: How do you find them when the college is not allowed to request that information?

Participant: At our college, it says on the application, "Do you have a need for any type of ongoing support services?" That is not a violation of the law.

Participant: I would think that most students who are hard of hearing would say no.

Participant: I agree with you. That is why we need to work with faculty, staff, and the community. We cannot serve deaf and hard of hearing students unless they let us know. We need to put DSS contact information on course syllabi and use other outreach approaches.

Participant: I am a VR communication specialist from Kentucky. I have been a student all of my life. I have a severe to profound hearing loss and I have never asked for services. The reason is because I did not know that there was something out there to help me. I did have a hearing aid. If there were a class discussion or lecture I thought if I went to the department they would give me

a tape recorder. Also, I was somewhat embarrassed asking for help when I was younger and single. You want to fit in. I think the answer might be to advertise DSS services in the Student Union lobby and make it look cool.

Participant: I am employed at Temple University in Philadelphia. I am hearing two different things. One is that we cannot ask on the application if they have a disability and then, conversely, cases where the application allows requests for services to be made. It seems to be at an open admissions institution, if someone fills out the application they are admitted as contrasted where they are evaluated for admission. I think that explains the difference in the confusion we are hearing.

Participant: I serve students at Columbia University in New York City. We were talking about how to let students know about DSS services. It is illegal for us to put it on the application. When they get their application packet, it has our contact information in it. When they sign their commitment letter, they have a box they can check for more information. It has been helpful. We have many students who are hard of hearing that do not want to use assistive listening devices. We have public address systems that can be installed in the classrooms, which helps the professors and the students.

Participant: I am in the DSS program at UALR. Even though we provide faculty training the problem is that those who need to come do not come. We have the same teachers coming repeatedly. So we got permission from our Provost to require all faculty members to see a 15-minute videotape. Subsequently, if instructors suspect they have a student with a hearing loss they contact us. Also we have a mandatory student orientation program that informs hard of hearing students about DSS so they do not feel labeled as being disabled.

A Future Challenge

Co-presenter: We have been using the same numbers for over ten years now and when we realize that there could be many more unserved people, then we need to focus more on the hard of hearing group. We need to develop innovative contacts with these students to provide services. The challenge for PEPNet with the initial push of federal laws in place is to change the ways the game has been played. You have removed a lot of the stigmata related to being a disabled student. Perhaps it has been made attractive so that the person who can benefit from disability student services will seek help. In other words, you have raised the level of expectation for students with disabilities. It has created a problem for postsecondary service professionals to ensure that students receive needed assistance. Today there is broader acceptance of the need to provide support services or communication technologies to students with hearing loss.

PEPNet has made it attractive to be disabled and that makes it a challenge. So now postsecondary service professionals need to be aware that we have responsibilities particularly with students with hearing loss. So with the PEPNet National Research Agenda I feel strongly there is a need to take a look at how we can better empower the students with a hearing loss and they can check that box on the application for needed services or accommodations. Show that information to your college administrators to get funding. There are students who might do better in the classroom. A lot of students who are deaf or hard of hearing and have these abilities still need help. The challenge is very clear and the numbers are there. We may want to ignore them or maybe we want to only serve students that have severe or profound hearing loss. We have just

started and this is the first in a series of studies we want to do to come up with numbers to help you get your institutions reach out to students with hearing loss throughout the country.

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The Changing Service Provider: Interpreter/Captionist. Does it work?

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Abstract

In recent years, both Miami-Dade College and Valencia Community College have encountered changes in the access requirements of population of students who are deaf and hard of hearing. As a result, a new service provider model has been implemented, and the traditional interpreter model has been adjusted. Now, both colleges are training interpreters to provide processed captioning in the classroom to students of varying degrees of hearing loss. Having made this adaptation to the traditional support services, many questions in the practice of this model call for dialog among like programs.

This session will focus on the use of technology and strategies for obtaining equipment necessary in the planning of interpreter/captionist service models, coordinating and training of support service providers, and the coordinating and flexing of services to meet the needs of nontraditional and under-represented populations.



Introduction

[Demonstration video of the interpreter/captionist in a classroom at Valencia Community College]

Background

The interpreter/captionist support service model is a story of the development of a service program that utilizes and trains current interpreters in the use of speech-to-text transcription services or process captioning in the classroom. Both Miami-Dade College and Valencia Community College have adapted this as a model. In the implementation of this model, the many factors to consider are: planning and training of personal; planning and coordinating with technology staff; getting input from the administration; coordinating of the actual staff and/or service providers; educating/training students. Although both colleges initially met some resistance from interpreters to become captionists, this is becoming less so. Sign language interpreters are excellent candidates for becoming captionists. They already possess knowledge of deafness, Deaf Culture, and have the language processing skills that are required.

Technology Decisions

Planning for this adjustment in support services requires an understanding of the technology involved and knowing the commitment of the administration to the costs involved. It must be determined how much hardware is to be purchased: laptops, wireless cards, storage and transportation of equipment. Software and maintenance is also part of the equation. It is recommended that the coordinator of services have training in the use of the equipment and software in order to enhance the program and to fill in as needed when there is a gap in service provision.

This requires close coordination with the technology department of the college. Ordering college sanctioned equipment (that is compatible with the network and ensures the tech staff will be able to troubleshoot or make repairs when necessary) is key to an ongoing program.

Why C-Print?

Both VCC and MDC selected C-Print because it is a system designed for students who are deaf and hard of hearing mainstreamed into hearing classes. Also, BECAUSE it is not a verbatim system, it is adaptable in its presentation. The condensing and summarization strategies help the students with lower reading levels (the rate of spoken language is often 180 words per minute—faster than the average college students who are deaf and hard of hearing can read), the discourse structure of the captions can be altered to read like written discourse (as opposed to spoken discourse) which makes the captions easier to read for the more literate students. C-print is relatively easy to learn and therefore easy to train new captionists. Both colleges have found financial support for training through PEPNet stipends.

Administrative Decisions

In the implementation of this model, administrators must be educated in the value of this approach to support services—especially if the coordinator is hiring and training *contract* service providers. This is the hard part of the job. Miami-Dade originally contracted with a CART agency and then switched to hiring full-time/part-time staff. There was more commitment to the college and more consistency of service provision when using MDC staff.

Valencia Community College uses a combination of staff and contract services. In addition, VCC has been experimenting with remote real-time services. Although this may ultimately work as a captioning option, they have found problems in: that the equipment required is specific (and therefore limiting), classroom modifications further limit the use, there are contract issues, it is expensive, unreliable (due to disconnects, etc) and lacks the personal touch of a face-to-face service.

Both colleges have found it essential that the interpreter/captionist coordinator ALSO be trained in C-Print. This makes for better (and more realistic) decision-making when recruiting and selecting candidates for training, placing interpreter/captionists in classes, and checking for effective communication in the classroom. To encourage interpreters to broaden their view of services for students who are deaf and hard of hearing and accept captioning as a new skill has been a challenge from both colleges. The coordinator also needs to be the liaison with the producers of the captioning system. As upgrades occur, decisions need to be made about upgrading the skills of the captionists, purchases of new equipment/software, etc. The coordinator is also available as an additional service provider.

Service Provision

A program for students who are deaf and hard of hearing must also consider the fact that the demand for this service model **will** outweigh the supply of service providers. Is the administration willing to pay for the initial training and the maintenance needed to enhance skills? How do programs and coordinators determine eligibility requirements? How does the coordinator balance the needs of the students compared to the needs of the service providers? Issues to keep in mind are: burnout, physical and mental stress, fair and reasonable compensation for service providers, etc.

In addition, will the college put policies into place that restrict the use of the service when the requests for services outnumber the supply of interpreter/captionists available? It is important to put timelines into the request policies for students who are deaf and hard of hearing: e.g. requiring two-week notification for a request for services. MDC originally began with oral deaf students who requested access to classroom lectures. Oral interpreters were tried, but the students didn't have any experience/training using oral interpreters and this wasn't successful. They were literate and used to captioning through their own experiences with closed-captioned films and videotapes. The administration immediately saw it as their obligation to accommodate the students through real-time captioning.

The Students

Students who are deaf and hard of hearing and who have traditionally used sign language interpreters at both colleges began to request captioning when they were exposed to it on campus. They were missing vocabulary from the classroom lectures (the transient nature of fingerspelling wasn't always adequate, and the vocabulary wasn't always taken down in the handwritten notes by the notetakers), the transcripts were a superior study tool (more thorough than handwritten notes), key phrases/sentences from the lectures often showed up on the tests—it was easier to recognize them in print than to rely on memory and translation from the interpretation, certain courses (English composition, reading, grammar, etc) were easier to access through English in print than through ASL (whether interpreted or transliterated). For this population the service seems to be most successful when combined with sign language interpretation. Sign-to-voice interpreting can be used for questions from the students who are deaf and hard of hearing to the instructor/classmates; voice-to-sign interpreting can be used for small group discussion; and interpreting can be put into use immediately as an emergency back-up support in case of equipment breakdowns, for times when the class is taken outside (field trip to the lab, library, writing/drawing sessions outside, etc.); unrelated comments that come up; for times when the student's eyes are fatigued; and for clarification (if the student who is deaf or hard of hearing doesn't understand a word or wants to check his/her own comprehension of the text).

Staffing the Service

In order to provide real-time captioning there needs to be a selection process of who will become the service provider. Does the college offer the training themselves (or search for people already trained)? Should the staff work for the college or be contract/free-lance workers? Should the trainees come from the clerical pool or from the Deaf Services pool? Do you add "captioning" as a required skill for new hires? Does captioning fall under: "other duties as assigned"? Is there additional payment for the added skill? Should there be a job description for 'captionist' separate from the job of 'interpreter/transliterator'?

Both colleges do use free-lance interpreter/captionists. In doing so, decisions have to be made to address such concerns as: Who owns the skill? (Especially important if the college has invested in the training). Will the college set up a non-compete agreement? Who buys the software needed for the training? Who pays for upgrades? Who provides the equipment for training/use in the classroom? What are the ‘risks’ of letting interpreter/captionists borrow equipment? When the demand for assignments shifts to more (or less) captioning, who gets the work?

In using the interpreter/captionist model, the service provider will use either mode of effective communication based on many factors. Deciding whether to interpret or caption involves assessing the dynamics and/or issues of the individual classroom, the instructor and the student who is deaf or hard of hearing. Teaming with another interpreter/captionist for long classes may offer the flexibility to offer both interpreting and captioning.

New Job Title?

Perhaps a more accurate description is “Communication Specialist” for students who are deaf and hard of hearing. Having skills as an interpreter and a captionist (i.e.: being a dual service provider) adds to the ease of scheduling (for the coordinator) and adds to job variety (for the interpreter/captionist). Interpreter/captionists at MDC report that going back and forth between both services is actually less ergonomically stressful than doing the same service (whether it is interpreter OR captioning) for long periods of time. The position itself offers more job security due to greater marketability for someone who is dually qualified. Both VCC and MDC report student demographics indicating more students who are deaf and hard of hearing are requesting real-time captioning. There are also increased markets within the greater student population such as: using captions with visually impaired students (digital formats of transcripts as easily put into Braille machines), learning disabled students and students for whom English is not their first language.

The Future of the Model

C-print is coming out with a certification process, which will allow institutions a degree of quality control not currently offered. There is also a professional association (STSN.org) to provide captionists with support (many of whom work alone). Text services can be used in K-12 settings providing our college students with a greater sophistication when coming to college for the first time. MDC staff met with itinerant teachers for students who are deaf and hard of hearing from Miami-Dade County Public Schools to introduce C-Print captioning as a viable means of support to their students who do not sign. Other technologies are compatible with real-time captioning: for example: VCC incorporates C-Print into Smart Classroom technology and MDC is using C-Print with TabletPC computers in math and science classes. Using the ‘draw’ feature of the TabletPC allows the captionist to draw graphs, equations, diagrams onto the screen along with the text. (NOTE: at this point, the software used is InstantText + WORD although, the C-PrintPro software is being reviewed to eventually offer this capability).

SAMPLE NOTES:

MAC2311

7/5/2012

Teacher: I'm postponing the test to Monday (of next week). Today: I want to start **4.4** (Although this chapter really fits better with the derivatives chapter).

L'Hospital's Rule:

L'Hospital was a French mathematician who came up with a rule that makes finding limits easier. You use the rule, *when applicable*: you take the derivative of the numerator over the derivative of the denominator and find the limit. If you do not get the answer, you apply the rule again (and again...until you get the answer). NOTE: This does not replace the other things you have learned. If you apply this rule incorrectly, it can actually take you longer or give you the wrong answer.

For example:

$$\lim_{x \rightarrow \infty} \frac{1x^2 + 3x + 4}{2x^2 + 5x + 1} = \frac{1}{2}$$

Keep in mind: L'Hospital's rule IS NOT THE QUOTIENT RULE!!!!

If you get infinity for the numerator and denominator: you can't divide ∞ by ∞ .

We call these: **indeterminate forms**: ∞/∞ (you do not know if they are the same value or which is larger); or $0/0$ [these two are actually the most common of the indeterminate forms].

Other indeterminate forms are: $\infty - \infty$ or 0^∞

Let's take a look at a limit I gave you a while back:

$$\lim_{x \rightarrow 0} \frac{\sin x}{x} = 0/0$$

$0/0$ is an indeterminate form. [It is also undefined because of the 0 in the denominator]. Undefined is not the same as indeterminate: therefore: $1/0$ is undefined and a different thing.

Page 313:

Try #11:

I can use L'Hospital's rule because I get:

$$\lim_{t \rightarrow 0} \frac{e^t}{3t^2}$$

The graph for this equation will look like this (more or less):



From the right and left it goes to ∞

1 times $\infty = \infty$

The answer is ∞

Examples of Transcript Variations:

More verbatim

Teacher: This is a simple problem because it deals with the journal entries alone. The amounts were given. [Example on board] [PAUSE]

Are there any questions?

They gave you the amounts. They may not have finished everything--where you will have a debit in work in process. That is the 320--I didn't figure that out. Did we transfer everything? I do not know. You do not have to transfer everything--if something is partially done, you do not transfer it. If there is material left over, you don't.

How do we get this figure here? It is always a problem dealing with factory overhead because there are so many factors involved.

If you do not figure this correctly, you will underestimate or overestimate your amounts.

There was a television program where a successful businesswoman thought she was doing great, except she was not figuring her factory overhead. If you price your product too high, you will be out of the market. If you price your product too low, you will also be out of the market because you will not be able to afford everything you need to pay.

My factory overhead will have actual and applied figures (debit actual / credit applied).

If you have a small balance, at the end of the year, you eliminate balance against the cost of goods sold for the year.

You do not want to mix the cost of goods sold for this year with last year's.

To eliminate this balance, I debit factory overhead (because there is a credit here and to eliminate it, I debit).

Then I credit cost of goods sold (this has now decreased by \$100)--because I spent less than I thought.

How do you know in real life? You establish a certain percentage and compare to that.

Processed

Teacher: This is a simple problem because it only deals with the journal entries and the amounts were given.

Any questions?

They didn't finish everything: for example: the debit for "work in process" is 320,00.

You do not have to transfer if:

1. Something is partially done.

Or

2. If there is material left over.

There are many factors involved in getting the factory overhead figure.

If you do not figure the factory overhead correctly, you will underestimate or overestimate your numbers.

For example: There was a television program where a successful businesswoman thought she was doing great, except she did not figure any factory overhead!

This results in:

1. The price of the product being too high, so it's priced out of the market.

OR

2. The price of the product is too low, and the business cannot afford to pay its expenses.

In my problem: the factory overhead will have both actual and applied figures (debit is actual; credit is applied)

At the end of the year: Eliminate any small balance against the cost of goods sold, for the year. Do not mix the cost of goods sold for this year with last year's.

To eliminate this balance: debit: *factory overhead* (because there is a credit in f.o.). The debit will eliminate the balance. Then make a credit to *cost of goods sold* (this has now decreased by \$100). Remember: I have spent less than I thought. In real life: you establish a certain percentage and compare to that.



Roots & Wings

2006 PEPNet Conference Proceedings

Introduction

During April 2006, educators, students, service providers and professionals from across the nation and the world gathered together at the fifth biennial PEPNet Conference in Louisville, Kentucky, to share concepts, ideas, research, technologies and successful practices that have helped individuals who are deaf and hard of hearing establish strong roots and grow strong wings. The purposes of this conference were to bring challenging issues and promising solutions together in a collaborative atmosphere, to establish solid networks that enhance one-on-one service delivery to clients and students who are deaf and hard of hearing, and to put solid workable strategies in the hands of professionals, students and clients alike.

Roots & Wings brought together professionals with expertise, interest and training in service provision, disability support, rehabilitation, state and federal government, educational and technological arenas to share successes, challenges, initiatives, issues, encouragement and support. Through their willingness to share new, exciting and creative ideas, PEPNet conference participants were given a wealth of ideas to improve their own service delivery efforts while also providing them opportunities for personal and professional growth.

The PEPNet 2006 conference offered sessions that were of interest to disability support services staff, administrators, counselors, students, interpreters, tutors, and faculty members. The conference featured sessions that offered practical, replicable strategies for providing services to students who are deaf or hard of hearing and who are attending postsecondary educational or training programs. This publication offers the reader a small sample of the information that was exchanged during the conference. It is our hope that knowledge and information shared in these sessions will grant each reader the opportunity to strengthen both roots and wings!

Kay Jursik, M.A., Editor
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We'd like to offer a special thanks to the session presiders, friends of PEPNet and other conference volunteers and steering / planning committee members for their willingness to assist throughout the conference.

Conference Sponsors

Our deep gratitude goes to those who assisted as co-sponsors for this conference:

- PEN-International: The Postsecondary Education Network International
- Kentucky Commission on the Deaf and Hard of Hearing
- The four Regional Postsecondary Education Centers for Individuals who are Deaf and Hard of Hearing who comprise the Postsecondary Education Programs Network (PEPNet):
 - Postsecondary Education Consortium (PEC)
 - Western Region Outreach Center & Consortia (WROCC)
 - Midwest Center for Postsecondary Outreach (MCPO)
 - Northeast Technical Assistance Center (NETAC)

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If It's Not One Thing, It's Another: Supporting Individuals with Hearing and Vision Loss

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Abstract

Just as someone gets adjusted to late onset hearing loss, they may be facing a vision loss as well! Vision loss in addition to an existing hearing loss can limit mobility, increase a sense of isolation, and further impact social relationships. This paper will explore who has dual sensory loss, the most common causes of low vision, the barriers to full participation in community life, and available resources. Along the way you will get a glimpse of what low vision looks like and the strategies and assistive technology individuals use to meet the challenge of this secondary disability.



Who Has Dual Sensory Loss?

The focus of this paper is not the individual who has been deafblind from birth and is a member of a specific cultural group. The individuals we are talking about here are those who have learned to live with one sensory loss and later develop a second sensory disability. This group includes those who have Usher's or other syndromes, individuals with vision loss who sustain late onset hearing loss, or who have hearing loss then lose their vision, senior citizens who lose one sense, then another due to aging, or those who lose a second sense due to trauma. Experience has told us that this group of individuals is not comfortable with the term "deafblind." They prefer the terms "dual sensory loss" or "vision and hearing loss" (Blashaski & Sligar, 2004).

Those with combined vision and hearing loss do not live in a silent, dark world. These individuals have a "combined loss of hearing and sight to such degree that he or she cannot make immediate use of facilities for those with impaired hearing or sight alone" (Gill 2006). It means any degree of hearing loss combined with any degree of vision loss, and it interferes with communication and the acquisition of information.

Low Vision

Low vision cannot be corrected with glasses, surgery or contact lenses alone. Normal vision is often described as 20/20, that is someone standing 20 feet away from an object can see it clearly. It is a measure of visual acuity. An individual has low vision if the corrected vision in the

better eye is 20/40 or less. That means that individual can only see at 20 feet what someone with normal vision can see from forty feet away. Low vision can also be defined by a restriction of the visual field, or how wide a field you can see while you are looking straight ahead. A person has low vision if their visual field is 20° or less. You can simulate by holding a 12 inch ruler in front of you at arm's length. The field circumscribed by the ruler is approximately 20°. Low vision can be a loss of acuity, i.e. 20/40 vs. 20/20, a visual field deficit, difficulties with contrast between an image and the background, sensitivity loss or poor discrimination. Low vision is a functional loss rather than actual impairment to the eye.

Before we go any further, we should debunk some myths about low vision. Just because you sustain a vision loss does not mean that you will develop ESP; if you are not a musician, you won't magically become one; you will not live in total darkness. (para. 7, "Chapter 1: Myths and Misconceptions About Blindness," n.d.) Eighty percent of individuals with changed vision retain some ability to see (ibid).

There are a number of causes and effects of vision loss. Cataracts make vision cloudy and indistinct and may add a yellow tint, like looking through a piece of wax paper. Retinitis pigmentosa, which is associated with Ushers syndrome, causes tunnel vision, described as viewing an elephant through a straw. Individuals must turn their heads to see what is in their periphery. In contrast, macular degeneration affects central vision making it blurry. It affects one's ability to do fine work such as sewing, reading, puzzles, and recognizing even the most familiar faces. Diabetic retinopathy affects the blood vessels to the eye and leads to loss of vision in the area affected. Vision for these individuals is patchy: when they look at something, pieces are missing. Both peripheral and central vision can be affected. Glaucoma affects peripheral vision, which has an impact on balance and depth perception. Individuals with glaucoma may have difficulty negotiating stairs or seeing open doors in their path. Visual field deficits usually affect the same area of vision in both eyes. The defect can be on the right, left, upper or lower quadrant. Often these individuals are unaware that they cannot see the entire visual field.

People with vision loss have a number of challenges. Glare can be a major problem, indoors as well as outdoors. Some individuals need a great deal more light to be able to see. Contrast is a problem for some people, as is print size, font style (sans serif is better), foreground and background color, and whether he sees better with light on dark or dark on light. Orientation in various surroundings can be a major issue, whether it is finding one's way in a strange setting, or finding one's place on the printed page.

Hearing Loss

Hearing loss can be defined in terms of degree, i.e. whether the loss is mild, moderate, severe, or profound. In functional terms, someone with a mild hearing loss may not hear whispered speech, or a soft breeze blowing through the trees, or many of the high frequency consonant sounds including f, s, h, k, p, v, or z. A moderate loss affects the ability to hear environmental sounds like an air conditioner or the remaining consonant sounds. Since most of the intelligibility of speech is carried by the consonants, even a mild hearing loss can be significant in one's ability to understand and to function socially. Those with severe hearing loss may not hear a lawn mower, a piano or the ringing of a phone. Profound hearing loss means only the loudest sounds can be perceived such as the rumble of a truck, a rock band, or an airplane taking off.

Hearing loss may also be defined by type. If there are problems in the outer or middle ear, the loss is conductive. If the canal is closed or the small bones in the middle ear are not formed properly, the sound cannot get through to the inner ear. Severe chronic ear infections can damage the ear drum or middle ear. A sensorineural loss occurs when there is damage to the cochlea as a result of genetics, normal aging, ototoxic drugs, illness, or accident. Some individuals have a combination of conductive and sensorineural loss.

There are some common misconceptions, or myths, about those with hearing loss: It is not true that hearing loss automatically brings the gift of speechreading. The clarity of an individual's speech is not an index for the severity of his or her hearing loss. Many late-deafened individuals who have severe to profound hearing losses retain good speech. The impact of a hearing loss on an individual's life is not directly related to its severity. Finally, poor speech or lack of a spoken language is not an indicator of intelligence.

Challenges for those with hearing loss include difficulty with speech discrimination, dealing with background noise, localizing sound, and understanding rapid speech (Older Adults' Speech-Processing Difficulties, 1998). Visual cues provided by speechreading, sign language, or text help individuals to understand. Speechreading is more than just seeing the spoken word on the lips. It includes using body language, facial expression, and contextual cues to help decipher meaning. A speech rate of 180 to 200 words a minute is considered ideal for listeners to process (Humpherys, 1996). In today's fast-paced environment, many people talk well in excess of 200 or even 300 words a minute, making understanding even more difficult for those with compromised listening skills.

The Impact of Dual Sensory Loss: A Double Whammy

Causes of dual sensory loss include a variety of syndromes, the most common of which is Usher's Syndrome I or II, head injury, diabetes, congenital rubella, and neurofibromatosis II (nf2). Individuals fall into one of four groups: those who have been sighted and hearing most of their lives, those who had a hearing loss first, then began to lose vision, those who had vision loss first and then lost hearing, and those born with both vision and hearing loss. Among these groups, those with long-term hearing and vision loss probably fare best. Those who lost both senses found communication very difficult, experienced frustration and a loss of confidence in their ability to function. In their study of emotional functioning of older adults who lost vision and hearing, Jang, et al (2003) found that, "Vision was a significant factor for disability, while hearing was significantly associated with social activity, implying the unique contribution of vision and hearing." They did not find a significant association between the severity of vision or hearing loss and depression, but found that personality and social resources were key issues.

Dual sensory loss imposes functional disability with a greater risk of falls and more utilization of health services. Difficulty with Activities of Daily Living (ADL), mobility, transportation, and communication all contribute to a loss of independence. Individuals with vision and hearing loss have poorer social relationships and express dissatisfaction with their social interactions. Individuals may feel isolated, angry, and depressed along with the other phases of grief as they move toward acceptance of their loss of vision and hearing.

Disability services staff on campus should be aware that the challenges that these individuals face, and the means they select to deal with them, may have an impact on their academic achievement, their attendance, the types of reasonable accommodations they will need, the appropriate assistive technology, and their integration into campus life.

Strategies

Strategies and assistive technology go hand in hand to make life easier for those with dual sensory loss. We will address strategies first. Professionals providing direct services to those with vision and hearing loss note several negative ways to cope. Individuals may bluff, pretending to see or hear rather than admit that they don't understand. Those with hearing loss may dominate conversations on the premise that if you are talking you don't need to worry about listening. Individuals may refuse to try new technology, as though by finding AT beneficial they have to admit the loss in the first place. They may withdraw from social situations and live in isolation rather than struggle to function with vision and hearing loss. In addition to saying that these coping strategies bring "short term gain with long term pain" (personal experience at SHHH conference workshop, 1988), Sam Trychin (2002) believes that individuals with hearing loss may stop paying attention when they cannot understand. This habit can evolve into a secondary disability that exacerbates the problems of hearing loss.

What can coordinators of disability services do to encourage students to use positive coping strategies? First they can urge them to be proactive and to talk about their struggles. Suggest they begin with a trusted family member or friend, or seek professional help. Identifying and enlisting the support of a personal network is another positive move. Learning the facts about their vision and hearing loss and focusing on residual vision and hearing rather than what was lost is a big step toward acceptance.

In the classroom, students can request preferential seating. If they have low vision, they may request additional task lighting. Controlling natural light to reduce glare can be critical in dealing with both vision and hearing loss. Students should seat themselves with natural light at their backs and use draperies or shades to control light.

Organization and planning are critical in making strategies work for the student. Materials should be available ahead of time in accessible format and put in the same spot in the classroom, in the same order, each time. Hazards in halls and aisles such as furniture, hanging plants, or open cupboard doors should be eliminated. All assistive devices specific to a particular class should be kept in a convenient place.

Help students learn to be assertive and to advocate for themselves by asking them what they need and encouraging them to ask for help on their own, including finding classmates who will help. Ask them how they feel you can help them. Make directions and instructions very specific.

Instructors unfamiliar with hearing and vision loss may need to know how they can make their classrooms and lectures accessible. Remind them to get the individual's attention first, to present materials in as many modes as possible, to speak slowly and clearly without exaggerating lip and mouth movements, to learn the basics about the types of assistive technology used, and how to work with an interpreter or captioner.

Social situations can be a real challenge for students with vision and hearing loss. Yet, students who do not feel a part of the social fabric on campus, are at higher risk of dropping out. Disability services staff should encourage students to choose quiet, well-lit venues on campus for get-togethers, to move in closer to maximize understanding, or to make arrangements to meet with people privately when large groups and noisy surroundings make clear communication impossible (Trychin, 2002). Above all, urge students to "just do it" because many anticipated difficulties never happen. Joining a support group, or even starting one on campus, provides a comfortable forum to learn coping strategies and share experiences with peers.

Students who are working part-time or at summer jobs can use helpful hints, too. Suggest that they post a sign near their work stations asking visitors to announce themselves. Showing co-workers how to write messages in a way that they can read them and having a designated place where co-workers can leave messages, mail, or other items makes life on the job a lot easier. At meetings, arriving early allows an individual to be seated at the head of the table before others arrive and maximizes their view of the participants.

Assistive Technology, or Gizmos and Gadgets

For those with low vision, there are four categories of assistive technology or AT: magnification, large print, contrast, and talking programs. Magnifiers may be hand held, or fixed, i.e. placed on a desk or table, and may include a light. CCTVs (closed circuit TV) are comprised of a monitor and TV camera. Traditional CCTV models are permanently placed on a table or desk, but newer smaller models are much more portable and allow users to view things on a desk top or at the front of a classroom. Text enlargers are software programs that allow users to change the size and type of font, the foreground and background colors, and adjust the contrast. Commonly used programs are ZoomText, Magic, and WebEyes. If the individual retains speech discrimination skills, screen readers such as JAWS, and programs like books on tape, or Talking Books provide excellent access to printed materials. Scanners allow print materials to be scanned onto the computer for text enlargement or screen reading. Braille programs convert text to Braille format for those with Braille literacy.

Large print is often requested by students with low vision. Large print is defined as a sans serif font, 14 to 20 point in size, with high contrast. Foreground and background colors can be critical and preferences vary from user to user. Talking aids, including watches and clocks help students stay on schedule and on time. The Braille ‘n Speak notetaker can be invaluable to students who know Braille, and audio recorders benefit those with sufficient residual hearing to use them. In addition there is a long list of low tech aids to make life easier including wide-lined paper, writing guides, 20/20 pens, large print calendars, date books, and schedulers, tactile paint and raised dots for marking key pads and dials, and liquid level indicators to prevent coffee and soda spills during study marathons.

Students with hearing loss who use residual hearing often benefit from assistive listening devices or ALDs. A personal ALD may tuck into a pocket or clip to a belt for interpersonal conversations; larger systems can serve one or more users seated around a table or in a classroom. Magnetic induction loops range from permanent installations in large meeting rooms to individual use in the form of a chair pad or clip board. Induction loops are especially useful for those who have t-switches or telephone switches on their hearing aids. There are a variety of devices that interface directly with an individual’s hearing aids or cochlear implant. Often these items are proprietary, available only through the maker of the hearing instrument.

Students without sufficient residual hearing to use listening devices, but enough residual vision may request speech to text services. CART (Communications Assistance Realtime Translation) is verbatim transcription read from a laptop screen or a TV monitor, and offers the user a choice of font type, size, and foreground and background colors. C-print, developed by NTID, and TypeWell are meaning-for-meaning speech to text programs that use a type of shorthand. The newest type of speech to text program involves voice recognition technology.

Individuals with vision and hearing loss have a variety of telecommunications equipment to choose from depending on their individual needs. Amplified phones, large button phones, TTYs,

TTYs with large visual display, braillephones, and CapTel, which uses voice recognition technology, are widely available. Telecommunications relay includes basic relay services, video relay services, online relay, and wireless services.

Conclusion

Disability services coordinators play an important role in assisting students with vision and hearing loss to achieve academically and to be full participants in campus life. Understanding the nature of vision and hearing loss, the challenges they pose for students of all ages, and the appropriate strategies and assistive technology for each campus setting is essential for successful outcomes.

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Creating a Winning Team: Working Together to Foster Student Success in College

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Abstract

This paper explores research findings and current practices related to promoting success among deaf college students. Also described is the importance of using a team approach that puts the student at the center of a developmental process with college and university personnel and family members as crucial supports. A review of relevant literature regarding student persistence is presented. Practices employed by the National Technical Institute for the Deaf will be reviewed.



Success for students who are deaf and in college can be measured and described in many ways. Some measure success by the percent of first year college students who return for their second year. Others view success as the percent of college students who graduate. Still others measure success by looking at test scores, grade point averages, and how much time is required, on average, for students to graduate. Others look at multiple factors and combinations of factors to determine success (Kuh, Kinzie, Schuh, Whitt & Associates, 2005; Upcraft, Gardner, Barefoot & Associates, 2005). The reader will have to decide for him or herself what determines success on his or her campus. Our purpose here is to explore factors (strategies and characteristics) that will influence student success no matter how it is measured. We divide these factors into two groups: institutionally-based factors and student-based factors. Further, we discuss the importance of taking a team approach to fostering student success. By this we mean the student working along side faculty, staff, administrators and family members to enhance his or her potential for being successful.

Often, when success in college is discussed you will hear people talk about what gets in the way of success. Heads will nod as this list of barriers to success is produced. The following list illustrates some of the more common areas in which students may struggle: study skills, learning style, English skills, time management, emotional development, access to classroom communication, institutional attitude, money, lack of home support or social support, transition to college, course selection and placement, college resources, student attitude toward college, motivation, and commitment. Whether we look at factors that facilitate success or factors that obstruct success the characteristics of both institutions and students must be considered.

Institutional Characteristics

Institutions of higher education must demonstrate commitment to the success of each student. This can happen in many ways. It begins before the student ever steps foot on the campus and continues through graduation and continues until the former student finds satisfactory employment. These three stages in the student's life then become critically important: transitioning into college, working through the college years, and transitioning to life after college.

College admissions standards and materials must be clear and appropriate for the students being accepted. Each student accepted must have a reasonable chance to succeed based on the college's admissions process. Courses, degree programs, and graduation policies must be clearly described for both students and their families.

College programs, both in and out of the classroom, must put an emphasis on student learning (Kuh, et al., 2005). In this regard, students must be both challenged and supported with appropriate resources. These resources may include academic support/learning centers, academic advising, counseling, an academic early alert system, support for career undecided students, and out of classroom programming and support. Faculty and staff should be encouraged to engage the students in numerous and ongoing ways both in and out of the classroom. Kuh, et al. (2005), talk about engaging pedagogies that are systematic and active, pedagogies that engage the student both inside as well as outside of the classroom. This interaction among students and those who work at the institution is critical if students are to connect with the institution and the programs offered.

The institution's administration should show clear and ongoing support for students and their success. The administration should demonstrate institutional respect for students of diverse backgrounds and characteristics and provide the resources necessary for their success. Resources should be relevant to student need, provided in a timely fashion, and be in adequate supply. Institutions should encourage families to be involved, as well.

A person or office on campus should be designated as the place for parents to contact when questions arise. Parents are increasingly involved in their children's lives during the college years. Ignoring the benefits of this involvement is a mistake. Parents need to know how and what the college intends to communicate with them. Families are often the students' best allies when it comes to facilitating success.

It is our view that the faculty, staff, and administration within the institution have a responsibility to work effectively among themselves, keeping students in the center of the educational process, engaging students all along the way, and evaluating the outcomes of their strategies and policies as they measure the success of their students. Student success is enhanced when all members of the college community work together as a team toward this common goal (Schroeder, 2005).

Student Characteristics

Students who are most likely to succeed in college typically share some common characteristics. They are developmentally and academically ready to face the challenges they will encounter in college (Evans, Forney & Guido-DiBrito, 1998). They learn how to engage the environment and the people they will meet. And they find ways to seek balance in all that they

do, a balance that will enable them to complete the necessary tasks that lead to academic success and eventually, graduation (Adams, 2001).

Students in college who are deaf, like hearing students, initially seek to find their place in the college environment. Whether they are recent high school graduates or returning older adults, whether their high school experience was in a residential setting or mainstreamed, and whether they are attending a residential college setting or commuting to a local community college, students who are deaf will need to find their place in this new setting. New college students will surely face a myriad of problems: finding a major, managing time, making friends, seeking help, facing disappointment, being independent, advocating for themselves, and completing work assigned. How students see themselves in this process, this sense of identity, is crucial to their success. Do they see themselves as deaf or hard of hearing? Do they prefer to communicate with ASL or speech or Cued Speech or with a combination of communication modes? What types of communication are comfortable within the classroom? Can they work independently on assignments? Can they work well in teams? What experiences have they had with peer and adult relationships? How do they handle the disappointments that will surely come their way in the academic and social college environment?

Successful college students are not successful in all areas of their lives at all times. They very likely will experience disappointment, failure, rejection, confusion, loneliness and loss during their college years. Success is not guaranteed to some students and withheld from others. Success is the result of a process of encountering and working through the daily challenges that a student will face in a manner that enables them to move on to the next stage in their lives. This process could lead to graduation, the earning of a degree and finding employment. It could mean transferring to another college. Or it could mean leaving college to find rewarding work without degree completion.

The college experience of successful students is often an experience of engagement or integration with the college community (Pascarella & Terenzini, 2005). Students cannot be successful in isolation. They must interact with students, instructors, administrators, and often with family members if they are to succeed in college. Instructors, friends and courses will come and go. The student remains and must find ways to navigate the inevitable changes and losses encountered. There is often help, of course, and the successful student will learn to reach beyond him or herself to engage the environment and the people there who can assist in this process.

Success means different things to different people. A student's sense of success may be different from his or her parent's. The road to success will surely vary for each student as will the destination. But the student need not be engaged in this process alone. Nor should the college simply provide what it considers to be adequate resources and hope for the best. The college student, the college personnel, and the student's family must work together as a team each listening to and learning from the other to foster success for students who are deaf and in college.

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STSN, Your Speech-to-Text Services Network: Working Together for Quality Services

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Abstract

The Speech-to-Text Services Network, STSN, is a non-partisan professional organization for service providers, administrators and consumers involved in the delivery of speech-to-text services. The mission of STSN is to be an information resource, and an advocate for high quality services. This half-day workshop included an update on the progress of STSN since its official launch at PEPNet 2004; extensive information for administrators, including guidelines for assigning services to students, models of technical support, and budget issues and solutions; and instruction for service providers, including preparation strategies, transcript ‘readability’ guidelines, ways for dealing with math classes, and ergonomic guidelines.



Part 1: Speech-to-Text Services Network: Working Together for Quality Services

Panelists for Part 1 include Denise Kavın, Marcia Kolvitz, Pam Francis, Sharon Downs, and Judy Colwell.

Denise Kavlin

Welcome to the first STSN national workshop for administrators and service providers. This is a dream come true! STSN, the Speech-to-Text Services Network is a professional organization for everyone involved with speech-to-text services: administrators, service providers, consumers, researchers, and interested others. The mission of STSN is to provide information and support to service providers, administrators, and consumers about speech-to-text support services, and to foster excellence of service.

Judy Colwell

We'll begin with a historical perspective. Speech-to-text communication access services began in earnest at NTID with RTGD (Real-Time Graphic Display) in the early 1980's under the direction of Ross Stuckless, the "father" of speech-to-text services. Court stenographers went into classrooms to provide real-time communication access for students at NTID. This evolved through the 1980's and 1990's into C-Print. Also, the availability of CART services increased around the country. TypeWell was developed in 1998. And automatic speech recognition programs came on the scene in late 1990s, both with the microphone on the teacher and with a shadow speaker, using a steno mask.

Now, services are provided across the country and in other English-speaking countries. Thousands of service providers work every day – in classrooms, meetings, worksites, social agencies, houses of worship, etc. And thousands of consumers are receiving text access to the communication around them. It is because of this proliferation of services that STSN was developed.

Sharon Downs

STSN is the result of many people with a shared dream coming together, and working hard. In 2002, a call was put out at PEPNet conference in Kansas City, for a professional organization for speech-to-text services. In 2003, a core group of interested professionals from around the country began organizing STSN, and the official launch of STSN was at the PEPNet 2004 conference in Pittsburgh, PA. Over 100 supporting members joined STSN, and the momentum for the international professional organization grew. Denise Kavlin took became the first President, and an Advisory Council was formed. It included service providers, administrators and consumers, who represented CART, C-Print, TypeWell, and voice recognition backgrounds.

Committees were formed, headed by people from across the country. Each committee was given a charge of work by Denise, to address questions and issues for our new organization.

Marcia Kolvitz

Much has been accomplished since the official STSN launch in 2004. Under Denise's excellent leadership, STSN has obtained tax-exempt and non-profit legal status. These legal filings were done pro bono by attorney Howard Rosenblum, and the legal filing fees were paid by the PEC Arkansas State Outreach and Technical Assistance Center.

Tax exempt and non-profit status mean we can now have a real membership structure, and collect dues (small!) and have a system of continuing education units. With the membership dues we can fund more workshops, and eventually maybe even offer certification.

The STSN Legislative Committee is co-chaired by Jo Alexander (Oregon State University), Denese Harlan (University of California-Davis), and Rhett Simmons (CART provider in Davis,

CA). Much of the STSN legislative structure was dictated by the legal requirements of tax exempt and non-profit status. The legislative structure of STSN includes three officers (President, Treasurer, and Secretary), an advisory council, and a group of committee chairs.

The Membership Committee is chaired by Glenna Bain. The committee set up a new membership structure that will replace the “Supporters” structure with which STSN got started. There will be one category of membership, and it will be open to service providers, consumers, administrators and interested others. Benefits of membership include:

- Voting rights;
- Eligibility to hold office (including advisory council membership);
- Eligibility to chair &/or participate on working committees;
- Eligibility for discounts on registration fees for continuing education credits; and
- Eventually, documentation of CEUs.

The membership dues are ONLY \$35.00 yearly. What a bargain! Sign up by filling in the form at <www.STSN.org> and mailing it along with your check to the STSN Treasurer. You’ll see her name and mailing address on the membership form.

The Public Relations Committee is chaired by Cindy Camp. She designed an STSN flyer designed for distribution at conferences, meetings, etc. There is a copy of the flyer in your handout, and it is available as a pdf download from the STSN website. This committee also maintains the STSN website. Website costs and the <www.stsn.org> domain name were supported by the PEC Arkansas State Outreach and Technical Assistance Center. Sharon Downs comes to the financial rescue again!

The Continuing Education Committee includes co-chairpersons Jennie Bourgeois, Glenna Bain, and Cheryl Thomas. This committee did an extensive study of CEU systems of other professional organization, and they will do a needs survey of members this summer to help determine what members want in a CEU system. Then they will set up and maintain the CEU system and be a resource for information for sponsors.

The Certification Study Committee is chaired by Mary Morrison. The committee researched the area of professional certification and learned certification development was too expensive for STSN now. The task is further complicated by having different kinds of service providers represented in the organization. Eventually STSN could have a certification system, as we grow and come into our identity more. During the next term, the committee will:

- Develop job description and professional standards of the profession
- Promote quantitative measurement of service provider skills, regardless of system used
- Develop resource packet for state licensure committees
- Change name and focus to Professional Standards Committee

Denise Kavin

I am happy to announce that the new president of STSN will be Sharaine Roberts. You may know her by her maiden name, Sharaine Rawlinson.

Sharaine has more than 27 years of experience in the field of Deafness. Deafened at age 14, she received a cochlear implant 23 years later. Sharaine holds a BS in Social Work and a Master’s of Social Welfare. She has extensive experience in working with secondary and post-secondary educational institutions serving deaf and hard of hearing students. She is an internationally-sought expert on deafness and hearing loss, access law and cochlear implants. She has published articles in numerous publications.

Our other two officers are Treasurer, Gretchen Francini, and Secretary, Judy Colwell. The 2006 – 2008 Advisory Council members are:

- Sharon Downs, University of Arkansas;
- Pat Graves, CART Caption First, Inc.;
- Marcia Kolvitz, Postsecondary Education Consortium;
- Bob Sidansky, California State University, Northridge;
- Pam Francis, National Technical Institute for the Deaf;
- Jennie Bourgeois, Louisiana State University; and
- Sharon Allen, Portland Community College.

The STSN goals for the next two years include:

1. The continued growth of a sense of community among people involved with speech-to-text services, through the promotion of membership and involvement in STSN.
2. The development of an STSN code of ethics, applicable to all members.
3. The development of a formal process for choosing officers, advisory council members, and committee chairs.
4. The development of guidelines and/or a budget for use of membership dues to further the goals of STSN.
5. The design and implementation of a continuing education unit system.
6. The design and implementation of at least one national continuing education presentation at the PEPNet conference in 2008.
7. The development of a speech-to-text service provider general job description and professional standards of the profession.
8. The development and dissemination of an informational resource kit for states and provinces considering licensing of speech-to-text service providers.
9. The development of bylaws for STSN.

Pam Francis and Judy Colwell

STSN is growing, and we encourage you to be part of the growth, and help shape our professional group. Why is STSN important? Why should you get involved?

STSN is a unifying force of the speech to text community. It gives a voice to the community's beliefs, wants, and needs. Everyone will have a different answer to why a professional organization is important to them. Here is what some people have said:

I am an effective and competitive student because of the help that the (speech-to-text service providers give) me. Because of them, what is said and what I have to say changes the destiny of it all. My place in class is no longer passive and withdrawn. Through my transcribers I am brought to an equal learning level with my peers in the university classroom. (Consumer's response.)

Speech-to-text services have meant the difference between failure and full academic success for many students we otherwise couldn't serve. I find myself with a growing staff of this new kind of service provider - who I want to keep and support. STSN provides the means to share the wealth of experience we are all gaining day by day. (Supervisor's response.)

I didn't know at first if I could do this job, but now I can't see myself doing anything else. I see students learning because of the access I provide. . . and I feel good about that. These kids inspire me to be the best that I can be. (Service provider's response.)

What does your involvement in STSN do? Here are some words that might fit your own reasons: diversity, resource, community, opportunity, goals, support, fairness, quality, professionalism, stability. Join STSN, and be part of this new adventure!

Part 2: What Every Administrator Wants to Know

Guidelines for assigning speech-to-text services

Jennie Bourgeois

Speech-to-text services encompass a wide array of communication access accommodations for deaf and hard of hearing individuals. These services are defined as “any method of relaying spoken information into a text format”. There are many options available within the field of speech-to-text services including steno captioning, TypeWell, C-Print, I-Communicator, and CaptionMic. In addition, many of these services can be provided both on-site as well as remotely.

As an administrator, there are many issues that should be addressed prior to utilizing speech-to-text services with a deaf or hard of hearing student. It should be determined if the student is a user of sign language or Cued Speech. The student's command of English should also be considered. It should be noted whether the student is stronger in English or sign language for general communication purposes. In addition, the student's reading level should be assessed to ensure that they have at least a fourth grade reading level. A fourth grade reading level is generally the minimum reading level usually recommended when using speech-to-text services.

There are also numerous environmental issues that an administrator should consider when using speech-to-text services as well. Classes that are conducted in a lecture format tend to fare better for the student using speech-to-text services than classes that are more discussion-based. The acoustics of the individual classroom should also be considered. The overall background noise of the classroom is a factor as well. Another thing to consider is whether or not the teacher plans to dim or turn out the lights during class frequently. If so, speech-to-text services may be a better option than sign language due to the laptop screen being illuminated. Naturally, electrical outlets strategically placed within the classroom are also fundamental when providing speech-to-text services.

When an administrator is trying to determine how to allocate interpreting and speech-to-text resources appropriately, there are some logistical issues to take into account. The overall availability of qualified interpreters and speech-to-text service providers is a fundamental issue that may be the overriding factor in allocating the available resources. Another administrative issue that is unique to speech-to-text services is the consideration of equipment needs for hardware, software, and the necessary internal technical support.

Internal policies and procedures also need to be included in the determination process for administrators. The policies concerning how students make requests for accommodations, including interpreting and speech-to-text services, are important to clarify. In addition, administrators should establish the student cancellation and “no show” policies. The internal

policies for choosing the type of accommodations is another consideration that needs to be discussed by an institution's administration.

Is the provision of speech-to-text services required if other equitable services are available? Administrators should have mechanisms in place to determine on a case-by-case basis what is considered to be equitable for certain students. In general, a student or volunteer notetaker is usually not considered to be a real-time communication service. Therefore, notetaking would not be considered an equitable service for speech-to-text services.

The administrator's role in establishing and maintaining a speech-to-text program is vital. A well-informed administrator will be able to address situations before some issues occur and handle problems as they are presented.

Dealing with technical issues in speech-to-text service delivery

Lauren Whitman and Judy Colwell

We distributed a survey about technical issues to 75 schools and several listservs, asking about current and ideal practices related to technical issues. Fifty-six people responded, evenly divided among C-Print users and TypeWell users. Responses were pooled because there were no obvious response differences between the two services types. Several respondents also gave information relative to CART use at their sites.

The results of the survey provided interesting information. For those sites that reported using CART services, all reported using independent contractors who provide their own specialized hardware and maintain it themselves. For sites using C-Print or TypeWell, the sites themselves generally owned the equipment and dealt with technical issues. The following data relate to those technical issues.

Who owns the computers? Eighty-eight percent of the respondents said the computers are owned by the Disability Support Services (DSS) department. This ownership works best because it gives the most control over the type of computers, care and maintenance, and flexibility of scheduling

Twelve percent indicated that the computers are owned by independent contractors. A positive aspect of this is that the department saves that money and is able to use it for other services. The negative aspect of this is that a computer used by a service provider may not be compatible with others in the department, or the quality may not be as good as desired.

What other technical items are provided, and by whom? Eighty-five percent of the respondents said their sites provide steno table, roller bag, and writeable devices. Most sites also provide school email account for sending notes, textbooks and printers. Twenty percent provide pagers. Special parking permits are provided by a few institutions.

How are computers chosen? Ninety percent of the respondents reported that their sites buy computers following the recommendations of the particular speech-to-text system being used, the site's technology specialists, and often the experienced service providers in the department. The DSS supervisor usually has the final say in the choice (55%).

How are computers signed out to service providers? Eighty percent of the sites sign out a computer or pair of computers to a service provider for a full school term, or longer. Seventeen percent have one set of computers shared by several providers.

Miscellaneous items. Sixty-one percent indicated that service providers are allowed to use the computer for non-work uses. However, caveats included not being allowed to install any new programs, not being able to change any settings, and not being allowed to use computers for financial gain.

Thirty-two percent said the DSS department is responsible for damage or loss to the computer while it is in the care of the service provider, unless there is clear negligence or abuse. Forty percent reported that it depends on the situation; 28% said it is the service provider's responsibility. Sixty percent of the respondents indicated that their site does not have a written policy about this responsibility; 10% didn't know. Most sites without a written policy say they think they should have one.

Ideal practices. The respondents recommended the following ideal practices for postsecondary institutions:

- The DSS department should own the computers.
- The DSS department should use collaboration to choose the computers, with the DSS boss having final say instead of the campus technology or purchasing department. Ask experienced service providers for input about weight, size of screen, size of keyboard, etc.
- The DSS department should provide steno tables, roller bags, writeable devices/printers, email account, texts, office space to edit, and pagers
- The most important ideal practice is for the DSS department to have its own technology person who is in charge of care and maintenance of the computers, instead of someone from campus technology services or no one at all. Only someone within the DSS department seems to have the real understanding of the importance of having the computers ready and working well. And only the DSS staff members appreciate how student needs are paramount.
- The DSS department should allow service providers to use computers for non-work activities, with written guidelines.
- The DSS department should formalize written policy of who is liable for damage/loss (depending on factors such as negligence, regular wear and tear, etc.)
- Regarding care/repair, the DSS department should:
 - Train service providers for basic troubleshooting;
 - Educate a specific techie about the specialized program/services;
 - Have backup computers for emergencies; and
 - Collect computers and other items at end of school year for maintenance.

Allocating resources in sparse times

Phil Hyssong

Let's assume that you have a budgeted sum of money. How do you make it stretch? So often we forget to ask the most fundamental questions, "What does the student need?" or "What is the best way to support the student?" Asking these questions allows you to avoid wasted spending. If the class is a foreign language class, an English-based text system might not be the answer. Talk with the student and the professor to determine the best way to proceed. Furthermore, just because a student has hearing loss, it does not mean he or she can sign. The converse is also the same. Many sign users are not comfortable with a completely text-based accessibility solution.

There are options on stretching the dollar. First and foremost be appreciative for the funds that you have. Handling what you have well will demonstrate to administration that this is wisely invested money. If one fritters away a small amount, administration will be assured that a large amount is not safe.

Contact your service providers and try to package a deal. Vendors do not want to have to worry that you will jump ship, for example, to \$5 per hour. Establish an annual agreement with the vendor assuring you of the best rate possible and then lock them.

Be creative with your services. Some schools sell the transcripts, or make them available to the professors for books. There are options if you look for them.

Encourage students to “batch” classes or take one longer class vs. a number of shorter classes. It is always easier to secure a service provider for three consecutive hours rather than one hour at three separate times of the day. Discuss with your service providers when they have the most available time and try to match schedules.

One can build relationships with neighboring schools in an attempt to maximize the investment. Perhaps one campus invites students from a neighboring campus to access a particular class. More students in one class mean less cost per student.

As stated previously, use resources well. Justify what is spent. Demonstrate the value to administration. Have the students say “thank you” to administration. It is frequently heard that students never thank administration for support services. Students can also be advocates with administration. Have students demonstrate the need and who the benefit of the services received.

Part 3: Fresh Ideas for Service Providers

Preparation strategies

Jo Alexander and Glenna Bain

Speech-to-text service providers are often called upon to provide communication access in contexts covering a wide variety subject matter. They often do not have adequate time to become well versed in concepts surrounding the material they are covering. The preparation strategies workshop is designed to aid service providers in gaining deeper insight into their own unique learning styles as well as providing strategies to assist them in preparing more effectively for those situations that are “on the fly”.

Adequate preparation is essential when dealing with an unfamiliar subject as well as in times of intense personal stress. Self care, always an important part of effective preparation, becomes especially critical during particularly stressful periods in individuals lives. Effective preparation also includes arriving early, maintaining a commitment to lifelong learning and understanding the “brain stuff” involved. Specific “predicting strategies” can be very effective in preparing oneself for challenging assignments as well.

There are a variety of study methods, or metacognitive strategies, that have been developed, based on research in cognitive psychology. These methods provide guidance on how to get the most from a textbook or online course. One of the most popular is SQ3R. This is a method of surveying, questioning, reading, reciting and reviewing the material in order to better comprehend and more effectively work with it.

As Winston Churchill so aptly put it, “Let our advance worrying become advance thinking and planning.”

Formatting notes with the reader in mind

Pat Graves

This presentation addressed terminology for CART, captioning, CART provider, captioner/ist, and the umbrella term of speech-to-text provider which includes C-Print operators and TypeWell transcribers.

Three major things affect the display for consumers. The first is software capabilities, such as font style, color and size, as well as background colors and lines per page add to the ease of reading the display, especially for long periods of time. Technique will also affect the display. This means putting in paragraphs at the appropriate times, upper and lower case letters, indentations for the change of speakers and the speaker names. The final major item that affects the display for consumers is the environment, such as lightness/darkness in the room, brightness of projector, glare, line of sight and the angle of the screen. Examples of different displays were shown in order to solidify the ideas.

Techniques for providing real-time captioning in math and science classes

Valorie Smith-Pethybridge

This workshop provided demonstrations and directions in how to make captioning more accessible in classes with lots of symbols, equations, and graphs. The system used at Valorie's work site is C-Print, but some of these techniques may also apply to other captioning systems.

Adding symbols.

- Font: Arial Unicode
- To add symbols:
 - Insert a symbol into a WORD doc
 - Copy symbol to clipboard [e.g.: ã θ ə]

Adding symbols with MSWord.

- Format/AutoFormat/Options/AutoCorrect
- Replace: [type in abbreviation]
- With: [paste symbol]
- OR: Insert
- Symbol [highlight the symbol]
- AutoCorrect
- Type in abbreviation

Adding symbols with C-print Pro.

- Make up an abbreviation; Ctrl+/
 - Paste into the expansion window

When using worksheets.

- Get digital copies of worksheets through email [or scan the hard copies]
- Link IT to the worksheet and caption onto the worksheet itself

To caption onto PowerPoint presentations for C-Print users.

- Arrange to have the presentation emailed to you
- Connect the laptops
- Open: IT, the PP program, blank WORD doc.
- Link: IT + WORD—minimize IT

- Put the PP in front of WORD window
- Right click: in empty space of blue taskbar at the bottom of screen (where 'START' is)
- Select: "Tile Windows Horizontally"
- Caption in the lower [WORD] wind
- Scroll through the PP slides using the double arrow [on right]

To caption using a Tablet PC.

- Connect Tablet PC to student laptop
- Open IT + WORD doc (or TypeWell)
- Begin captioning
- Graphs, diagrams or equations can be drawn as you caption

Inserting equation editor.

- Tools/Customize
- Tab: Commands
- In the left window: Insert
- In the right window: Click: Equation Editor icon [\sqrt{x}] and drag & drop it onto any toolbar
- In a Word document: click on the: \sqrt{x} icon and insert a function
- Highlight the function [double click]
- Edit/Copy
- Format/autoformat/options/autocorrect: 'Replace': [make up an abbreviation]
- 'With': [right click: paste the copied function]/

Adding other media.

- Digital pictures:
 - Small webcam in USB port
 - Take the snapshot and insert into the notes later

SMART Boards.

- Works best if captions are projected onto space above the Smart Board
- As each snapshot is saved: draw line in the notes:

-
- Merge text with snapshots using lines to match up text with snapshots

Virtual captioning.

- Log onto network/internet
- Open chat window
- If using a webcam: attach to the IM
- Open IT and connect to the chat window
- Begin captioning

Keeping healthy

Pam Francis

"An ounce of prevention is worth a pound of cure," are words to live by for speech-to-text service providers. While there are a number of medical professionals trained to treat injuries, a greater emphasis should be placed on preventing injuries. Ultimately, it will help maintain the

personal health and safety of service providers. Additional benefits are increased quality of services, increased job satisfaction, and less likelihood of insurance/compensation claims.

Whether a speech-to-text service provider is mobile or stays in one location, there are associated risks. Ergonomic considerations include: (a) the job and the demands on the service provider, the equipment; (b) the service provider's capabilities (and limitations); and (c) the physical and social environment. It's a considerable challenge, as there are a number of variables and speech-to-text service providers tend to have some unique needs. Fortunately there are a number of resources available which provide helpful information on existing research and prevention advice.

Some behaviors and job-related conditions that contribute to injuries are posture and sitting position, "off-the-clock" activities, repetitive motions, lifting, computer design, and lack of natural breaks. The assumption by some administrators and employers that the task is "light" work, or not stressful can also create unsafe conditions. To help alleviate some of the risks, employers can create an ergonomically-friendly environment (i.e., portable tables, light-weight equipment), and encourage an open, communicative atmosphere where individuals who experience symptoms can speak up.

For the most-part, the health of a service provider is the responsibility of the service provider. To reduce the risk, individuals can make optimum use of the technology (equipment and software), accessories, and system-related shortcuts, and avoid unnecessary exposure to risk (e.g., work in a safe and supportive environment). Finally, increasing personal health—eating healthfully, exercising, and reducing personal stress—will help make service providers less susceptible to injuries.

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What the Boss Needs to Know: Running a Good Speech-to-Text Program

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Abstract

The use of speech to text services to provide communication access and notes to students and others is growing by leaps and bounds. Administering these relatively new service programs is not always easy. This Speech-to-Text Services Network (STSN) presentation addresses four important aspects of a successful program: finding good providers; keeping good providers; evaluating good output; and developing a site policy handbook.

Administrators whose programs use, or are considering using CART writers, C-Print captionists, TypeWell transcribers, voice writers, or other speech-to-text service providers will all benefit from the general and specific information provided.



Strategies for Finding Good Speech-to-Text Service Providers: Jennie Bourgeois

The current speech-to-text technology that is available for communication accommodations is truly remarkable. The technology, however, is only going to be as good as the service provider who is utilizing the technology. How do administrators recruit and select individuals to become competent speech-to-text service providers? Where should administrators look for individuals and what skills should they be seeking?

When seeking out individuals for speech-to-text training, administrators may wish to look in certain areas for potential trainees. One excellent source would be to consider those individuals who are already trained in providing communication services to individuals who are deaf and hard of hearing. Cross-training sign language interpreters is an excellent way to help utilize the communication processing skills that they already possess. If a sign language interpreter is also competent in speech-to-text services, they are able to meet a wider spectrum of accommodation needs by students who are deaf and hard of hearing. Naturally, the sign language interpreter would also need to possess excellent typing and computer skills to be considered for speech-to-text training as well.

Other excellent populations to consider for potential trainees are former court reporters, individuals finishing court-reporting school, or those who don't care for the legal setting. Many individuals who complete court reporting school may find that while they enjoy the actual work that they provide, they do not care for the legal environment. These individuals may be perfect candidates for providing speech-to-text services in an educational setting.

Medical transcriptionists may also find that the medical field is not their area of interest or that the work may not be stable or steady enough for them to work from home as they initially thought. These individuals already possess a skill set that can be adapted and utilized within the educational setting as well to provide speech-to-text services.

Other populations that administrators may wish to consider include former telephone relay service communication assistants, answering service operators and in-house clerical staff, and educational aids. In addition, word of mouth referrals from current speech-to-text service providers can many times prove to be the best resource in recruiting.

Should administrators consider publicly advertising for individuals to be trained? There are some benefits to advertising such as reaching a larger pool of potential applicants and being able to reach individuals that might not otherwise be reached. However, there are also some drawbacks to publicly advertising. In general, administrators cannot determine an individual's work ethic simply through the interview process and the individuals applying without any prior knowledge may not have a full understanding of deafness or the position.

When seeking out potential service providers for speech-to-text, what are the desired skills and qualities that administrators need to look for in an individual? Potential candidates should definitely have a minimum typing speed of at least 55 to 60 words per minute. Their typing skills should be both fast and accurate in order to be a competent speech-to-text service provider.

In addition, individuals should have a strong work ethic with a proven record of dependability and trustworthiness. Individuals must be prompt and reliable. They must be able to learn and process new information quickly and be able to adapt to changing work schedules and the changing postsecondary educational environment. Potential speech-to-text providers must be team players, be self-motivated and have excellent people skills. They also need to be able to work independently and problem solve in stressful situations.

It is also important for potential speech-to-text service providers to keep assignment- and client-related information confidential and remain in the professional role of a Communication Service Provider at all times. They should possess excellent listening skills and be able to quickly obtain the meaning from spoken information. Candidates should also have an excellent understanding of English grammar and have superb spelling skills.

Some other factors that administrators may want to consider when interviewing candidates include their personal postsecondary experience, their general computer and technical knowledge, and if they have had any history of repetitive motion injury or strain. It is also beneficial to know if the individual is willing to commit to working a certain amount of time upon conclusion of the training.

The selection, hiring and training process of individuals is crucial to the success of a speech-to-text program. The technology is only capable of performing to the skill level of the speech-to-text provider. Successful speech-to-text programs have competent and well-trained individuals who utilize the technology well and provide quality services to the students.

Strategies for Keeping Good Speech-to-Text Service Providers: Jo Alexander

Once you have successfully recruited and trained speech-to-text service providers, it's time to do everything possible to retain them! Consideration for the physical, mental, and emotional demands of the job requires advance planning before the first meeting of the class. This is perhaps the most crucial aspect of preparing for speech-to-text providers at your site.

Endeavor to contact the instructors directly and have a conversation about the service. Alternatively, a document with information about the service should be available by email, hard copy, or a website link. A meeting between the instructors, coordinators, and service providers can also be helpful.

Addressing instructors' concerns about issues such as the size of the equipment, ownership of transcripts, confidentiality, communicating with students who are deaf and hard of hearing, and accommodating students during small group work can ease tension on the first day of class!

When meeting with the instructor, explain the difference between meaning-for-meaning and verbatim output. Offer the opportunity for instructors to look over transcripts for clarity, completeness, and accuracy. Doing so provides an opportunity for instructors and service providers to develop a collaborative working relationship. Explain to the instructor that the service providers will type information that is spoken but not presented on overheads or slides, and ask for copies of those materials. Remind the instructor that videos should be captioned, and direct the instructor to the personnel at your site who can assist her or him.

Students should also be informed in advance about your site's policies regarding use of the service. Explain how the equipment will be issued and if the student is permitted to use the equipment for personal use. Discuss the process for typing comments to the service provider for voicing, and discourage students from typing personal comments to the service provider. Additionally, the students should know if and how the transcripts of the classes will be provided, if transcripts can be copied for other students' use, and if the transcript will be supplied when the student is absent. In general, sites do not release transcripts to students who were absent from class unless the absence was disability-related, and this can be a point of contention if students are unaware of the policy.

Students should be encouraged to speak directly with service providers about needs, questions, and concerns. This develops a sense of teamwork and offers an excellent opportunity for students to enhance self-advocacy skills. Ensure that the service providers have training in Deaf culture in order to promote smooth interactions.

Try to prepare the service providers in advance for circumstances that they may not anticipate. If equipment needs to be plugged in or if the providers need to position themselves in an aisle, make sure they are aware of fire codes. If the equipment in certain buildings can interfere with wireless transmission, arrange a "back up" plan for the providers. Be sure to always have an extra set or two of laptops charged and ready in the case of equipment failure. Review the code of ethics and work with the providers to prepare tactful ways of dealing with uncomfortable situations.

Perhaps the best way to retain service providers is to develop the attitude that *your job is to work for them*. Providing quality communication access is difficult and stressful, and a little TLC goes a long way. Begin by advocating for a professional wage and position at your site. When scheduling providers, consider class content and length, speed of delivery, skill of the transcriber, environment, prep time, and the need for breaks. If course materials are posted on the internet, be sure to arrange access to the site to aid in class preparation. If the instructor has an accent or the environment has a great deal of ambient noise, provide an FM system for the provider's use. Updated maps of accessible entrances and elevator locations are appreciated, and service vehicle permits for the providers are great stress reducers!

Service providers will respond to the Coordinator's efforts to point out campus amenities such as the library, art galleries, recreation centers, "eateries", and daily campus events. Purchasing an associate ID card (or its equivalent) for providers whose positions are not staff is a

nice gesture of appreciation and allows access to events and services that are restricted to students and employees.

Help the service providers prevent injury by stressing ergonomics in the workplace. Provide quality, well-maintained equipment with consideration for reliability, size, and weight. It is helpful to supply a waterproof roller bag with large wheels for transporting the equipment. Padded chairs and sturdy steno tables will allow providers to concentrate on the job at hand!

Be mindful of ways to provide ongoing professional development, and develop a mentor program for new trainees. Observe in classes each term, and provide helpful feedback; remembering to comment on what was done well. Most importantly, carefully listen to the service providers' comments, suggestions, and requests, as the seeds of an excellent program are embedded in them!

You Have Them, Now What Do You Do? Laurie Watts-Candland

At Utah Valley State College, all speech-to-text service providers are required to e-mail transcripts to the Manager of Deaf Services/Coordinator for all classes within the allotted 24-hour time period. This has a dual purpose. One is for documentation purposes. If a student makes a claim that he/she didn't receive their transcripts, or that they were incomprehensible, it can be easily verified when, or if, the speech-to-text service provider sent the transcripts, and review the content. Secondly, the transcripts are used as an initial diagnostic tool. They are routinely reviewed for cohesiveness, grammar, punctuation, and flow. If a pattern emerges, then it can be incorporated into skill development activities tailored for that specific person.

Each semester in-class observations are conducted. Normally these are unannounced. The evaluator arrives early to observe setup, and to position themselves in an unobtrusive position near the student who is deaf. This gives the evaluator an opportunity to observe the real-time lecture output and exactly what the student is receiving in class. These observations are then combined with what has been noticed in reviewing the edited transcripts. The service providers then schedule a meeting with the Coordinator and the service provider's work is discussed. These tend to be very positive meetings.

Mandatory testing is required at the beginning of each semester. This is only to make sure that all the speech-to-text service providers can still meet the minimum qualifications required by their certification. This is not used as a diagnostic tool.

A secondary in-house certification test was developed about a year ago. This allows the more experienced and qualified speech-to-text service provider an opportunity for a pay increase as well as better prepare them for certification testing such as TypeWell and the National I and II Informational Level certification tests.

At Utah Valley State College, philosophy videos were borrowed from the distance education department, and then transcribed by our CART provider. Three professionals independently pick out the major and minor points within the transcripts. These were then reconciled and became the master copy of the test.

Here is a breakdown of the different areas graded:

Area	Calculation	Score
Words per minute	(Number of Words/Time)	ex: 70
Structure	(Pts. Correct/Total Possible Pts.)	25 points total minus 1 point per error
White Spacing	(Pts. Correct/Total Possible Pts.)	25 points total minus 1 point per error
Grammar	(Pts. Correct/Total Possible Pts.)	25 points total minus 1 point per error
Spelling	(Pts. Correct/Total Possible Pts.)	25 points total minus 1 point per error
Content	(Pts. Correct/Total Possible Pts.)	To calculate, add up the number of all major content points chosen for review. Total to determine possible points.
Overall	(Total accrued pts/total possible)	ex: $110.5/123=89.8\%$

The applicants must bring computers or equipment that they are accustomed to using. They are allowed warm-up time prior to the test. The test is administered within a five minute time frame. At the conclusion of the test, the raw transcript is sent to the Coordinator and the transcript on the laptop is deleted.

After the test is graded, the Coordinator and the individual meet and review the results. Through offering this intermediary test, the morale and longevity of my employees has increased. By incorporating tailored as well as generalized skill development exercises, further testing/certification opportunities and one-on-one debriefing, I have a happier group of speech-to-text service providers who enjoy their jobs.

Writing a Speech-to-Text Service Provider Handbook: Kim Thiessen

Of course, in order to enjoy a job, an employee must understand the requirements and policies that are required of them. It is absolutely essential that the hiring department has a speech-to-text providers' handbook which explains all of the campus' policies and procedures in writing. There are a number of important points that need to be described in a clear and concise format, with as detailed language as possible, in order to eliminate any future conflicts which may arise.

The first thing that needs to be looked at is the actual position of the speech-to-text provider. Is s/he a staff employee, an hourly exempt employee, or a contracted provider? Each employment status will have a slightly different emphasis in the handbook.

To get started, PEPNet has developed a template, which can be found at <http://sunsite.utk.edu/cod/pec/products/Captioni.DOC>. If you already have an interpreter handbook, much of the information may be similar. Other institutions using speech-to-text services are also a wonderful resource as you begin writing your handbook.

You should begin with general campus information and your disability services' mission statement, along with your state laws and the ADA laws pertinent to the speech-to-text service provider's position.

The roles and responsibilities of the speech-to-text provider need to be clearly defined, with the priority being the provision of real-time equivalent communication access. Your campus' policies regarding qualifications and interactions of service providers with students, faculty, and other staff should be included. You may also want to explain that it is the responsibility of the

speech-to-text provider to be alert to their own ergonomic needs and also to be aware of treating the students as adults.

If your campus has a general dress code, this should be included along with special situations that may require protective clothing, such as goggles in chemistry labs.

The payroll system at your institution should be explained fully; including pay scale, the timesheet submission process, and pay dates. How speech-to-text providers become eligible for wage increases is another important item which needs to be addressed.

The handbook should explain the process for receiving an offer of work at your institution, which may include the speech-to-text provider providing a schedule of their availability and class preferences, along with an update on skills and certifications.

Teaming procedures on your campus should also be included.

Having policies regarding contact information is extremely important in case of emergency, class change or cancellation.

After being offered work, the speech-to-text provider will need to know various aspects of the assignment; such as how the instructors will be notified of services in their class, who is responsible for getting textbooks and other prep materials, and the process for getting appropriate chairs into the classroom; as well as details of the assignment such as date, time, location, length, client, and team info.

Time allowed for preparation and editing should be defined, as well as procedures and timelines regarding transcript distribution.

Expectations for attendance and absences need to be clearly outlined. Your department's policies regarding payment for class cancellations, student absences, extra-curricular assignments, illness, bad weather, or emergencies should be explained in as much detail as possible.

Parking information is important for the speech-to-text provider to know before the assignment begins, to avoid last minute problems getting to the assignment on time. It should also be said whether your institution pays for travel to and from the campus.

Your handbook should explain the kind of evaluative measures that are used on their campus. Diagnostic tools such as in-class observations, transcript analysis, tape recording comparisons, and certification testing are some of the ways your program may choose to evaluate performance levels of your speech-to-text service providers.

Information regarding the speech-to-text equipment should also be discussed. S/he will need to know which equipment to use, how to check out the equipment if not using their own, what responsibilities will there be connected to the equipment, machine maintenance, what to do in case of equipment breakdown, renewing batteries, having cords, etc.

It is a good idea to list professional development expectations and possible opportunities for the speech-to-text service provider and if these will be supported and paid for by the institution. Occurrences such as staff meetings, conferences, workshops, and mentoring are some of the ways service providers can experience a variety of learning.

As employees working on your campus, speech-to-text providers need to have access to the procedures of due process at your institution. In the event that a student has a complaint regarding services or if the service provider has an unresolved grievance, the formal filing process should be outlined.

The information provided in this paper about running a good speech-to-text program is in no way comprehensive. All of the co-presenters agree that discovering ways to improve the service is an on-going and gratifying process. Students who are introduced to the service are those who

have often “fallen through the cracks,” and the feedback from those who have recently used the service for the first time makes all the effort of implementing a program more than worthwhile!

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Circles of Learning: Communities of Excellence

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Abstract

Learning Communities have become an integral part of the curricula at Gallaudet University. Faculty members have created ways in which Learning Communities are used to help students make significant connections between the courses they are taking as well as feel involved in communities that foster connections between students, faculty, staff, and the University. This article describes several Learning Communities and the ways these courses integrate materials and ideas. Almost all First Year Seminar (FYS) courses are linked with another course from English, history, biology or another discipline. Other Learning Communities have focused on creating Integrated Discipline Studies (IDS) courses that integrate two disciplines into one course. Learning Communities will be discussed in depth in hopes that other programs may adopt this idea.



Introduction

Learning communities, which include a variety of structures in which students have a common education experience, have developed into a national movement in higher education during the past fifteen years. Their structures range from cohorts of students simply attending the same group of classes, to linking two or more courses (in a range of curricular connection), to integrating disciplines into a single course. All learning communities have two or more instructors working together and students in learning communities may share a common living experience as well. Learning communities, as research is now showing, are effective in enhancing student learning (Smith, et.al., 2006, p. 6).

Learning communities at Gallaudet University are currently structured in two different ways. Through the First Year Experience program, the majority of First Year Seminar (FYS) course sections are linked with English, history, or biology. In addition, faculty members have created Integrated Disciplinary Studies (IDS) courses which integrate two disciplines in one course. IDS courses typically ask one important question that students examine throughout the semester.

Both models at Gallaudet share the goals of developing a community of learners and enhancing their learning. This is accomplished through increased communication among students and faculty, increased participation and motivation in class, and shared academic activities. This article describes some of the learning communities that faculty members and students at Gallaudet University have been involved with.

A First Year Seminar and Biology Learning Community

Two professors, Jane Dillehay and Khadijat Rashid taught a linked FYS-Biology section with the theme of bioethics. The class addressed the subtext, “what does it mean to be human?” The collaboration utilized the synergy generated by the two very different courses. FYS is a process-oriented course with the primary goals of helping students discover who they are and how they can best learn and succeed in the new environment of college. Biology, on the other hand, is a typical science course with rigorous content requirements that introduces students to the scientific method.

The bioethics learning community was posed at the juncture of those divergent disciplines, in an effort to help students move beyond “soft” FYS and “hard” science and understand the ethical issues and ambiguities inherent in any field of study. In the process, we hoped that students would learn more about themselves, their environment, today’s technology, and society in general.

College freshmen often see the world as either black or white, with few shades of gray. We wanted to help them transition toward an understanding that life is full of ambiguities, and there are frequently lots of grays, with no clear answers. Despite this lack of clarity, it is still possible for the student to learn, and to develop a sense of self and values. Much of the material we developed for the class and the discussion in the classes focused on these shades of gray, with students frequently coming down on one side or the other, but learning to respect those on the “other” side. In order to facilitate this discussion, students developed a class code that consisted of the following rules:

- Respect each other’s opinions, privacy, and personal differences.
- Keep an open mind.
- Be friendly and polite.
- Take turns – don’t interrupt.
- Agree to TIME OUT if discussion becomes hot.

The summer before we taught the learning community, we met several times to develop content that we wanted to emphasize in our courses. We attended several workshops that focused on working with freshmen, including ones on emotional intelligence and working across disciplines. Still, the two courses were taught separately, with different readings and coursework, and they were held on different days (FYS on Tuesdays and Thursdays; Biology on Mondays, Wednesdays and Fridays). In the biology class, students discussed standard topics such as cell structure and function, reproduction and genetics, photosynthesis and energy production. In FYS, students were introduced to various aspects of the college experience, and we read articles from a reader about the freshman experience.

However, in both classes the bioethics theme was always present, and we continued to emphasize it as we covered regular material in each class. The aim was to establish and maintain bioethics as the thread that bound the classes together. Additionally, the professors visited each

others' classes and met regularly over the course of the semester to discuss student progress and share strategies and ideas.

In addition to regular class meetings and coursework, the professors held three dinner and movie nights during the semester. All the movie nights followed the same basic pattern—first, the professors met the students for dinner at the campus cafeteria an hour before the movie was shown, and then we all watched the movie together. The movie was then followed by a discussion of the ethical issues that the movie's protagonists had raised or confronted. The movies viewed were *The Lost Boys* (Gordon, 2002), about refugees from Sudan resettling in the Midwestern United States; *The Sound and the Fury* (Weisberg, 2002), about the impact of cochlear implant technology on a multi-generational deaf and hearing family; and *Gattaca* (DeVito, Shamberg, & Sher, 1997), about genetic engineering in the near future.

Students were required to develop short presentations in both classes on different issues in bioethics. The students rose to the challenge and many gave in-depth presentations with surprisingly perceptive and sophisticated analysis of their chosen topics. Topics included stem-cell research, anabolic steroids, genetic engineering, euthanasia, and in-vitro fertilization.

The goals for our FYS/Biology learning community were to enhance:

- student cooperation and participation during class
- student motivation
- student learning
- improved communication among students and faculty members
- ways to help students feel more engaged while learning content in their linked classes.
- appropriate thinking skills
- ability to integrate concepts
- ability to use Blackboard and Powerpoint (common academic software)
- an atmosphere that demonstrated appropriate class conduct

Based on the feedback from students as well as assessment that occurred during and after the course, we met all of those goals. Students who participated in the link showed better critical thinking skills, improved reading and writing skills, better interaction with peers, an increased sense of responsibility, and more engagement in learning. Faculty also reported noticing significant improvement in student academic progress as well as a better sense of community and rapport with faculty members from other disciplines and students.

Both students and faculty agreed that learning communities were more time-intensive and required more preparation and commitment than most other courses. One challenge faced primarily by Dr. Dillehay was balancing the requirement to teach a regular college biology curriculum with the learning community's emphasis on bioethics. Focusing too much on the latter would mean less time on the regular curriculum, which might penalize students in that section during final exams (all first year biology students follow the same curriculum and are required to take the same exams). However, the payoffs in terms of student learning and retention, and a more nuanced understanding of biological and ethical life issues, were deemed by both students and faculty to be worth this slight risk. Another learning community that used a link with FYS is discussed next.

An English and First Year Seminar Learning Community

Two professors, Jane Nickerson and Judy Termini, linked their courses to create a learning community for our English (Critical Reading and Thinking) and First Year Seminar (FYS)

students. Students attended both classes and developed a sense of community throughout the semester. We asked the students to read many of the same essays for both classes so that they could discuss them with different perspectives in mind. We wanted our students to think carefully about various issues in ways that they may not have ordinarily thought about. For example, when our students read about how people interact with society, we focused on several articles that addressed issues related to diversity, culture, religion and race. We wanted the students to broaden their horizons and think about themselves and how they fit into our global society.

We were pleased with the development of our learning community. Our successes for this learning community included the following:

- Students became members of a small learning community.
- Students cooperated well with their classmates (most of the time).
- Students were more motivated to come to the linked class than the students in a non-linked class.
- Students learned about the writing process, strategies for reading, and developed critical thinking skills as they read essays for the linked courses

We asked students to think about this learning community and provide feedback so that we can improve our learning community in the future. Student comments included:

- “I enjoyed taking English 102 and FYS with the same group of students. I felt comfortable working with my classmates. We felt like we were part of a community.”
- “The students in my classes helped each other even though we had different perspectives on a lot of issues. We discussed our ideas openly.”

Overall, we were pleased with our learning community and will continue to work together in the future to design learning communities in which the students learn and cooperate from each other as they start their college experiences. A second English course was linked with an art course to create an Interdisciplinary Studies (IDS) course. This course will be discussed in the next section.

An English and Digital Media Learning Community

Two professors, Jane Nickerson and Tracey Salaway created an Interdisciplinary Studies (IDS) course that integrated English 323 and Art 235. Each IDS course focuses on a broad question that we asked our students to think about throughout the semester as they read texts, watched and produced their own films. Our question for this course was: “How is society represented in literature and films?” As we developed materials that would integrate the curriculum between the English and Art departments, we thought about this question and ways in which we could help students create many interrelationships between our disciplines.

As faculty members, we wanted our students to become experts who look at literature, film and film production in many ways. We encouraged them to read novels, screenplays, and/or other documents that supported the films they watched for class. We also wanted them to think about how they could incorporate ideas from the films we watched into films they created. Students often asked us questions about literature, film, and film production and we sought to answer those questions together as the semester progressed. In addition, we encouraged our students to make connections among the ideas that were discussed, analyze novels and

documents they read and films they watched that connect ideas from history, culture, art, literature, sociology and other content areas together, and create two short films.

Our goals for the students included the following:

- Read and discuss several texts for class discussions and film critiques.
- Write and rewrite some of their film critiques in order demonstrate their abilities as readers, writers, and film critics.
- Learn to appreciate the literary (genre, theme, and plot) aspects of films, focusing on how screen writers and directors tell stories in the films.
- Create two short films utilizing: an individual project (developed or self-written screenplay), a remake of a scene from master film, (a group project is required by selecting one of the best student screenwriters in class).
- Students learned about the basic visual components such as space, line, shape, tone, color, movement, and rhythm used in films.
- Students learned to understand camera movement, lighting, including moods, emotions, ideas and many film techniques.
- Students had opportunities to participate in various roles as: director, screenwriter, camera operator, lighting operator, editor, and actor.

We were pleased with the successes we had in this course. We felt that the students enjoyed reading the texts and that they had good class discussions about the books and the films. After we completed our discussions, we asked the students to write film critiques for each film in which they compared and contrasted the reading selections with the films. As a result, the students became very engaged in critical thinking activities. We were also pleased that the students were exposed to films from different genre. We watched the following films in class (and for many of them, we read the text that went with the film): *Amelie* (Deschamps, & Ossard, 2001), *Citizen Kane* (Welles, 1941), *Erin Brockovich* (DeVito, Shamberg, & Sher, 2000), *Like Water for Chocolate* (Como agua para chocolate) (Arau, 1992), *Road to Perdition* (Mendes, Zanuck, & Zanuck, 2002), *The Shawshank Redemption* (Marvin, 1994), and *Shrek* (Katzenberg, Warner, & Williams, 2001). We were also very pleased with the short films that each student created as they were all unique and showed the knowledge they gained in the class. When students created their own films, they learned about writing short screenplays, lighting, shooting, directing, acting, and editing. Overall, the students created films that showed how well they learned the various techniques they saw in many of the films. Each film was shown in class so the students had the opportunity to watch and critique the films. The students offered excellent feedback and as the semester progressed, the quality of the films improved. We were very pleased with the films the students created.

There were also some challenges that we faced in this class. It was difficult for us to teach everything we wanted to teach as we sometimes ran out of time. As a result, one of the professors met with students in the evenings and on weekends to provide workshops on filming techniques.

In the future, we hope to continue our IDS course and help our students expand their knowledge in many areas. We always hope that our students become more enlightened film critics and film makers! The next section focuses on assessment and tools for assessments that were used to examine these learning communities.

Assessment

Several assessment measures noted benefits to both faculty and students in learning communities linking FYS with another course. Students who participated in the learning communities had higher levels of satisfaction with the course and the community and felt that it benefited them in many ways. Faculty who participated also saw benefits to the students, and for themselves. Finally, student achievement was higher for students who participated in the learning communities than for students who did not participate.

Tools for Assessment

Both quantitative and qualitative measures were used for assessment. Three quantitative measures of students progress were used; The First-Year Initiative Benchmarking Survey (FYI), progress in English, and end-of-semester evaluations. Qualitative measures were used for both faculty and students and included both written and verbal comments. This data was used to compare differences between students who participated in learning communities and those who did not, as well as faculty perceptions of learning communities.

The First-Year Initiative Benchmarking Survey loads into 15 factors. Of these 15, three were considered of interest and included Academic/Cognitive skills, Critical Thinking, and Connections with Peers. In each of the learning community sections (an FYS course linked with English or another content area); the learning community sections had responses that were about or at the Gallaudet FYS mean on these three factors.

In all FYS sections that were linked with Developmental English, students made more progress (movement to a higher level English course) than those in English courses that were not linked. The results are as follows:

Developmental Course	Learning Community	No Learning Community
English 50	52% qualified for credit English or moved up	47% qualified for credit English or moved up
English 70	47% qualified for credit English or moved up	41% qualified for credit English or moved up
English 80	100% qualified for credit English or moved up	68% qualified for credit English or moved up

Results of the FYS evaluations indicated that students enjoyed the linked courses, felt that they got to know their classmates, saw connections between disciplines, and had opportunities to apply what they were learning in other contexts. One negative comment was that one student felt as if he were being “watched too closely.”

Results for faculty who taught in these links indicated that they benefited and learned about new pedagogy from working together. They were able to see students making connections across disciplines, and using reading and writing in the context of work required for courses other than English. In addition, they saw students helping one another and developing a sense of community. Concerns faculty shared included the amount of time they had to invest in these

learning communities, as well as the work necessary to be sure the same students were enrolled in each class.

Results and Recommendations

Based on both quantitative and qualitative data, both faculty and students benefited from participating in learning communities. Students made academic gains as well as social connections. This model of social and academic integration is fundamental to student retention. In addition, a natural faculty development model evolved where faculty learned from one another in an informal way. The First Year Experience program will continue to offer the linked-course model of Learning Communities, with continued faculty development, beginning during the summer and continuing through the semester.

Conclusions

We have described several different learning communities that have been established at Gallaudet University. These learning communities have enabled students to become more actively involved in the learning process. We have observed that students cooperate and participate more often during class discussions, are more motivated to accomplish the tasks for their classes, and communicate often with each other and with their professors. Faculty members at Gallaudet University will continue their work in learning communities in the future as we recognize the important factors that enhance student learning.

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Administrative Issues: Sign Language Interpreters in the College Setting

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Abstract

This presentation includes the information that a disability support staff (DSS) should know when working with a sign language interpreter in the post secondary level.

Recruiting, advertising, interpreter credentials and hiring procedures will be addressed.

Developing policies for interpreters in the area of team interpreting, evaluating interpreters, as well as providing additional incentives and support for sign language interpreters will be presented.

DSS coordinating responsibilities and standard practices in the profession are among the other topics discussed.

Learning objectives

1. Hiring qualified interpreters and the importance of understanding interpreter's credentials.
2. Developing policies for the sign language interpreter such as, developing pay rates, team interpreting, substitutes, down time and prep time.



Providing sign language interpreting services to deaf and hard of hearing students in a college setting can be a challenging task. Finding, supervising and retaining good interpreters requires creativity, work and preparation on the part of the Disability Support Staff. This presentation is designed to address ways to keep your institution a place where interpreters want to work. As the disability service provider, you must be clear as to what the role of an interpreter is so that you can inform your faculty and meet your students' needs.

What Do Interpreters Do?

Sign Language interpreters must be fluent in both sign language and spoken English. They are responsible for expressing words/signs, inflection and intent to be sure they are providing an equivalent message from one language to another. Interpreters of American Sign Language are also responsible for cultural communication. Often, a mainstream college instructor may be working with a Deaf/Hard of Hearing student for the first time and does not know about Deaf Culture.

It is critical that the Disability Support Staff interview the students to be certain of their communication preferences. Depending on a student's educational background and hearing loss, he/she may request American Sign Language (ASL), Pigeon or Contact Sign Language (PSE), Transliteration, Tactile Signing, Oral Transliteration or Cued Speech Transliteration. It is important to find interpreters who can successfully provide each of these services.

Recruiting Interpreters

Recruiting interpreters can be done in a variety of ways. Getting referrals from interpreters already working at your institution can be most helpful. You may also choose to advertise in professional publications circulated in your county or state or on Internet bulletin boards. Your state RID chapter and local interpreter training programs are also good sources for finding interpreters. When you do advertise, be sure to emphasize what your institution offers like free use of the library or work-out room. Some schools offer free tuition and emphasize that college interpreting means long term assignments and a steady income, something freelance interpreters are always looking for.

Know the meaning of interpreter credentials. This will make the hiring procedure more manageable. There are a variety of certifications an interpreter can receive. Interpreters who have received Registry of Interpreters for the Deaf (RID) Certification, or National Association of the Deaf (NAD) Certification or the new National Interpreter Certifications (NIC, CI,CT, CSC) are considered highly skilled professionals. Many states have their own quality assurance screening processes. If an interpreter has graduated from an Interpreter Education Program (IEP) it means they have received formal training in the skills required to become a professional interpreter. It is also wise to ask about an interpreter's work experience and background. Educational interpreting is skill specific and it may be valuable if the interpreter has a strong academic background.

If your pool of interpreters do not have the credentials previously listed, it will be helpful to find someone you can bring in to assess skills. There are many interpreters doing good work who have not yet achieved the level of national recognition. In-house screening can be a valuable tool for the disability provider. During the interview process, questions that are helpful can be those that identify the interpreter's areas of strength and weakness, their preferences in course content, hours of availability along with questions that focus on their understanding and use of the RID Code of Ethics.

Your office or institution should, early on, establish a pay rate scale dependent on the interpreter's credentials. As discussed previously, this can mean certified, state screened, experienced or novice. Knowing the "going rate" in your area for freelance interpreters will help you make sure your rates are competitive. Have documentation in the form of literature or an interpreter handbook, which includes all of your institutions policies and procedures spelled out clearly, including the rate of pay. If possible, include a Deaf student or employee in the interview process to insure that the interpreter has the level of interpreting skills needed for Post-Secondary work.

Policies and procedures should be established for the following issues: class cancellations, student no-shows, snow day or other emergency school closings, arranging for substitute interpreters, and team interpreting. In the field it is standard to provide 24-48 hours notice when interpreters are not needed. Less than that time means the interpreter will receive payment for the assignment. In many colleges, interpreters are asked to wait for the student outside the classroom door for twenty minutes for each hour the class meets. After that time, interpreters can

report to the disability office for further instructions. Each institution will develop their own plan for locating substitute interpreters. Often there is a list of acceptable candidates to be used by the interpreters themselves when they are unable to work a scheduled assignment. In some offices, the disability provider prefers to handle that task.

Team interpreting has become another standard in the field. It is important to project the need for a team of interpreters. Examine the classes your students have registered for. Are the classes lengthy? Is the course content challenging? Do you know that the professor speaks rapidly? The answers to these questions will help you be prepared with the proper coverage and will give you time to adjust your budget to accommodate this need. It is common for class assignments lasting more than one hour, and that are mostly lecture, to provide a team of interpreters, both of who remain in the classroom. The interpreters share the time “in the chair” working for twenty to thirty minutes each, while the team member remains attentive, ready to feed signs or words missed during the lecture. It would be appropriate to rely on the primary interpreter when he/she tells you a team is required. Interpreters know that the quality of what they produce falls drastically if a single interpreter works for an excessive amount of time without a break. Problems with Repetitive Motion Injury (RMI) and Carpel Tunnel can be disabling for an interpreter who suffers from overuse.

Another thing to consider when working with interpreters in the college environment is how well we compare with the private sector. A freelance interpreter, also known as a private practitioner, relies on individual assignments to make his/her living. In educational interpreting, often times the rules in the private arena do not apply in the college setting, making retention of talented people difficult. Each institution, when making their pay scale, must decide whether or not to include portal to portal fees, mileage and tolls, and two hour minimums; things interpreters have come to expect in private practice. Always remind interpreters that college work provides them with ongoing, consistent schedules and income for at least a full semester.

Evaluating Interpreters

How do you know how effective the interpreter is in the classroom? Ask the students! Sending out evaluation forms to the student after the first few weeks of the semester is a way to empower them and get the feedback that you need. If there is a problem with an interpreter, it is important to address it as early as possible. Classroom observations are another way to ensure that the interpreter is doing the job needed in the college classroom. If you have someone on staff to perform that task, be sure to schedule the classroom visits early in the semester. If not, hiring a consultant to provide feedback to the interpreting staff will be beneficial to both the interpreters and the students using their services. Most interpreters welcome feedback as a form of professional development. Finally, check in with your faculty. Survey's distributed to your teaching staff either at the middle or end of the semester will let you know what the instructor's experience working with the interpreter was like. Did the interpreter work as part of the educational team? Was the instructor comfortable with the interpreter present in the classroom? Did the interpreter provide cultural information that was helpful? Be sure to keep an open door policy for students, instructors and interpreters so they can come to you to speak openly and freely about any questions and concerns they might have.

Supporting Interpreters

Consider the possibility of hiring one or more staff interpreters as part of your service team. Having someone who works as a full time member of your department means you have someone who is vested in your program and the students you are serving. A full time interpreter becomes familiar with other staff members, faculty and students on campus. That person can more easily negotiate the campus system, will have more flexibility with their schedule, and can be responsible for additional tasks as needed during the course of the day. A staff interpreter understands the goals of your program as well as the academic needs of individual students.

If your only option is to hire freelance interpreters, try your best to support them as they work to support your student population. Providing free textbooks for class preparation each semester is a help to the interpreters and they will appreciate having that available to them. Priority parking may be a simple benefit that makes arriving on time to class that much more manageable. Skill development opportunities are invaluable. Nationally certified interpreters are required to maintain their certification by attending professional development workshops and conferences. Organizing and hosting such programs at your college as well as inviting your local RID chapter to have meetings on your campus is a good way to develop the professional relationship you want to have with the people in the field of interpreting.

The responsibilities of the interpreter coordinator or disability service provider are huge. Recruiting, scheduling, supervising and evaluating the interpreting staff at your institution is a demanding job. To run a successful program and provide your diverse student populations with the variety of services they need means you must be informed. Know your students' needs, know your interpreters' needs, and know your institution's needs. For more information, you can refer to the Resource List provided below. Best of luck to you!!!

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English Access Forum: High Stakes Testing, Reading/Writing Accommodations, Implications for Programs and Services

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Abstract

The English Access Forum addressed the historically, controversial topic of accommodating English (print) for people who are Deaf and Hard of Hearing. Jo Anne Simon, Dr. Noel Gregg, and Dr. Alton Brant, were expert guests from the fields of disability law, language, and disability accommodations. The discussion concerned High Stakes Testing and challenged current policies. Georgia leaders discussed high school graduation tests, entrance/exit tests for colleges, universities, technical education, employment, training. Information and challenges will be shared to interact with session participants, to further this discussion nationwide, and to help professionals consider an appropriate range of accommodations for the future.



Georgia's State Outreach and Technical Assistance Center (Postsecondary Education Consortium for PEPNet) is often asked what to do when clients, employees, and students do not pass exit, entrance, and certification tests despite what appears to be "otherwise qualified" circumstances. High Stakes Testing issues have long been at the root of controversy in professions working with people who are Deaf or Hard of Hearing. GA-SOTAC has received inquiries about many tests including high school graduation tests, the Georgia Board of Regents Test, developmental studies exit exams, entrance requirements for technical colleges, the Praxis Exam, graduate school entrance exams, the CRC exam, teacher training standards and student teaching requirements, and general testing.

Professionals are looking for creative, appropriate strategies to address the needs of many students, clients, and employees who are Deaf and Hard of Hearing who have historically struggled with High Stakes Tests. How do we determine "otherwise qualified" in academic and employment settings that require entrance and exit tests which are given in English (print)? What are appropriate, reasonable accommodations for people who are Deaf and Hard of Hearing in high stakes testing situations? And, perhaps most importantly, how do we insure that a test given in printed English is credible, valid, and reliable for a person who is Deaf or Hard of Hearing? If a test is not purported to measure the ability to read and write, and it is administered in printed English, is it always an appropriate measure for an individual who is Deaf or Hard of Hearing?

On February 23, 2005, GA-SOTAC hosted The English Access Forum to address many of these questions and provide better technical assistance. Katherine Bruni, GA-SOTAC Outreach Specialist, and English Instructor at Georgia Perimeter College, facilitated the Forum. The goal

of the Forum was to begin a dialogue nationally about English Access for people who are Deaf and Hard of Hearing. Information about the Forum should help others 1) gain information to help consider an appropriate range of accommodations for testing, and 2) learn about legal perspectives and accommodations for hearing students with disabilities that may challenge current practices.

Guest Experts

Expert guests from disability law, language development, and disability accommodations led a discussion with Georgia policy leaders to begin a dialogue about English Access.

Jo Anne Simon is an attorney in New York. Formerly a teacher of the Deaf at Gallaudet, she has taught Deaf and blind children. Because of the similar difficulties in reading that are experienced by people who are Deaf and people who have learning disabilities, a background in deafness helped Simon try an important case on learning disabilities. Her perspectives challenged Forum participants to consider “what is the right thing to do” within a context of legal requirements and mandates.

Dr. Alton Brant had the “good fortune of growing up in a deaf home.” His first language was ASL. He was trained as an educator. He was a principal in a school for Deaf children. He currently teaches at Clemson University, teaching ASL and Deaf Studies.

Dr. Noel Gregg has been in the field of learning disabilities for almost 25 years. One of the filters that influenced her comments at the Forum is related to the fact that a “learning disability is a communication disorder. It is a difficulty in understanding either verbal or non-verbal types of information. Some of those difficulties have similarities to people with hearing impairments.”

Forum Leaders and Policy Makers

More than forty leaders and policy makers in Georgia represented almost every aspect of work with people who are Deaf or Hard of Hearing, including education, both postsecondary and K-12 and both public schools and state schools, counseling, disability services, employment and training, vocational rehabilitation, advocacy and community services, testing, disability law. Consumers, students, and parents also participated.

A Framework for Discussion

To facilitate a productive discussion, participants were reminded of the following principles that would serve as the framework for discussion:

1. One size does not fit all. Decisions about appropriate, reasonable accommodations should be made on an individual by individual basis. One accommodation is not necessarily a good fit for every individual.
2. Test development and administration requires that we know what we want to measure. We must consider what a test is purported to measure when administering an assessment to any individual.
3. English Access is also relevant to instruction and general access of information.

Questions: Dissecting the Pink Elephant

In general our field seems hesitant to discuss English Access, and the Forum explored this hesitation. In the field of education of the Deaf, we discuss how to improve reading/writing instruction. When is it appropriate, however, to accommodate English (print) as is done for individuals with other disabilities? How do we define “otherwise qualified” in academic and employment settings? When are tests that are administered in English (print) discriminatory? And when are they not credible, reliable, or valid? These are questions that we tend to avoid perhaps because of our eagerness to promote the fact that people who are Deaf and Hard of Hearing can achieve, accomplish, and succeed.

Perhaps we are afraid that we will diminish the integrity of degrees administered by institutions and of achievements attained by individuals who are Deaf or Hard of Hearing. The Forum suggested, however, that these fears are unfounded if we adhere to sound principles of accommodation provision and testing. Surely there is a way to maintain the integrity of the achievements of some individuals while not jeopardizing the opportunity of others to meet their human potential.

Brant put a new twist on an expression at the Forum, saying, “This is a ‘*pink elephant*’ in the middle of the room.” We have known this “pink elephant” has been here for decades, but no one wants to talk about it. We talk about instruction, but we don’t talk about real access issues with regard to print and people who are Deaf. Brant challenged Forum participants to address English Access issues head-on; “We are going to dissect this pink elephant today!” he said. Discussion at the Forum considered difficult questions that do not have easy answers: What is literacy? What is the definition of “illiterate”; might it have a different definition for people who are Deaf and Hard of Hearing? What accommodations are being provided to people who are blind and to hearing people with learning disabilities related to reading and writing? What are the legal perspectives related to English Access? What does language disability mean for an adult who is Deaf or Hard of Hearing? What research questions do we need answered? What are the accommodations that might be considered for printed material? When might these accommodations be appropriate and for whom?

Instructional Access – Children

As Forum Experts and participants addressed these questions, they concluded that English Access also means access to knowledge, information, and power, as well as language. Within this context, participants discussed instruction, even though the Forum focused on English Access as it relates to testing. Brant discussed the lack of standards for teachers and interpreters regarding signed communication reminding us of the importance of fluent communication skills among professionals and of the relevance of English Access in instruction and curriculum development. Dr. Harley Hamilton, Atlanta Area School for the Deaf, Center for Accessible Technology in Sign, participated in the Forum. Hamilton is modeling best practices that emphasize the importance of English Access to instruction. The web site <www.aasdweb.com/CATS> should be explored as a resource for instruction that attends to English Access in work with children.

What is Reading and Writing? What is Literacy?

Guest experts challenged Georgia leaders to expand their traditional notions of literacy and to consider a new paradigm when considering testing and instruction that involves reading and writing skills. Gregg described a new conception of reading:

Reading has been defined very conservatively in the past as reading with your eyes and reading print on a page with your eyes. That is no longer an acceptable definition for what reading represents in our society. Again a person can use an iPod and download a book onto it, and they are listening to that book. That is reading a book. It does not anymore have to be that it (reading) must come through our eyes in order to access that knowledge. So reading equals the alternative media that allows you access to that information. Is reading with words on a page different from reading through our ears, such as through a book on tape? Our traditional ways of reading have been very restrictive and have not allowed many adults with learning disabilities, with hearing impairments, or with visual impairments to be able to really demonstrate their knowledge. Today with iPods and other types of MP3 players we are beginning to redefine what we mean by the term reading, and this will have a very significant effect in how we define how to test reading.

Simon spoke of “the notion of literacy under a Multiple Intelligence Framework,” and she challenged the Forum to think of listening and reading and intelligence within a different framework. “We are really talking about knowledge and access to information. High Stakes Testing can help with many things but not the mission of education and knowledge,” she said. The high correlation between listening comprehension and intelligence was discussed, and the need to consider different ways to demonstrate knowledge of information was encouraged. The discussion suggested far reaching implications for education of people who are Deaf and Hard of Hearing and for appropriate accommodations for print. When might it be appropriate, for example, to have reading material interpreted in sign language to determine an understanding of the material or even to determine the main idea, to draw conclusions, or to determine inferences? People who are blind often access printed material through listening because they cannot physically see the print.

Looking to Other Disabilities

Participants were encouraged to look to other disabilities to consider what accommodations are being requested and granted, and they were reminded that extended time and “read-alouds” are the most used accommodations by people with learning disabilities. “Read-alouds,” Gregg explained, “are when someone reads a test to you or signs the test to you, so that your eyes do not have to interpret the meaning that is in front of you. Again a redefinition of what we mean by reading.” Hearing people who are blind or have reading and writing disabilities are requesting “read-alouds” (often through technology) and scribes; these requests are often granted (on a case by case basis.) Forum participants pointed out that similar requests for readers, or interpreters, are seldom made by people who are Deaf and Hard of Hearing, and such accommodations may not be officially considered despite the well documented and direct correlation between congenital hearing loss and reading/writing ability. The reliability, validity, and credibility of testing instruments may, indeed, be compromised by the lack of consideration of appropriate accommodations for certain individuals who are Deaf or Hard of Hearing in testing situations. Alternative media, especially with regard to reading, is the “way of the future,” Gregg advised,

and she further defined reading as the ‘alternative media’ that allows you access to (that) information.” She continued:

Alternative media represents many different types of technologies that are available to an individual for accommodations. For those individuals with learning disabilities or with visual impairments the most common type of alternative media refers to things such as books on tape where an individual in order to understand a book would have to hear that book through their ears. Alternative media could be Braille for an individual with visual impairments. It is an alternative way of accessing information. We must begin to think about reading in a different framework.

Legal Perspectives

Brant shared the challenges that teachers who are Deaf face regarding the passing of tests for licensure and certification. The dilemma is that deaf people who can communicate effectively have difficulty passing tests for licensure; however, hearing people who passed the exam have difficulty communicating the content in the child’s primary language. A parent at the Forum explained her child’s struggle with a graduation writing exam that he took approximately twelve times before passing and receiving a high school diploma. That same student is now at NTID, and he has made the Dean’s List. In South Carolina, Brant explained, interpreting various tests as an accommodation has been approved for a standardized high school graduation exit exam, but the state considers the signing of the reading section of the test to be a modification rather than an accommodation. Simon challenged that decision, saying:

I don't believe that is a modification. I believe every State Department of Education in the country thinks it IS a modification. That is part of the battle. But I think we should look at that line and think about re-drawing it. What is an accommodation versus a modification?

From a legal perspective, Simon inspires the field of deafness to reconsider traditional notions of literacy, modifications, and accommodation:

If reading is visual and text based, what are we doing with blind people? So what do we mean by reading? We combine what we test with the mechanics of (a) test. When a fundamental thing is changed we consider it a modification. It’s not a modification of math to be signed or history or science for it to be signed. Why is it on reading? It’s the same thing as books on tape.

Within the context of appropriate testing principles and a new framework to define literacy and reading, Simon discussed reasonable accommodations vs. auxiliary aids and services, undue burden, fundamental alteration of programs, and tutoring and personal services. “I don’t believe that what the law requires at this juncture is, in fact, true access,” she said. Simon challenges professionals to ask themselves if the way we as educators are doing things is the only way and the right way. Disability Law and Deaf Education have the responsibility to explain, and to understand, deafness and its impact on the reading and writing process; people who are Deaf and Hard of Hearing should not have to have a diagnosed learning disability to receive accommodations for reading and writing.

Testing

Specifically regarding testing, Simon continued:

Signing a test is the same as reading the test. We have MP3 and iPod players. You can take the digital version of those tests, and that interpreter puts it on the iPod and interprets it. How is this different than services which are provided for a dyslexic person?

Gregg reiterated the importance of understanding specifically what it is that is being measured by a test:

One of the unfortunate assumptions that has gone on in the literature for some time is that the accommodation is what makes the difference in a student's performance. The accommodation is simply the tool that allows you to access or demonstrate your knowledge. If an individual does not have the knowledge, giving them extra time or giving them alternative media is not going to make the difference. The issue is not the accommodation. The accommodation is no different than, for instance, someone like myself who needs reading glasses. The reading glasses allow me to access and demonstrate my knowledge. I still have to have the knowledge. If you give me my reading glasses and then give me content that I don't understand, the glasses are not going to make the difference. It is the access to that knowledge. Using of the accommodation is simply a tool. It is the leveling of that playing field.

Gregg further discussed Universal Design whereby the "environment becomes what we are trying to change in order to accommodate all learners not just certain types of learners. iPods and MP3s are being used by students more and more frequently to access reading."

Simon cautioned consumers and advocates not to make requests on the basis that English is a second language because second-language learners do not have protections regarding access, by law, that people have because of a disability. It is important to explain the "functional limitations" with regard to reading and writing that exist because of a hearing loss.

Strategies and Needed Research

Gregg stated that more research is needed to understand "what it means to have a universally designed test. How can we create tests so that we are truly measuring what we think we are measuring and will not discriminate for different types of learners?" There is also a need to conduct research to determine the effectiveness of accommodations. As a possible strategy, Brant reiterated the precedent set in South Carolina for interpreting standardized tests.

Simon emphasized the importance of "following up" after requesting accommodations for testing or instruction. Furthermore Simon recommends that it is "usually a good idea to disclose your disability when applying to schools (although you do not have to disclose your disability) because you will eventually if you are going to request accommodations." Simon also suggests that students make:

...part of (a) personal statement, that you have a disability, how it affects you, what proper accommodations you are requesting, (and state) if not accommodated the score (on an entrance test) may not be a valid indicator of your ability to be successful in that program.

Challenges and Recommendations

Some administrators at the Forum expressed concern about giving the impression that children who are Deaf and Hard of Hearing should be excused from, for example, the High School Graduation Test, or that they cannot learn to read because they are Deaf. The Forum challenged administrators to understand that the issue with regard to accommodations is access to knowledge. Experts challenged “fundamental assumptions, understandings, and beliefs.” Simon cautioned administrators about the conflating of standards with testing:

I think that education standards do not always mean that there is a test for it or a test to be passed. Testing is one way to implement standards and to assess knowledge, but it’s not the whole thing. Some of these questions don’t get answered (because) they’re hard, and people haven’t committed to doing that very, very tough work, some of which requires a lot of us to go back and soul-search what we understand, why we understand it, what our assumptions are, what we believe that may not, in fact, be true.

Gregg supported her colleague, saying, “What we want to do with accommodations is to allow individuals with disabilities, whether that is a learning disability, a hearing impairment, or visual impairments, access to knowledge that those without disabilities have on an every day basis.”

Gregg recommended instruction, and therefore knowledge, be provided in varied formats and through alternative media. To provide individualized, effective accommodations, Gregg encouraged quality (not quantity) assessments that are tailored to the individual and administered by qualified evaluators. An additional recommendation addresses agencies and bureaucracies and challenges them to develop “clear standards and policies that can be used across systems.” Simon reminded Forum participants of the importance of political action, explaining, “There’s tremendous support for making federal issues local these days, working to make sure that your local policymakers on the state and local level are educated about these issues.”

The Forum decided that presentations about the English Access Forum should be made at national conferences to promote a dialogue about English Access issues. Presentations were completed in April 2005 at the Western Symposium on Deafness in San Diego and in June 2005 at the English Think Tank at the National Technical Institute of the Deaf. Leaders and experts at the Forum concluded with a summary and implications for future action:

English Access needs to be considered when making decisions about instruction and testing.

We need to challenge our beliefs, fundamental assumptions, and decision making regarding policies and accommodations.

We need to discard the notion that reading only means seeing the print with our eyes.

We need to expand traditional notions of literacy and consider a new paradigm.

We need to learn from other disabilities and the accommodations that they are requesting and receiving for print.

We need to educate others, and our field, about the profound impact that hearing loss can have on language, reading print and writing.

We must maintain a focus on principles of accommodation provision and testing.

The English Access Forum will convene again to further explore many of the questions that remain unanswered and undefined regarding English Access in instruction, and testing of individuals who are Deaf and Hard of Hearing. It is important to make decisions about accommodations on a case by case basis. We must be sure that a test is measuring what it is intended to measure and not the disability of the person taking the test. We must consider appropriate accommodations for individuals in test taking situations to ensure the reliability, credibility, and validity of the testing instrument. Since the English Access Forum took place in February 2005, an important resource has been published that further challenges leaders and policymakers:

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‘ROOT’ing Service Delivery: Interpreters Find Their Wings in the World of VRS

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Abstract

A panel representing the four regions of PEPNet will discuss creative strategies to address emerging interpreter shortages and funding challenges. Video Relay Services are bringing a needed service to urban and rural communities, but they also provide new challenges. Participants will be encouraged to share positive and creative solutions to the critical needs for interpreting services in this changing era. Participants will: (a) learn/share new strategies for addressing the critical shortage of interpreters; (b) gain information about creative structuring/funding of interpreting services.



Many states are experiencing the benefits and challenges of Video Remote Services (VRS.) Postsecondary institutions, secondary schools and other PEPNet/PEC clients have contacted PEPNET outreach centers throughout the country proclaiming that they cannot find interpreters and/or that interpreters are taking higher paying positions with VRS companies. The reaction to VRS has frequently been negative on the part of agencies, organizations, and institutions trying to find interpreters despite the overall positive appreciation for VRS on the part of consumers who are Deaf.

The reality is there have always been interpreter shortages and money concerns about providing interpreting services. Interpreter shortages have always been an issue, especially in rural areas. Now, they are an issue in urban areas as well. VRS is not the enemy.

VRS companies, as a matter of fact, have gone a long way to develop initiatives and policies that are beneficial. In some parts of the country, companies such as Sorenson have used monies to speed up RID exam results. Some VRS companies have tried to build mentoring programs and increase the community interpreter pool. It is appropriate and important to shift the focus from a negative perspective to a positive approach for providing interpreting services.

A panel representing all four regions of PEPNet led a discussion that encouraged a positive perspective and approach to providing and funding interpreting services in this era of VRS. Knowledgeable resources were also present in the audience to share ideas and information that would help the panel do a thorough job of articulating creative recommendations.

Panelists included: Bambi Riehl, University of Wisconsin, Interpreter and PEPNet/MCPO Outreach; Jane Nunes, Massachusetts Site Coordinator, PEPNet/NETAC; Annette Leonard, PEPNet/WROCC Outreach Coordinator, Oregon, Idaho, Washington, Alaska, and Disability Services, Western Oregon University; Debra Brenner, Coordinator of Services for Students who are Deaf and Hard of Hearing, Georgia Perimeter College; and Katherine Bruni (Presentation Moderator/Facilitator), GA-SOTAC Outreach Specialist PEPNet/PEC and English Instructor to students who are Deaf and Hard of Hearing, Georgia Perimeter College.

There are no absolute answers to issues of interpreter shortages and funding issues, but there are some positive initiatives about how to find and fund interpreters that the panel and experts in the audience shared with others in our field.

In this session participants learned new strategies to address the critical need to find interpreters, gained information about creative ways to fund interpreting services, and were encouraged to share positive and creative solutions to address interpreting needs.

Six topics provided a framework for discussion: funding interpreting services, finding interpreters, communicating with administrators, remote services, considering other accommodation options, and legal considerations.

Funding Interpreting Services

Some in-house ideas regarding the funding of interpreting services included hiring staff interpreters, hiring part-time interpreters, considering a different student fee structure, and billing other departments on campus.

Some institutions can save money by hiring staff interpreters, and that has been the experience at the University of Wisconsin. Bambi Riehl explained that staff interpreters are generally not paid for travel time, and they are not paid for mileage. Difficulties with interpreter availability may also be overcome by hiring staff interpreters. A national survey on interpreting salaries may assist programs in justifying staff interpreting positions on their campuses. The 2005 Survey of Postsecondary Interpreter Services: Salary and Program Demographics can be accessed on the MCPO web site <http://www.mcpo.org/interp_survey.asp>.

Riehl suggested that savings can be realized by:

...growing your own interpreters. Now, we are hiring those (interpreters) with fewer credentials with less experience, but we mentor them. Certified doesn't always mean qualified. We hire pre-certified interpreters and spur them on to more experience and skill.

Nunes and Brenner recommended splitting positions into part-time interpreting positions and offering benefits for part-time interpreters. It can be helpful to provide administrators a comparison of costs for contracting with free-lance interpreters and for providing part-time interpreting positions with benefits. Benefits are often attractive to an interpreter who has been working free-lance without benefits. Nunes explained, “I convinced my administrators that this is what I would have paid them (interpreters) if they were freelance. We can pay them a lower rate on salary because the benefits take up the rest of the slack. It became very effective to attract and keep interpreters.” Interpreters may also have other duties and not interpret every hour that they are working. Furthermore, Nunes recommended a flexible work schedule and “swing schedules” that are negotiable per the interpreter’s contract; this will also add flexibility in scheduling for the postsecondary disability services office.

Annette Leonard encouraged programs to investigate their student fee structure for clues about funding interpreting services. At Western Oregon University the group that makes the decision about how student fees are spent involves students, faculty, and staff. When considering funding for interpreting services for non-academic and extracurricular activities like sports, clubs, and residence hall events, it may be very helpful to request funds from student fees.

Leonard also suggested that it is sometimes appropriate to bill other departments outside the disability services office for interpreting services. As departments see how much interpreting services cost, they may set aside interpreting services as a line item in their budgets. It is important to work with the departments and educate them about appropriate accommodations and their costs so that students who are Deaf are accepted and welcomed into all campus activities. It is important to consider all funding options at one’s institution.

In addition to in-house solutions, statewide and institutional strategies for sharing resources must be considered. Some of these strategies include: system wide agreements, subcontracts between institutions, and sharing interpreter lists and contracts.

Agreements between Vocational Rehabilitation and postsecondary institutions can be very important, and they may also increase funding through opportunities to match and/or access additional funds. Kentucky has a strong VR and postsecondary partnership. Tricia Davis is the KY-SOTAC/PEC Coordinator and Grants and Projects Director for the Center on Deafness at Eastern Kentucky University. Davis is an excellent resource for establishing such partnerships.

System wide strategies may also be considered. In Georgia there is discussion about funding “following the student” within the Board of Regents system. The concept being discussed would enable any institution within the Board of Regents system to contribute to and then subsequently draw from a single, system wide funding source as funds are needed to provide interpreting services. Bonnie Martin, Director of the Center for Disability Services at Georgia Perimeter College, is trying to build this concept in her state.

Another strategy is to subcontract interpreters to neighbors. Riehl suggested, “You can think of people that you can partner with. Think about the campuses within 30 minutes of your campus and how you can share interpreters.”

Brenner emphasized the importance of sharing lists of interpreters and contact information even when one might be hesitant to do so because of interpreter shortages. Sharing between institutions may also be a more efficient use of interpreter resources; interpreters spend a lot of time traveling to assignments that could be spent interpreting if institutions shared resources for a more efficient system of scheduling. The sharing of resources and information about finding interpreters may also lead to a partnership or subcontract agreement with other institutions that could be beneficial to all with respect to funding interpreting services.

Finding Interpreting Services

The RID website is one resource for finding interpreters; the web address is www.rid.org. RID has several databases that are searchable, and one is a database of members. This web site allows an individual to seek out interpreters and members by city and state. That doesn't mean that the person seeking an interpreter will necessarily always be able to identify interpreters with certification, but the site will give the person contact information for people in his or her area, and people seeking interpreters should check the site regularly. There is also information on the site that will help the individual make sure interpreters are maintaining their certification, and that's a great resource.

Offering creative incentives to interpreters may also be a way to find interpreters for one's campus. Jane Nunes suggested a number of creative incentives that have been helpful in securing interpreters in her state including: paid parking, tuition discounts for interpreters who may want to work on their degrees, fitness center discounts or privileges, free or reduced programs or courses perhaps through continuing education, free housing on campus, training opportunities, and opportunities to get critical diagnostic feedback to improve interpreting skills.

Nunes also recommended borrowing and bartering with other institutions, organizations, and agencies when unable to find an interpreter. It may be possible to find a staff interpreter who is not busy who may be "borrowed" and then reimburse that particular agency or place of employment. Postsecondary interpreters may indeed appreciate the opportunity to be "loaned" back into the community as a change of pace, and this has been the case at the University of Wisconsin. Thinking creatively about what interpreters might want or need in the community is a good way to begin a creative process to find interpreters.

Interpreter training programs are, of course, a great way to increase the number of interpreters in communities, but Debra Brenner offered that they may also be a great source for finding interpreters. Interpreters in training may already be fluent in ASL (a CODA for example) but may not have completed their formal education in interpreting.

Project Reach is an example of cooperative agreements that can help find interpreters and fund services. Riehl shared information about another presentation at the PEPNet Conference, "Schools Working Together to Meet Interpreting Needs: Three Successful Wisconsin Interpreting Subcontracting Projects." That presentation, which took place at the PEPNet Conference on April 7th at 3:30 PM, discussed three campuses and how they established partnerships in their areas of Wisconsin. Project Reach is a good example of how to collaborate from the bottom up and the top down for funding and finding solutions. Hopefully, an article will be published of that presentation in the PEPNet Proceedings of the Conference. Riehl is a good resource for more detailed information about Project Reach.

Mary Morrison, WROCC Coordinator and University of Montana Director, shared from the audience the collaborations and partnerships established in her state with Vocational Rehabilitation and with the public school system. Morrison is a particularly valuable resource to others in rural areas.

Communicating with Administrators

If a disability services provider has some funding and finding ideas, then how does he or she convince the administration to accept creative solutions?

There are strategies to explain costs such as spreading costs over all students or dividing costs in terms of credits, GPA, or retention. "You have to show how expensive the service is, and

this requires crunching numbers to increase the budget in your area,” Nunes explained. She noted that there may be many creative ways to do this, including comparisons of GPA averages for students with disabilities (receiving accommodations) and GPAs for students without disabilities. Nunes introduced Bobbi Cordano in the audience as an excellent resource regarding creative strategies that address the costs of providing accommodations and explaining those costs to administrators. Cordano is the Director of Disability Services at the University of Minnesota.

Leonard further reminded presentation participants that:

...retention is on everyone's mind. The administration pays attention to this. Without accommodations appropriate to the student, retention tanks. Students with these services are more likely to stay in school. (We need to look) at the fact that by providing access and auxiliary aids, we are maintaining our numbers and furthering the retention of the college.

Disability services providers need to explain accommodations and their costs in terms that will help administrators define their value to the institution.

There are strategies for educating and networking with administrators. Leonard noted that:

PEPNet is a wonderful resource. I have told my VP and others above me my opinions, but if I refer them to PEPNet as well, they believe them! You should contact your local PEPNet person to help support (your creative recommendations.)

Statewide meetings to discuss interpreting service issues is a strategy that has been helpful in Massachusetts, and the meetings have gone a long way to educate administrators and to network to support creative ways to think about budget issues and to provide services.

Leonard suggested that it may also be helpful to share information with one's administration that will show them how many classes went uncovered (meaning no interpreters). This information may reflect the number of potential lawsuits.

The most important strategy, however, is to build relationships with the administration that are productive and positive. Listen to the needs and concerns of the administration. Take time to build relationships with individuals in administration, and seek their input and opinions.

Remote Services

If a disability services provider says an interpreter can't be found, has he or she looked into the possibility of providing remote services?

Providing remote services means education and technology working together. It is also important to know about ongoing projects and resources and independent and private sector vendors.

The technology for providing remote interpreting services is not 100% effective in all areas and all situations and environments yet, but it cannot be dismissed as an option unless it has been tried. It is a marriage between technology people and educators. It is impossible to know if arrangements can be made for remote interpreting until one's own technology service providers have been consulted.

Riehl discussed the PantherCom Project and displayed a slide of the PantherCom studio on

her campus. She explained, “We have a program called Panther Communications. VR...gave us money to investigate remote services. We now have this studio and can occasionally provide these services. We are not doing much, but every once in a while when needed.”

Dr. Nanci Scheetz is also involved in research that uses remote technology for the provision of interpreting services, tutorial services, and teacher and interpreter education. Heading up the Teacher Training Program as well as the Interpreter Training Program at Valdosta State University in Valdosta, Georgia, Dr. Scheetz is another valuable resource.

Riehl encourages the field to be open to the use of remote technology for the delivery of services. She explained:

Two years ago when I came to PEPNet, people were talking about Video Remote Interpreting (VRI). Now there are agencies offering VRI. ...There was a press release on the Sorenson website that said only 10% of the VRS market has been tapped. The exponential change in the next 5 years (due to remote technology) will be incredible.

Nunes has compiled a list of vendors for VRI, Video Remote Interpreting, and VRS, Video Remote Services. This list is available as final slides on the PowerPoint of this presentation and should be available on the PEPNet website: <www.PEPNet.org>. The PowerPoint presentation, with the list of vendors, is also available on the following web site: <<http://dss.jsu.edu/pp/rooting.pps>>. This list is forever changing; one should use it as a resource that is not necessarily endorsed by PEPNet or the members of this panel. Users of this list should update it frequently for their individual use. Some of the vendors on the list, SLA, for example, may also be able to provide services in other languages in addition to English and ASL.

Considering Other Accommodations

As decisions are made about appropriate accommodations on a case by case, individual by individual basis, it is important to consider all accommodations. There are a number of text accommodation options including: stenography – CART, C-Print, Typewell, instant messaging, text messaging (pagers), and captioned conference calls. When considering these text accommodation options, it is important to understand that English fluency is a factor that must be considered when determining whether or not these accommodations are appropriate options. A text accommodation cannot just summarily be substituted for interpreting services. Furthermore, the situation, the environment, the student or client, and the duration of communication all should be considered when determining appropriate and creative use of these options. Some of these options may not be employed for primary access but rather for “behind the scenes” accommodations to facilitate communication in select situations.

Legal Considerations

FCC regulations and “getting one’s legal house in order” are two important topics. It is important to remember that Video Remote Services (VRS) and Video Remote Interpreting (VRI) may use the same or similar technology, but they are different services in their application. VRI is a fee based service, which can be billed by increments of time. VRS is regulated by the FCC. This is the service that a portion of phone bills supports. Society pays for VRS in advance each

month with its phone bills. That means, Leonard reminds us, “We are abusing the services if we are in the same room having a conversation (using VRS.)” VRS is not an option for the classroom when the instructor and student are both in the room; it cannot be used to provide that kind of accommodation. VRS could, however, be used for a student to meet with and confer with an instructor over the phone. VRI, on the other hand, is indeed used to provide an accommodation in the classroom where an interpreter is assigned to interpret for the class but is just in a different location using remote technology to make that accommodation possible.

It may be important in the times ahead to be informed about FCC regulations and responsive to FCC requests for information as disability service providers address issues that may impact availability and costs of interpreting services.

Leonard further emphasized that documentation is imperative when “getting your legal house in order.” David Ladou, a speaker at the PEPNet Conference, addressed this issue expertly. If a service provider is not able to find an interpreter, he or she should document thoroughly all the ways that were explored to provide interpreting services (including through remote technology).

Leonard stressed creative strategies that were discussed during the presentation as she emphasized that:

Access is a campus wide issue. That's not the responsibility of the office of disability services, but the whole institution. When we think about how to communicate with administrators, we need to be inclusive, including people who are Deaf and Hard of Hearing. When I say you make departments financially responsible, you need to spread access across the whole university.

Nunes shared a strategy that has been effective in her state. As a former Director of Deaf Services, she established an advisory board for the Deaf and Hard of Hearing Services. As she explained:

The advisory board established, and then partnered with, a campus wide access committee. The membership of that committee had direct access to all vice presidents on campus. The access committee convinced the director of facilities, the 504 compliance officer, and a person from academic services to join the committee. It became a powerful and successful committee. I (now) go in as a consultant, and I could not have accomplished many things we did without having the power of the committee.

VRS companies are expanding our infrastructure, providing a much needed service to the Deaf and Hard of Hearing communities, and creating new opportunities for freelance interpreters. VRS companies are not the enemy but a challenge that is a catalyst for a new era. We must be creative and diligent in meeting the challenges to find and fund interpreters, to develop and utilize remote services, to communicate effectively with administrators, to consider all possible accommodation options, and to attend to necessary legal considerations at our institutions.

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More Than Words on the Screen

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Captioned Media Program

Abstract

It is well known that captions are crucial to anyone with a hearing loss. It has also been shown that captions benefit all students in retaining information more efficiently. However, the reality is that less than 10% of all educational videos contain captions. It is important for education institutions to be well versed in captioning options. There are resources for obtaining captioned versions of some media, but there may also be a need to add captions if there is not already a captioned version. All media produced by a college or university should be captioned during the production. Commercial media can be captioned, post production, with permission from the copyright holder. The process of adding captions can be costly and time consuming but the benefits to the students far outweigh the difficulties.



Captions are crucial to students who have a hearing loss. In addition all students can benefit from captions by using multiple sensory input. However, less than 10% of all educational media is captioned. Educational productions are usually produced on a much smaller budget than Hollywood productions and captions are not a priority. So it is left up to individual institutions serving deaf and hard of hearing students to try and make these materials accessible.

Some institutions may try to provide accessibility through an interpreter. However, this option does not fully provide real-time access. Dr. Malcolm J. Norwood, “the Father of Closed Captioning”, himself deaf and a certified teacher, conducted research in 1978 comparing the effectiveness of two modes: print (captions) and sign language (interpreter). His findings, reported in his dissertation entitled “Comparison of an Interpreted and Captioned Newscast Among Deaf High School Graduates and Deaf College Graduates,” confirmed earlier research that deaf persons receive significantly more information from captions than from a sign language interpreter.

Another method being used to try and make uncaptioned media accessible is a written transcript. This does satisfy the letter of the law because a simple definition of captioning is the text version of the spoken word. But again it does not provide full access because it is important that sound effects, speaker identification, and music also be included in the text. In addition effective captions are synchronized (appear at approximately the same time as the audio is available), equivalent (content in captions should be equal to that of the spoken word), and accessible (readily available to those who need them).

These components provide true access for those who cannot hear the audio. However, research has determined that it also benefits many who can hear, including those who are not

fluent in the language in which the audio is presented and individuals with learning or reading difficulties.

Laws such as the ADA and Sections 504 and 508 for the Rehabilitation Act require that access to information be provided to individuals with disabilities. In recent years, and with the help of several important law suits, more and more colleges and universities have begun to be diligent in their attempts at providing captioned materials.

When schools produce their own media such as promotional videos or recordings of classroom lectures it is important to remember that captioning should occur during the production stage. Captions may not fit in naturally if they are added in later. In addition, for DVD and CD media, captions are included at the design/authoring stage and become a part of the digital information on the disc. Once the disc has been created (burned), there is no way to add the captioning. The original programmer (or author) of the disc would have to add captions and burn a new disc. While many school AV and media departments are beginning to deemphasize the VHS format, many instructors still have personal classroom video collections. For this reason, there may still be a need for a system that will caption VHS as well as digital media.

Digital media is the easiest to caption since additional hardware is not required as it is with VHS. The main programs used to display media on the computer are QuickTime, Windows Media Player, and Real Player. Each has a built-in function for displaying captions. All that is needed is a time-coded transcript. MAGpie is a free software that can do this. It is time consuming, but not too difficult to use.

Schools should know that commercially produced media is normally copyrighted, and copyrighted material cannot be altered or produced in a different format without permission. Adding captions alters a video, and even digitizing a VHS video is changing the format. Therefore, written consent from the producer is a must. At this time there are no exceptions under the Fair Use provision even for educational institutions.

However, the first step should always be to locate a captioned version if possible. Two resources to help determine if media is already captioned are: R.R. Bowker LLC (888-269-5372 (V), <http://www.bowker.com/>) and the Captioned Media Program (<http://www.captionedmedia.org/>). R.R. Bowker maintains a database of commercially produced captioned media produced in the U.S. The Captioned Media Program is a free loan library of open captioned media for individuals with a hearing loss and professionals in the field of hearing loss. Both can provide databases of accessible media. If you already own an uncaptioned version of a video and find that a captioned version is available, try negotiating an exchange with the producer even if an exchange fee is required.

While all media used in the classroom should be accessible, the reality is that everyone has to maximize use of resources. Because captioning is expensive and time consuming, schools will need to develop a process for prioritizing what is captioned. The following questions can help in prioritizing media.

- How current is the media?
- What is the life span of the media?
- How often is it used?
- How many faculty use this title?
- How often do students with a hearing loss take this class?

Once the media has been selected then the process is to create a transcript, perform line divisions, and then to add the captions. The captions are only as good as the transcript they come from. The transcript should be verbatim with correct spelling, capitalization, and grammar. It should follow all standard rules for punctuation as well as the unique rules which apply to captioning. All essential sound effects should be included, either in words or symbols (e.g., “buzz” or 🎵). Once an accurate transcript is obtained then the text has to be broken into sentences, and then the sentences must be sub-divided into captions. Then a text file is prepared for digital media or a VHS tape can be closed captioned through the use of special software and hardware.

The transcript and line division process can be the most difficult and time consuming. Since translating speech to text is not easy, as spoken language is generally very different from conventional written text. Spoken language sometimes appears improperly constructed when put into written form and can be difficult to punctuate.

Equal access demands a verbatim transcript that adheres to high standards. It is very important to apply captioning grammar and presentation rules, such as those presented in the Captioned Media Program’s “Captioning Key: Guidelines and Preferred Techniques.” (<http://www.captionedmedia.org>) These rules include:

1. Spelling and capitalization should be accurate through checks made by utilization of high-quality general dictionaries, specialized dictionaries, and encyclopedias. All proper nouns should be verified.
2. Grammar and punctuation rules from standard grammatical style guides and reference manuals are followed when possible. However, acceptable and understandable speech may consist of broken sentences, incomplete sentences, run-on sentences, and other constructions normally considered not acceptable when originated as written language. Transcription of these speech constructions into text sometimes requires use of punctuation that is unique to the captioning process and style guides. Punctuation should make captions as easy as possible for viewers to read.

It is not necessary to repeat, in caption form, any information that is already on the screen (such as the name of a presenter or temperatures read out in a weather report), assuming that such information is not obscured by inappropriately positioned captions.

There are several different ways of obtaining a transcript. Some schools have speech-to-text services established for their students who are deaf or hard of hearing. These service providers can be contracted to produce a transcript. One factor to consider is how much time the transcription will require and does the service provider have the time in addition to their classroom hours. Also, remember that your in-house people probably lack training in creating appropriate and accurate verbatim transcripts for captions. While they may cost less per hour they may require more time to complete the project.

Hiring a professional service is another option. There are several commercial transcription services in the United States. Many serve individuals needing one-time services as well as very large companies. While commercial services may charge high fees they should have the training to produce quick and accurate transcripts. The final difference in cost between in-house and commercial services may not be as great as they appear at first glance. The following are a few of the services available:

- Via Communications - <www.viacommunications.com>
- Closed Caption Maker - <www.ccmaker.com/>
- Casting Words - <www.castingwords.com>

- Escriptionists - <www.escriptionist.com/>
- Production Transcripts - <www.productiontranscripts.com/>

Some companies charge per page or per hour of labor, leaving you to guess how much your bill will be after they've completed the work. Others charge based on the length of the recorded audio submitted. There may also be additional fees for poor audio quality, multiple speakers, and strong accents. You should be sure to discuss your expectations and theirs before deciding on which service to use.

At this point it is time to look at the various captioning systems available. When buying a system these are some of the questions to ask:

- What type of captions are displayed? (Pop on or roll up?)
- With what type of media will this program work?
- How are the line divisions created?

When purchasing software one should first clearly define what the needs are and what formats will be required. Some of the more inexpensive systems only create roll up captions because they are easier to produce. However, the preferred format is pop on thus captioning abilities should not be limited just to save a few dollars. Another consideration is the type of media the system is compatible with. While the world is moving to digital formats there are still many campuses with VHS tapes in use. In this case a school can either purchase equipment to convert VHS to digital format or purchase a system that works with the data for Line 21.

Some systems will automate parts of the captioning process. Some software will automatically create line division based on parameters which are set by the user. If this is the case does the software then allow for editing? While technology is wonderful it is not a replacement for the human brain. The captions will still need to be proofed to be sure that they follow standard guidelines.

There are several closed-captioning equipment and software vendors, including:

- Computer Prompting and Captioning Co. (CPC) www.cpcweb.com/
- Image Logic® <www.imagelogic.com/>
- CCMaker <www.ccmaker.com/>
- Rapidtext <www.rapidtext.com/index.html>

Company	Software	Cost	Peripheral Equipment	Cost	Training	Tech Support	Total Cost
Computer Prompting and Captioning Co. (CPC)	CPC-700	\$4,995	Time Code Generator Time Code Reader Video Display Device Encoder (OC/CC)	\$325 \$315 \$75 \$1,200	User-Friendly	5 free hours for first year; can purchase additional hours	\$6,910
Computer Prompting and Captioning Co. (CPC)	CPC-600	\$2,995	Video Display Device Encoder (OC/CC)	\$75 \$1,200	User-Friendly	5 free hours for first year; can purchase additional	\$4,270

						hours	
Image Logic®	AutoCaption II	\$8,000	Time Encoder (Generator & Reader) Line 21 Encoder Deck (2)	\$2,300 \$2,800 \$200	Software is similar to Windows and Word—Should be user-friendly	Offers 30 days of free support	\$13,500
CCMaker	OCMaker	\$3,000			User-friendly; able to learn in 4 hours	Free unlimited tech support	\$3,000
CCMaker	AddrollupCC	\$3,000			User-friendly; able to learn in 4 hours	Free unlimited tech support	\$3,000

The above chart provides cost comparisons, technical support availability, and comments about training. This is not meant to be a comprehensive list of systems but an overview of the variance in price and services.

Two digital software programs for creating captions from “scratch” are: MAGpie and Hi-Caption. MAGpie can be downloaded from <http://ncam.wgbh.org/webaccess/magpie/> for free. Hi-Caption can be purchased at <http://www.hisoftware.com/hmcc/index.html> for between \$400 and \$500.

MAGpie (Media Access Generator) was developed by the CPB/WGBH National Center for Accessible Media (NCAM) to make Web- and CD-ROM-based multimedia accessible to people with disabilities. It allows someone with minimal training to add captions and/or audio descriptions to video files that will be viewed over the web or on a CD-ROM which can be viewed using Microsoft Media Player, Real Player or QuickTime.

Although MAGpie may have its quirks, it's very easy to use and can be learned in a very short amount of time. At the outset, some people may feel intimidated and sure that they never could master it. But once they actually have their hands on the keyboard and start the process, they'll realize how easy it is and have fun. A free training kit is available to provide you with all the tools necessary to conduct a training or workshop on adding captions using MAGpie 2. (This is not a self-tutorial; it assumes you already know how to use MAGpie and want to train others in its use. If you are looking for a resource to teach yourself how to use MAGpie, see “Resources” at the end of the Trainer Manual).

Hi-Caption is relatively inexpensive software that also allows you to add captions to Web- and CD-ROM-based multimedia. Some may find the interface more user friendly than MAGpie, which is bare bones software. Hi-Caption has a few more bells and whistles and can speed the process along for the user.

Some additional pieces of software which may be useful are Caption Keeper and Amazing Slow Downer.

- CaptionKeeper
 - Retains closed captions when converting VHS to digital
 - <http://ncam.wgbh.org/webaccess/captionkeeper/>
 - Large organizations (over 100 employees) \$5,000
 - Non-profit large organizations \$2,500
 - Small organizations (under 100 employees) \$1000
 - Non-profit small organizations \$500
- Amazing Slow Downer
 - Slows digital audio without distorting clarity
 - <http://www.ronimusic.com/slowdown.htm>
 - \$44.95

CaptionKeeper is an additional piece of software you will want if you are converting a VHS tape with line 21 closed captions to digital format. Normally the closed captions are not transferred to the new digital media. This software allows you to convert the captions so that they are not lost in the new digital format.

Amazing Slow Downer is a piece of software which allows you to slow down digital audio files. This is very useful when you are transcribing audio files to produce a transcript. Normally you would need to repeatedly stop the audio, back up, listen again, etc. This software slows down the audio without distorting the sound quality so that the person transcribing the audio will not need to stop and restart. Some captioning software packages may come with a similar piece of software. If you are purchasing a system be sure to ask what additional features/options are available.

When considering producing in-house captions one area that should not be over looked is the investment in time and personnel. For a 30 minute video the following are approximate times for each step of the process:

- 3–4 hours to transcribe
- 3–4 hours to digitize
- 2–3 hours to do line breaks
- 2–3 hours to sync the captions to the audio
- 10–14 hours total

The time investment is significant, but the benefits will be enormous for all students and faculty.

For additional information a power point presentation of this information can be found at:
<http://dss.jsu.edu/pp/wordsonscreen.ppt>

.How to cite this article

Camp, C., & Stark, W. (2006). More than words on the screen [Electronic version]. Paper presented at the 2006 PEPNet conference Roots & Wings. (Proceedings available from the University of Tennessee, Postsecondary Education Consortium Web site: <http://sunsite.utk.edu/cod/pec/products.html>).

Online Resources Available From the 2005 NTID Instructional Technology Symposium

Paper Presented at PEPNet 2006 Conference, Louisville, KY
April 6, 2006



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Denise Kavim, Ed.D., Senior Project Associate
James J. DeCaro, Ph.D., Director

PEN-International
National Technical Institute for the Deaf
Rochester Institute of Technology
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Program Abstract

The International Symposium on Instructional Technology and Education of the Deaf was held at NTID June 27- 30, 2005. The symposium offerings included presentations by 44 speakers, two plenary addresses, 24 poster sessions, and 10 exhibits. A major goal of the Symposium was to make information presented available on the Symposium Web Site (<http://www.rit.edu/~techsym>) for worldwide dissemination. Each presentation and poster summary, as well as abstract is available on the WWW, as are complete papers. Presentation media can also be viewed, along with the captions generated during each presentation. A captioned video presentation of each plenary and concurrent session also are available. This presentation will review the highlights of the 2005 Symposium, with emphasis on accessing resources from the WWW.

Contents

- 1) Two Page Summary of Symposium
<http://www.rit.edu/~techsym/2005rpt.pdf>
- 2) Overall Symposium Evaluation Report
http://www.rit.edu/~techsym/Overall_Symposium_Eval_05.pdf
- 3) How to Access Resources From Symposium Web Site
<http://www.rit.edu/~techsym/2003/howtouse.pdf>
- 4) Handouts
<http://www.pen.ntid.rit.edu/ewc/pepnet06/2005symhnd.pdf>



Instructional Technology and Education of the Deaf:

Supporting Learners, K-College

An International Symposium – June 25 – July 1, 2005

<http://www.rit.edu/~techsym>

The National Technical Institute for the Deaf (NTID) co-hosted, with The Nippon Foundation of Japan and PEN-International, an international symposium entitled, “Instructional Technology and Education of the Deaf: Supporting Learners, K-College” June 27 – July 1, 2005, on the campus of Rochester Institute of Technology (RIT) in Rochester, New York. The primary goal of the Symposium was to provide a forum, for educators supporting deaf and hard-of-hearing students, to disseminate information relative to current and future innovations and developments in the use of educational media and technology within the teaching and learning process.

A total of 230 teachers, administrators, and technologists representing 17 countries attended the Symposium. The Symposium consisted of two plenary addresses, 44 concurrent presentations, 24 poster sessions, and eight commercial exhibits. In addition, 10 post-symposium workshops were offered to provide participants with a hands-on opportunity to develop skills in the application of instructional technologies.

On Monday, June 27, 2005, Judith E. Heumann, Advisor, Disability and Development at The World Bank opened the Symposium as the first plenary speaker. On Wednesday morning, June 29, 2005, Markku Jokinen, President of the World Federation of the Deaf, addressed the Symposium as the concluding plenary speaker.

The presentations that were rated most favorably included:

- “Technology Integration in the K-12 Classroom” (T11A)
- “BSL Tuition in the Hands of Deaf People – a BSL Academy” (T10C)
- “Creating a Book-on-Demand: Publishing a Workshop Planner’s Guide for Promoting Classroom Access” (T9A)
- “Technology in the ASL/English Bilingual Classroom” (T10A)
- “Achieving Goals! Career Stories of Individuals Who are Deaf or Hard of Hearing” (W10C)
- “I Can SEE What You HEAR!” (T10D)

“It’s been my new inspiration and motivation.”

2005 Symposium Participant

“I thought the selection of topics matched my interests and needs best of all.”

2005 Symposium Participant

“The presenter provided me with a wealth of information that I am excited about using in my classroom! This presentation was wonderful!”

2005 Symposium Participant

“Congratulations for the excellent symposium. It was excellent in every aspect (organization, content, speakers, exhibitions, hospitality). I’m so glad I participated. I learned a lot and I had the opportunity to meet and talk to many good people.”

2005 Symposium Participant

Photographs of Symposium

Any of these photographs can be made available in high resolution for use in publications.

- a. Monday
<http://www.pen.ntid.rit.edu/images/techsym05/M/index.htm>
- b. Tuesday
<http://www.pen.ntid.rit.edu/images/techsym05/T/index.htm>
- c. Wednesday
<http://www.pen.ntid.rit.edu/images/techsym05/W/index.htm>
- d. Workshops (and Lunch)
<http://www.pen.ntid.rit.edu/images/techsym05/WS/index.htm>

For Additional Information

An *Overall Symposium Evaluation Summary* (http://www.rit.edu/~techsym/Overall_Symposium_Eval_05.pdf) provides a brief background of the Symposium goals, participant backgrounds and analysis of responses to the Overall Symposium Evaluation submitted by attendees. A separate *Exhibitor Evaluation Summary* is available at <http://www.rit.edu/~techsym/exhibeval05.pdf>.

The complete Symposium schedule of two Plenary Addresses, 44 Formal Presentations and 24 Poster sessions is available at: <http://www.rit.edu/~techsym/schedule.html>. From this site, it is possible to link to full descriptions, presentation materials, handouts, video and caption displays of every session at the Symposium.

Program Book (<http://www.rit.edu/~techsym/pb05.pdf>)

Abstracts of Presentations and Posters (<http://www.rit.edu/~techsym/abs05.pdf>)

To learn how to access the 2005 and 2003 schedules and online resources, read "How to Access Symposium Presentation Resources on the WWW" (<http://www.rit.edu/~techsym/2003/howtouse.pdf>). This document describes how to view, online, all presentation summaries, abstracts, media files, captions and video files.

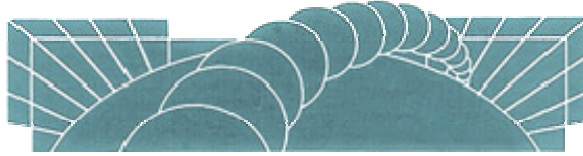
The "Program at a Glance" which includes a list of presentation titles, first authors, date/time of presentation or poster, along with a schedule of events for the Symposium, can be downloaded at: (http://www.rit.edu/~techsym/pag_05.pdf)

At the conclusion of the symposium, a "culminating luncheon" was held among symposium participants. The goals of this session were to foster reflection regarding symposium proceedings, and stimulate collective speculation regarding future potential for instructional technology in deaf education and what barriers are likely to hinder the realization of the optimal implementation of technology. The following notes attempt to capture the rich discussions that ensued. (<http://www.rit.edu/~techsym/CullLunchSum.pdf>)

Contact

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PEN-International: <http://www.pen.ntid.rit.edu>
Technology Symposium: <http://www.rit.edu/~techsym>

Instructional Technology and Education of the Deaf



Supporting Learners, K – College
An International Symposium

Sponsored by National Technical Institute for the Deaf at Rochester Institute of Technology
The Nippon Foundation of Japan and PEN-International
June 27 – July 1, 2005

<http://www.rit.edu/~techsym>

Overall Symposium Evaluation Summary

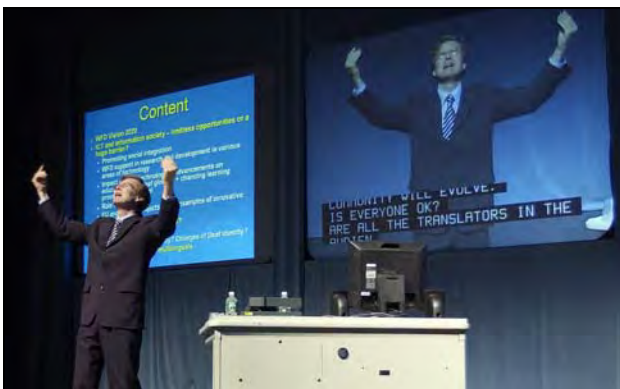
Executive Summary

The National Technical Institute for the Deaf (NTID) co-hosted, with The Nippon Foundation of Japan and PEN-International, an international symposium entitled “Instructional Technology and Education of the Deaf: Supporting Learners, K-College” June 27 – July 1, 2005, on the campus of Rochester Institute of Technology (RIT) in Rochester, New York. The primary goal of the Symposium was to provide a forum, for educators supporting deaf and hard-of-hearing students, to disseminate information relative to current and future innovations and developments in the use of educational media and technology within the teaching and learning process.

A total of 230 teachers, administrators, technologists, and researchers representing 17 countries attended the Symposium. The Symposium consisted of two plenary addresses, 44 formal concurrent presentations, 24 poster sessions, and eight commercial exhibits. Of the formal concurrent presentations, most (32 out of 44) of the topics related to all audiences, eight specifically targeted participants affiliated with K-12, and four targeted participants affiliated with deaf and hard-of-hearing stu-



Judith E. Heumann
Advisor, Disability and Development at
The World Bank, Opened Symposium
as First Plenary Speaker



Markku Jokinen
President of the World Federation of the Deaf,
Addressed Symposium as Concluding Plenary Speaker

dents at the college level only. In addition, 10 post-symposium workshops were offered to provide a hands-on opportunity for participants to develop skills in the application of instructional technologies.

On Monday, June 27, 2005, Judith E. Heumann, Advisor, Disability and Development at The World Bank, opened the Symposium as the first plenary speaker. Ms. Heumann spoke to Symposium participants about the technological advances benefiting individuals with disabilities. On Wednesday, June 29, 2005, Markku Jokinen, President of the World Federation of the Deaf, addressed the Symposium as the concluding plenary speaker. Mr. Jokinen's speech focused on the current impact of instructional technology and how to position oneself appropriately for the future.



Rosemary Stifter of Laurent Clerc NDEC Presents "Technology in the ASL/English Bilingual Classroom," One of the Highest Rated Sessions at the Symposium

(V/TTY).

The Symposium was extremely successful. Almost all (97%) participants rated the Symposium either excellent (70%) or good (27%). Similarly, 97% of participants rated the strategies for supporting communication (interpreting, captions) very favorably (84% excellent, 13% good).

Satisfaction levels were consistently high among all of the attributes relating to the Symposium. Eight out of the 10 attributes were rated 90% or higher. Participants were most satisfied with the attributes relating to NTID facilities, distribution of information prior to the Symposium, food service, variety and quality of formal concurrent presentations, and the Symposium being a valuable resource and offering information and strategies that met overall needs.

Networking with colleagues from different nations played a very important role in the success of the Symposium. Many participants mentioned the variety of people from different countries when asked what they liked most about their overall Symposium experience. Many other participants felt the whole Symposium was very well organized and enjoyable, the selection of topics ideal, and the introduction to practical technological information that can be implemented immediately to be invaluable.

Most participants said they plan to share, recommend, or integrate the new information/technology learned at the Symposium at their worksite. Many others said they will further investigate ideas and strategies for possible implementation. Several participants mentioned having a renewed sense of inspiration and motivation to teach as a result of attending the Symposium.

An additional goal of the Symposium was to make the information presented available on its wWeb site for worldwide dissemination. Each presentation, poster summary, and abstract was posted on the Web site as well as entire papers, PowerPoint slide shows, and captioned video presentations. Complete symWposium information and program details can be found at <http://www.rit.edu/~techsym>.

In an effort to continuously improve the Symposium, the sponsors, -- the National Technical Institute for the Deaf at Rochester Institute of Technology, The Nippon Foundation of Japan and PEN-International, -- conducted various evaluations to assess participants' experiences. This report summarizes the Overall Sympo-

sium Evaluation results only. Separate evaluation summaries have been generated for the Formal Concurrent Presentations and the Post-Symposium Workshops. The evaluation results are extremely favorable within all areas. These additional summary reports are available upon request by contacting E. William Clymer, Chairperson Technology Symposium, techsym@rit.edu, 585-475-6894



James Mallory of NTID/RIT, Presents "SnagIt" Post-Symposium Workshop



Zhong Zhanguo of Changchun University Presents "Doing Math with PEN-International" Poster Session

The formal concurrent presentations that were rated most favorably include:

- “*Technology Integration in the K-12 Classroom*” (T11A)
- “*BSL Tuition in the Hands of Deaf People – a BSL Academy*” (T10C)
- “*Creating a Book-on-Demand: Publishing a Workshop Planner’s Guide for Promoting Classroom Access*” (T9A)
- “*Technology in the ASL/English Bilingual Classroom*” (T10A)
- “*Achieving Goals! Career Stories of Individuals Who are Deaf or Hard of Hearing*” (W10C)
- “*I Can SEE What You HEAR*” (T10D)

More than 80% of all participants attending these sessions rated them as excellent. An overview of each of these highly rated presentations are provided below.

Technology Integration in the K-12 Classroom (T11A)

Mari Liles

Texas School for the Deaf

Email: mari.liles@tsd.state.tx.us

Date: Tuesday, 6/28/05 – 11:00 AM

Location: LBJ (060) Panara Theatre

Strand: Using Technology to Support Learning

Audience: All

Summary: Students and teachers at Texas School for the Deaf are integrating technology into every aspect of the curriculum. Come see how our students and teachers are using electronic whiteboards (ACTIVBoards), document cameras (Elmos), laptops, digital cameras, various software applications and more to enhance and inspire learning.



(<http://www.rit.edu/~techsym/detail.html#T11A>)

BSL Tuition in the Hands of Deaf People – a BSL Academy (T10C)

A. Clark Denmark

University of Bristol

Email: a.c.denmark@bristol.ac.uk

Co-presenter: Tim Rarus

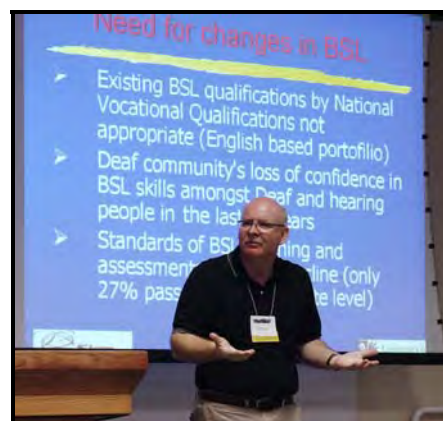
Date: Tuesday, 6/28/05 – 10:00 AM

Location: LBJ (060) 2590

Strand: Online and Distance Education

Audience: All

Summary: A Proposal from the British Deaf Association for training to establish a United Kingdom wide framework to support the Recruitment, Training and Deployment of British Sign Language Tutors, which will enhance their numbers, status and levels of Qualification through Distance Learning.



(<http://www.rit.edu/~techsym/detail.html#T10C>)

Creating a Book-on-Demand: Publishing a Workshop Planner's Guide for Promoting Classroom Access (T9A)

Donald Beil

NTID/RIT

Email: don.beil@rit.edu

Co-presenters: Alan Cutcliffe, Susan Foster,
Gary L. Long, Marsha Young

Date: Tuesday, 6/28/05 – 9:00 AM

Location: LBJ (060) Panara Theatre

Strand: Using Technology to Support Learning

Audience: All

Summary: This session describes the experiences of Project Access, which promotes access for deaf/hard-of-hearing students, in creating a book-on-demand on leading workshops that promote access. The processes of creating source material, designing pages, and working with an on-line publisher to catalog and print books one at a time as needed will be described.

(<http://www.rit.edu/~techsym/detail.html#T9A>)



Technology in the ASL/English Bilingual Classroom (T10A)

Rosemary Stifter

Laurent Clerc National Deaf Education Center

Email: rosemary.stifter@gallaudet.edu

Date: Tuesday, 6/28/05 – 10:00 AM

Location: LBJ (060) Panara Theatre

Strand: Using Technology to Support Learning

Audience: K-12

Summary: Our goal is to create an ASL/English bilingual classroom using technology to enhance social and academic proficiency in both languages. Examples of technology use will be provided to reflect the interactions between two languages and how students benefit from hands on experiences and visual learning in a linguistically rich environment.

(<http://www.rit.edu/~techsym/detail.html#T10A>)



Achieving Goals! Career Stories of Individuals Who are Deaf or Hard of Hearing (W10C)

Pat Billies

NTID/RIT

Email: pabnca@rit.edu

Co-presenter: Regina Kiperman-Kiselgof

Date: Wednesday, 6/29/05 – 10:00 AM

Location: LBJ (060) 2590

Strand: Online and Distance Education

Audience: All

Summary: Come and view the multi- award winning video and Web site project, providing strong role models that influence the aspirations of young students who are deaf or hard of hearing! Newly released video features individuals working with computers!

(<http://www.rit.edu/~techsym/detail.html#W10C>)



I CAN See What You HEAR! (T10D)

Pat Billies

NTID/RIT

Email: pabnca@rit.edu

Co-presenter: Marcia Kolvitz

Date: Tuesday, 6/28/05 – 10:00 AM

Location: LBJ (060) 3237

Strand: Using Technology to Support Learning

Audience: All

Summary: Exciting new technologies make it easier for deaf and hard-of-hearing students to access classroom as well as co-curricular activities! This presentation will look beyond traditional interpreting and notetaking. We'll introduce you to various systems of speech-to-print technologies for classroom access, both live and remote: Realtime Captioning and C-Print. Video remote interpreting will also be discussed as an option to traditional "live" interpreting. Innovative wireless technologies such as video relay interpreting and Internet-based systems will also be discussed.



(<http://www.rit.edu/~techsym/detail.html#T10D>)

Methodology

Evaluation Design

The evaluation instrument consisted of 19 questions. The types of questions included rating scale, open-ended, and classification questions. Rating scale questions were based on a 5-point scale ranging from "strongly agree" to "strongly disagree" or a 4-point scale ranging from "excellent" to "poor."

Respondents were asked, in open-ended format, what they like most about the Symposium, suggestions for improving the Symposium, and what changes they intend to make at their worksite as a result of their experiences.

A copy of the evaluation form can be viewed at <http://www.rit.edu/~techsym>.

Sampling

The evaluation was conducted using a self-administered methodology. The Overall Symposium Evaluation form was included in the set of materials distributed to all participants at registration and also available online. Participants were reminded during the closing luncheon to complete the Overall Symposium Evaluation and return the completed survey to the registration desk. A handful of evaluations were submitted electronically. Evaluations were accepted through August 7, 2005.

All 230 participants had the opportunity to complete an Overall Symposium Evaluation. Of the 230 participants, a total of 31 evaluations were completed resulting in a 14% response rate and a



Registration Desk

$\pm 16\%$ margin of error in estimated values in the participant population (based on the finite population correction factor at the 95% confidence level). Although the return rate is low, it is fairly consistent with the response rate from the 2001 Technology Symposium (18%). Decisions that were made based on the 2001 data were proven to be accurate and extremely beneficial.

Analysis

Data obtained from the evaluation forms were tabulated for the entire sample, as well as broken down by curriculum level affiliation (K-12, Postsecondary, Other) and job function (Teacher, Administrator, Technologist, Researcher). Differences between demographic categories were considered statistically significant when p-values (or attained-significance levels) are equal to or less than 0.05. SPSS software was used to compile the data.

Most of the findings are presented using percentages. For all rating scale questions, the total responding to the question was used as the percentage base. For most other types of questions, the total sample was used to compute percentages. The percentages for individual response categories do not always add up to 100%. This results from either rounding factors, a small percentage of no answers, or multiple responses provided by participants.

In addition, all open-ended questions were coded in an effort to quantify responses. The actual verbatim responses are included at the end of the summary report.



Symposium participants visiting exhibits at their leisure.

Demographic Profile of Participants

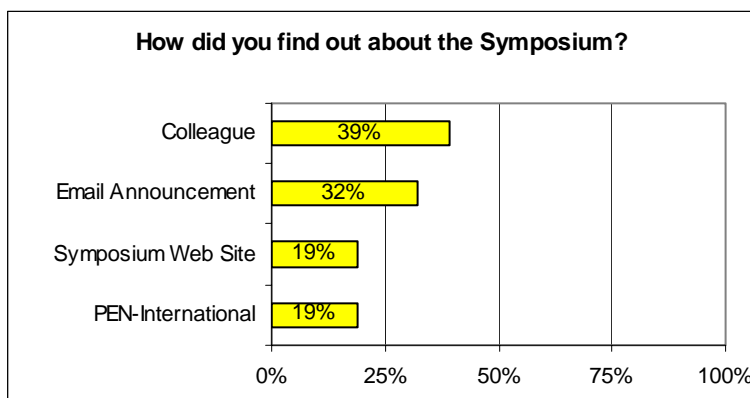
The demographic profiles of participants are provided below. The demographic variables captured from participants that completed the Overall Symposium Evaluation were comparable to the demographic variables of all Symposium registrants provided by PEN-International. One-third (33%) of all Symposium participants met the early registration deadline. Fourteen individuals took advantage of a 10% discount in registration fees by participating in two conferences: the Technology Symposium and the Literacy in the English Classroom and Beyond Conference that was held at NTID a few days prior to the Technology Symposium. Thirty-eight percent (38%) of the participants presented material at the Symposium, and 14% of participants requested a sign language interpreter.

NTID/RIT faculty and staff conducted 15 out of the 44 concurrent sessions (34%) and 7 out of the 24 poster sessions (29%). PEN-International partners and associates conducted 1 concurrent session (2%) and 9 poster sessions (38%).

Participants represented 93 different organizations from 17 countries, including Russia, China, Japan, Thailand, Philippines, Canada, Finland, Greece, Italy, Korea, United Kingdom, Czech Republic, Denmark, Hong Kong, Norway, Viet Nam, and the United States.

Demographic Profile of Participants Symposium Registrant Population vs. Overall Symposium Evaluation Sample		
	Symposium Registrant Population	Overall Symposium Evaluation Sample
Curriculum Level Affiliation		
Postsecondary	33%	68%
K-12	14%	16%
Other	53%	24%
Job Function		
Teaching Faculty	32%	52%
Administrator	15%	35%
Technologist	10%	12%
Researcher	N/A	16%
Not Specified / No Answer	43%	10%

Thirty-nine percent (39%) of respondents said they learned about the Symposium through a colleague. Similarly, one-third (32%) said they received an email announcement informing them about the Symposium. Other respondents said they found out about the Symposium through the Web Site (19%) or directly through a PEN-International representative (19%).



Overall Assessment

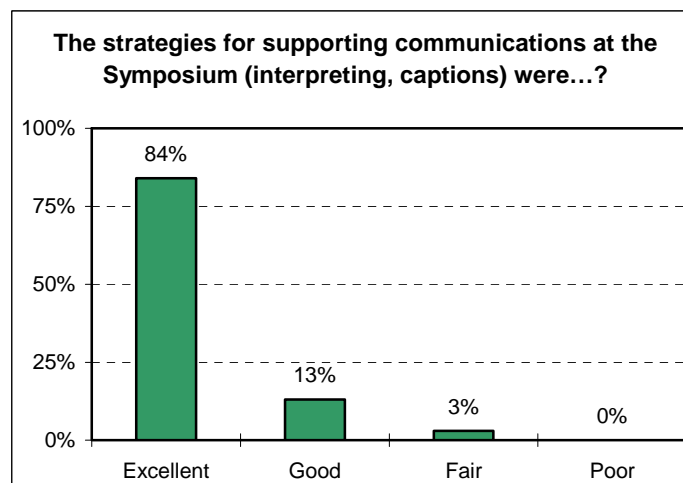
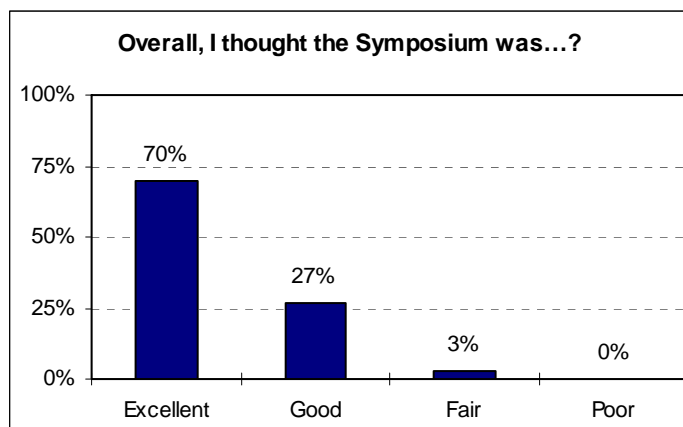
Respondents were asked to rate their overall assessment of the Symposium. Seventy percent (70%) of respondents said they thought the Symposium was excellent. Twenty-seven percent (27%) rated the Symposium as good, and the remaining 3% rated the Symposium as fair.

“Congratulations for the excellent Symposium. It was excellent in every aspect (organization, content, speakers, exhibitions, hospitality). I’m so glad I participated. I learned a lot and I had the opportunity to meet and talk to many good people.”

“What a wonderful conference you and your incredible colleagues hosted at NTID! As always, my expectations were thoroughly exceeded. The feeling of welcome embrace is unmatched at other conferences.”

“The overall impact of this Symposium for one is the encouragement it has given me in trying out technology in delivering instruction. I am not a tech-savvy person and I consider myself to be a techno-phobe and this Symposium has got me thinking that learning new technology may not be as difficult as I think it is and the rewards in my classroom may well be worth it.”

Eighty-four percent (84%) of respondents felt the strategies for supporting communication at the Symposium (interpreting, captions) were excellent. Thirteen percent (13%) of participants rated the strategies for supporting communication as good and 3% rated it as fair.



Symposium participants socializing during a reception near the commercial exhibits

Respondents were asked to rate their level of agreement/disagreement to a series of statements related to the Symposium. Respondents were most satisfied with NTID facilities, distribution of information prior to the Symposium, food service, variety and quality of formal concurrent presentations, and the Symposium being a valuable resource and offering information and strategies that met overall needs. The following graph outlines the findings by question in descending order.

Over two-thirds (68%) of respondents strongly agreed that the NTID facilities (meeting rooms, audio-visual equipment, etc.) effectively supported Symposium sessions. The remaining one-third (32%) agreed with this statement.

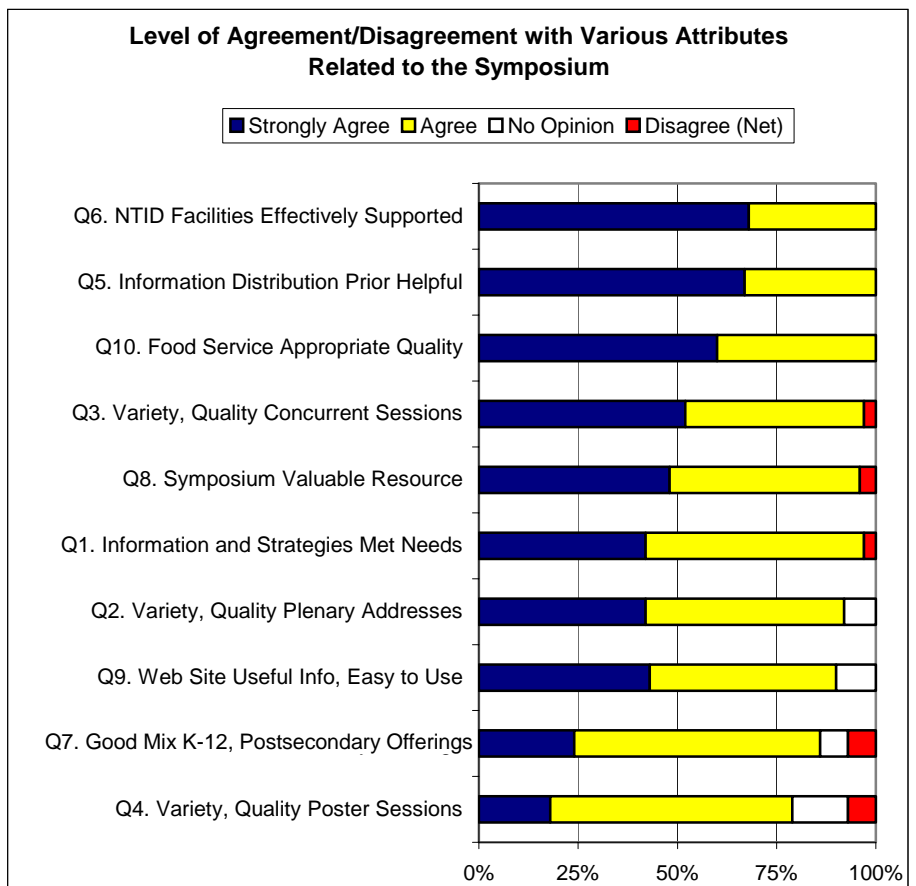
“Excellent technical support.”

Similarly, 67% of respondents strongly agreed that the information distributed prior to the Symposium was helpful in making plans to attend. Again, the remaining one-third (33%) agreed with this statement.

“The information distributed prior to the Symposium was excellent.”



**Harold Johnson of Kent State University Presents
“Classrooms as Learning Portals:
Teachers & Students as Learners”
Formal Concurrent Presentation**



All (100%) of the respondents either strongly agreed (60%) or agreed (40%) that the food service for lunch and receptions was adequate and of appropriate quality for the Symposium. Ninety-seven percent (97%) of respondents agreed (strongly agree/agree net score) that the concurrent sessions offered the variety and quality that they look for in conference programs. Teaching faculty respondents were more likely, than respondents in other job functions, to strongly agree with this statement (statistically significant difference).

“I liked the variety of the presentations from the many countries. This gave us a clearer picture of what is being taught around the world for the deaf and hard-of-hearing people.”

Similarly, 97% agreed (strongly agree/agree net score) that the Symposium was a valuable resource of ideas and insights regarding applications of instructional technologies to support deaf and hard-of-hearing students, and that overall, the Symposium offered information and strategies that met needs. Respondents in administrator positions were less likely, than respondents in other job functions, to strongly agree that the Symposium offered information and strategies that met their needs (statistically significant difference).

“I thought the selection of topics matched my interests and needs the best of all.”

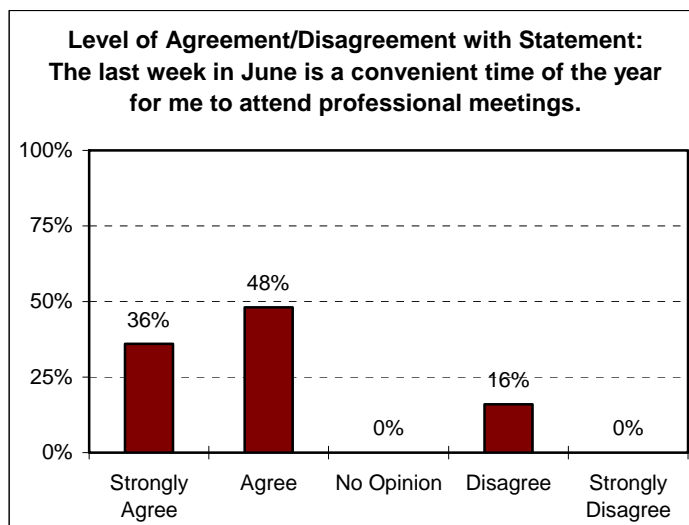
Other attributes that were rated 90% or higher included the variety and quality of the plenary sessions (42% strongly agreed, 50% agreed), and the usefulness of the Symposium Web Site (43% strongly agreed, 47% agreed).

The lowest rated attribute was the variety and quality of the poster sessions. Seventy-nine percent (79%) either strongly agreed (18%) or agreed (61%) that the poster sessions offered the variety and quality that they look for in conference programs. A few respondents commented, in open-ended format, that the poster sessions seemed the same as the last the Symposium. Similarly, 86% of respondents agreed (strongly agree/agree net score) that there was a good mix of K-12 and postsecondary offerings at the Symposium, however this finding did not differ significantly by curriculum level affiliation.

“Poster sessions seemed repetitive of last Symposium poster sessions.”

“There was very limited sessions that met the needs of K-12 program. Many of the sessions were similar in content! Greater variety of workshops or sessions.”

“Some sessions were marked ‘all’ – they seemed to be more K-12 focused.”



June appears to be a convenient time of the year to hold a symposium for most of the respondents. Eighty-four percent (84%) said they either strongly agreed (36%) or agreed (48%) that the last week in June is a convenient time of the year to attend professional meetings. Sixteen percent (16%) of respondents disagreed with this statement. One respondent from Russia explained that June is not a convenient time of the year because it is the end of their academic year.

“The end of June is the end of the academic year in Russia, so this was not the best time for attending!”

Respondents were asked, in open-ended format, what they liked most about the Symposium. Thirty-nine percent (39%) said they liked networking with colleagues from around the world most. Twenty-nine percent (29%) mentioned comments relating to the operations and organization of the Symposium including friendly and helpful staff, sessions flowing smoothly, and session length being ideal. Similarly, 21% mentioned that they liked the variety/selection of topics most.

“The opportunity to communicate with colleagues from around the world.”

“Very pleasant staff. Friendly and helpful.”

“The sessions were well managed and flowed smoothly.”

“The variation and ability to pick and choose between subjects of interest.”

Thirteen percent (13%) of respondents appreciated receiving practical information that they could implement immediately. Ten percent (10%) of respondents said they liked learning about new technologies, and sharing and discussing different teaching approaches. A few respondents (6%) said they felt the keynote speakers were excellent.

Question 14 What did you like most about the Symposium?	
•	Networking with colleagues from around world – 39%
•	Operations: Friendly staff, flowed nicely, session length – 29%
•	Variety / Selection of topics – 21%
•	Provided practical information – 13%
•	Gained knowledge about new technologies – 10%
•	Sharing different teaching approaches / Discussions – 10%
•	Keynote speakers – 6%

“Succinct precise information I can use immediately and implement in my region for minimal cost!!!”

“The practical suggestions and technologies presented here were outstanding because of the very fact they were practical!”

“New knowledge about technologies (IdeaTools, Tablet, etc.).”

“An opportunity to meet different people and exposure to different approaches adopted.”

“Great keynote speakers!”

“Judy Heumann was outstanding.”

Forty-five percent (45%) of respondents did not include any suggestions for improving the Symposium. Sixteen percent (16%) of respondents suggested improving the Symposium by dealing with various facility/environmental issues. These respondents specifically mentioned the chairs were uncomfortable, the temperature was a little too cold, and the lack of tables for the purpose of note taking was less than ideal.

Question 15 Any suggestions for improvement?	
•	Issues related to facilities/environment – 16%
•	More social events / Opportunities to network – 13%
•	Foreign interpreters distracting – 13%
•	Greater variety of sessions / Too similar in content – 13%
•	Include hands-on workshops as part of Symposium – 10%
•	Poster sessions repetitive from last Symposium – 6%

“The chairs were horribly uncomfortable.”

“A little chilly.”

“It is hard to balance notes on your lap, maybe desks and chairs, or chairs with partial desks would help.”

Thirteen percent (13%) of respondents suggested implementing more social events and opportunities to network, particularly in the evening. Similarly, 13% suggested that foreign interpreters and their delegates wear microphones and earpieces in an effort to be less distracting to other participants. One respondent suggested using the Thai interpreters as a model because *“very rarely did you recognize they were the interpreters in the session.”*

“It would be great to have some kind of social program (for the evening).”

“Perhaps more opportunities to mix with other participants.”



Networking Opportunity During Lunch

“It would be helpful if spoken language interpreters used some type of assistive devices to assist with the interpreting process. It became difficult to focus and learn during several workshops due to the high noise level.”

“Accommodations for foreign delegates that also do not distract the other delegates. Maybe a microphone with the foreign language interpreter and earpiece for the foreign delegate so that other delegates are not confused with several voices speaking at one time.”

Other respondents suggested a greater variety of sessions that differed more in content (13%), including the hands-on workshops as part of the Symposium (10%), and offering new and different poster sessions (6%).

“I would increase the number of the presentations dedicated to the use of the new technologies for teaching deaf and hard-of-hearing students.”

“Make the post-symposium workshops part of the active schedule of events. It was a let down to come on Thursday to an empty building tearing things down.”

“I felt that there was very little that was new and very exciting, especially the poster sessions.”

Participants were asked, in open-ended format, what changes they plan on making at their worksite as a result of their Symposium experiences. Thirty-six percent (36%) of respondents said they plan to share, recommend, or integrate the new ideas/strategies. Several of these respondents acknowledged a renewed sense of inspiration and motivation to teach as a result of attending the Symposium.

Question 16 Based on your Symposium experiences, what changes will you make at your worksite, your professional development activities, or your studies?	
•	Share, recommend, integrate new ideas/strategies – 36%
•	Conduct further research on new ideas/strategies – 16%
•	Reach out to new contacts – 11%

“I’ll certainly share the information with my colleagues, which will hopefully motivate all of us to use technical facilities in class in a more varied way.”

“Bringing back two strategies: Authoring with Video, MS Producer. Two ideas we can directly use now.”

“A major overhaul of my lesson plans incorporating better visuals and assisting aids for the deaf.”

“It’s been my new inspiration and motivation.”

Sixteen percent (16%) of respondents said they will be conducting further research on the new ideas and strategies before implementation at their worksite. Others said they plan to reach out to new contacts that they have made and/or friendships that they have renewed (11%).

“I’ll investigate ways to improve access across the distance learning and Web-based curriculums.”

“Will begin more investigation into additional technologies.”

Verbatim Comments

Question 14: What did you like most about the Symposium?

Wide variety of individuals in attendance. Well done!

I thought the selection of topics matched my interests and needs the best of all these IT and Ed of Deaf Symposi-ums.

The support staff was excellent.

The opportunity to communicate with colleagues from different countries. New knowledge about technologies (IdeaTools, Tablet, etc.).

Presentations relevant to teaching English to the deaf, and video-based presentations on successful members of deaf community worldwide and meeting friends from all over the world.

Possibilities to meet colleagues from other countries.

A lot of the presenters talked about their topics in simple terms and I did not have to be tech-savvy to understand what they were trying to say.

The variation and the ability to pick and choose between subjects of interest.

Succinct precise information I can use immediately and implement in my region for minimal cost!!!

Opportunity to renew some friendships and see what was happening in other schools for the deaf. Tuesdays sessions in the AM were much better.

The sessions time was very well managed and flowed smoothly between sessions. In closing, however, I want to acknowledge the amount of work in organizing the Symposium and thank the efforts of all who were involved.

Variety. Excellent technical support. Very pleasant staff. Friendly and helpful.

Length of time for presentations and discussions.

The atmosphere.

Great keynote speakers!

Like it all. It's very pleasurable for us.

An opportunity to meet different people and exposure to different approaches adopted.

Information distributed prior to the Symposium, the NTID facilities, and the Symposium was a valuable resource of ideas and insights regarding applications of instructional technologies.

I liked the variety of the presentations from the many countries. This gave us a clearer picture of what is being taught around the world for the deaf and hard-of-hearing people.

The practical suggestions and technologies presented here were outstanding because of the very fact they were practical!

Variety of speakers from around the world. Ongoing water supply and coffee pot. Hands-on workshops on Wednesday and Thursday (post-symposium workshops). Networking with others, discussion with peers.

Judy Heumann was outstanding. The information distributed prior to the Symposium was excellent.

Variety of presentations.

Question 15: Any suggestions for improving the Symposium?

There was very limited sessions that met the needs of a K-12 program. I was disappointed after attending several of your conferences. Many of the sessions were similar in content! Greater variety of workshops or sessions. More vendors of products for the deaf. Longer sessions. Consider establishing different locations throughout the country. Virtual tours of facilities or set ups.

Regarding #6 (NTID Facilities) Some rooms were a little awkward, but well-equipped!

Why not use the participants more? Maybe use untraditional forms of meeting, which allow the participants to share and discuss their knowledges, maybe use “open space” methodology?

The end of June is the end of the academic year in Russia, so this was not the best time for attending! Making the Symposium a little longer might be a good idea too. It would also be great to have some kind of social program (for the evening).

Tables so it's easier to write notes and not try to write with the paper on our laps. Accommodations for foreign delegates that also do not distract the other delegates. Maybe a microphone with the foreign language interpreter and earpiece for the foreign delegate so that other delegates are not confused with several voices speaking at one time. I don't know if this is possible but just a suggestion.

I would greatly appreciate a session focusing on financial resources, institutions known for supporting our populations, and grant possibilities! Help! There's not an official category to address this issue and I know it's not under direct control of the Symposium itself, but the chairs were horribly uncomfortable.

This was my third Symposium and while I enjoyed the sessions I attended, I also felt that there was very little that was new and very exciting, especially the poster sessions. Got me to wonder if tech development in the area of education (in general) and for the deaf (in particular) have reached some leveling off plateau. I also noticed (or perceived) that the attendance this year seemed to be less than in 2001 and 2003. There were noticeably very few representatives from down state NY and I cannot help wonder why that is so? In general, I felt the enthusiasm to be somewhat flat and the buzz of excitement melted. I believe in 2001 and 2003, entertainment was provided on the first night which brought attendees together in a very social way. Also, in 2003 there were keynote speakers each day in the morning. Yeah, overall I felt the reduction and cutting back, which will give me pause as to whether or not I'll attend if offered in 2007.

A little chilly. More acknowledgment of co-presenters on program.

Require presenters to send outlines to interpreters at least a week prior to the conference. Have a meeting for presenters and interpreters, and optionally captioners, the evening before the presentations. The voice interpreting and some of the sign interpreting was often embarrassingly poor. Consider hiring conference interpreting from outside.

More on individual pieces of software technology.

None. I've been satisfied.

Poster sessions seemed repetitive of last Symposium poster session.

Perhaps more opportunities to mix with other participants.

Everything was wonderful.

I would increase the number of the presentations dedicated to the use of the new technologies for teaching deaf and hard-of-hearing students.

Make the post-symposium workshops part of the active schedule of events. It was a let down to come on Thursday to an empty building tearing things down.

The price of the workshops on Wednesday/Thursday were a bit high (post-workshops). It is hard to balance notes on your lap, maybe desks and chairs or chairs with partial desks would help. Allow more discussion time on closing day or another day at lunch, by the time we got lunch, I had to hurry to get to 1:00 PM workshop.

Should have had more K-12 offerings. Make sure the international interpreters use wired loops for their clients who wear earphones to receive.

Lunch on Wednesday was too slow, great food, but should have had two lines.

Some sessions were marked “all”- they seemed to be more K-12 focused. It would be helpful if spoken language interpreters used some type of assistive devices to assist with the interpreting process. It became difficult to focus and learn during several workshops due to the high noise level. The Thai interpreters (voice and sign) provided a great model, very rarely did you recognize they were (the interpreters) in the session.

Question 16: Based on your Symposium experiences, what changes will you make at your worksite, your professional development activities, or in your studies?

I'll investigate ways to improve access across the distance learning and Web-based curriculums.

I will be much more aware of the many technical possibilities that do exist to facilitate a better learning experience for hard of hearing and deaf.

I'll certainly share the information with my colleagues, which will hopefully motivate all of us to use technical facilities in class in a more varied way.

The overall impact of this Symposium for one is the encouragement it has given in trying out technology in delivering instruction. I am not a tech-savvy person and I consider myself to be a techno-phobe and this Symposium has got me thinking that learning new technology may not be as difficult as I think it is and the rewards in my classroom may well be worth it.

Not a great deal! A couple of ideas I can add but disappointed in the conference this year! Some suggestions gained on Tuesday. We'll look at adding some hardware aspects.

Bringing back two strategies: Authoring with Video, MS Producer. Two ideas we can directly use now. New contracts and networks.

Explore greater use of Webcams for face-to-face distance communication.

It's been my new inspiration and motivation.

I am planning to improve teaching of the instructional technology to the deaf and hard-of-hearing students in accordance with ideas of this Symposium.

I would do my best to use the new technologies and the new products that were presented at the Symposium.

A major overhaul of my lesson plans incorporating better visuals and assisting aids for the deaf.

More aware of some things.

Experiment with more technology.

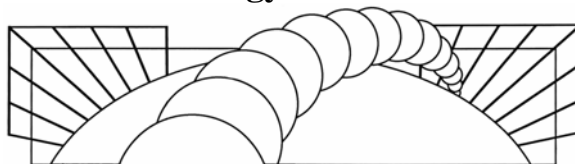
Several, but will begin more investigation into additional technologies.

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Overall_Symposium_Eval_05.doc

Instructional Technology and Education of the Deaf



Supporting Learners, K – College
An International Symposium
National Technical Institute for the Deaf

June 23- 27, 2003

Sponsored by
National Technical Institute for the Deaf at Rochester Institute of Technology
The Nippon Foundation of Japan and PEN-International

<http://www.rit.edu/~techsym>

How to Access Symposium Presentation Resources on the WWW

Symposium Background

Over 275 deaf education professionals, from 12 different countries met at NTID, June 23-27, 2003 for the Instructional Technology and Education of the Deaf Symposium. The program consisted of three plenary addresses, 42 formal presentations, 25 poster sessions, a recommendation report discussion, 13 commercial exhibits, and lots of time for conversation, sharing and networking. 106 individuals attended 16 pre-conference workshops.

Symposium Resources Online!

A major goal of the Symposium was to make the information presented at the Symposium available on the Symposium Web Site for wide dissemination. For each presentation at the Symposium, it is possible to read the presentation or poster summary and abstract. It is also possible to read a complete paper submitted by the presenters, to view the presentation media, such as PowerPoint, read the captions generated during each presentation, see a photograph of the presenter(s) and actually view a captioned video presentation of each plenary and concurrent session!

Each Plenary Address, Concurrent Session and Poster Session has a "Listing" on the Symposium Web Site. These listings provide linkages to the all the resources available for each session.

You can access each presentation listing from the Symposium Schedule or Session Lists. This document describes how to use either structure to find a presentation or poster listing.

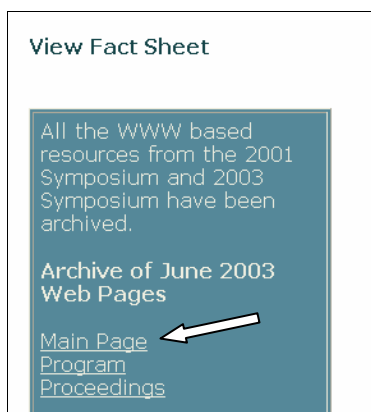
Directory

- [Access Session Resources from the Symposium "Schedule" \(Page 2\)](#)
- [Access Session Resources from the Symposium "Session Lists" \(Page 4\)](#)
- [Presentation Resources Available from Session Listing \(Page5\)](#)

Access Session Resources from the Symposium “Schedule”

[Back to Page 1](#)

- From the Main Page of the Symposium Web Site (<http://www.rit.edu/~techsym>); on the bottom, left of the screen, select “Main Page” from the “Archive of June 2003 Web Pages”.



- Select “Schedule” on the left menu.



- Select a Plenary Address, Concurrent Session or Poster Session Time.

Symposium				
Time	Wednesday June 25, 2003		Thursday June 26, 2003	Friday June 27, 2003
8:00AM	Coffee		ASD Reception	Coffee
8:30AM	<u>Opening</u>			
9:00AM	<u>Plenary 1</u>		<u>Plenary 2</u>	<u>Plenary 3</u>
10:00AM	<u>3 Concurrent</u>		<u>4 Concurrent</u>	<u>4 Concurrent</u>
11:00AM	<u>4 Concurrent</u>		<u>4 Concurrent</u>	<u>4 Concurrent</u>
Noon	Lunch		Lunch	Lunch
1:00PM	Open		Open	<u>Recommendations</u>
2:00PM	<u>4 Concurrent</u>		<u>4 Concurrent</u>	<u>Closing</u>
3:00PM	<u>4 Concurrent</u>		<u>4 Concurrent</u>	<u>Final Evaluation</u>
4:30PM	<u>Poster Sessions</u> (4:30-6pm)	NTID Reception (4:30-7pm)	<u>Poster Sessions</u> (4:30-6pm)	RSD Reception (4:30-6pm)
5:00PM				
6PM				
7PM	Symposium Participant Taiko Performance		Rochester Community Taiko Performance	

Access Session Resources from the Symposium “Schedule”

[Back to Page 1](#)

4. Select a Session Number.

Wednesday—June 25					
Times	Session#	Name	Title	Audience	Room Number
8:30 AM	W830A	Symposium Committee	Opening	All	Panara Theatre
9:00 AM	W9A	Sasakawa, Yohei	The Growing Importance of Global Education Networks in the Age of Information Technology	All	Panara Theatre
10 AM	W10B	Elliot, Lisa	What's New with C-Print?	All	1510
	W10C	Burik, Linda	Active Learning Through Technology: Creating a Technology-Infused Environment to Actively Engage Deaf Students in the Learning Process	K-12	2590
	W10D	Roush, Danny	Providing Sign Language Access to Digital Information Using 3D Animation Technology: An Overview	All	3237

5. View the “Listing” for the selected session. To learn more about the resources available under each listing go to “[Presentation Resources Available from Session Listing](#)”, page 5.

The Growing Importance of Global Education Networks in the Age of Information Technology
(W9A)

Yohei Sasakawa
President, The Nippon Foundation of Japan

Email:

Wednesday, 6/25/03 -- 9:00 AM
Location: LBJ [060] Panara Theatre

Strand:
Type: Plenary **Audience:** All

Summary:

The Nippon Foundation supports assistance activities around the world with the belief that the world is a family and every individual that inhabits this Earth is an important family member. In recent years, the foundation has turned its attention to international educational networks and the use of technology in education as effective means for promoting educational and economic development across the world. In his speech, Mr. Sasakawa will touch on recent developments in the field and propose a vision for the future of international educational networks.

[Abstract](#)

[Paper](#)

Presentation

- [Media](#)
- [Captions](#)
- [Streaming Video](#)
- [Photos](#)

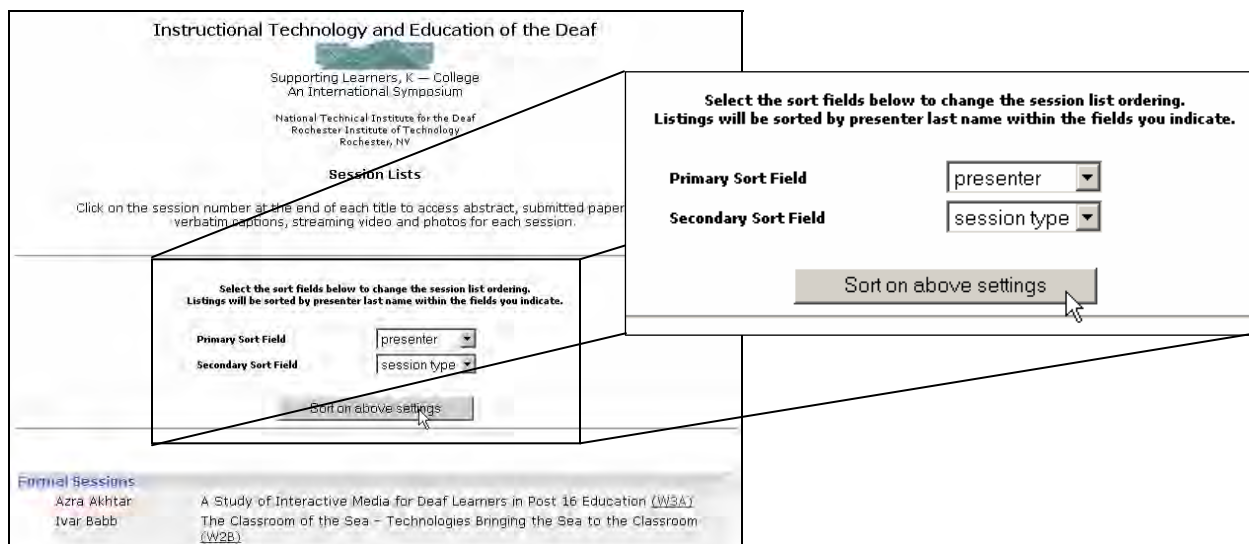
Access Session Resources from the Symposium “Session Lists”

[Back to Page 1](#)

1. From the Main Page of the Archive of the June 2003 Symposium Web pages (<http://www.rit.edu/~techsym/2003>), select “Session Lists” on the left menu.



2. To facilitate access to sessions, it is possible to sort the sessions by date, type or presenter. After sorting, select a Session Number to obtain more information.



3. Select the session number to move to the session listing.

Olga Orechkina	Techniques for Meeting the Needs of Deaf Students in the Design of Shared Computer Laboratories at a Major Technical University in Russia (W01P)
Becky Sue Parton	The Interpreter Who Never Tires: Adding Animated Sign Translations to Student and Teacher Presentations (W10P)
Geoffrey Poor	American Sign Language Video Dictionary and Inflection Guide (W11P)
Melanie Updegraff	Captioned Media Program Online Innovations (W12P)
Plenary Sessions	
Yohei Sasakawa	The Growing Importance of Global Education Networks in the Age of Information Technology (W9A)

Presentation Resources Available from Session Listing

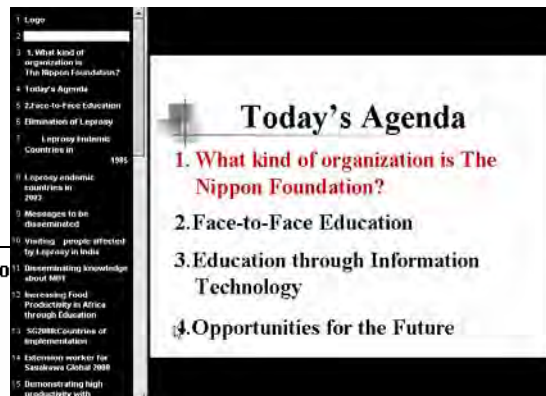
[Back to Page 1](#)

- Click on the resource links to access materials related to the session. Note that some sessions may not contain all the listed resources because they have not been submitted by the author.

(Sample of a paper)



PowerPoint Presentation



The Growing
Yohei Sasakawa
President, T

Wednesday,
Location: LBJ [060] Panara Theatre

Strand:
Type: Plenary Audience: All

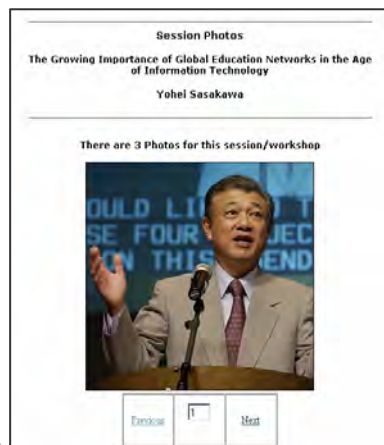
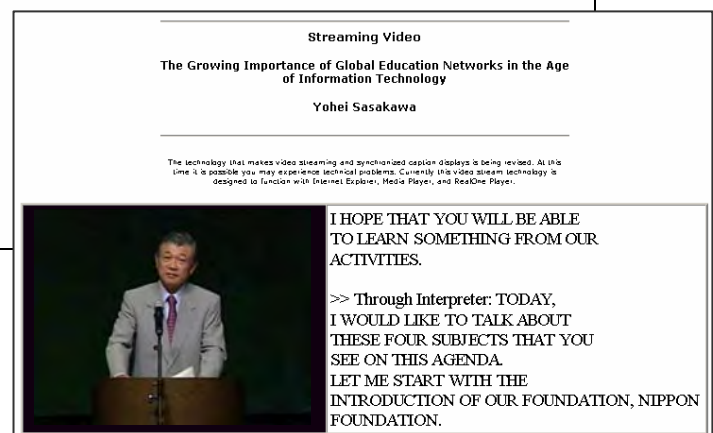
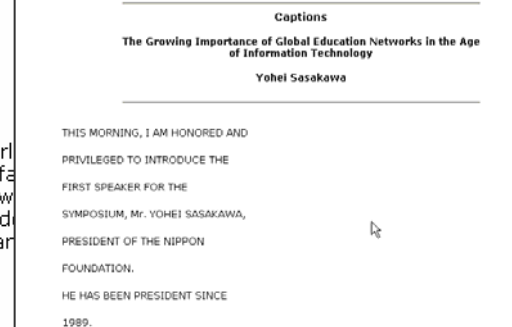
Summary:

The Nippon Foundation supports assistance activities around the world and every individual that inhabits this Earth is an important part of the foundation. The foundation has turned its attention to international educational networks and education as effective means for promoting educational and economic development. In this session, Mr. Sasakawa will touch on recent developments in the field of international educational networks.

[Abstract](#)
[Paper](#)

[Presentation](#)

- [Media](#)
- [Captions](#)
- [Streaming Video](#)
- [Photos](#)




Handouts on Web
<http://www.pen.ntid.rit.edu/ewc/pepnet06>

Online Resources Available From the 2005 NTID Instructional Technology Symposium

**E. William Clymer
Denise Kavim
Jim DeCaro**


PEN-International
<http://www.rit.edu/~techsym>
 April 6, 2006

Paper Presented at PEPNet 2006 Conference, Louisville, KY



Objectives

- Using <http://www.rit.edu/~techsym> You Will be Able to:
 - Search the NTID Symposium Web Site for Presentations and Poster Sessions
 - Given a Session Listing, to Access Related Media Files
- NTID Center on Access Technology
- 2008 Symposium



Overview

- June 27 – July 1, 2005
- Sponsored by:
 - NTID
 - Nippon Foundation
 - PEN-International
- 248 Participants
 - 17 Countries







Participants


■ Curriculum Level	
○ Postsecondary	33%
○ K-12	14%
○ Not Specified	53%

■ Teachers	32%
■ Administrators	15%
■ Technologists	10%
■ Not Specified	43%




Program

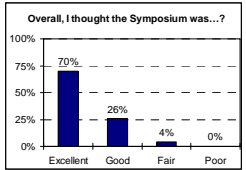
- 2 Plenary Addresses
- 44 Concurrent Presentations
- 24 Poster Sessions
- 8 Commercial Exhibits
- 10 Post-Symposium Workshops



Overall Evaluation




Overall, I thought the Symposium was...?



"It's been my new inspiration and motivation."

2005 Symposium Participant



Sign Language and Communication Services

- Skilled Interpreters
- Communication Facilitators
- Real-Time Captioning
- Real-Time Graphic Display
- Assistive Listening Devices

The strategies for supporting communication at the Symposium were...?

Rating	Percentage
Excellent	82%
Good	14%
Fair	4%
Poor	0%

NTID
3/26/2006

Program Overview

- 4 Strands
 - Using Technology to Support Learning
 - Online and Distance Education
 - In-Service/Pre-Service Strategies for Educating Teachers in Technology
 - Assessing the Impact of Technology in the Teaching/Learning Process

NTID
3/26/2006

Plenary Addresses

- Judith E. Heumann
Recognizing Technological Advances Benefiting Individuals with Disabilities; and Acting as Agents for Change
- Markku Jokinen
Positioning Ourselves for the Impact of Instructional Technology: 2005 and Beyond

NTID
3/26/2006

Concurrent Presentations

- 44 Formal Presentations
- 30 Minutes for presentation; 15 minutes for discussion
- 4 Sessions held concurrently

"I thought the selection of topics matched my interests and needs best of all."
2005 Symposium Participant

NTID
3/26/2006

Highest Rated Sessions

- "Technology Integration in the K-12 Classroom" (T11A)
- "BSL Tuition in the Hands of Deaf People – a BSL Academy" (T10C)
- "Creating a Book-on-Demand: Publishing a Workshop Planner's Guide for Promoting Classroom Access" (T9A)
- "Technology in the ASL/English Bilingual Classroom" (T10A)
- "Achieving Goals! Career Stories of Individuals Who are Deaf or Hard of Hearing" (W10C)
- "I Can SEE What You HEAR!" (T10D)

NTID
3/26/2006

Technology Integration in the K-12 Classroom (T11A)

- Mari Liles
Texas School for the Deaf
Email: mari.liles@tsd.state.tx.us

Tuesday, 6/28/05 -- 11:00 AM
Location: LBJ [060] Panara Theatre

Strand: Using Technology to Support Learning
Type: Formal **Audience:** All

Summary: Students and teachers at Texas School for the Deaf are integrating technology into every aspect of the curriculum. Come see how our students and teachers are using electronic whiteboards (ACTIVBoards), document cameras (Elmos), laptops, digital cameras, various software applications and more to enhance and inspire learning.

NTID
3/26/2006



BSL Tuition in the Hands of Deaf People – a BSL Academy (T10C)

- A. Clark Denmark
University of Bristol
Email: a.c.denmark@bristol.ac.uk
- Tim Rarus

Tuesday, 6/28/05 -- 10:00 AM
Location: LBJ [060] 2590

Strand: Online and Distance Education
Type: Formal **Audience:** All

Summary: A Proposal from the British Deaf Association for training to establish a United Kingdom wide framework to support the Recruitment, Training and Deployment of British Sign Language Tutors, which will enhance their numbers, status and levels of Qualification through Distance Learning.

3/26/2006 13



Creating a Book-on-Demand: Publishing a Workshop Planner's Guide for Promoting Classroom Access (T9A)

- Donald Beil
NTID/RIT
Email: don.beil@rit.edu
- Alan Cutcliffe
- Susan Foster
- Gary L. Long
- Marsha Young

Tuesday, 6/28/05 -- 9:00 AM
Location: LBJ [060] Panara Theatre

Strand: Using Technology to Support Learning
Type: Formal **Audience:** All

Summary: This session describes the experiences of Project Access, which promotes access for deaf/hard-of-hearing students, in creating a book-on-demand on leading workshops that promote access. The processes of creating source material, designing pages, and working with an on-line publisher to catalog and print books one at a time as needed will be described.

3/26/2006 14



Technology in the ASL/English Bilingual Classroom (T10A)

- Rosemary Stifter
Laurent Clerc National
Deaf Education Center
Email: rosemary.stifter@gallaudet.edu

Tuesday, 6/28/05 -- 10:00 AM
Location: LBJ [060] Panara Theatre

Strand: Using Technology to Support Learning
Type: Formal **Audience:** K-12

Summary: Our goal is to create an ASL/English bilingual classroom using technology to enhance social and academic proficiency in both languages. Examples of technology use will be provided to reflect the interactions between two languages and how students benefit from hands on experiences and visual learning in a linguistically rich environment.

3/26/2006 15



Achieving Goals! Career Stories of Individuals Who are Deaf or Hard of Hearing (W10C)

- Pat Billies
NTID/RIT
Email: pabnca@rit.edu
- Regina Kiperman-Kiselgof

Wednesday, 6/29/05 -- 10:00 AM
Location: LBJ [060] 2590

Strand: Online and Distance Education
Type: Formal **Audience:** All

Summary: Come and view the multi-award winning video and Web site project, providing strong role models that influence the aspirations of young students who are deaf or hard of hearing! Newly released video features individuals working with computers!

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I Can SEE What You HEAR! (T10D)

- Pat Billies
NTID/RIT
Email: pabnca@rit.edu
- Marcia Kolvitz

Tuesday, 6/28/05 -- 10:00 AM
Location: LBJ [060] 3237

Strand: Using Technology to Support Learning
Type: Formal **Audience:** All

Summary: Exciting new technologies make it easier for deaf and hard-of-hearing students to access classroom as well as co-curricular activities! This presentation will look beyond traditional interpreting and notetaking. We'll introduce you to various systems of speech-to-print technologies for classroom access, both live and remote: Realtime Captioning and C-Print. Video remote interpreting will also be discussed as an option to traditional 'live' interpreting. Innovative wireless technologies such as video relay interpreting and Internet-based systems will also be discussed.

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Poster Sessions

- 24 Poster sessions
- 12 at one time
- Opportunity to discuss one-on-one
- Hands-on
- No other events
- Networking opportunity





3/26/2006 18

Commercial Exhibits

- 8 Organizations with products and services
- Relevant to participants
- Available throughout the Symposium



3/26/2006

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Exhibits Included...

- PEPNet
- Automatic Sync Technologies
- Captioned Media Program
- NTID
- Caption First
- ULTECH



3/26/2006

20

Post-Symposium Workshops

- Hands-on opportunity for skill development
- 10 Workshops in total
- 57 Participants



3/26/2006

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Workshop Topics

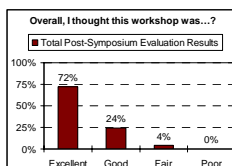
- Acrobat
- Electronic Portfolios
- Online Tutorials
- Smart Board Technology
- SnagIt
- Emerging Technologies and Assistive Communication
- Photoshop Elements
- Video Editing



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Post-Symposium Workshops



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Symposium Evaluation

- What did you like most about the Symposium?
 - Networking with colleagues from other countries – 39%
 - Variety/Selection of topics – 21%
 - Operations: Friendly staff, flowed nicely, session length – 29%
 - Provided practical information – 11%
 - Gained knowledge about technologies – 7%
 - Sharing different teaching approaches – 7%



3/26/2006

24

Symposium Evaluation

- Based on your Symposium experiences, what changes will you make at your worksite, your professional development activities, or in your studies?
 - Integrate new ideas/strategies – 28% (Provided inspiration that will carry over)
 - Conduct further research on new ideas/strategies – 14%
 - Reach out to new contacts – 11%



25

Culminating Luncheon Discussion

- Opportunities to be seized
 - 10 years from now, where should the field of deaf education *ideally* be regarding the use of instructional technology?
- Challenges to be met
 - What barriers are likely to hinder the realization of the above ideal??



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Opportunities to be Seized

- Human Networks of Students & Teachers
- Equipment & Resources Issues
- Impact of Cochlear Implants
- Internet & Web-based Resources
- Impact on Student Education
- Accessibility & Universal Design



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Challenges to be Met

- Teachers & Administrators
- Technical Support Staff
- Funding
- Greater Investment in R & D
- Preserving Linguistic & Cultural Minorities
- Preserving the Role of Human Interaction
- Educate Deaf Community in Benefits of Technology
- Need to Simplify Technology



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<http://www.rit.edu/~techsym>

- Each plenary, concurrent, poster and workshop on WWW.
- Papers, presentation media, caption files, video and photos.



29

Accessing Symposium Resources on the Web



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Access Technology Discussion

- Initial Focus Group to Help Formulate NTID's Center on Access Technology.
- http://www.pen.ntid.rit.edu/ewc/atc/Summary_of_AT_Discussion_6-28-05.pdf



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NTID Center on Access Technology

- <http://www.ntid.rit.edu/cat>
- Four Strands of Research
 - Classroom Access Technologies
 - Mobil Technologies
 - Training and Evaluation Services
 - Audio and Sound Technologies



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Next Symposium Scheduled for June 2008

- Sign-up for Email Announcements
- Suggest Program or Format Ideas
- Possible Greater Focus on Access Solutions



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Universal Instructional Design: Enhancing Understanding of the Benefits for Students with Hearing Loss¹

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Abstract

The movement to integrate principles of Universal Instructional Design (UID) into higher education has grown. UID literature for students with hearing loss typically provides examples like captioning, interpreting, and FM systems. These examples, however concrete and beneficial, limit our understanding of the full potential benefits of UID for students with hearing loss and other students in learning environments. While other strategies have been proposed, they usually are only in the disability-specific context (i.e., deafness), but not in connection with the specific principles. The purpose of this session is to provide background on the principles of UID, deepen our understanding of the benefits of these principles for students with hearing loss and provide an assessment tool to participants.



Introduction

Universal Instructional Design (UID) first emerged in educational circles in the late 1990s as an outgrowth of an effort recognizing that strategies good for students with disabilities also benefited other students.² UID adapts the principles of Universal Design developed in the field of architecture to learning environments.

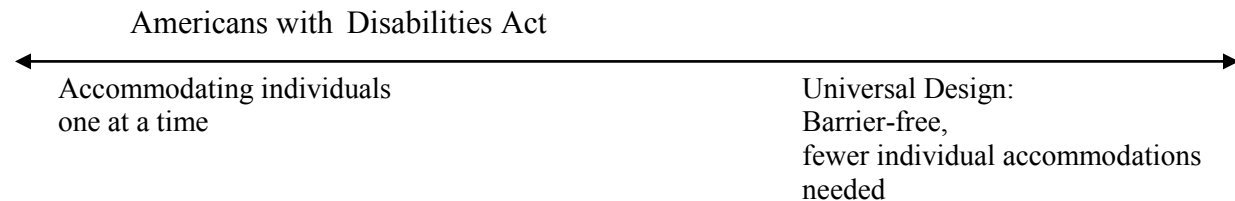
Our review of literature regarding UID strategies that benefit or are effective for students with hearing loss in the classroom yielded little information and examples that demonstrate the breadth of benefits for students with hearing loss beyond the traditional accommodations provided. The experience of the authors at the University of Minnesota is that the most common examples cited are those related to using interpreters, captioners or assistive listening devices.³

If we are to continue to promote UID in higher education, we must fully explore the benefits of Universal Design as it relates to all disabilities and illustrate how these benefits also accrue to other students. This paper, based on our presentation at the PepNet conference in April 2006, explores in greater depth how UID principles benefit students with hearing loss as well as other learners in the classroom. In addition, it includes an assessment tool that was shared, which can be used by educators⁴, disability service professionals and students to analyze and develop strategies to assure greater access in the classroom for students with hearing loss and other students.

Universal Instructional Design

“Universal Design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design”⁵. The application of Universal Design to learning environments is commonly called Universal Instructional Design. “The basic premise of universal instructional design is that curriculum should include alternatives to make it accessible and applicable to students with different backgrounds, learning styles, abilities and disabilities.”⁶ In the context of the legal compliance environment in higher education and disability services offices, it is helpful to think about Universal Design in the context of a continuum.

Universal Design Continuum



One end reflects the legally-mandated individualized accommodations in classrooms required by state and federal laws particularly, the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973.⁷ The other end reflects the benefits of Universal Design, where the environments in a classroom are designed to be barrier-free. In such environments, fewer individual accommodations are required.⁸

UID focuses on accessibility for all learners. It seeks to create and include alternatives for conveying information and facilitating learning. Though the field is still young, UID has benefited a wide array of students. Students with disabilities benefit as do students from ethnic/racial cultures, students with different learning styles, and students for whom traditional learning environments are inconvenient or difficult to navigate.⁹

Principles of Universal Instructional Design

The Curriculum Transformation and Disability project at the University of Minnesota¹⁰ identified 8 principles of Universal Instructional Design¹¹:

1. Create a welcoming classroom climate
2. Determine essential components
3. Provide clear expectations and feedback
4. Incorporate natural supports for learning
5. Use varied instructional methods
6. Provide for a variety of ways of demonstrating knowledge
7. Use technology to enhance learning
8. Encourage faculty-student contact

In this paper, we will briefly explain each principle and then expand on the knowledge of each by identifying how these strategies provide additional benefits to learning for students with hearing loss.

1. Create A Welcoming Classroom Climate

To create a welcoming classroom climate, the original CTAD project noted the following strategies:

- Establish ground rules for class discussion
- Avoid singling out students who receive accommodations
- Recognize the authority of personal experience
- Attend to physical *and communication/information* needs of students *and accommodation providers*.
- Share your own experiences
- Honor diversity and cultural differences
- Develop inclusive syllabus statements¹²

As a result of this project, the authors have revised the fourth bullet item to state: “Attend to the physical *and communication/information needs* of students and *accommodation providers*.” The purpose for this change is to acknowledge that the physical environment must not only be accessible (e.g., lighting), but also that the communication/information environment must be effective, too. Accommodation providers were included as well because if a student is using a sign language interpreter or a captioner, things like lighting, space, and electrical power sources must be available for the accommodation to be effective. In other words, one cannot just think about ensuring an environment for only students. For UID to truly be implemented, one must design environments that are inclusive of students and any accommodation services that may be provided in that setting.

For students with hearing loss, a welcoming environment includes the planned placement of accommodations such as interpreters and captioners central to the learning in the room. By central to the learning in the room, it means being prepared to locate the accommodations in places where the student can feel they are not marginalized in the learning environment. To do this, it also means that the furniture, lighting and the placement of the accommodation must also support an environment that ideally assures that the student with a hearing loss is able to participate meaningfully and fully.

Creating a welcoming climate also includes engaging strategies that reduce the isolation of the student with a hearing loss through introductions (with people identifying themselves clearly and slowly) and intentional (and frequent) class interactions.

Among the things educators must also do is develop and share communication strategies that take into account information delay when interpreters and captioners are used. A student with a hearing loss will always experience difficulty participating effectively and frequently if people are not aware of when the interpreting/captioning process is completed for any one conversant.

Another strategy in creating a welcoming environment is to consider accommodations used for students with hearing loss in other situations where students may benefit. For example, if an educator has a very strong accent that is difficult to understand, captioning can benefit all students in the classroom, regardless if a student with a hearing loss is present.

To apply UID strategies, it is imperative to understand and be able to articulate the essential components of the course. Essential components are the outcomes (skills, knowledge, and attitudes) all students must demonstrate with or without using accommodations to be evaluated in a nondiscriminatory manner. Student performance outcomes, not process, are determinative. Process is where flexibility and creativity can emerge for all involved.

When determining the essential components of the course, educators must consider:

- The purpose of the course
- Outcomes absolutely required of all students in the course, with or without accommodations
- Instructional methods that most effectively address the essential outcomes
- Effective measures that allows fair evaluation of *all* students

Hearing bias, or what is more currently referred to as audism¹³, creeps into course expectations often rather unconsciously because of the hearing perspective and life experience of educators. An expectation in a clinical rotation that a resident be able to use a specific type of stethoscope to diagnose conditions is an example. Upon further analysis, it becomes evident that it may not be the use of that particular stethoscope that is the essential component, but rather it is the ability to diagnose conditions in the lungs, abdomen and heart and identifying some specific conditions that are most common. A student may not be able to use the specific stethoscope identified, but may be able to engage in a number of different strategies to identify and diagnose conditions in the lungs, abdomen and heart, including using a different type of stethoscope adapted for people with hearing loss.

It is imperative that, as early as possible, students with hearing loss work with educators and DS providers to become familiar with essential components for completion of the major, minor or advanced degree. This will assure that there can be planful discussions about various compensatory strategies (including accommodations) that may be available to them throughout their course of study. This process engages the interactive process intended by the Americans with Disabilities Act. Too often, the temptation is to allow DS providers and educators to make decisions about accommodations or compensatory strategies for students without consulting with the student. This must be avoided for two reasons. First, students should be a part of the interactive process under the ADA¹⁴. Second, people with disabilities have often encountered unexpected situations that have required imagination and creativity to navigate. Their experience is often invaluable to assuring a thorough and thoughtful interactive process.

2. Provide Clear Expectations and Feedback

Clear expectations articulated at the beginning of a course benefits students. An optimal vehicle for communicating expectations is to document them in the syllabus. Expectations articulated should include class participation, tests and exams, papers, outside activities related to the course, in-class activities, and grading rubrics. During the course, students should receive regular feedback on their performance, including mid-term updates.

In UID discussions, the focus of feedback is typically on the students' performance. What often is neglected is feedback on the accommodation process. One of the great benefits of feedback regarding student performance at regular intervals is that it provides an opportunity for discussion on the student's and educator's experiences with the accommodation(s) being provided. Oftentimes, dialogue is spurred only at the invitation of the educator because his/her inquiry signals that s/he is willing to work with the student to improve the learning environment. This creates opportunities for dialogue about what is working and what is not working well for the student, the educator and the accommodation provider(s). Furthermore, all parties are usually motivated to modify his/her practices once they receive concrete feedback about the challenges/barriers that are faced in the learning environment.

The following is a story told by a faculty member on how language used in a presentation created barriers for a deaf student and how she changed her practices to improve the student's learning experience.

...[W]ith a deaf student, I tried to limit my use of vague terms and pronouns, such as “this” and “that.” The deaf student needed to use an interpreter. When I pointed to something and said “this,” I was usually pointing to something else or nothing at all by the time the deaf student understood the interpretation. By being more specific, the student had a better understanding of my references, and I'm sure the specificity was beneficial to the rest of the class.¹⁵

This faculty member also recognized how removing a barrier for one student benefited all students.

3. Incorporate Natural Supports For Learning

“Natural supports are non-accommodation-based supports that are built into a course to promote more universal access to key course components. Using natural supports will make a course accessible to all students, disabled or nondisabled.”¹⁶ The two components of Principle 3 are: “natural supports” and a subset of natural supports referred to as “cognitive supports.” Principle 3 generally focuses on strategies that provide clear guidance and directions in a manner that benefits all students and usually leads to students producing better outcomes. The elements of natural supports are:

- *Divide Tasks into Parts*: Break tasks into smaller units and give step-by-step information.
- *Make it Basic*: Consider what information the listener needs at this time.
- *Model Problem-solving Steps*: “Here's what I'd do.”
- *Supplement Verbal Instructions*: Convey Information using more than one method.
- *Direct Questioning and Response*: “Tell me what you're going to do.”¹⁷

Cognitive supports focus on how information is conveyed and reinforced by strategies to ensure understanding. The key strategies are:

- Find out what the individual knows.
- Provide an overview of issues.
- Provide clear goals.
- Model strategies for problem-solving.
- Summarize major issues.
- Provide transitions between issues.
- Check for understanding.

Examples of these strategies include:

- Creating electronic archives of lecture notes makes participation by students with visual disabilities, hearing impairments, sick children, or unreasonable bosses more fully possible.
- Including instructions for important assignments in the print syllabus, explaining them orally, and reinforcing them individually ensures that all students' strongest sensory mode is addressed.
- Teaching key course concepts by lecture, discussion, reading, and group work, accommodates a range of learning styles.

- Holding office hours face-to-face, as is traditional, but also through e-mail, phone, or real time on-line chat ensures access for all students.¹⁸

Though these strategies are usually very heavily associated with students with learning disabilities, attention deficit hyperactivity disorder and some types of psychiatric disabilities, they are also extremely helpful to students with hearing loss. First, conversations structured as recommended by Principle 4 make it much easier for accommodation providers to convey information, either in a printed or signed context. With cognitive supports, if the process is engaged fully, it becomes a tool for the student with hearing loss and an educator to assure that the information was conveyed and understood accurately, especially when sign language interpreting is used. By conveying information in a scaffolded way, there is less room for an error in the interpretation. There will also be more opportunities for the student and educator to check for understanding if the student is primarily relying on lip reading. Lastly, the actions recommended in this principle facilitate and support understanding, particularly when cultural and/or linguistic diversity exists in the classroom. Checking for understanding assures that the language and cultural barriers have not interfered with the receipt of information.

4. Provide Varied Instructional Methods

As the CTAD Workshop Facilitator's Guide¹⁹ explains:

Providing students with different ways to access material creates an accessible environment for all students. Some students thrive in lectures; others obtain information effectively from text, while still others learn best through visual media such as diagrams, illustrations, charts, or video.

For example, by utilizing alternative means of representation, a course module on homelessness could be taught through a series of lectures, through multimedia and videos, and through completing field trips or service-learning projects with local homeless shelters.²⁰

For students with hearing loss, each of these activities needs to be analyzed to understand how they may provide greater access for these students and how these activities can be improved to assure access. For example, when using or referring to PowerPoint slides, or other forms of written text, the speaker must allow time for reading (without speaking) so that users can look at an accommodation provider (e.g., interpreter or captioner) and follow along. Too often, speakers present text, then immediately speak from it and about it, without allowing the student time to read the text involved. This usually causes the student with hearing loss to struggle to multitask to get information from different sources simultaneously. This almost always results in the loss of information and, frequently, confusion. The tool discussed later in this manuscript provides strategies for assessing the learning environment to prevent these types of experiences for students with hearing loss and other students.

Other considerations include ensuring that films, videos and DVDs are captioned in advance of class and that the equipment has the capacity to show captioning. In addition, developing multiple strategies to represent, express and engage information will reduce the isolation of students with hearing loss because it encourages greater levels of participation in ways that are more creative and engaging for all students. In all cases, it is imperative to take into account accommodation needs for different types of activities, such as making sure there is room for

more than one interpreter, if two will be present, and ensuring that there is a seat for a captioner and space for a laptop for the student

5. Provide For A Variety Of Ways Of Demonstrating Knowledge

This principle is described best in *Creating Curb Cuts in the Classroom, Adapting Universal Design in Education*:

One benefit of Universal Instructional Design is that the model addresses individual learner differences by providing alternative methods of...expression, and engagement (CAST)...By providing multiple means of expression, students are given a choice in how they will demonstrate their knowledge of course content. For example, one student may choose to demonstrate knowledge of cell biology via a research paper, whereas another student may choose to give an oral presentation. By providing multiple means of engagement, instructors seek the right balance in how students are engaged in the learning process.²¹

In short, in any learning environment, information should be presented in multiple ways; students should have multiple ways to interact with and respond to curricula and materials; and there should be multiple ways for students to find meaning in the material and thus motivate themselves.²²

With regard to evaluation of students, particularly those with hearing loss, educators should consider the modes of testing or evaluation that are preferred and the rationale for those particular modes. How do they affect different types of students, including students with hearing loss? Are they inherently biased toward students with particular skills in expression and representing knowledge? Educators and DS offices should discuss with students with hearing loss the different types of testing and evaluation strategies that have been effective for them. This should be part of an interactive process so that opportunities to engage different strategies can be explored (provided the willingness is present for all parties). In addition, educators and DS offices should explore the preferred modes of testing or evaluation in different disciplines and examine if there are other testing modes of testing or evaluation that may achieve equal, if not more effective, results in assessing student learning and performance.

6. Use Technology To Enhance Learning

It is important to acknowledge the potential of technology in providing access and learning opportunities for all students, while at the same time recognizing that it is not a panacea. Great strides have been made in the last decade to make information technology more accessible to people with disabilities. Experience with UID has shown that technology may be the key to increasing flexibility in courses. Putting materials on-line, arranging for course listservs, and selecting software that is compatible with screen readers may assist all students in accessing materials in their own time in a manner that is accessible to them. The key is to not exclude students by using technology that is not accessible.²³

DS offices should do as much as they can, in partnership with IT offices, to level the playing field for students with disabilities. UID strategies should, as much as possible, make available

accessible information technology. Such information technology should be compatible with adaptive technology and, when needed, be available in alternative formats.

With respect to students with hearing loss, particular consideration needs to be given to ensure that digitized media used on the web or computers is accessible with captioning, when auditory information is present. Whenever separate accommodations must be used for any group of students with disabilities to access information technology, take time to evaluate the disparate impact it may have on the particular student compared to his/her peers.

7. Encourage Faculty-Student Contact *And Student-To-Student Contact*

Faculty-student contact is a key indicator for student retention. Strong evidence reveals that, more than anything else, faculty involvement with students and active self-directed learning by students contribute to measurable student success.¹⁰ For students with hearing loss, the communication barrier between educators and the student may prevent them from establishing a relationship. UID strategies that focus on creating more welcoming environments may encourage students to speak with and become familiar with educators. In addition, educators need to demonstrate ease of use with accommodation providers before a student with hearing loss will be able to have meaningful conversations. After all, this relationship can become one of the student's most important assets upon graduation, especially if s/he applies for fellowships, jobs, and/or graduate school.

Similarly, because isolation is a common experience for students with disabilities, including students with hearing loss, it is important to foster student-to-student contact as well. Structuring learning experiences to encourage student-to-student contact allows students with hearing loss to build a social network and to remove barriers among students by building familiarity and reducing fear/nervousness in dealing with difference.

Assessment Tool To Determine Accessibility of Learning Environment

Attached to the manuscript is an assessment tool that can assist educators, students and DS providers in evaluating the accessibility of the learning environment for students with hearing loss.²⁴ (Appendix A) It is a tool that can be used to understand how and whether UID strategies can be used to create the flexibility and customizability necessary to benefit students with hearing loss as well as for other students. It also can be used to develop an understanding of when accommodation providers such as interpreters or captioners will need to be used and what strategies can be employed to assure effective use of those services. The authors will make available on the PepNet website a version of the assessment tool that is partially completed to give the reader examples of how it can be filled out.

How to Use the Assessment Tool

Column A: Four Environments. The chart identifies in the left column the “four environments” in all learning environments. They are:

1. **Physical:** This is related to the concrete, physical environment. It includes things such as the room structure (e.g. shape of room, fixed furniture, high/low ceilings, lighting, carpeting, furniture, wall and ceiling qualities.)

2. **Informational:** This is related to the manner in which information is conveyed. Examples include text, verbal means, electronic (web, on-line, email) means, and signage.
3. **Policy/Programmatic:** This includes requirements that precede entering the learning environment, such as course prerequisites and financial aid, as well as requirements for participating and succeeding, such as course requirements, essential requirements for the course, and assessment tools.
4. **Attitudinal:** This is focused on the things, words, and actions that support creating a welcoming environment for all learners.

The chart identifies examples of each of these environments in the left column (although it is not exhaustive). The user of the tool needs to either select those items that apply to his/her learning environment, or expand the list to identify things that are not on it. Breaking down the learning environment into these four categories gives the user the opportunity to see how all aspects of the learning environment affect students with hearing loss as well as other students.

Column B: Hearing: Access Achieved through Eyes---Ears. In this column, users can identify how certain environmental characteristics and/or behaviors can affect learning for a person who can hear and see. To do this, the user can identify the experience of the person in the room who can both hear and see. “Eyes --- Ears” refers to visual and aural information. These two types of information are processed through eyes and ears. For example, related to seating arrangements, a person who uses eyes/ears has flexibility to sit in different types of seating arrangements, including rows, semi-circles, circles, or auditorium seating.

Column C: Deaf: Access Achieved through Eyes---Eyes. This column gives the user the opportunity to identify the experience of the person in the room who relies on eyes to process visual and aural information (e.g., lips moving, lights on a CD player). In this column, users can identify how certain environmental characteristics and/or behaviors can affect learning for a person who primarily processes information through their eyes. To keep with the example on seating arrangements, for people who rely primarily on eyes/eyes, circles or semi-circles are more ideal to foster effective communication and direct eye contact with speakers.

Column D: Comparable? Modifications? The purpose of this column is to assist the user in understanding the similarities and differences between the hearing and Deaf person’s experience in various environments. Once this is understood, it becomes easier to discuss options for leveling the playing field. In this column, the user (hopefully in consultation with the other partners in the interactive process) can identify strategies to create more effective access for all users. In the example with seating arrangements, the experience is not the same in seating arrangements where people are in rows or auditorium seating, but is more similar in semi-circular or circular arrangements. A modification in the case of a room with movable chairs might be to move chairs to a more accessible arrangement. If there are too many people, or if the furniture cannot be moved, it may be to place the student with a hearing loss in the best location based on that person’s preference (the front may not always be best) and where the accommodation provider (if there is one) can be feasibly located.

Column E: Interpretable? Modifications? This column allows the user to analyze the environment for accommodation providers like interpreters or captioners. First, a determination should be made if the particular environmental challenge is interpretable. If so, then move to the next inquiry about what, if any, modifications need to be made to ensure access. In the situation evaluating seating arrangements, assuming it is interpretable, the user might note that room for a captioner/interpreter will be needed. It may be necessary to move one or two seats or to allow for shared space with the educator on the platform.

Column F: How will modifications benefit other participants? The purpose of this column is to note the benefits for other participants, including students and the educator. When this is added to the analysis, the benefits of universal design strategies become more transparent to all involved. It can also be a strong motivator as it answers the question, “What’s in it for me?” for all participants in the room, including the educator.

Conclusion

Our observation has been that UID has not “caught on” among providers of services for students with hearing loss. We believe some of this may be due to the lack of in-depth discussion regarding the potential benefits of UID strategies for students with hearing loss and other participants in the educational environment. We hope that the assessment tool will be useful in facilitating the interactive process for educators, students and DS providers. Indeed, this project has led us to expand this tool to evaluate the accessibility of learning environments for all students, not just based on use of eyes and ears.

Endnotes

1. “Hearing loss” includes students who are hard of hearing, deaf-blind, deaf and Deaf. It assumes a wide range of students with different hearing abilities and who use different compensatory strategies (e.g., lip-reading, captioning, sign language interpreters, cued speech, etc.)
2. See, e.g., Silver, Patricia, Universal instructional design in higher education: an approach for inclusion, *Equity & Excellence in Education* v. 31 no. 2 (September 1998) p. 47-51 and Silver, Bourke, and Strehorn, Universal Instructional Design in higher education: an approach for inclusion, *Equity & Excellence in Education* v. 31 n. 2 (1998).
3. The authors thank Uriah McKinney for his additional research in this area.
4. The term “educators” is used throughout this paper and is intended to include faculty, instructors, teaching assistants and any other person who has a primary role as a teacher in a learning environment.
5. The Center for Universal Design (1997). *The Principles of Universal Design, Version 2.0*. Raleigh, NC: NC State University.

6. Center for Applied Special Technology. (2001). Universal Design for Learning. [Online]. Available: www.cast.org
7. The Americans with Disabilities Act, 42 U.S.C. Sec. 12182 and Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. Sec. 794.
8. In some cases, accommodations that were ‘one-time’ modifications become universally designed features, such as a ramp or elevator. In others, the accommodations are tailored to the individual and must be repeated each time the individual encounters a different environment, such as providing brailled documents or sign language interpreters.
9. See, e.g., Jehangir, Rashné R, “Charting a New Course: Learning Communities and Universal Design,” Curriculum Transformation and Disability (CTAD): Implementing Universal Design in Higher Education, Edited by Higbee (2003) p. 88.
10. The information on this and related pages is adapted from the work of Curriculum Transformation and Disability (CTAD), a collaboration of the University of Minnesota's General College and Disability Services. Curriculum Transformation and Disability was funded by the U.S. Department of Education, Office of Postsecondary Education. Project # P333A990015. *See also*, Workshop Facilitator’s Guide, <http://www.gen.umn.edu/research/CTAD/publications.htm>.
11. These principles were synthesized from Chickering and Gamson's (1987) Seven Principles for Good Practice in Undergraduate Education and North Carolina State University's Principles of Universal Design (1997). See, e.g., Fox, Hatfield, and Collins, Developing the Curriculum Transformation and Disability Workshop Model, Curriculum Transformation and Disability (CTAD): Implementing Universal Design in Higher Education, Edited by Higbee (2003).
- 12 *See*, CTAD, *id.* at endnote 10.
13. Humphries, Tom, Communicating Across Cultures (Deaf/Hearing) And Language Learning. Doctoral dissertation. Cincinnati, OH: Union Graduate School (1977), and Lane, Harlan, The Mask Of Benevolence: Disabling The Deaf Community. New York: Alfred A. Knopf (1992).
14. *See, e.g.*, U.S. Department of Justice, Office of Civil Rights, Students With Disabilities Preparing for Postsecondary Education: Know Your Rights and Responsibilities (2005); <http://www.ed.gov/about/offices/list/ocr/transition.html>
15. Fox, Hatfield and Collins, *ibid.* at 34.
16. Fox, J and Johnson, D., Curriculum transformation and disability: Workshop facilitator’s guide. Minneapolis, Minnesota: University of Minnesota: General College and Disability Services (2000) at Slide 6.
17. Adapted from “Interventions for Students with Learning Disabilities: A Meta-analysis of Treatment Outcomes” by H. Lee Swanson, 1999.
18. *See* CTAD, *id.* at endnote 10, at Slide 6.

19. See, CTAD, id. at endnote 10.
20. See, CTAD, id. at endnote 10.
21. See, CTAD, id. at endnote 10.
22. From Bowe, Frank, 2000. *Universal Design in Education: Teaching Nontraditional Students*, Westport, CT: Bergin & Garvey.
23. See CTAD, id. at endnote 10.
24. The assessment tool was partially based on the work of Dr. Betsy Winston, who used headings in columns B, C, D and E in her work on interpreting processing. The four environments are based on the theory of meaningful access, used in the CTAD materials cited above and also developed in the work of Cordano, R.J., and Mann-Rinehart, P., related to Universal Design for Diversity 2006.

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Appendix A: Universal Instructional Design Assessment Tool for Evaluating Learning Environments for Students with Hearing Loss (Cordano & Magler)

Environment (Physical, Informational, Policy/Programmatic /Attitudinal)	Hearing: Access achieved through: Eyes---Ears	Deaf: Access achieved through: Eyes---Ears	Comparable? Modifications?	Interpretable? Modifications?	How will modifications benefit other participants? (educators and students)
Physical					
Lighting					
Seating Arrangements					
Flooring					
Wall Decorations					
Windows/Window Dressings					
Ability to adjust proximity to teacher as needed					
Provides appropriate breaks for students and service providers in long classes.					
Informational					
Lecture (note: be clear what language/mode will be used. E.g., ASL or English or another language or modality)					
PowerPoint					
Overheads					
Paper outline					
Simultaneous electronic notes/outline or slides on laptops					
Question and answer (lecture based)					
Question and answer (text or paper based)					
Classroom Discussion					
Round-robin style					
Teacher facilitated					
Random Input without signal (e.g.raising hand or voice indication)					
Input with signal					
On-line electronic discussion using laptops or other devices					
Web-based Materials					
Digital videos					

Environment (Physical, Informational, Policy/Programmatic /Attitudinal)	Hearing: Access achieved through: Eyes---Ears	Deaf: Access achieved through: Eyes---Ears	Comparable? Modifications?	Interpretable? Modifications?	How will modifications benefit other participants? (educators and students)
Media Technology					
DVD					
Video					
Audio tapes					
Online classes					
Audio features					
Video clarity					
Policy/Programmatic					
Syllabus statement					
Course requirements					
Essential requirements					
Assessment tools					
Course registration protocol					
Course prerequisites					
Cost of course/Financial Aid					
Time of course					
Attitudinal					
Opening-welcoming of all and thoughtful of differences in classroom					
Use of body language					
Body language and expressions					
Interest in dialogue					
Commitment to office hours and student contact					
Encourage and support student interaction					
Approach to accommodation service providers					
Classroom environment / decorations					
Sensitivity to different views/perspectives of students based on life experiences					
Educators capacity to explore differences in students' responses or experiences based on cultural or linguistic experience.					

* Columns B,C,D,E adapted from work of Dr. Betsy Winston.

* See also, Cordano, R.J. & Mann, R.P., Principles of Universal Design for Multiculturalism, 2005.

* See, Curriculum Transformation and Disability, University of Minnesota.

Public...Speaking?: Charting the Road Less Traveled

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Abstract

At most college campuses, Public Speaking is a required course for all students. Comments from interpreters, direct observations by Disability Services Directors, and questions posed by professors suggest that public speaking courses raise unique questions: How can the instructor be sure he or she is evaluating the student, and not the interpreter? Are curricular materials and assumptions appropriate for deaf students? How can public speaking faculty prepare their hearing students to effectively evaluate deaf presenters, and vice versa? Through a collaborative effort, faculty from Western Oregon University's ASL/English Interpreting and Communication Studies Programs are working to develop solutions.



Introduction

This paper explores two interrelated facets of a research project aimed at improving the instruction, evaluation, and interpretation of course materials and student presentations in a postsecondary public speaking course. The first facet involves consideration of the curriculum of the course, especially the non-signing instructor's and students' measures and standards for evaluation of presentations by deaf students who use interpreters. We also briefly consider dynamics of hearing presentations that may pose particular challenges for deaf student evaluators. The second facet involves the training of interpreters within ASL/English Interpreting programs. This aspect of the research also focuses on presentational contexts and addresses the demands upon interpreting services as well as individual interpreters.

Background

A 1995 report of the National Center for Educational Statistics estimated that more than 20,000 deaf and hard of hearing students enrolled in postsecondary educational institutions in the United States. Most of these students are enrolled as undergraduates and most of them will not graduate with degrees (cited in Marschark, Lang, & Albertini, 2002, p. 151). There are many

reasons why significantly fewer deaf students than hearing students graduate, especially from four-year programs. Issues of access, academic preparation (including college prep courses in high school), funding (for both schools and individuals), social support, and many other factors affect undergraduate student recidivism. Some of these issues may be amplified for deaf students who experience “lags in language development and gaps in academic skills” (p. 152). Given all these barriers to success in higher education, it seems only reasonable that the core university curriculum be as accessible as possible for all students. Yet, for practical as well as ideological reasons, this is still very far from the case on most campuses.

At most colleges and universities in the United States, undergraduate students—deaf, hard of hearing, and hearing alike—are required or opt to take a public speaking course. Such courses are intended to familiarize students with the principles of the rhetorical canon while providing them with opportunities to become more comfortable delivering public address. As a teacher of rhetoric, in a course titled “Fundamentals of Speech,” I was challenged to address the question of access most profoundly the first time a deaf student enrolled in the course. At minimum, I needed to adapt the curriculum and reconsider my teaching methods and preparation. What other option did I have?

After struggling through the term and learning a little more about Deaf culture and communication, I was surprised to learn there was another option—an option I had not considered. Shortly after we began our collaboration on this essay, a discussion occurred on a listserv regarding accommodating deaf students in public speaking classes. The following points were brought out:

- The task of the class was to prepare and deliver speeches by researching, organizing, writing and demonstrating techniques of effective delivery.
- There was concern that the interpreter would be delivering all of the speeches for the student.
- A waiver of the requirement was suggested as the best solution, and was deemed by the service provider to be a reasonable accommodation.
- The waiver would follow the student to any college the student planned to attend.

Why not waive?

While there are some instances where a waiver might be appropriate, is it ever advised to make this waiver standard or policy for all deaf students? Is this service provider correct in assuming the interpreter would be giving the speeches for the student? The fundamental premises that undergird the study of public speaking (or presentational communication), and the educational experiences of deaf students suggest that this recommendation, this solution to the question of appropriate and reasonable accommodation, is not ethically defensible. It is reasonable, as well as practical and probably quite common. From the standpoint of a non-signing instructor, it is completely understandable. Yet it is also deeply ethnocentric and potentially disabling.

The ensuing discussion recognized students need and deserve to be taught how to research, organize, write and deliver an effective presentation as much as any of their classmates. It also recognized that a student may be reluctant to take a course in which her grade appears to be reliant upon the vocal performance of an interpreter with whom she may have little out-of-class interaction. Her reluctance may stem from her sense that the teacher is not well-equipped to properly evaluate her presentational communication because of some of their communication

differences. Or she may be one of the millions of people who fear public speaking more than death. Clearly, though, reluctance alone is not sufficient reason for a waiver.

That the waiver would travel with the student to another university is also troubling. Not only is she being encouraged to pass on the opportunity to develop her argumentation and public communication skills but she is being protected against the future possibility of a (perhaps less ethnocentric) communication curriculum that might benefit her academically. In this case, the waiver is appropriate if the student can demonstrate proficiency, but significantly less so if it prevents her from attaining proficiency.

Finally, the claim that the student will have the interpreter give all the speeches for her is troubling both because it demonstrates a lack of understanding of the nature and purpose of rhetorical training and because it diminishes the student's role in her academic work. As educators, do we merely have the interpreter give our lectures for us? Of course not. So the problem appears to reside with the issue of delivery, which is but one component of rhetorical training, often less emphasized in such courses than quality of argumentation, organization, support, and language choice. More pointedly, if we shift the burden from the student to the curriculum, the problem appears to reside with the non-signing instructor's and students' inability to adequately evaluate and assess the quality of a deaf presenter's delivery due to their lack of understanding of ASL and deaf communication (including Deaf culture). Unlike so many of the problems facing deaf students in their struggles to succeed in postsecondary settings, this one can be resolved relatively easily. What we need is a different attitude and some foundational research to help guide further development of presentational communication curriculum, teacher training materials, and pedagogical strategies for mixed deaf/non-deaf classes.

In an essay in *NETAC Networks*, Jane Jarrow (1998) calls attention to one of the underlying problems and reasons why such a curriculum is not already well established:

Lately I have been hearing a lot of stories about faculty members who balk at the idea of having a deaf student who uses sign language involved in . . . courses that have a heavy emphasis on oral presentation. . . . Unfortunately, the majority of the hearing world still believes that the use of sign language is second best. . . .

Hearing people may be fascinated with sign language, they may envy those with facility in its use, but when it comes down to the wire, they believe that anything other than speech is a poor substitute. We have to help faculty, staff, students, and the community understand that sign language is a viable alternative to speech.

The use of sign language does not diminish either the user or the value of the communication. (Jarrow, 1998, p. 5).

Although the statement "the whole purpose of the assignment is to have the student learn to handle the pressures of standing in front of a class and making an oral presentation" (p. 5) glosses over other skills gained in public speaking courses, Jarrow is absolutely right that such attitudes can inhibit deaf students' educational pursuits. For that reason alone, our research is worthwhile.

In addition to aiding in the education and retention of deaf students, this collaboration enables us to further the professional development of faculty members and the ASL/English interpreters who work in their classrooms. Many of these interpreters will also work in contexts that require them to interpret for deaf presenters and hearing audiences. The experience they can gain in a presentational communication classroom will strengthen their ability to be effective in a

variety of communication situations. Likewise, interpreting students can gain additional experience through the videotaped interpretation of carefully crafted public discourse by both deaf and hearing presenters. Such pedagogical activities help both interpreting students and non-signing instructors understand some of the dynamics at work in presentational communication contexts involving deaf presenters and interpreters.

Evaluation of Presentations

First, it is worth noting that there are numerous similarities between presentational communication delivered by English language and ASL presenters. For example, the processes of audience analysis, development of ideas, research, organization, use of style, and techniques of memory can all translate across the two linguistic cultures. Likewise, many traditional standards of effective delivery such as a slower pace, clear articulation, consideration of the audience and speaking environment, word choice, poise, composure, and consideration of personal appearance are consistent for both deaf and hearing presenters (see, e.g., Zimmer, 2000).

These similarities in evaluative considerations suggest that it is highly appropriate for deaf students to enroll in public speaking courses. Yet there are also important differences that need to be more closely examined by Deaf Studies, ASL, Interpreting, and Communication educators in order to improve our methods of instruction and evaluation. We offer a preliminary sketch of some of the necessary (re)considerations here.

The linguistic features of ASL as a language warrant attention. For instance, non-signing students and instructors should understand that formal signing tends to be slower and involves a much larger signing space than informal ASL. Formal signs are two-handed variants and are also supposed to be clearer and more fully executed than the casual signing that marks an informal conversation. This feature of ASL can be likened to the formality in language choices a hearing student might make (as opposed to the tendency toward casual, unplanned phrasing in informal communication situations) but it is also important to recognize the differences in register variation that impact ASL communication in public settings.¹ Other linguistic features of ASL described below, such as the use of shoulder, head, or eye-gaze shifts to mark reported speech, or the use of head nods to grammatically mark the ending of a thought or transition to a next point, also differ from the standards frequently assumed for non-signing presenters.

Perhaps predictably, the preparation and delivery of the speech differs for non-signing and ASL presenters, particularly those who rely upon the services of interpreters to communicate with their audiences. ASL presenters who are addressing non-signing audiences need to use facial expression to communicate what is generally termed vocal variation in most public speaking curricula. Hearing students also use facial expression, as well as gesture and body movement to convey their ideas and emotions to audiences but the situation is slightly different for ASL presenters. For the deaf presenter, effective delivery may involve the appropriate level of projection of signs, the holding of a sign or use of head nods to communicate an ending or transition, the use of directional shifting of the torso to communicate dialogue, two-handed signs and sign variants to indicate formality, and possibly even distinguishing communication with the interpreter (from communication directed to the audience) by signing lower on the body in a less formal register. ASL presenters may also have to divide their eye contact between the audience and the interpreter, and the necessity of this practice for audience comprehension should be explained to non-signing audience members in the context of the public speaking curriculum.

Non-signing students who are conducting evaluations can be quickly and easily informed of some of these differences, as well as more basic considerations such as looking at the presenter, not the interpreter, and applauding in a manner customary among deaf people. Student evaluators may even offer additional insights into effective public communication practices by ASL presenters, allowing their feedback to reflect much more than just the comprehension of the interpreted language choices. More importantly, non-signing instructors need to be familiar with some of these differences to adequately assist their deaf students with the development of their presentational communication abilities.

In addition to the educational training of deaf and non-signing students in the presentational context, there are also institutional constraints and considerations to contemplate. For instance, interpreters should be provided with outlines or texts of the students' speeches in advance. In places where students have chosen particular kinds of phrasing for rhetorical effect (such as a metaphor, alliteration, or use of rhythmic devices), the text should be marked with quotation marks so the interpreter knows that this phrasing warrants special consideration and can prepare appropriate signs or English translations in advance. Also, interpreters are often only paid for their in-class interpretation time, not preparation time or practice time, which might be even more important when the presentation is being evaluated. The ASL presenter should have the opportunity to address with the instructor any errors that may have been made by the interpreter, but absent from the delivered presentation.

Finally, when preparing the deaf student to be an evaluator of non-signing student presentations, parallel considerations should be made. Here, institutional constraints can also be problematic. In the case of our institution, a single interpreter is assigned to public speaking courses in which 10-15 students might be delivering speeches in a single class period. Such failures of funding and scheduling not only make for extremely difficult work on the part of that interpreter, but can actually limit the students' learning if the interpreter is physically unable to keep up with each presentation. Brenda Chafin Seal (2004) touches on some of these problems as they affect interpreters in her "Case of the Final Semester Presentation" (Chafin Seal, 2004, pp. 188-189).

Genesis of Service Learning

The ASL/English Interpreting program at Western Oregon University has been working on integrating Service Learning (SL) into the curriculum since the spring of 2004. At that time, a request was made to the campus community offering a forum for presenters to practice their presentations in the safety of the interpreting classroom, thereby providing the opportunity for interpreting students to practice interpreting in a risk-free setting. Several presenters took advantage of this opportunity and the live speakers/signers greatly enhanced the student interpreters' learning experience.

We solicited source material for translations. The most viable project to date was a request by a university faculty member who wanted to have three ASL videotapes translated for an ASL Literature course offered to ASL teachers, interpreters, and other interested students. Students worked collaboratively to develop written English translations of the ASL source material. The teacher who requested the translations successfully incorporated them into her literature course.

We received an additional request for ASL translations of three student speeches in spoken English that accompany a textbook for an introductory public speaking class. This project proved to be challenging and not as beneficial to the instructor making the request. The translations were

longer than the original speech in spoken English and the instructor goal of having translations that include both effective and ineffective public speaking practices was not achieved. These challenges, in many ways, motivated the present study and a SL brochure project.

In this SL project, students in an introductory course on the interpreting profession developed a brochure. Students conducted research to identify materials that were already available and found that materials containing the basics of working with an interpreter exist in libraries, Disability Services offices, and on the Internet. Yet there was very limited information available that addressed working specifically in classes where presentations are required. After their initial research, the students interviewed deaf and hearing students, faculty, and staff interpreters to identify effective and desirable educational practices. The project culminated in a brochure for faculty who teach deaf or hard of hearing students who rely upon signed language interpreting services.² This brochure may be found at <www.wou.edu/rred> under the link “Resources.” The brochure offers some preliminary advice on teaching deaf students effectively and evaluating deaf students’ presentations.

Conclusion

Many more considerations are warranted, and further studies should expand on the communication similarities and differences that impact public speaking curriculum for mixed deaf/non-deaf classes. The purpose of this preliminary conversation is to chart a road into underexamined territories and to ponder the ways collaborative efforts across disciplines can improve postsecondary educational opportunities for all students, deaf and hearing alike. After all, hearing students who feel they can competently understand and respond to a deaf presenter are more likely to take advantage of opportunities to attend presentations by deaf speakers. Likewise, deaf students who have been effectively trained in public communication are more likely to use those skills to express their ideas and insights in public settings such as conferences, lecture halls, rallies, and meetings. By including interpreters, individuals training to become interpreters, instructors, deaf students, and hearing students in the research process, we are better positioned to consider multiple dynamics and facets of presentational communication education in mixed classrooms. The service components and cross-disciplinary approach enriched our discussion and expanded the applicability of our findings.

In closing, we turn to an inspiring anecdote about a high school senior whose favorite class was public speaking. A 2003 issue of the *Hillsboro Free Press*, a Kansas newspaper, includes a story about a highly accomplished deaf student named Tomi McLinden. The article states, “She found she enjoyed giving the speeches and demonstrations that were part of the class” and indicates that McLinden plans to take public speech, along with a full load of other introductory courses at Butler Community College the following fall (Hamous, 2003). This student’s story reminds us of the importance of encouraging deaf students to become proficient public communicators. Public speaking, as it was conceived by the ancient Greeks and Romans and as it is promoted by contemporary communication scholars, is part of a broader civic duty that we all share. Such encouragement also helps educators and administrators address issues of access, curricular adaptation, and accommodation more effectively and with greater empathy.

Endnotes

1. For more on formal and informal registers, see RRCD (1997) *Language use in ASL: Register*. Interpreter Education Center. Monmouth, OR: Western Oregon University.
2. It is important to note that this brochure is not intended to supplant the more detailed resource manuals and tip sheets available online and in most Disability Services offices. Rather, we intend the brochure as an easily accessible, cursory introduction for faculty who may not yet be familiar with the more extensive materials available on their campuses.

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Positive Connections: Working Together to Prepare Well in Advance

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Abstract

At the start of each new term, a typical support services program gets a lot of hurried requests and demands for accommodations from students with disabilities. Preparing well in advance is essential to be able to provide support services and other accommodations for the students at the same time as having other departments educated on taking part in helping the student earn an education and life-building skills. Working with other departments on campus will bring effective collaborative results in providing accommodations to students with disabilities. Cross-training should help all departments be well-informed about each other, speeding up the process of sending an individual to the appropriate department. Marketing techniques, workshop and luncheon hosting, and other relevant material to help promote positive connections will be presented with a perspective of a former student using accommodations who is now a professional providing accommodations.



Objective

Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has. —Margaret Mead (1901-1978)

Teaming up with other departments to bring effective collaborative results in providing accommodations to students with disabilities—*ahead of time*—means more than just educating and working with other departments. According to the quote, our “small group” of DSS must consider what to do to make a difference. DSS should start making changes by organizing and representing our office before proceeding to engage in collaboration activities.

Perspective

This manuscript has its own perspective, combined with both personal and professional experiences. The personal experiences mentioned are based on my college and graduate school years, and the professional experiences stem from my work for DSS at Jacksonville State University (JSU). Using personal and professional experiences may give some insight on what works effectively for a college student with a disability to be cognizant of what to do and where to ask for assistance on campus. Proceeding from my perspective, it is considerably important for any office of disabilities to be organized within its department and market its services conscientiously—in order to be approachable to students and other departments. By being approachable, the office of disabilities is to have a perspicuous vision in contributing to the university and assisting students.

Personal Perspective

- Auburn University
 - B.A. in English with double minor in Business & History
 - M.Ed. in Higher Education Administration
- Registered with Auburn's Program for Students with Disabilities (PSD)
- Accommodations included transcription, course substitution, notetakers, copies of faculty notes, extended time for exams, films to be captioned/transcribed, and having faculty face the audience while lecturing

Experienced Freshman Year

- As a freshman, I experienced feelings of bewilderment while applying for college and residential dorm, figuring out what to do for financial aid and how to handle scholarships, registering for classes, requesting accommodations, and adapting to independent living
- Wish list for a better freshman year:
 - *student handbook* for using support services that explain in detail the ADA/504 guidelines and type of accommodations offered
 - *checklist* for all things to be done as a student
 - *other essential information* such as deadlines, working with Vocational Rehabilitation Counselor, knowing what and where to ask for accommodations, go see an academic advisor before registering during Priority Registration
 - *Quick Reference sheets* on all major departments with email addresses and phone numbers (i.e. Financial Aid, Registrar's Office, Bursar's Office) and links to college and support services websites

(Note: Remember this is my personal experience from college. PSD now utilizes the Auburn University website to assist students become better oriented to the services they provide.)

Professional Perspective

- Hired August 2005 as Disability Specialist, Generalist
- Using all education earned from Auburn University to work within another college setting: Jacksonville State University
- Applying all experience as a college student with a well-rounded background, including having a disability
- Job duties include: departmental PR/Marketing, conduct ADA/504 compliance surveys, update/create forms & SOPs, coordinate programs such as College Prep, ACT Prep, & support services, help with support services billing

Experiencing First Year as a Professional

- Seeing how and what students, particularly freshmen, need guidance in to get around on campus
- Educated wish list for students with disabilities
 - *Vocational Rehabilitation*: what does it really do for the student and who is eligible

- *Orientation to support services packets and handbooks* to give to students, faculty, and perhaps administration
- *Scheduling support services* in timely manner
- *Train faculty* to have more understanding of and communication with students with disabilities
- *Update website* with all integral information and forms available
- *Market the office* through promotional pieces and frequent appearances and maintain good hospitality politics
- *Office approachability*

Strategies

Successful collaboration with other departments calls for one or more strategies, and there are three main strategies listed here. These strategies are to guide the office of disabilities in getting started. Each strategy is explained in detail as to why and how it would help the office of disabilities collaborate well with other departments.

- I. Marketing Techniques
- II. Office Organization
- III. Office Representation

I. Marketing Techniques

There are four main components of marketing techniques to keep into consideration:

1. research
2. interviews
3. review and then update/create promotional material
4. availability of information

Research is gathering information from different sources and putting together a concept that supports the points being made. Sources include watching videos, reviewing other postsecondary institutions' marketing materials, and networking. To deepen the research process, frequent interaction with students, faculty, and departments is recommended. This allows the DSS to absorb details essential to catering to unspoken needs and wants through mediums of in-person reception, promotional pieces (i.e. newsletters, brochures, handbooks), website, lunch/party hostings, interviews, and many more. Have interviews with persons who are either directly or indirectly affected by the way the office of disabilities operate. The more persons interviewed and the more relevant the questions are asked, the more unthought-of possibilities and useful, detailed feedback that will help determine how to market the office.

Once the research and interviews are done, take the time to carefully review latest promotional pieces. Keep in mind that not updating or revising promotional material, forms, SOPs, and other documents will most likely lead to miscommunication. People asking for information probably do not take the time to read or look for the revision date (that is, if the revision date is on there in print or online) or, for example, note that a particular form has not been revised since the '90's. There may be some information missing that prod the same questions to be asked over and over again; this is unnecessary if the answers asked for are available somewhere—on paper, online, or in person.

Make updated changes and revisions and/or create new promotional material, along with forms and documents. The updated/created promotional material, forms, and documents should always be available by having plenty of copies in the reception area, individual offices, other departments, and online. Comprehensively, the four main marketing techniques established will help any office of disabilities in a long way with more understanding, better communication, and increased availability of information.

II. Office Organization

Credibility is based on action rather than words. The office of disabilities shows its credibility by first being organized within. Students, other departments, and the institution as whole will note the actions the office of disabilities has taken to organize. By organizing the office, the roles and duties of each person on staff from student worker to director are to be specifically outlined and defined. The promotional pieces should include information on the staff and their respective roles and duties. Some examples:

- a flowchart helps illustrate the staff
- a staff directory is designed as quick reference for contact information on each staff member
- a layout map of the office helps guide any individual to an appropriate office
- the forms should be updated and corrected by every staff member, because each staff member has experience from which can be used to determine how the forms will help all the office, students, other departments, and the institution as whole (i.e. accommodations, equipment reservation and sign-out, contractual agreements on having read the rules and will abide by them, request for support services, and cancellation of support services)
- the website is part of the advanced process of giving out information and should be updated often. The website not being updated may inadvertently send a message that the office is not quite organized or reliable.

Each staff person should have substantial knowledge of what is going on around the office, what support services are offered, and what policies and procedures are to be followed. Weekly staff meetings, or at least on a regular basis if not weekly, should help the staff be knowledgeable and more in tune with the latest mission pursued within the office. Moreover, having quick facts/references sheets on hand at front desk and in each staff member's office will definitely increase communal knowledge. The state of organization within the office will be acknowledged by students and other departments when they come for assistance and/or collaboration. Other departments will likely have more respect for the office of disabilities when they observe how exceedingly the office operates thanks to its organization.

Organization Effort Example: Faculty Verification Form. Accountability is an integral factor in tracking the success of collaborative efforts put forth by the office of disabilities. To verify that the student with a disability has given his accommodation letter to the instructor, a form is to be signed by the instructor, indicating that the accommodation letter has been received, read, understood, and would allow the student use appropriate accommodations to further his education. There has been some debate over the issue of verification letters. There are pros and cons.

The universities and colleges who support the accommodation letter verification have developed systems that work to the point of satisfaction of everyone involved. One example is an

email system of “checks and balances”, starting with a prior email to faculty with an approved list of accommodations for a specific student proceeding with the student to print out a copy to give to the instructor (in case the instructor does not check email) in order to discuss accommodations in person. A second example is having the student come to the office and fill out a request form asking for certain number copies of accommodation letters to give to faculty. The accommodation letters are prepared accordingly, with instructions for the student to meet with faculty to discuss accommodations in person. The last example is the use of the website system where a student can go on-line to make accommodation letter requests, which will go through the approval process before sending a notification email to respective faculty about the student’s approved accommodations. Among institutions using these systems, the return rates of signed verification forms average between 70-75%. This statistic shows how useful verifying the accommodation letters are when it comes to having proof of dated signatures—especially when accountability conflicts arise such as student asking for accommodations too late (like right before a test to ask for extended time test-taking) or an instructor denying of receiving any letter notifying that the student is qualified in requesting for specific accommodations.

On the other hand, there are other institutions not supporting the accommodation letter verification. Their arguments include unnecessarily adding to worry and stress over retrieving or not retrieving the verification forms, more paper waste, decreasing of student’s independence, and wasted “legal” efforts. The main point is to let the student decide, and the office of disabilities should focus more on being there to provide accommodations and not worry about making things easier for the student. Both pro and con sides have valid points on the issue of verifying accommodation letters, and it is up to the office of disabilities to discern the need to have such verification due to the atmosphere and size of the institution. (“Accommodation Letters”, 2006).

Organizational Effort Example #2: Orientation to Office of Disabilities Packet. What student does not want to have some kind of orientation in order to make adjustments less stressful and quicker? The office of disabilities should have some kind of an orientation packet to give any student who recently registers with them to request for support services. The orientation packet is to contain all information vital to surviving the beginning of being a college student with a disability. Below is a recommended list of materials to be included in the orientation packet:

- Welcome Letter from the office of disabilities (Director)
- Purpose/Mission Statement of the office of disabilities
- Legal mandates & policies
- Staff directory and each staff member’s specific role
- Office layout
- Admission Procedures
- Documentation Guidelines
- Relevant documents, forms, FAQs, and advice
- Description of available support services
- Student responsibilities once registered with the office of disabilities (handbook)

III. Representation of the Office

- A. Brief presentation at departmental meetings

- B. Opportunities to promote support services
- C. Hospitality Politics

A. Brief Presentation. The difficulty of having a whole department come to the office of disabilities (or any other department) for a quick training workshop prompts creativity in seeking other ways of educating a department as whole. After interviews with several persons from other departments concerning this issue, the best tool in educating a whole department is to come to them.

- Get acquainted with the departmental secretary before asking for assistance in scheduling a brief appearance during a departmental meeting
- Give a 10-minute (or less) presentation complete with visuals; keep it brief and straightforward
- Hand out promotional pieces before time is up; make sure the website address is included on the handouts
- To make a strong impact, bring a student with a disability to stand next to you. The student may say a few words to let the departmental members realize the importance of the office of disabilities' role in the postsecondary institutional setting.

B. Promote Support Services. There are opportunities to promote support services. Orientation days, summer orientation camps, and special campus events (i.e. Homecoming and Greek Week) are opportunities. Students, other departments, and other persons need to see the active involvement by the office of disabilities. The awareness fueled by support services being provided in places such as the graduation ceremony or a guest speaker will lead to more trust and respect.

C. Hospitality Politics. I have coined this term “hospitality politics” after watching how JSU-DSS maintains its place in high regard due to being hospitable to students, other departments, and visitors. We host luncheons, tea parties, and open houses in order to invite other departments to come and spend time with us. All of these activities help build approachability and awareness of what our office does for the students and the university as whole. Not only do we host these gatherings, we also go to other departmental events to give our support, which may increase their receptiveness to us. Their seeing us supporting them encourages willingness on their part to help maximize togetherness by participating in workshops we host such as web conferences, College Prep, ACT Prep, and other programs. The fact is that we do need their assistance in preparing aspiring college students fill out financial aid or housing applications, or to learn how to take notes in a mock lecture. Overall, it is crucial for the office to take initiative in bringing on the realization the proficiency of having support services available anywhere such as guest speakers, campus events, or when they have a visitor who needs support services. Hospitality politics is a fitting term to describe the “give and take” relationship of working with other departments.

Conclusion

Point to consider #1: Proactive versus reactive

Take the initiative to think ahead for the benefit of all involved

Point to consider #2: Benevolence versus ethical obligation

Willing to help in any way possible as opposed as to do as mandated by law

Resources

Auburn University – The Program for Students with Disabilities (PSD)

<http://www.auburn.edu/academic/disabilities>

- Improvements and changes have been made at AU's PSD, including such a well-detailed website that would help students, faculty, administration, and other interested persons all. This website highlights the importance of having information available and is integral to the PowerPoint presentation of Positive Connections.
- Personal experience as former PSD student both in college and graduate school is used to give a perspective to the presenting of Positive Connections.
- Thank you to Dr. Kelly Haynes for her permission to use the website and couple of forms in order to help make the presenting of Positive Connections more informative

Jacksonville State University – Disability Support Services

<http://dss.jsu.edu>

- The past year at DSS can be viewed as metamorphic due to innovative changes still in progress. The staff, location, program of providing accommodations, forms, and many other details have been and still are undergoing the process a more advanced overall program of DSS.
- Informative interviews with various departments have been conducted to get input for the presenting of Positive Connections
- Personal experience as current DSS professional is used to give a perspective to the presenting of Positive Connections

Undisclosed listserv email list. (February 2006). "Subject: Accommodation Letters"

Email discussions concerning the accommodation letters being verified

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Diverse Students, Diverse Stories: Perspectives on Postsecondary Access Issues from Students who are Deaf and Hard of Hearing¹

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Abstract

What exactly does a student who is deaf or hard of hearing need for a successful education? What accommodations and strategies work best? Whom do we ask to find out? This session featured a panel of students with different backgrounds from a variety of postsecondary settings. They are individuals with common issues, but perhaps unique needs. They shared their experiences in how to be successful and reach their goals. This discussion allowed conference participants insight into the students' thoughts, opinions, and experiences.



Andy Firth

Good afternoon everyone, and welcome to the closing session of the 2006 PEPNet conference. You've all had a wonderful time sharing a lot of valuable information this week. I have also learned a lot of new information, and I really have enjoyed meeting the various individuals who are here for the first time.

This week we have heard many, many different issues being discussed. We've had a variety of educational professionals here, so it's nice to share the information from the different areas within our profession. But we always have to keep in mind the perspective of our students whom we serve. It's always great to hear from populations that we provide services to. Sometimes you can get a reality check on how we have been doing. So, what other best way is there to close this conference than to hear some perspectives from those students within those populations?

This week we have heard a lot about diversity within the Deaf and hard-of-hearing student

¹ This is an edited transcript of the student panel presentation at the closing session.

community. For our closing session, we have a panel of students here with us from diverse backgrounds. We hope that they will share a variety of their experiences with us today. I'm sure you'll enjoy hearing from them. We hope to have some time for questions and answers at the end of the presentation.

I'd like to introduce my co-facilitator, Cassie Manuel.

Cassie Manuel

Good afternoon! As Andy said, we are excited to have a panel of students here to end the conference. Some of them flew in last night on short notice, so I do appreciate their taking the time to join us. We have a wonderful opportunity to hear them share their experiences with us.

The first student we have is Gary Talley, from the University of Arkansas, which is located in Fayetteville. Sitting to his left is Kim Thornsberry. She is from Western Oregon University. Brock Hansen is from the University of Wisconsin-Milwaukee. On his left is Jennifer Buckley. She is at the Rochester Institute of Technology, and she was just accepted at Michigan State University. On the end, we have Cynthia Patterson, also from the University of Wisconsin-Milwaukee.

What I'd like to do is start the panel off by asking each of you to just basically give us your background, something about your hearing loss, accommodations that you've had in college or support that you received in college... anything you'd like to share with us.

Gary Talley

I wish I had an explanation for the hearing loss. They haven't told me after three years why I went deaf. I was teaching a class in Las Vegas. I didn't have allergies or other problems; there was nothing out there. I noticed a small distortion. Six weeks later, I was deaf. I thought my life was over. I hooked up with some good people. I started sign language classes and was accepted into the Vocational Rehabilitation Counseling program at the University of Arkansas. Classes were taught in Little Rock, but it's a Fayetteville degree. This is my second Master's degree. I graduate next month, and I'm very excited.

(applause)

With everything that happened, things just turned out well and I was pretty lucky.

Kim Thornsberry

Hello, I'm Kim Thornsberry. I was born deaf. We have no explanation for why I was born deaf. I'm from Idaho, actually, and grew up in Michigan. I went to a mainstream program. I'm at the Western Oregon University and I'm studying in the Vocational Rehabilitation Counseling program. I'll be graduating this coming June. Before I was at that university, I went to Gallaudet with two majors, psychology and child development. I've now transferred to Western Oregon for the VR counseling program.

Brock Hansen

As they said, I go to the University of Wisconsin-Milwaukee (UWM). I lost my hearing four years ago now. It started probably sooner than that due to Neurofibromatosis-2, or NF 2 for short. To make a long story short, tumors grow on the auditory nerve. I came into college with a hearing loss in one ear, and then halfway through the year, the tumor destroyed everything else. I was completely deaf within a semester.

I know a bit of sign language. I moved from special seating to pick up stuff in my good ear,

then to using notetaking, and then to using FM systems. As my hearing went down, I kept getting more and more lost. And I finally settled on a captioning service, which I've used ever since.

I'm currently in my first year of graduate school, in the Rehabilitation Counseling program, and I'm enjoying it.

Jennifer Buckley

My name is Jennifer Buckley, and I am currently about to graduate from the Rochester Institute of Technology (RIT) in Rochester, New York. I will be going to Michigan State University (MSU) in the fall. I was born almost hearing, and I have a progressive loss. My father is deaf. It's a hereditary thing. My mom is hearing and is an interpreter. I was raised with sign language, ASL, English, and oral communication, as well. I'm cross-registered with the National Technical Institute for the Deaf (NTID) and RIT. And I think that's it. That's all the information you want to know for now? Okay.

Cynthia Patterson

My name is Cynthia Patterson, and I am currently at the University of Wisconsin-Milwaukee (UWM). I'm not sure if I was born with my hearing loss, but they discovered it when I was going to a regular school. The teachers told my mother that I had a hearing problem. I was transferred to a mainstreamed school where they used Cued Speech because my parents didn't want me to sign. Then I picked up sign language with my friends. As I got older, I was in a regular mainstreamed school. Then I attended John Marshall High School, where I got my first taste of teacher-student communication in both sign and speech. When I attended Gallaudet University, it was the same thing. After I left Gallaudet, I attended the Milwaukee Area Technical College (MATC), and that was a big change for me because there were interpreters along with the students and teachers.

It was a very confusing time for me. I left school, started to work, and came back to UWM. I attended UWM for my first semester in 2004, and I enjoyed it. I've been able to have my life experiences and apply what I learned in the hearing world. Right now, I'm a junior and an Education major.

Andy Firth

Thank you all for sharing your background information with us. We would hope you could also share some information regarding the services and accommodations you use within the classroom and the laboratory setting. Maybe you can also share what types of unique challenges you may have faced in getting or using those accommodations. Also, what would you do to insure a positive result or to resolve the problem that arose in getting those accommodations?

Gary Talley

For me, at first, it was TypeWell. My biography in the program book says that I went to Gallaudet. I was at Gallaudet for two weeks in an intensive sign language class. That was the most frustrating experience of my life! When I showed up there, I couldn't fingerspell. When I left, I could fingerspell and that was it. The teacher gave me a C++. I don't know if it's just my age or what. Maybe I wasn't ready for sign yet. People told me that I needed it, and I figured I'd have to learn.

Maybe I just wasn't ready. I came back to Memphis and started speechreading classes. When I started college, it was strictly TypeWell. I didn't think I would ever learn to sign. I started ASL

1. But as far as accommodations for learning, it was strictly TypeWell. I needed it written down.

One of the challenges I had was to learn not to watch every word. When you see every word pop up, you miss a whole lot. You have to look away for a minute and read whole sentences and paragraphs.

I was also again lucky with that. Pamela Barnes, the transcriptionist in my first class Deaf Culture, was wonderful. She was right on the money and right on target and it helped me so much. Any of the challenges I had, it had to do with skill level. I had one service provider that the school fired. She was just bad. She just couldn't keep up. Of course in that particular class, anybody would have had trouble. Dr. Williams was vision-impaired. His class was via a teleconference from Fayetteville, and the man talked so fast it was unbelievable. The problem with this transcriber was that she didn't show up twice, and that was the rule.

(laughter)

If anybody has challenges, you've got to let them know. You can't keep it to yourself. After a while you figure, "Well, this is just my problem." But, no... if it's not working for you, you've got to let them know.

Kim Thornsberry

I think what I'll do first is explain more about my background. I went through an oral program and did speechreading. I didn't know any sign language at all growing up. I had notetakers in my classes; some of my classmates who were hearing also would write down quick notes to clarify what point the teacher was speaking about if I wasn't able to catch it right away. I went to speech therapy, as well.

When I graduated from high school, before I entered Gallaudet, I went to a community college. It was a public college, and what a difference that was! What a change that was for me. I didn't have accommodations set up. And I wasn't quite sure how to approach the teacher, because I was the first Deaf student that they had seen.

I actually had to do some thinking about who I was and figure out what my identity was. I spoke with my VR counselor, and we discussed the different options that were out there, including other universities and colleges that had services set up for Deaf students, like NTID, Gallaudet, and RIT.

The VR counselor was able to explain to me the different options that were out there. I visited some of the different colleges, like Gallaudet, which was quite a different experience for me. I didn't know sign language, and so many people, of course, were using sign language. I felt overwhelmed in that environment and wasn't sure that I would fit there. I learned, though, that some of the students at Gallaudet had grown up with the same background as I did, in an oral program.

I learned ASL for one month before I entered school in the fall. I was able to go to Gallaudet again for a month before the semester started to learn sign language for the first time. It's called the New Signer's Program – NSP -- and that is a month-long immersion program where you're able to quickly pick up the language, hopefully before the semester starts. Then all the other college students were back to college there, and what a world of difference! There was such a variety of students there. They all had different backgrounds, coming from the residential Deaf schools and mainstreamed schools.

So the first day of class when I entered, I was just ready to go home. But I decided to stay. I was very impressed that I had an instant rapport with the teacher because I hadn't had that experience growing up in the K-12 experience. But I felt a connection with the teacher, of

course, because we had direct communication. I graduated from Gallaudet within five years.

I can't really think of any challenges. I guess for me the challenge was learning ASL for the first time. But after that, I had a variety of support and felt very connected there. Again, I graduated from Gallaudet and moved to Western Oregon University, and I'm in the VR counseling program there.

Under Rehabilitation Education, there are two subgroups. There is a group that is specifically for Deaf people, and then a group working with Deaf and hard-of-hearing people. There are about 20 students combined in those two programs. It's the first time in my experience that I'm depending on interpreters in an educational setting. And that's a challenge for me because I'm so wiped out at the end of the day from watching interpreters. My eyes are tired.

So I had to figure out how to work that system, working with interpreters, getting what I needed in classes, and budgeting my energy so that I was able to get what I needed from classes. So that, for me, has been a challenge so far.

Brock Hansen

All right. If I remember I had almost the same experience as you did before I went into Gallaudet University myself.

I had a thought here. One of the first things, with accommodations and problems with that, I found out what worked for me. As I went through the hearing loss -- especially as I went from hearing to not being able to hear -- I had to focus so much that at the end of the day I was tired. If you lipread someone for about 20 minutes, even if you had a perfect night sleep the day before, you feel like could take an eight-hour nap. So I was struggling with that.

I've got to plug the UW-Milwaukee team for working with me on this one. We tried a bunch of stuff, and I settled on captioning. One, because I'm kind of a skeptic. That's kind of a joke. But I don't trust other people taking notes for me. And I couldn't take notes and focus on interpreting or anything else. So I settled on C-Print because I could go through a class and take my own notes. Or I could take notes and then scroll back through the text. I could look away for a bit, rest my eyes, and look back to catch up.

I think one of the biggest problems with people or professors is that some will work with you a lot, and some of them just don't get it... no matter how many times you explain it. I think some of them think that I drag the computer around with me everywhere I go, and that a captionist follows me around or something.

A lot of times they will try to talk to you when you are not near the computer, and they wait for an answer, and they are not looking at you, and you're thinking what?? So in that regard, to be successful, you have to really establish a reasonable amount of patience with some people. Just keep working with them. And usually, eventually, they get it. And if they don't, they weren't worth it anyway; that's my opinion.

(laughter)

One of the other things that I think is important to mention is having captions on videotapes, movies, or whatever happens to be shown in class. I don't know how it is at other schools, but UW-Milwaukee is the best university here. I'm sorry...

(laughter)

But some of the stuff is so outdated and the captions don't come up. People don't pick it up, or they just assume that the interpreter or the captionist is going to just interpret or transcribe whatever is on the film. And that's even worse, having to jump back and forth. I don't know how to make that successful, other than just to complain about getting movies that are captioned.

I'll leave it at that for now, I guess.

Jennifer Buckley

My background: I was born into a mixed sign/hearing family. My two younger brothers are hearing. So we all sign for communication and speak. I was put into a mainstreamed school right away. To help you understand what's it's like to have a progressive loss, you're hard of hearing and then you lose more and more hearing every year. Right now I have 120 dB loss in one ear and 90 dB loss for the other ear, so I'm effectively deaf. But I have a normal voice and that causes more problems than anything else in school. I go to RIT, and they probably have the best support services...

(applause; laughter)

At RIT, you can request an interpreter for any class. It doesn't mean you'll get it, but you have a high chance of getting it. You can request an interpreter for any event. If you know that there is a poetry reading or if you know that there is a concert, you want an interpreter, then you go online and click a button. It's that easy. It's easy if you know the interpreters well, so they see your name and they want to interpret for you. But ...

(chuckles)

But it's a large community. NTID and RIT have a large Deaf community so it's a big family feeling. It's a small world. If you network and know more people, you can get more services.

In high school and grade school, I used no interpreter and no notetaker. I had a brief, short stint with the FM system, which was very short. My parents were not happy about the shortness of that. But I had problems with the FM system; the audiologist would tell me that the FM system would be effective for me. And I said, "Well, no, it's not. It's making things louder, but it's also making them blurry." And they said, "No, you don't know what you're hearing." I know what I'm not hearing.

(laughter)

But I was very young. One thing that my parents taught me was to be independent and advocate for myself. Not just accept what they expected as good enough, to be able to say no. I have a right to get equal education, equal services, as a hearing person would. So when I arrived at NTID, it was odd for me to have to get an interpreter for classes. I took advantage of it. I found out yes, it was tiring on the eye, but because I was raised with sign, I was tired. But it was still an advantage to be able to understand right away at that moment while the teacher was talking, instead of having to wait until after class saying, "Well, I wasn't sure on this, this, this."

I also used C-Print for some of my classes, especially for more advanced classes where the interpreter probably wouldn't be knowledgeable with the terms; I'm a biology major, pre-vet, and the terminology can get heavy. But right now, I use hearing aids in both ears, and I still don't use an FM system. Even though I know the technology has improved, I'm still a bit guarded on that but I really appreciate the technology.

One thing that I want to advocate is broader education about Deaf culture and not just capital "D" Deaf. I mean deaf culture in understanding that we need to lipread, or understanding that when we go to a movie theater, we have to see captioning. Rochester has one of the biggest deaf communities, but we have two theaters that show one movie a week with captioning. And it tends to be the children's features so Deaf families can go. I don't mind Disney, I really don't mind it, but not every time I go to the theater. There are a lot of changes that need to happen, but I really think that RIT is really a leader in some of the changes that are happening.

(laughter)

Andy Firth

Well, I'm happy that you advocated for yourself. An important part of this discussion we are having is to encourage students to advocate for themselves more and more. Cynthia? Would you like to share the accommodations or any unique challenges you may have faced?

Cynthia Patterson

My biggest challenge was I wanted to go to a comedy show that UWM was having; I believe it was something related to cultural diversity. So I went to the department and I told the lady, "I need an interpreter." And she told me, "Well, we don't have the money for it." I replied, "Well, it's on the campus. I have a right to an interpreter." And she responded, "Well, we are funding it. We don't have the money."

So I ran all the way to talk to Amy (at the Student Accessibility Center), and I told them that they said that I couldn't have an interpreter. What is going on here? I thought I could get an interpreter. I was frustrated and upset because I really wanted to see this famous comedian Ricky who's very funny. Amy gave me a paper saying that I have a right and it explained that even though they may not have the money, there's other part of the UWM system that will provide an interpreter for me.

I went all the way back over to the union and let this lady know. I said, "Look, you have to provide this for me or else, because this is my right. I have a right to be involved in the college community. I have the right, whether I'm hard-of-hearing or not." She said, "Okay, we will see what we can do about it." My friend, who's hearing, came with me and we enjoyed Ricky, with all of his smiling, laughing, and silliness.

Accommodations are good for me in some ways, but it can also be bad because it's just really difficult for me. I do have a lot of hearing, and I can look at the teacher and catch a lot of what he is saying. Sometimes I miss part of it, especially if it's a classroom of 200 students. If I miss something, I can always go back to the interpreter. But sometimes I feel really bad because I'm not watching her; I'm looking at the teacher and it makes me feel awkward. But I learned that what I need from the interpreter is to catch what I missed.

I liked all my interpreters, and I try to make their job not difficult. I have to have an interpreter with a personality. I'm sorry, but I cannot have an interpreter who is just straight and it's all about work, work, work. It just makes me feel confident that we're working together as a team, and that the interpreter is not just sitting there with the attitude, "Well I'm just an interpreter. That's all I'm good for." You know, I need more than that.

(laughter)

I do have notetakers, but I don't trust the notes, either. So I read my book and the professor will give us outlines. I've had teachers that didn't give out the outline, but when I requested it, they gave me the outline. I would share the outlines with my interpreters so that they know what is going on. They are there for me, to help me to reach my goal of becoming a teacher for the Deaf. That's my passion. And I'm going to get it even though I'm older. Well, I'm not that old; I see some people here who are older than me, and it makes me feel like I can do it. If you can do it, I can do it, too.

(laughter; applause)

Cassie Manuel

Thank you all of you for sharing your experiences with us about the classroom settings. You

also added comments about experiences outside of the classroom, such as going to the movie theater. But during the conference this week, we have been talking about transition and student development, including things that happen outside of the classroom, but still within the campus environment. These might be study groups, or living in the residence halls. Can you give us a little bit of your experience and maybe some personal stories about what it is like to be a Deaf or hard-of-hearing student on a college campus, but outside of the classroom?

Gary Talley

One thing I can't address is the dorm. I never did that even as a freshman, back when I was a kid. At 50, I wasn't about to go into a dorm!

(laughter)

God, I can't imagine that. But, as I said, I went through class and there were five of us. The program is designed that so the five of us go through all of our classes together. We will finish next month. I was always the worst signer, and I was in class with a man who was culturally Deaf, a CODA, and two interpreters. After a while it started to get to me that I was always the worst signer and always would be. But they were very supportive, and the five of us were pretty close. We stay in contact, even though I'm here in Virginia now, two are in Texas, and two are back in Little Rock.

The CODA, Shane, actually went to Mexico with me last year. I go every year to Mazatlan. It was easier not to hear in a foreign language than it was in English. I don't understand Spanish. But it was nice being able to understand what was going on. All I had to do was buy his ticket. It was nice to know what was going on around me. I'm taking him again this year, and he is rearranging his schedule just to go. Not that Mazatlan is a tough assignment, but still, it's a sacrifice.

Social life in Little Rock? I don't know how big Rochester is, but Little Rock has one theater that shows captioned movies. At least there, they're first-run movies. Richmond... now it's about the same size. They have one theater, and they are showing the stuff that no one wants to see. I haven't been to the movies since I moved to Richmond because they haven't shown anything first-run at all. It can be very isolating. The older you get, the more isolating it can become. I moved back to Virginia where I have family. My younger brother and sister are starting sign language classes. My daughter signs now. So I'm not as lost as I was three years ago.

As I mentioned earlier, three years ago, I thought my life was over. I had what I thought was the best job in the world. I was a training manager in a casino. I would tell people at new employee orientation that I looked forward to going to work every day. It was the truth. I worked with a wonderful team. It was different all of the time.

When I lost my hearing, I lost my job. At 49, I couldn't stop living. I told people if it had been five years later, the outcome might have been very different. I don't think I would have started learning sign language. I don't think I would have gone back to school. I would have done like many older people do who are late-deafened -- they just disappear. They sit at home and watch TV. I tried that; that sucks. Y'all watch TV during the day? It is boring.

(laughter)

And the captioning is not good.

Now, I'm the outreach program manager for the Virginia Department of Deaf and Hard-of-Hearing. The mission of this agency is to break down communication barriers between the hearing world and the Deaf world. I'm in a position where I can advocate. And God help the Virginians who get in my way now!

(applause)

Kim Thornsberry

I'm trying to gather my thoughts. I'd like to go back and explain more about my background. When I grew up, I felt isolated. I was the only deaf person in a circle of hearing people. I think I missed out a lot in my life not being able to meet people; I had to focus on myself growing up. When I was at Gallaudet, I just jumped into everything that I could get my hands on, but I was trying to fill in the gaps that I had missed in my experience growing up. I just had not had that much time or that many opportunities for growing experiences. So I just dove into everything at Gallaudet.

Of course, I made my mistakes along the way. I learned the hard way, but I was able to grow in a healthy way and start learning more about myself and my identity. And I became a self advocate as well, and I truly believe that is a key.

Growing up, I felt like I had to depend on other people, asking them to help, especially with communication. But I decided as an adult, going to Gallaudet, I wanted to know my rights and asked for an interpreter if I needed one. I didn't have that experience or felt that I could do that growing up. I felt more like I wasn't able to do things.

I truly believe that Gallaudet really helped me in so many ways, innumerable ways, especially within class and outside of class. I joined a variety of organizations. I joined a sorority. I had a job on campus. Before Gallaudet, my resume was maybe one page long, pretty skimpy. But after my experience at Gallaudet, I was able to provide a lot of work experience on that resume.

I guess that's it. Thank you.

Cassie Manuel

You may not already know this, but I happen to work with Brock. I'm so happy that he is here on the panel. Brock, do you remember that experience you had in the bar with the other students? Would you mind sharing that experience, please? I think it's really important part of college life.

Brock Hansen

I was thinking of the closed captioning thing, and I think this is what you were talking about. First off, one of the biggest things that people need to consider is awareness. That's the reason I do this stuff, because we're not all the same. But we have a common bond in hearing loss and to whatever degree that is. A lot of people think that just because you're deaf or hard-of-hearing, you automatically know sign language and you automatically can't speak for yourself. That is not true. There are so many stereotypes.

About closed-captioning, I'll get worked up, because this really bugs me. It's not just deaf people that use captioning. You go to a bar, how often do you see captions on TV? If there's at least one, is that because someone in there is deaf or hard-of-hearing? Absolutely not. It's because the music is so loud that a hearing person wants to see what is on TV. And that is no different than any of us. If you want to think that the imaginary music is too loud in the classroom, we just want to understand what is going on there. We are no different than a foreign film. A hearing person wouldn't think twice about having English subtitles. Okay. Is that what you wanted?

Cassie Manuel

Well, remember times when you were socializing with some of your friends or hanging out with your friends. Could you share an experience, like when you first lost your hearing and as you gradually lost more of your hearing, when it was harder to hang out with friends?

Brock Hansen

As I lost my hearing, my social life suffered because people didn't get it. When I meet new people, I voice for myself and try to lipread. I also should mention that I have an implant. For some people, implants work well enough to talk to the phone, but it may not help other people at all. For me, it helps with lipreading. I call it the "Charlie Brown effect" because it sounds like *whamp, whamp, whamp*.

Well, again in social situations and meeting new people, some people are okay and get it. "You want me to talk directly to you, that's cool." And they help me out. A lot of people are closet fingerspellers.

(laughter)

I'm not kidding. I have known some people for a year, and then all of a sudden, I see them fingerspell something. I ask them, "When did you learn that?" They tell me that they've known it since they were kids. "But why didn't you ever use it?" Sometimes it's helpful for me to get the first letter or two of a word.

Getting back to the social situations that happened about six months after I lost my hearing... I'm deaf but I lipread pretty well, so people can talk right to me. A lot of people don't get that. They look at me, and then I start talking again. I can just see the motors turning in their head. Wait. This isn't making sense, and this is where the awareness comes in. They think again that I'm deaf, but I can talk. This can't be right, so they will stop looking at me. I just say that I can't hear very well, but I can lipread pretty well. I rarely run into that problem anymore. Sometimes there's the occasional idiot (and that's being nice) who will walk away. And I'm like, "Whatever."

I'll stop now. UWM is the best.

(laughter)

Andy Firth

We might have to separate those two!

Jennifer Buckley

In both high school and grade school, the social isolation that happened was obvious. Kids are cruel anyway. But growing up in a small country town, I remember the first few weeks at my new school. It was fourth grade, and I was very shy. I didn't know what to do. I had an ugly FM system. Ick! I had big hearing aids and I talked funny. Some of the kids turned away from me. They didn't want to deal with me or sit with me at lunch. Then I learned if I ignored that and kept talking and meeting people, they would learn to get used to me. And because of me, Palmyra now knows how to deal with deaf people.

But I also learned that if I was active in organizations and sports, I would know more people and they would accept me more. So I was involved in everything in high school. When I went into RIT, it was almost the opposite. I arrived at RIT and, instead of having to meet the few people that might know sign, I was just overwhelmed. There were so many Deaf friends and so many services available. My social life didn't get bigger. I was serious academically, but I did

notice that there was a pull. My Deaf friends felt threatened if I spoke when I signed; my hearing friends felt threatened if I signed. They both thought that I was trying to be something that I was not. Well, I'm not hearing. I'm not Deaf. I'm hard-of-hearing. Get used to it.

I continued to sign and speak, and didn't really care. I got involved with Deaf Olympics and with my school soccer team. I also worked at the campus. And I never let anyone tell me, "No." Or if they did, I changed it really quickly.

But life outside of school is difficult. Brock said that the minute they see you can speak, they assume you're hearing. They assume you can understand them, even if you told them, "No, really I'm deaf, I'm hard-of-hearing, I can't hear a word you're saying." They still will look away, or there will be a joke and you'll miss it. It doesn't seem important. It seems trivial to the average hearing person. But when you're in a group of people and you're the only deaf or hard-of-hearing person, and someone says something, everyone is laughing, and no one takes the time to explain what was said, it gets boring for them to see you saying, "What? Can you repeat it?" They get tired of it, even if they are your best friends. They get tired of it.

Having hearing aids, speechreading, it's all good. But outside of RIT, you either have people you know that can sign, or you fake-smile a lot.

Cynthia Patterson

Let me think about my experiences outside of school. My husband is hearing, and he likes large groups of people. He wants me to come with, but I do not like large groups. He isn't embarrassed about me being hard-of-hearing. Something funny will happen and everyone is laughing, but he will take time look at me and explain what was said that was funny. He won't let me miss out on anything.

In my family, my stepsisters and brother didn't take the time for me. "Go put your hearing aid on. I know you can hear me." They'd say. It doesn't have anything to do with my hearing aid. It just makes them loud and I don't want to hear them!

(laughter)

I'm kind of isolated from my step-siblings. I always go sit with my mother or my father, because they are more understanding than my step-siblings. As far as my social life in school, it's kind of limited because I have children at home. I don't spend a lot of time on campus, but when I do, there are interpreters there with me. But it's more of a small group setting, and when I need them I'll let them know. Maybe I didn't understand what someone said.

Sometimes it's kind of funny when you misunderstand; sometimes it's totally the opposite meaning. People might look at me and say, "What??" I missed what they said. Nobody can embarrass me. I can embarrass myself, but I don't care because I always have a comeback. Everybody says, "Cynthia, you're so crazy; you're so silly," but that's okay. That's part of me. That's who I am.

My stepmother used to get upset with me with my facial expressions. She said, "Why do you make such ugly faces?" It's a natural thing for me, because it shows my emotions and it shows what I'm feeling. I said, "Well, mom, I'm sorry, but that's just who I am." When she and my dad got married, she didn't understand why I was always looking at her mouth. She said, "Herman, why is she looking at my mouth like that?"

(laughter)

And he said, "Well, baby, she is just lipreading you." I'm an expert lipreader. You cannot get past me and say anything small, because I can catch my daughter in a minute. I said, "I heard that!"

(applause)

Sometimes she talks behind my back and my husband catches her, so she can't get away with it, either way.

They say I've got the best of both worlds, but it's still kind of difficult to fit in with the Deaf culture and the hearing culture. In the hearing culture, everybody is talking, talking, talking, and I miss out on so much. In the Deaf culture, the majority of the people that I know are white. I love all people, but it's like being an African-American in the hearing world. Some hearing people feel this way about white people. I try to stay away from that because I feel like we all have blood running through our veins the same way.

It's kind of difficult at times. I took a class where they were talking about culture in the inner city schools, and I'd try to not say anything because I don't know, it's a conflict. It's what I hear. Now that I'm older, I can see things and understand things.

I meet people like my interpreter Liz; she is very open and there is no prejudice. It's just like we're a family. It's not about color. I used to worry about that -- it's about color... a black thing, a white thing, a deaf thing, or a hearing thing.

It was a culture shock when I went to Gallaudet. Being a Black woman, I'm supposed to stand up straight and not let anybody bother me. At Gallaudet they would walk facing each other. But the girl who is walking straight has to move over, and she didn't do that. The lady turned around and said, "Deaf way?" Hmm, if that happened in the Black community, they'd be ready to throw you down and fight.

(laughter)

Okay? It's so different. I have to be very watchful of what's going on in my environment. They say you have the best of both worlds, but it's difficult... whether you're hearing, Deaf, hard-of-hearing, black, white. You have to get used to it all. At the age of 34, I'm still trying to get used to all this culture stuff. I just wish it was just one big happy family with nobody against anybody else. So that's my story.

(applause)

Andy Firth

Thank you. We have time for one last question for our panelists. You can volunteer if you would like to respond. Here at the conference, we have a variety of people from various areas, education, students, interpreters, and speech-to-text service providers. I'm curious if you have any advice for them, for faculty members, or for disability support service staff members, based on your experience as a student with a hearing loss. What advice would you give to them?

Gary Talley

I'd say if you have questions about how to most effectively provide disability support service, call Sharon Downs at UALR. That's the truth. I wouldn't be here if it weren't for her. I went to UALR first, before I started the rehabilitation counseling program at the University of Arkansas. I took three classes at UALR. Sharon was the first person I met. She knew I didn't understand sign language, but she spoke so I could lipread her. She is the one who set everything up for me.

She told me about the program that I'm in. She has been there with me, after I moved to the University of Arkansas program. She was there for me. I don't think there was anybody else who was a stronger advocate or support for a Deaf students than Sharon Downs at UALR.

(applause)

If you have questions, call her.

Kim Thornsberry

I would have to say it's important that you have knowledge of support services available in your area. That is key... that you know the ADA, that you know the laws that are in place, and what supports and services you are required to provide as well as what students would like to have given to them to meet their needs. You need to know that there are some barriers that can be eliminated through training, through awareness, through being flexible and through patience. I think that you can become successful.

Brock Hansen

I'll say something quick. If you're a service provider, or a teacher, or faculty, or whatever, know your services. It's just like Kim said. Realize that there is a spectrum of hearing loss and a spectrum of services. And if you want to join the best, look for a job at UWM.

(laughter)

Or RIT, I guess.

(laughter)

Jennifer Buckley

Obviously, there is a reason he is so defensive!

(laughter)

Cynthia Patterson

I feel like the most important advice that I can give the faculty is to be patient. Patience is very, very important. Because someone in my situation, being hard of hearing and trying to balance, you have to be patient. Conversation and communication are very important to keep relationships going.

Andy Firth

At this time I'd like to give the audience an opportunity to question our panel. If anyone would like to speak, you can proceed to the microphone. Any questions? No? Okay, we will wrap up.

Cassie Manuel

This is your opportunity to just ask the students anything you'd like. If you prefer, you can come up to them in private after we wrap up the session here. Thank you so much, panelists, for sharing your experiences. It has just been a great opportunity and invaluable, because you come from a variety of backgrounds.

The theme of this conference is *Roots and Wings*. I know that as you were starting to think about college, some seeds were being sown and some roots were starting to grow, and you started thinking about the services that you needed and you started to place the roots more firmly. And the people in this room are all part of helping you develop your roots. Now you're beginning to develop your wings and to head out into the world and to fly off.

Thank you so much for your time today and for being part of the panel.

(applause)

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Transition Services: Proven Strategies for Preparing Transition-Aged Youth Who Are DeafBlind for Post-School Life

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Abstract

This article will target a group of students who are deafblind and who have made the successful transition from secondary education to adult life. The findings will shed light on the fact that, despite the limited history regarding research on effective educational accommodations for deafblind youths within K-12 inclusive and residential settings, many educators and adult service professionals have been able to help deafblind students navigate their way to successful post-school outcomes. The key factors that historically led to these successful education, transition and employment outcomes for deafblind students will be addressed. Most importantly, the contributions of professionals, family members, and students themselves have been gathered and will be highlighted.



Introduction

Historically, there has been minimal research conducted on the successful transition of deafblind youths who have normal or gifted intelligence in K-12 inclusive and in residential settings. A number of highly publicized studies on the education of deafblind students with cognitive disabilities have been conducted; however, no such study has been completed on students with average or above average intelligence (Petroff, 1999). This article aims to share results of informal data collected over a 20-year period on a group of transition-aged students with combined vision and hearing loss. All the students profiled in this manuscript scored average to above average on intelligence testing and performed academically on level with their non-disabled peers in a majority of core classes required for high school graduation.

The underlying benefits of this article are to identify early success factors in deafblind students which lead to their successful transition from secondary programs to adult life. Emphasis will be given to effective early intervention strategies, individualized instructional support and communication access which promoted sound education, transition and employment outcomes.

History Revisited

In gathering data for this article, documentation from the history of education for deafblind students from the late 1700s was compared to strategies used currently by school systems serving deafblind students. As early as 1789 documentation of successful education of deafblind students was recorded (Everett, 1902; Collins, 1995; Freeman, 2001; Gitter, 2001). From these early

educational methods came the basis for instructive ideas that are currently utilized with deafblind students.

In 1832 the Perkins Institute for the Blind was established by Dr. Samuel Howe. Five years later, Laura Bridgman became the first deafblind student to be educated at Perkins (Freeman, 2001). The instructional techniques used by Dr. Howe with Ms. Bridgman became the initial strategies and theories for educating students who are deafblind. Toward the end of the 1800s the famed Helen Keller was born and received training using the same established techniques which proved successful with Ms. Bridgman. From this foundation begun with Bridgman and Keller, the early standards by which students who are deafblind would be measured and taught were born and are continuing today. Through research and data collected by Samuel Howe, it was surmised that one-to-one instruction for students with profound deafness and severe vision loss was the most effective instructional approach (Freeman, 2001). Through such instruction students who are deafblind are afforded the opportunity to have not only immediate access to the environment, but also an immediate explanation of the events, objects and people therein (Kinney, 1972).

Advances in Education

In addition, the invention of Braille, the white cane and the telephone would have great implications on the education of deafblind students. Throughout the remainder of the 1800s to the mid 1960s, few deafblind students received a formal education (Wolf-Schein, 1989; Freeman, 2001). Of the very few students who received a formal education during the early 1900s were Dr. Richard Kinney and Dr. Robert Smithdas. However, following the Rubella epidemic in the mid-1960s it became apparent that an improvement to the school curriculum to address the anticipated influx of multi-disabled students would be required (Collins, 1995). Using the techniques employed by Dr. Samuel Howe, many schools for the blind in the United States began establishing deafblind services. In 1969, one year following the death of Helen Keller, the United States Congress allocated funding for the creation of the National Center for Deaf-Blind Youths and Adults (today known as the Helen Keller National Center for Deaf-Blind Youths and Adults) to address the independent living, employment and communication needs of deafblind youths and adults (Salmon, 1970).

These services were developed following the investigational federally funded program, the Anne Sullivan Macy Project, named for the famous teacher of Helen Keller (Salmon, 1970). The name of the project portrayed the type of model that the services would follow. Using the technique established by Dr. Howe some 150 years earlier, the National Center for Deaf-Blind Youths and Adults documented the effective practices employed with Helen Keller from early childhood through her transition to college. These techniques became the basis for the education, training and adult service-support system for deafblind individuals served by the National Center. As trainees entered the National Center's comprehensive training program, services were adjusted to meet their unique needs and delivered by way of one-to-one instruction.

It was hoped that by establishing an adult service program linked to the education system, the transition from the school system to adult services of students who are deafblind would be seamless. Unfortunately, it was only after the 1990 Individuals with Disabilities Education Act which mandated transition services for all students with disabilities that school-aged students who are deafblind began receiving an individual formalized plan to facilitate entry into the adult service system. Today, all students with disabilities are required to have an IEP and by the age of

16 must have an established Individualized Transition Plan (ITP) for how they can best exit secondary programs and enter adult services.

Demographics

In 1982 the federal government funded the first comprehensive study of the deafblind population in the United States. This study was far more inclusive and far reaching than an earlier study of the deafblind population in North America conducted by Rochealeau and Mack in 1930. Despite the fact that in 1930 the numbers of individuals in the United State were nowhere near the number of individuals that exists today; conducting such a study throughout the country must have been very cumbersome, with many individuals going uncounted. In 1930, there were a reported 663 individuals in the country who were deafblind. In contrast, when the REDEX was conducted in 1982, the population of the United States was more than triple that which existed in 1930 and thus the tally of deafblind individuals was more than 735,000. While current data collection efforts are far more superior to what was used in 1930 or even 1982, demographic data for consumers who are deafblind remains unreliable. This is due in part to the lack of understanding of what it means to be deafblind. Both Helen Keller and Laura Bridgman were completely deaf and blind. And because of these two “poster children” for deafblindness many educators, family members and even consumers falsely believed that in order to be considered deafblind an individual must have a total loss of vision and hearing. On the contrary, the definition of deafblindness simply means the presence of significant vision and hearing loss existing at the same time. Table 1 outlines the different subgroups of the population and who would most typically be represented in those subgroups and the likely support needs for each student which should be considered when drafting the IEP.

Table 1

DeafBlindness Defined	Hearing Loss	Vision Loss	Support Needs
Congenitally DeafBlind	Inability to understand normal conversational speech even with optimum amplification	20/200 vision or worse even with correction; visual field restricted to 20 degrees	Tactile communication system (may include sign language, Braille or object cues); may be a candidate for cochlear implant or digital hearing aids; orientation and mobility instructions one-to-one instruction or individual interpreter services initially and possibly throughout school
Congenitally Deaf, Adventitiously Blind	Inability to understand normal conversational speech even with optimum amplification	20/200 vision or worse even with correction; visual field restricted to 20 degrees	Possibility of tactile and close vision sign language and print (may also use Braille and manual communication exclusively); may be candidate for cochlear implant or digital hearing aids; orientation and mobility instruction; one-to-one instruction or individual interpreter services initially and possibly throughout school
Congenitally Blind, Adventitiously Deaf	Inability to understand normal conversational speech even with optimum amplification	20/200 vision or worse even with correction; visual field restricted to 20 degrees	Braille, tactile manual/object cue communication system (manual communication system likely to be English based); possibility for cochlear implants or digital hearing aids; orientation and mobility instruction, one-to-one instruction or individual interpreter services initially and possibly throughout education

(Table 1 continued on page 4)

(Table 1 continued)

DeafBlindness Defined	Hearing Loss	Vision Loss	Support Needs
Adventitiously Deaf, Adventitiously Blind	Inability to understand normal conversational speech even with optimum amplification	20/200 vision or worse even with correction; visual field restricted to 20 degrees;	Braille, manual communication which can be tactile or close vision, communication system may be English based (devices such as: Screen Braille Communicator, CART, C-Print), may benefit from cochlear implant or digital hearing aids, orientation and mobility instruction, rehabilitation teaching, one-to-one instruction or individual interpreter services initially and possibly throughout education
Functional Deafness and Functional Blindness	Difficulty hearing speech even with optimum amplification; or hearing so severe that it adversely impacts daily activities	20/200 vision or worse even with correction; visual field restricted to 20 degrees; or vision so severe that it adversely impacts daily activities	English based or concrete communication system, may benefit from digital hearing aids, orientation and mobility instruction, rehabilitation teaching, one-to-one instruction or individual interpreter services initially and possibly throughout school

It is important to keep in mind that most students who are deafblind have some residual hearing and vision. The largest segment of the deafblind population is reported to be individuals who have some form of acquired vision and hearing loss (Ingraham et al, 1994). This includes persons who are aging, veterans of war or other violent acts, persons who have been exposed to a serious illness or those who have experienced an allergic reaction to medication. Depending on the severity of the combined vision and hearing loss, previous educational experience and etiology, an individual student who is deafblind may be capable of functioning with complete independence while others may require constant one-to-one support to receive information, travel in the community and live independently (Kinney, 1972; Ingraham, et al, 1994; Ingraham, 2001).

Interpreting the Laws

The Individuals with Disabilities Education Act (IDEA) and the No Child Left Behind law (NCLB) are two of the most powerful legislative documents for students who are deafblind. For the first time in the history of education for students who are deafblind, schools are mandated to prepare students for post-school life, and are being held accountable for post-school outcomes for all students. Students who are deafblind can benefit from a broad interpretation of both laws as opposed to a narrow prospective. By beginning with the end in mind, school systems are better able to form a transition team to work with the student to design an effective plan for how that student will access essential services and training following high school.

Coordinated transition services for students who are deafblind should be based on the individual needs, abilities, choices and interests of the student (Ingraham & Anderson, 2001). Activities included in the plan can be established as goals for the classroom or the community. Functional vocational assessments as well as independent living skills can, and should be, included in the transition plan for every deafblind student.

Delaware student, Bryan Ward (Usher Syndrome Type I) leads his own IEP meeting using a PowerPoint presentation to explain his current and future education goals.



Initiating the Process

To begin the process of planning for successful post-school life, the transition team should contact any adult service provider from whom the student can benefit presently or in the future (Ingraham & Anderson, 2001). These providers can include: vocational rehabilitation agencies, Centers for Independent Living, agencies that focus on specific disability groups, and even the Social Security Administration. By far, linking with the Social Security Administration and the Vocational Rehabilitation Agency in the state are two of the most critical adult service partners for the student who is deafblind. Any adaptive technology required to ensure that the student who is deafblind realizes success in the classroom and in the community should be provided before the student exits the school system. This will enable the student to experiment with any critical adaptive equipment while entitlement support services are available to assist with any necessary adjustments or additional training concerns that may arise (Ingraham et al, 1994; Ingraham et al, 1998; Ingraham & Anderson, 2001).

When the student reaches his or her 16th birthday the state Vocational Rehabilitation Agency and any other appropriate adult service provider should be invited to participate in the transition plan. Again, it is best to make use of the knowledge of these professionals while the student is still enrolled within an entitlement program, rather than waiting until the student has completed education and has entered the adult service arena where services are based on eligibility (Ingraham & Anderson, 2001; NCLB Parents Guide, 2003). In many states, vocational rehabilitation services have helped fund an array of support services, assessments and even training before the student exits the school system (Ingraham et al, 1994; Ingraham & Anderson, 2001). Creative and astute vocational rehabilitation counselors will see the benefits of these early partnerships with the transition team as foundations for a consumer case that is more likely to reach successful closure status following high school. Expectations that the vocational rehabilitation counselor will have for the college student who is deafblind include the need for self disclosure, self determination and awareness of their individual support needs. These very skills can be practiced and reinforced during the transition years.

Again, creative and astute counselors who interpret rehabilitation policies more broadly will be open to exploring every possible avenue for funding outside the vocational rehabilitation system in order to reduce the financial burden on the student and family. Ultimately the goal of

vocational rehabilitation services is a successful outcome, which means competitive employment in an integrated setting. All support services, assessments, training and adaptive technology provided to the student are driven by the vocational goal documented in their Individual Plan for Employment (IPE). Post-school options available to students for which vocational rehabilitation funding can be sought include those listed in Table 2 and other creative strategies identified by the student and the counselor.

Table 2

The Vocational Rehabilitation “Buy In”
Postsecondary Education
Vocational Training
Integrated and/or Supported Employment
Continuing and Adult Education
Adult Services
Independent Living
Community Participation

Postsecondary Education

As mentioned previously, it is imperative for students who are pursuing academic advancement beyond high school to “connect” with a vocational rehabilitation counselor before exiting the school system. To ensure success in the postsecondary educational setting it is imperative that the student be equipped with self advocacy skills, knowledge of his or her disability, knowledge of required adaptive technology and instructional support needs, transportation and travel skills, and training and identified communication preferences before graduating from high school. Prior to enrolling in a postsecondary education institution or training program, it is to the student’s advantage that most, if not all, their support issues be resolved. For students who manage to make it out of school prior to the development of these essential skills, the student and school staff can seek support from the large network of adult service providers across the country who are skilled in working with students who are deafblind <www.hknc.org/affiliates>.

The accommodations and support services which many deafblind students receive in high school are often provided by a cadre of professionals whose duty it is to ensure that each student with a disability is properly accommodated. It is critical that professionals involve the student in the planning process to reduce dependency on outside support services which tend to hinder rather than enable the student’s ability to develop the essential skills for self identify, self advocacy or for seeking useful on- or off-campus resources. It can not be stressed enough that the vocational rehabilitation counselor is an excellent resource for the student who is seeking a clear understanding of what expectations he or she will face once college enrollment begins (Ingraham & Anderson, 2001). Also, the Office for Students with Disabilities on the college campus where the student is enrolled is another excellent resource.

Preparing for Emergencies

Resources on the Internet, local community service providers and support groups are a great place for students to begin their individualized search for support services and resources. Before leaving home, it is a good idea for the student to develop a personalized resource book for the college or local community where they will be relocating. Such a reference document can include extra copies of the student's resumé, contact information for medical providers, vocational rehabilitation counselors, community support service programs, transportation resources, interpreter service agencies, and orientation and mobility instructors just to name a few. Along with resources for support services, the student's resource book should include a section on any special accommodations he or she will need in the classroom, community or at home. Extremely essential in this resource book should be an emergency preparedness section with photographs and descriptions of equipment, and a listing of local and national vendors where equipment can be repaired or purchased. Also important to include in the resource book is information regarding any special communication needs or preferences, or any known medication, or medical conditions and specific medical procedures in the event of an emergency.

With the recent heightened security concerns across the country related to acts of terror and natural disasters, it would be prudent for students to have a list of emergency contact numbers, shelter or community resource facilities and an evacuation plan for each location where the student will spend a majority of his or her time. Some communities have regular emergency evacuation drills, while others post emergency information as needed on local radio and television stations. Students who are Deafblind and are preparing for post-school life, either in an educational setting or the community, should develop an accessible network of reliable friends, professionals or sources where emergency information can be obtained, as well as a list of In Case of Emergency (ICE) contacts, whether they be relatives, friends, or service providers.

Below are several transition success stories of deafblind students who have made the successful transition from education to adult services. Along the way individualized early invention services were provided, along with critical transition services which helped to ease each student through the shift from entitlement to eligibility programs.

Success Stories

Often success stories for students who exit the school system begin long before any transition plans are devised. Family members, early educators and students themselves put in long hours and hard work to make certain that every opportunity available to students who are deafblind is seized and fully utilized. The following five students have all experienced post-school success. However, this success was not achieved without a lot of long hours, hard work, determination and resiliency. Four students attended school following the passage of P.L. 94-142 and were then eligible to benefit from a free and appropriate education in the least restrictive environment. Only one student exited the school system before the passage of P.L. 101-476 which mandated that transition plans be drafted for each student with a disability by the age of sixteen. However, even though this one student did not benefit from all of the same education legislation available to the other students, this young man did have the benefit of resourceful and forward thinking professionals who in essence, began a transition process similar to that set forth in P.L. 101-476 long before he completed his educational program. A list of specific accommodations for each student is included within the individual case study. All students are now thriving and are living

independently, working in competitive settings and/or making full use of their community resource manual and service providers.

Warren

Born in 1969 with Usher Syndrome Type I, Warren attended residential schools for the deaf near his home. He is fluent in ASL and now receives information using both tactile and close-up methods. Prior to exiting the school system, Warren participated in support groups for students with Usher Syndrome. He learned a great deal about his condition and what accommodations he would need to be successful after leaving school. However, when Warren left the school system he elected to receive minimal support and training from vocational rehabilitation. As a result, he was trained to do custodial work and began living with friends. Following additional vision loss, Warren decided to re-establish contact with his vocational rehabilitation counselor who then made contact with the Helen Keller National Center regional representative. After much deliberating and failed attempts to persuade Warren to consider other types of employment, he was again trained for a job in custodial work, but only managed to retain his job for a few months before being let go due to poor work performance. In reality, Warren could no longer see the dust, dirt and grime he was required to clean. After losing his second job, Warren utilized his resource skills to locate support services from a community church. The church assisted him with locating an affordable residence, transportation to medical, employment and other required appointments, and helped him connect with other consumers who are deafblind.

With the help of the church outreach ministry, Warren was again connected with Helen Keller National Center (HKNC) and was assisted with completing his application for training. Following one year of training at the HKNC, Warren is now living independently, volunteering in his community church, lecturing on the topic of deafblindness and seeking competitive employment. His resource book has been updated to include a new section containing work experiences, extra updated copies of his resumé, contact numbers and email addresses for community resources and newly acquired problem-solving techniques.

What Worked for Warren:

1. Strong educational support services.
2. Accommodations in the classroom and community.
3. Information on □ and mental health support regarding □ his etiology.
4. Post-school planning with identification of appropriate adult service resources.
5. Faith-based community outreach services to bridge the gap when coordinating services.
6. Self-determination skills and resiliency to persevere and persist even in the face of adversity.
7. Knowledge of disability accommodation needs and a willingness to share information with others on how to work with deafblind consumers.

Karen

Born in 1974, Karen was a very alert and energetic infant at birth. Soon after her birth, Karen's parents suspected that she may have some hearing loss and perhaps also some vision loss. After numerous visits to the pediatrician it was determined that she had a condition known as Leber Amarausis. Her parents were told that the small amounts of vision and hearing that she had would soon be gone and they were encouraged to take her to an institution and leave her there. Her mother believed that Karen possessed intuitiveness and an aptitude which suggested that she was bright despite her severe disabilities. Right away, Karen's mother began using sign

language to teach her about her environment, the names for people, objects and activities, as well as how to communicate her wants, needs and desires.

At the age of three, Karen was introduced to Braille and began to read simple vocabulary words. She entered a segregated education program at the age of five and remained there until the age of eight. Soon, she was transferred to a private educational setting where she was the only student with a disability. She was provided with a one-to-one interpreter tutor, orientation and mobility instruction, Braille transcription services, adaptive technology training and access to all course work and the same electives which were available to her peers. At the private program Karen excelled and graduated with above average marks. During her transition years, Karen attended and participated in her IEP meetings. During summer break she would attend the American Association of the DeafBlind Convention and even participated in evaluation and training at HKNC during the summer of her sophomore and junior years of high school. Karen's outgoing and engaging personality really worked to her advantage as she was often paid to visit programs domestically and abroad to talk about deafblindness. Following short stints at a college for the Deaf and a junior college near her home, Karen landed at a four-year university program where she obtained a Bachelor of Science Degree in Computer Programming. She currently is seeking employment in the computer or adaptive technology fields and will be living in her own apartment soon.

What Worked for Karen:

1. Early intervention at home and in school.
2. Communication and language models at the segregated program.
3. Early exposure to literacy through Braille.
4. Ample support services in communication access, adaptive technology orientation and mobility.
5. Family support.
6. Self determination skills training.
7. Resiliency in the face of adversity.
8. Established goals that she continued to follow.

Alton

Born in 1975, Alton was among the first group of students who migrated from segregated programs for the blind to inclusive K-12 educational settings following the passage of P.L. 94-142 and its subsequent amendments. Alton, was born with normal vision and hearing, but as a toddler was diagnosed with Retinoblastoma. Following rounds of radiation and chemotherapy, Alton's parents noticed that he was not hearing too well. It was later discovered that in an attempt to save Alton's life, the therapy prescribed to battle his cancer had also stolen much of his hearing. Until the age of twelve and left with no vision and a severe hearing loss, Alton was placed in a segregated program for children who are blind. During his educational tenure in the segregated program, Alton was exposed to Braille, adaptive technology, orientation and mobility, public transportation services, along with vocational exploration and training.

Once he arrived at the inclusive program, Alton was able not only to comprehend and convey most of his technology support needs, but also he learned how to request additional accommodations during IEP meetings and with his resource instructors. He developed strong writing skills and even worked a short time as a freelance writer for his community newspaper. Once in high school, Alton excelled and began taking advanced placement courses without the

support of an interpreter. As an alternative he used an FM system, requested notes prior to the start of class and was given preferential seating in the front of the classroom. During the summer break between his junior and senior years of high school, Alton attended HKNC for an educational evaluation. Recommendations generated from the evaluation were used to supplement his final year of high school with preparatory skills essential for living and functioning independently at the college level. Also, throughout high school Alton attended career exploration programs, camps for youth who are blind and deafblind, and also attended two of the American Association of the DeafBlind Conventions. At these conventions he was introduced to other peers and professionals who were also deafblind. His self awareness blossomed and he became more self assured. Computer technology, independent living skills such as banking, budgeting, cooking, selecting clothing for formal and casual occasions and self advocacy skills were addressed during Alton's senior year of high school. He graduated with the second highest marks in his class and was honored as class Salutatorian. Following high school, Alton attended both a four year university program where he majored in Sociology and a one year adaptive technology training program for which he received a certificate upon completion. He is now employed as an Adaptive Technology Instructor for Blind and DeafBlind consumers at a community training program near his apartment. He travels independently in the community and lives alone. Throughout Alton's various educational, employment and independent living experiences and training, the vocational rehabilitation agency was there to support him with funding of activities, location of training programs and to offer support. The state agency from which Alton received support also offers educational services to school-aged students who are deafblind. Thus, he was followed consistently throughout grade school, high school and into college by the same agency. Often, Alton was fortunate enough to have the same case worker or vocational rehabilitation counselor as he transitioned through educational programs and work experiences.

What Worked for Alton:

1. Early intervention from family and school.
2. Training in adaptive technology and blindness skills.
3. Early literacy skills.
4. Orientation and mobility training which included public transportation.
5. Independent living skills training.
6. Family support.
7. Self determination skills training.
8. Career exploration opportunities.
9. Consistent support from vocational rehabilitation and other community providers.

Jamie

Born prematurely in 1982, Jamie was diagnosed with Premature Retinopathy during infancy. As a result of excessive oxygen during critical weeks following his birth, Jamie lost both his vision and much of his hearing. He received early intervention services from the local school for the blind and entered the segregated program for children who are blind at the age of four. Following several years at the School for the Blind, Jamie was transferred to his local middle school where he attended with the support of a one-to-one interpreter/tutor, the support of vision and hearing itinerant instructors, orientation and mobility instructors and educational services from the state rehabilitation agency. He excelled in middle school academically, but did not have many friends.

After moving on to high school Jamie decided to return to the segregated program to obtain updated blindness skills training and instruction in adaptive technology for the deafblind. He remained at the segregated program for a short time before returning to the inclusive high school program where he completed his secondary education. Throughout high school Jamie attended career exploration training programs, camps for youth who are deafblind and the American Association of the DeafBlind Convention. Through these contacts Jamie was able to develop self awareness as a person with vision and hearing loss, and was also afforded the opportunity to network with his peers and professionals in the field. He is now living independently in his own apartment in the community and is working part-time as an Adaptive Technology Instructor for the Blind and DeafBlind. He is actively pursuing his goal to obtain employment in radio.

What Worked for Jamie:

1. Early intervention services.
2. Blindness skills training in basic independent living and adaptive technology.
3. Basic orientation and mobility training.
4. Self determination skills training.
5. Supportive family.
6. Career exploration.
7. Resiliency in the face of adversity.

Crystal

Born in 1983 with profound deafness and legal blindness resulting from Congenital Rubella Syndrome, Crystal spent her entire educational years in inclusive programs. Crystal received early intervention support services from the local hearing and vision itinerant instructors associated with the school system. During school Crystal was given a one-to-one interpreter/tutor who accompanied her to all her classes, assembly activities and school outings. During high school she attended Transition Week Activities for the DeafBlind, career exploration programs and camps for youth who are deaf. At the age of 18, after completing her academic education at the inclusive setting, Crystal utilized her remaining years of entitlement education and attended the residential school for the Deaf. This transfer was recommended because IEP goals for language, socialization, communication, and employment exploration were not achieved at the inclusive program. At the segregated program, Crystal was exposed to a number of language and communication role models and developed key friendships with peers who are deaf and deafblind. In addition, she participated in weekly employment training and work experience activities. Following the official completion of her high school education, Crystal attended training at the Helen Keller National Center for 18 months which included an additional 18 months of follow-up employment support services.

She is now living independently in her own apartment and working part-time at a nearby pizza parlor. She utilizes the resource books she developed at the Helen Keller National Center to locate community services, resources and recreational activities. Like Alton, Crystal lived in a state which offered consistent support from the state agency both while she was in grade school as well as throughout high school.

What Worked for Crystal:

1. Early intervention services.
2. Language role models in inclusive and segregated programs.

3. Orientation and mobility instruction.
4. Career exploration.
5. Self determination training in school and during transition week.
6. Family support.
7. Career goals and ambition.
8. Transition support services.
9. Supportive and consistent education and vocational rehabilitation services.
10. Resiliency in the face of adversity.
11. Resource book.

Summary

As can be seen with these successful students, transition services for students who are deafblind are most effective when begun early. Each student was afforded early access to the educational process and support systems in the least restrictive environment. Occasionally, it was necessary to change the education setting, level of support services and even adaptive equipment. However, each student exhibited resiliency and flexibility when change was needed. This ability to “go with the flow” helped to ensure that these students would be prepared to make any necessary adjustments later in life, but it also enabled them to acquire coping skills.

Career exploration, peer interaction and self awareness were a key part of each student’s educational experience. Not only did all the students participate in their IEP meetings and overall educational planning but also, each student was given the opportunity to develop self determination skills by speaking up and advocating for themselves. Whether the career exploration takes place through an on line search or in the community, it is vital to expose students who are deafblind to a variety of post-school employment possibilities (Folska, 2001). Often students who are deafblind are so adept with adaptive technology that they are guided into that field. However, it is crucial to remember that an individual who possesses great knowledge in a particular area may not be the best instructor on that subject. The opportunity to interact with and discuss career objectives with peers and professionals in the field was extremely helpful to these students. Often, career choices were made after meeting another deafblind adult with similar interests or skills.

Finally, it is important to ask students who are deafblind early and often what things they know about themselves and their ability to do things independently. The short checklist below is a great place to start when trying to assess whether a student is indeed ready for life after high school, or if success is on the horizon.

Check List for Success:

1. Does the student know how to use an interpreter?
2. Is the student comfortable with his/her disability?
3. Does the student know what accommodations are needed and how to use them (TTY, amplified phone, relay, etc.)?
4. Can the student explain his/her own accommodation needs?
5. Does the student have orientation and mobility skills?
6. Does the student understand and value the responsibilities of employment?
7. Does the student have to deal with disincentives (SSI, over accommodating parents, etc.)?
8. Does the student have family support and transportation?

Developing a Post-School Profile

1. What would you like to be?
2. Where would you like to work?
3. Does that goal require postsecondary education?
4. What kind of people do you like to be around?
5. What are your support needs?
6. Where can you go to get support or help?
7. What jobs have been your favorites?
8. What jobs were successful for you?
9. Why?
10. What are your dreams for the future?
11. What is required for you to have a successful life after high school?

Developing a Resource Book

1. Personal information (address, DOB, SSN, Telephone Number, Medications, etc.).
2. Emergency contact information (parents, counselor, case manager, etc.).
3. Special accommodation needs.
4. Local and national resources.
5. Sample applications, extra resumés.

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Addressing the Needs of Students Labeled as Deaf and Low-Functioning or “At Risk”

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Abstract

This presentation will give professionals both conceptual and practical strategies in working with persons who are deaf and hard of hearing as well as students with additional challenges due to medical and or environmental factors in the postsecondary setting. Training offered will include identification assessment, coursework selection, support service planning, employment opportunities and follow up activities.



Review of Past Efforts: A Brief Stroll through the Last 60 Years

Historically, federal funding to serve persons who are deaf or hard of hearing has been allocated mostly to programs, such as Gallaudet University and National Technical Institute for the Deaf (NTID), that serve those who have the greatest promise of success. This would include many accomplished individuals who have either completed their academic tenure at Gallaudet University, NTID, or one of many other fine institutions, and who have entered the workforce and successfully established their careers.

However, professionals and the Deaf Community have long recognized that there were a substantial number of individuals who were deaf and who had additional challenges or risk factors, who had not experienced similar success. With this recognition, a number of attempts to address the need through education, awareness efforts, and allocation of resources have taken place, mostly through the field of rehabilitation, over the years.

The field of rehabilitation began in the United States through the Smith-Fess Act of 1920, in which newly disabled veterans returning from World War I received assistance in returning to the workforce. The act was subsequently re-authorized through the Vocational Rehabilitation Amendments of 1943, of 1954, and 1965, and these amendments expanded services to persons with mental retardation and mental illness, added training and demonstration grants, and included a broader population of individuals with disabilities. Then, the Rehabilitation Act of 1973 changed the name of this legislation, mandated the priority to serve persons with the most severe disabilities, and added new “civil rights” for persons with disabilities Title V (Sections 501, 502, 503 and 504).

During the earliest evolutionary development of rehabilitation counseling and services, there was an almost immediate recognition of the need to serve individuals who are deaf or hard of hearing. Initially, individuals who happened to know some sign language or had an interest in working with this population often either volunteered or were selected to assume responsibility for the provision of services. Over time, an ongoing effort emerged to address the unique rehabilitation needs of persons who are deaf. At the same time, a paralleled effort was made to address the long-term needs of individuals who are deaf and who have additional disabilities or other “at risk” characteristics, necessitating additional environmental supports.

The first manual that focused on how to work with individuals who are deaf and hard of hearing was published in 1942 by the federal Office of Vocational Rehabilitation (now Rehabilitation Services Administration) was *Rehabilitation of the Deaf and the Hard of Hearing: A Manual for Rehabilitation Case Workers*. This manual, recognizing the unique challenges of this population, detailed how to provide speech training and job placement services.

The next publication, *Guidelines for the Establishment of Rehabilitation Facilities for the Deaf*, which first proposed regional comprehensive service centers, was not written until 1959.

After that multiple publications occurred during the 1960s and 1970s; that is, *Research Needs in the Vocational Rehabilitation of the Deaf* (1960), *The Vocational Rehabilitation of Deaf People* (1966), *Multiply Disabled Deaf Persons: A Manual for Rehabilitation Counselors* (1968), *Toward More Effective Rehabilitation Services for the Severely Handicapped Deaf Client* (1971), *Recommendations and Plans for Meeting the Needs of Low (Under) Achieving Deaf People* (1971), and *Severely Handicapped Deaf People: A Perspective for Program Administrators and Planners* (1978).

Realizing the need to obtain federal funding to create and implement a national infrastructure to work with individuals who are deaf and who needed additional environment supports, considerable efforts were made during the early 1970s to develop a legislative proposal to establish comprehensive rehabilitation centers for deaf youth and adults. In 1972, Section 412 was added to H.R. 8395 of the then proposed Rehabilitation Act that if passed, would have mandated comprehensive rehabilitation centers for deaf youth and adults “who were unemployed, had inadequate communication skills, underdeveloped work related and social skills, and/or other organic and functional deficits in addition to deafness” (unpublished document detailing the need and intent for the proposed Section 412). Proposed funding to be authorized would have been \$5 million in 1973, \$7.5 million in 1974 and \$10 million in 1975. However the Rehabilitation Act of 1973 was vetoed twice, which resulted in Section 412 being taken out prior to the passage of the final authorizing statute.

Instead, in Section 304 of the Rehabilitation Act of 1973, authorization was given for temporary funding to be set aside for the initial three-year special demonstration projects to three grantees. The demonstration sites were located in Hot Springs, Arkansas, Delgado, Louisiana, and Crossroads in Indiana. These grantees were to specifically serve the population that could not be served through the traditional approach; that is, through a vocational rehabilitation counselor who, with the use of VR dollars, sent the individual to college or assisted with job placement.

For the first time, with the special demonstration project funding, the three demonstration sites were able to develop and provide specialized direct services to deaf individuals who needed additional environmental supports, and the resulting outcome was promising. Many individuals were served and the “collective” field turned to these programs as viable resources nationally.

Predictably, however, at the end of the three-year grants, funds again became scarce and these sites were forced to limit services.

Efforts continued in the 1980s. Another publication, *Independent Living Skills for Severely Handicapped Deaf People* was printed in 1980, outlining how to provide independent living skills for deaf individuals with cognitive disabilities and mental retardation. The Commission on the Education of the Deaf in 1988 (chaired by Dr. Frank Bowe), *Toward Equality: Education of the Deaf* strongly recommended four regional comprehensive service centers.

A year later, the National Task Force on Low Functioning Deaf Adults (1989) detailed further recommendations, which lead to a second and third round of special demonstration projects funded by RSA, in 1990s. In 1990 three special Demonstration projects through OSERS to serve LFD at the Lexington Center (NY), Community Outreach Center for the Deaf, (AZ and NM) and Southwest Center for the Hearing Impaired (TX). Again, the programs were able to provide a number of needed services, which then had to be eliminated upon the end of the five-year cycle. There were no other existing funds to replace the loss of the federal funds for these services. And, there were no plans to allocate further funding to assist with this need.

In 1995, renewed efforts to generate interest in Washington in long-term, direct service dollars for LFD, lead to the *25th Institute on Rehabilitation Issues: Serving Individuals Who Are Low Functioning Deaf (LFD)* (1999). That document describes the population, the need for appropriate environmental supports, and suggestions for how these supports can be provided. The following narrative gives a brief overview of these topics.

Brief Description of the “Low Functioning Deaf” Population

Of the 23.1 million individuals with hearing loss, approximately 552,000 individuals are deaf. Of the 552,000 individuals who are deaf, as many as 165,000 individuals who are deaf may have one or more disabilities in addition to being deaf.

The IDEA report to Congress states that of the 4,187 students with profound hearing loss, age 14 to 21, leaving school in the year 2000 – 2001, 2,862 students graduated with a regularly high school diploma (68.4%), 626 students received a certificate (15%), 620 students dropped out (15%), and the remaining students either aged out or died. This clearly indicates that about 30% did not earn a diploma. Less than one-half of 17 year old deaf students read at above 4th grade level (about 40%), only 12% read at or above 7th grade level; which means at mostly, only 15% of all 18-24 year old deaf and hard of hearing students are eligible for college education.

It is noteworthy that 30% of these students did NOT receive a high school diploma, and entered the adult service delivery system needing additional supports beyond traditional interpreting services. These students are the sub-group of youths and adults within the general population of persons who are Deaf or Hard of Hearing, whose skills and competencies are *significantly* below average (e.g. less than 2nd grade literacy skills). An estimate of this population ranges from 125,000 to 165,000 individuals.

Over the years, many different labels have been used, including: “Under Achieving,” “Multiply Handicapped,” “Severely Disabled,” “Minimal Language Skills,” “Traditionally Underserved,” “Hard to Serve,” “Low Functioning,” “Most At Risk,” “Deaf with Special Needs,” and “Psychologically Unsophisticated.” To date, the field has not yet adopted a commonly accepted description.

When determining if a deaf youth or adult may need additional environmental supports and services, possible risk factors to consider may include: low socioeconomic status, inappropriate

diagnosis, foreign born or English as a second language, lack of access to services, lack of family support, substance abuse, secondary disabilities, minority status, or residence in rural or low income urban settings

Identification can be made through either the traditional medical approach; that is, having a secondary or more disabilities; or the identification can be through a more holistic approach; that is environmental deprivation/ risk based, in which the individual experiences extremely limited access to environmental information, through barriers to language acquisition, barriers to skills acquisition and development, and educational deprivation. In making this assessment, the most critical barrier that is common to all individuals who are deaf and who have limited functioning, is the fluent acquisition of a native language (either spoken or signed) and communication with families and significant others.

Scarcity of Resources for Individuals Identified as . . . “*Low Functioning Deaf*”

To date, no system effectively serves non-college bound deaf youth and adults. There are few available and under-funded resources. As stated previously, most resources available are focused on services to youth who can participate in postsecondary training and education programs. There is no federal funding or parallel system of financing similar to postsecondary programs. The least amount of resources is usually allocated to deaf individuals with additional disabilities and/or with other functional limitations. In addition, the average high school student who is in special education will cost approximately \$30,000 to \$40,000 per year. The average postsecondary training for a student per year is approximately \$15,000 (for tuition), and the average resources for a student labeled as “LFD” per year ranges from \$2,500 to \$6,000.

Efforts to provide services are also complicated by the fact that resources and funding for services for adults are inconsistent with no single program or funding source, with limitations on program funding eligibility (some are eligible for SSA, Medicaid, and/or Title XIX). Vocational Rehabilitation (VR) is mandated to emphasize short-term placement, and most state VR agencies use “fee for services” which is insufficient. This results in inadequate or no environmental supports being provided for employment settings, independence at home and in the community, access to appropriate educational and vocational training opportunities, socialization and recreational opportunities, health care, behavioral adjustment and mental health counseling.

A parallel issue is the assumption that full access to services and support can be provided by sign language interpreters. Often youth and adults who are “LFD” require direct communication access with service personnel for all services and supports. However, there is a severe shortage of professionals with the language expertise necessary to serve persons not using standard ASL

Consequently, without appropriate environmental and communication supports, these individuals face daily challenges just to survive. Their dream to live independently, to work, and to have control of their own lives is not achieved.

A “Vision” is needed to Develop A National Service Delivery Model

In 2003, with the support of Postsecondary Education Programs Network (PEPNet), a strategic workgroup was established to develop a vision for a national service delivery system for deaf individuals at risk. PEPNet chose to lead this effort, because many individuals who are deaf and who have limited literacy skills and/or other difficulties accessing the local service delivery

system often will go to the nearby college/university disabled student resources office for services. Most colleges are not able to serve this group.

The goal of the strategic workgroup was to create and to articulate a vision for a *National Service Delivery Model* that will ensure adequate and effective environmental supports to deaf, deafblind, hard of hearing and late-deafened youth and adults identified as “Low Functioning” to achieve optimal personal independence in the workplace, in the home, and in the community. The strategic workshop almost immediately agreed that the vision needed to emphasize interaction with the environment; that is, the interaction of the individual with the environment where he/she is expected to function. This interaction with the environment will then identify what the needs are for ongoing supports or adaptations that would reduce the barriers for optimal functioning.

The components of the Model that was developed by the strategic workgroup, included: (1) Direct Service Delivery System, (2) Personnel Preparation/Training, (3) Research, and (4) Technical Assistance and Outreach. The National Service Delivery Model proposed to link the already existing direct service delivery system into a new “networked” service delivery structure that will fill in the gaps in service provision. And, the service delivery system was proposed to include a national center, regional centers and affiliate networks.

Under this model, the national center could conduct the following activities:

- Coordinate a national advisory board.
- Conduct and coordinate research.
- Set national priorities.
- Educate legislators.
- Provide direct consumer services through model program.
- Establish partnerships.
- Train professionals and paraprofessionals.
- Evaluate effectiveness of services.

The regional centers could conduct the following activities:

- Establish regional advisory boards.
- Coordinate resources.
- Provide direct services.
- Provide training and technical assistance to service providers, parents, and consumer groups.
- Collect and report information to the national center.
- Establish partnerships.
- Work with affiliates.
- Provide ongoing resource development.

And, the affiliate networks could conduct the following activities:

- Provide case finding and case management.
- Provide employment related services.
- Use staff with prerequisite linguistic and communication skills.
- Provide long-term consumer support.
- Conduct consumer evaluation for services at regional centers and national center.

- Collect and report information to regional center.
- Work with other affiliate organizations.
- Conduct ongoing resource development.

The participants of the strategic workgroup, after articulating the vision for a national service delivery system, then asked each other, “What are the steps that need to be taken to implement this vision?” The first steps are to share the vision with various organizations, communities, and other interested stakeholders, to develop collaborative networks, and to collect information on what is already occurring in the field. Researching emerging models across the country may demonstrate how the national collaborative approach might be best accomplished. The next section gives a brief overview of several emerging models.

Current Activities - Examples of Emerging Models

Kentucky VR Model

The Kentucky Vocational Rehabilitation Agency has four regional Deaf/Deaf-Blind Coordinators who work with Rehabilitation Counselors for the Deaf (RCDs) in the area and who report to the State Coordinator for the Deaf (SCD). The SCD, regional coordinators, and RCDs meet regularly with a state interagency team that provides input and advice on how best to serve consumers who are Deaf-Blind and/or Deaf “at risk.” The regional coordinators and RCDs, when appropriate, use various assessment tools adapted specifically to this population, such as the “Personal Futures Planning” (PCP) and “Planning Alternative Tomorrows with Hope (PATH). Evaluations of outcomes are conducted through periodic counselor and consumer interviews and comparison of data.

A Different Service Delivery Model - Dr. Neil Glickman’s Work with “Psychologically Unsophisticated” Deaf

Dr. Neil Glickman, in his work with deaf individuals with mental illness and/or other mental health issues, has adapted a cognitive-behavioral model. This model states that individuals who are deaf and “psychologically unsophisticated” typically are not introspective or self-observing. They are often unable to identify feelings, are quick to blame others without understanding their own contributions to problems, do not understand how others may feel, have difficulty understanding others’ points of views, do not understand or value counseling, and do not see the professional as a “credible” helper.

Dr. Glickman suggests using “pre-education/pre-counseling” in which visual metaphors and pictures are used, by explaining counseling/VR simply, by the use of a pictorial menu of VR processes, and by telling motivational stories. He states that most goals can be conceptualized as a “skill” through guided self-discovery and through self-monitoring. Self-monitoring can be conducted through the use of “thumbs up or thumbs down,” numerical ratings, checklists, a diary or log, and/or drawings

Specific coping skill building can include “Sensory Management Intervention,” such as squeezing a ball, jumping on a trampoline, petting a dog or rocking in a chair. Other techniques include positive “self-talk” (think – “I Can”), specific relaxation techniques, use of prayer and meditation, learning to laugh, developing self-acceptance, visualizing a “shield” to ward off negative feedback, and use of an internal traffic light when feeling angry (RED: STOP – take

notice; YELLOW: CALM DOWN – breathe, and take a break; GREEN: THINK and ACT – positive self-talk).

Another Model – “ReThinking unEmployment” Approach

Another model that has been used with ex-cons is the “ReThinking unEmployment” approach that was adapted by the Community Outreach Program for the Deaf in Albuquerque, NM with deaf youths and adults who have experienced long-term unemployment and other significant functional challenges. The approach is a cognitive-skills-based strategy that responds to the needs of chronicity in deaf and hard of hearing youth adults, using role-play and motivational interviewing techniques to skill-build a deaf participant in moving forward in his/her personal and work lives.

This model states that cognitive skills are the skills we use to think and that thinking guides all acting. If the thinking skills are limited and faulty, then so are the potential actions. Cognitive skills produce social competency; social competency produces motivation and employment. The individual who requests services is challenged by internal ambivalence and an inability to see that that his/her behaviors are the root cause of their failure and that his or her life is out of control. This individual feels two ways about requesting services simultaneously; that is, whether to “change or not to “change.”

Other Strategies

Another emerging strategy in serving this population is the increasing use of “Certified Deaf Interpreters” (CDIs) when the communication mode of a Deaf person is so unique or idiosyncratic that traditional interpreting or direct communication is ineffective. CDIs may use gestures, mime, props, objects in the environment, and adoption or adaptation of the deaf individual’s own use of signs and gestures

George Friebohn at Lexington Vocational Services Center suggests using the “Clothesline Method,” the New Oxford Picture Dictionary, and a chart of all the countries’ flags.

Other Current Activities

NIDRR Notice of Proposed Priorities

Published in Federal Register on Feb 7, 2006. The notice proposes in *Priority 9--Improving Employment Outcomes for the Low Functioning Deaf (LFD) Population*. (Page 18) Comments were due on March 9, 2006. The link to the Federal Register notice is at: <http://a257.g.akamaitech.net/7/257/2422/01jan20061800/edocket.access.gpo.gov/2006/06-1075.htm>.

Hofstra University – Distance Education Opportunity

On-line training offered by Dr. Frank Bowe <<http://lfd.hofstra.edu>>.

Courses and Topics include: SSI, Independent Living, Reading and Writing/Math and Transition, In-Person Communication, Technology, and Facilities (Toolworks in San Francisco, Mill Neck Services in New York, Lexington Center in New York and Louisiana Career Development Center for the Deaf/Deaf-Blind.

Training Conferences

Texas Region IV Education Service Center sponsored: 2004 Statewide “LFD” Training Conference, 2005 Statewide “LFD” Training Conference. Plans are being developed for March 2007 “LFD” National Conference.

Development of DVD

Need for a “face” or an “icon” similar to Helen Keller for deaf-blind. Videotaping “LFD Profiles” with the theme: Those of Us Left Behind. Four profiles in three states (Colorado, Montana and Texas).

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PEN-International: Facilitating Deaf Education for Deaf Men and Women Around the World

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Abstract

The Postsecondary Education Network-International (PEN-International) is funded by grants from the Nippon Foundation of Japan to the National Technical Institute for the Deaf (NTID). NTID, one of the eight colleges of Rochester Institute of Technology (New York), serves approximately 1,250 deaf and hard-of-hearing students who study, share residence halls, and enjoy social life together with more than 15,000 hearing students. The PEN-International network currently consists of thirteen colleges and universities in Japan, China, the Philippines, Thailand, Russia, the Czech Republic, and the United States. PEN-International shares its expertise with international partners that, like NTID, offer postsecondary educational programs to deaf and hard-of-hearing students. PEN-International is dedicated to providing professional development to teachers of international deaf and hard-of-hearing students, facilitating the use of innovative instructional technologies in the teaching/learning environment, and furnishing its international partner institutions with state-of-the-art equipment. This paper describes PEN-International's background, goals, accomplishments, and future activities.



RIT/NTID Background

Founded in 1829, Rochester Institute of Technology (RIT) is internationally recognized as a leader in career education with more than 15,000 students enrolled in its eight colleges. The students represent all 50 states and more than 80 foreign countries. The campus occupies 1,300 acres in suburban Rochester, the third largest city in New York State.

The National Technical Institute for the Deaf (NTID), the world's largest technological college for students who are deaf or hard of hearing, was formally established by Congress in 1965. RIT was chosen as the site for NTID in 1967 and officially became one of RIT's eight colleges in 1968. In its first year, 70 deaf and hard-of-hearing students were admitted into the

NTID program. One of the unique features of RIT/NTID is that deaf and hard-of-hearing students study, share residence halls, and enjoy social life together with hearing students.

NTID is an international model for educating and preparing deaf students for technology-related careers. Its mission is *“To provide deaf and hard-of-hearing students with outstanding state-of-the-art technical and professional education programs, complemented by a strong liberal arts and sciences curriculum, that prepares them to live and work in the mainstream of a rapidly changing global community and enhance their lifelong learning.”*

Of the 1,250 deaf and hard-of-hearing students currently at NTID, approximately 43% are enrolled in baccalaureate or graduate programs. NTID’s support and access services are unprecedented. During a typical one-year span, NTID logs 80,000 interpreting hours, 40,000 notetaking hours, and 20,000 tutoring hours. During the 2005-2006 academic year, 10,000 C-Print™ hours were logged, and this number is expected to rise. C-Print is an NTID-developed speech-to-text transcription system that allows deaf students to have immediate access to a teacher’s lecture. In addition, the residence halls are fully networked and equipped with strobe lights and telephone amplifiers. NTID employs nearly 500 faculty and staff members who are experts in deaf-related fields. Instructors use a variety of communication strategies including sign language, speech, fingerspelling, writing, and visual aids. On-site audiologists provide services related to hearing and hearing aids, assistive devices and cochlear implants, and speech-language pathologists offer a broad range of speech and language services. In addition to NTID having the largest interpreting staff of any college in the world, it was the first college in the world to formally educate sign language interpreters. NTID has graduated more interpreters than any other college.

Postsecondary Education Network (PEN-International)

The Nippon Foundation of Japan

The Nippon Foundation of Japan, founded in 1962, provides annual grants that support PEN-International. The Foundation believes “that all people share a common duty of transcending antagonism and overcoming conflict, so that cultures of the world may establish consensus and provide assistance to each other.” The Foundation meets that challenge by sponsoring multilateral networks to improve the circumstances of disadvantaged people around the world. The Postsecondary Education Network-International (PEN-International) was created in 2001 to improve and expand postsecondary education to deaf and hard-of-hearing students around the world by sharing educational technology and conducting faculty development and training, particularly in developing countries.

PEN-International Goals

The goals for PEN-International are as follows: to train faculty for improving teaching and learning; to apply innovative instructional technologies to the teaching/learning environment; to provide state-of-the-art equipment to international partners; to promote program self-sufficiency; and to expand career opportunities for deaf and hard-of-hearing students. PEN-International’s vision is to assist partner institutions in the “move from importers to self-sufficiency to exporters of knowledge and skills within their respective home countries.” Establishing an international network was the first step in achieving this end.

Partner Institutions

The host site for PEN-International is the National Technical Institute for the Deaf (NTID) at Rochester Institute of Technology (RIT). A total of thirteen colleges and universities in Japan, China, the Philippines, Thailand, Russia, and the Czech Republic have partnered with NTID during the first five years to become part of the PEN-International network.

National Tsukuba University of Technology (N-TUT), was an original member of PEN-International, joining in 2001. The Government of Japan chartered Tsukuba College of Technology in October 1987 by amending the Japan Law for Establishing National Schools. Tsukuba's Division for Hearing Impaired offers state-of-the-art programs in design, mechanical engineering, architectural engineering, electronics, and information science. Approximately 200 deaf and hard-of-hearing students are currently enrolled at N-TUT. There is also the new formation of PEPNet-Japan, a coalition of twelve universities and support centers in Japan that serve deaf and hard of hearing students. This structure is modeled after PEPNet's Northeast Technical Assistance Center at NTID/RIT.

In 2001, **Tianjin Technical College for the Deaf of Tianjin University of Technology (TUT)**, joined PEN-International. Tianjin Technical College for the Deaf is China's first technical college for people who are deaf. Established in 1991, the college enrolls more than 125 students who study technical disciplines that prepare them for productive membership in Chinese society. The college is the lead PEN-International partner in China and coordinates all activities in the country.

During the next three years, PEN-International expanded in China by adding the Special Education Colleges of **Beijing Union University (BUU)** and **Changchun University (CU)**, and **Zhongzhou University (ZZU)**.

Beijing Union University, founded in 1985, is a multidisciplinary institution offering humanities, science, social science, natural science, technological science, and management science programs to 12,000 students. The University's College of Special Education was created in 1999 and serves more than 125 deaf students who study art design, decorating and advertisement, gardening, and office automation.

Changchun University's Technical College for the Disabled was established in 1987. It is the oldest and largest postsecondary program for disabled students in the People's Republic of China, and also the oldest postsecondary program for people who are deaf in China. The college currently enrolls more than 200 deaf and hard-of-hearing students who study in the college's fine arts and graphic design programs.

Zhongzhou University, the newest member of PEN-International in China, signed a memorandum of understanding in March 2005. They serve approximately 200 deaf students, who study such disciplines as computer assisted drafting, information technology, fashion design and ceramics, and has the only postsecondary sign language interpreter training program in China with approximately ten students.

In project year two (2002), **De La Salle - College of Saint Benilde (CSB)**, Manila, Philippines and **Bauman Moscow State Technical University (BMSTU)** in Russia joined the PEN-International network.

The College of Saint Benilde was founded in 1980. Fourteen years later, in a move to expand its mission, CSB became an autonomous college in the De La Salle University System. CSB's School of Deaf Education and Applied Studies is a leader in education for the deaf in the Philippines through its academic programs, international linkages, and unique commitment to

empower its citizens by preserving deaf heritage and nurturing Filipino deaf culture. Approximately 125 students are currently enrolled at CSB.

Founded in 1830, Bauman Moscow State Technical University is an engineering and scientific university of excellence whose graduates have contributed significantly to developments in engineering and science disciplines. While BMSTU has been educating deaf students since 1934, the University in the 1990s expanded its programs and services for deaf students by establishing the Center on Deafness. Presently, approximately 250 deaf students study in various programs across the university as well as in compensatory programs.

In 2005, three more programs in Russia joined PEN-International. They are the **Institute of Social Rehabilitation at Novosibirsk State Technical University, Vladimir State University Center for the Deaf, and Academy of Management, “TISBI”, at Kazan.**

Novosibirsk State Technical University was founded in 1950, currently serving 15,000 students. The Institute of Social Rehabilitation was established in 1993 to provide high-tech education to individuals with disabilities, currently serving close to 300 deaf students. At Vladimir State University, the Center of Professional Rehabilitation of the Deaf was established in 1994, and then in 2002 became an experimental platform for providing education and social support to deaf children. They enroll approximately 60 postsecondary deaf and hard of hearing students, who study computer systems of management in industry and business programs. TISBI at Kazan has provided primarily internet-based education at the secondary and postsecondary levels to individuals with disabilities, currently serving approximately 25 deaf students.

Charles University in the Czech Republic joined the network in 2002 as an associate member. Charles University in Prague is the oldest university in the Czech Republic and the oldest university in central Europe. Founded in 1348 by King Charles IV, the University enrolls 41,000 students at the bachelor's, master's, and doctoral levels. Among the University's population are 120 students with special needs, including 24 students who are deaf. The University's world renowned Language Resource Centre, which teaches English to deaf and hard-of-hearing students, is a collaborative effort with several internationally recognized institutions, including NTID.

Ratchasuda College of Mahidol University is the first and only education institution in Southeast Asia dedicated to providing tertiary education for deaf students. The College, created in 1991, consulted with worldwide leaders in education of deaf students in formulating its curriculum. Ratchasuda College enrolls 89 students who are deaf and joined the PEN-International network in 2002 as an associate member.

Training and Faculty Development

To assure that PEN's faculty development offerings meet the needs of educators of international deaf students, PEN has conducted needs assessments in each partner institution. PEN then works collaboratively with each partner institutions to determine the solutions that meet 'their needs'.

On the basis of the needs assessments, specific solutions are developed that detail activities, goals, and outcomes. The solutions are developed collaboratively with each partner institutions. Program evaluations are used to assess the effectiveness of each solution that is implemented.

Recent Accomplishments in Faculty Development

Instructional Technology Symposium. PEN-International co-sponsored, with NTID and The Nippon Foundation of Japan, an international symposium entitled, "Instructional Technology and

Education of the Deaf: Supporting Learners, K-College” in 2005. More than 230 educators of deaf and hard-of-hearing learners from 17 countries shared information relative to current and future innovations and developments in the use of educational media and technology. More information can be found at: (<http://www.rit.edu/~techsym>)

Representation at the International Congress on Education of the Deaf and Hard of Hearing. In July 2005, representatives from PEN-International presented and exhibited at the International Congress on Education of the Deaf in Maastricht, Netherlands, which attracted close to 900 participants from around the world.

Delegate Visits. Throughout 2005-2006, PEN-International hosted delegations from Korea, the Philippines, Japan, Hungary and the Czech Republic. Further, PEN-International staff visited the Korean Employment Promotion Agency for the Disabled, PEPNet-Japan Partner Institutions and the Kyoto Consortium of Universities. In addition, various institutions and programs in Russia, the University of Hong Kong, Dong Nai Provincial Teachers College in Vietnam, the College of St. Benilde in Manila, and postsecondary institutions in China were visited. Training and workshops were an integral component of all the visits.

Upcoming Activities. PEN-International will have representation at the Deaf Studies Conference at Wolverhampton University in England, the national 2006 AHEAD Conference in San Diego, CA, and the 2006 Asia-Pacific Conference on Postsecondary Education and deafness in Tokyo. Further, PEN will hold its first ever Leadership Institute for deaf and hard of hearing postsecondary students at Herstmonceux Castle in East Sussex, England. Four students from each of PEN-International’s partner institutions in China, Japan, Russia and the Philippines, as well as NTID, will convene for a week-long training on advocacy and leadership skills development. More information can be found at: www.pen.ntid.rit.edu/summer-institute.php.

PEN-International Multimedia Computer Labs

PEN-International recognizes the importance of instructional technology for educating deaf students. For this reason, state-of-the-art high technology multimedia labs have been constructed at partner institutions. In project year three (2003-2004) PEN-International constructed two new labs at Beijing Union University and Changchun University, both in China. The multimedia labs at Tianjin University of Technology and Changchun University were recently enhanced, and in 2006 a second lab was opened at the College of St. Benilde. These labs, used an average of about 40 hours per week for coursework, provide students and faculty with access to the World Wide Web, offer videoconference capability to the university, provide a local area computer network hub, and serve as a smart classroom for teaching and learning. Students attend classes in these environments as well as use them as general computer labs when formal classes are not scheduled. Each lab has between 12-18 student computer stations.

Dissemination of Network and Program Information

One of PEN-International’s goals is to disseminate technological information worldwide to improve education and increase educational and employment opportunities for deaf and hard-of-

hearing individuals. PEN-International does this through participation at conferences, via its Web site, and through articles in various worldwide publications.

PEN-International has a well designed and accessible Web site that is widely publicized and continuously updated. The Web site includes PEN-International's goals and objectives, a list of partner institutions, a resource database, and a complete listing of all PEN-International news and events. All PEN-International and partner events are listed, and also described in detail with accompanying photographs. News and events from each year also are archived on the Web site for easy retrieval. PEN-International is in the process of revising and updating its website, which will be available during the summer of 2006.

PEN-International Reporting

PEN-International's brochure communicates the essence of the PEN-International network. The brochure outlines PEN-International's goals and mission, describes each of the partner institutions, and highlights the organization's objectives, including faculty professional development and training, implementation of multimedia laboratories, faculty and student exchanges, and research and evaluation efforts. PEN-International also provides an annual report to The Nippon Foundation of Japan. The annual report describes in detail PEN-International's goals and accomplishments for the year. Additionally, articles about PEN-International's staff members, partners, and research efforts appear periodically in publications worldwide.

Evaluation and Research

PEN's research efforts aim to positively influence postsecondary education within each country. The training sequence is as follows: training is conducted in the USA, follow-up training is conducted in the targeted country, and participating faculty members train others in their home country. The vision is that the faculty training will grow exponentially throughout each country.

PEN-International activities and outcomes are evaluated utilizing both formative and summative techniques. The overall evaluation plan addresses the attainment of project goals, level of satisfaction by partner administrators and faculty, and improvement in student performance as a result of PEN activities. Additionally, the role of each partner organization as a regional and national leader is addressed.

Cultural Exchanges

PEN-International supports virtual and real student and faculty exchanges between participating colleges and universities. This program strives to strengthen the knowledge and skills of individual participants as well as those of faculty and students at the host university. The cultural exchanges "strengthen each student participant's cultural and personal identity while simultaneously helping him/her develop an understanding of the diverse cultures that affect our world." Examples of cross-cultural exchanges include student visits to various partner institutions, Haiku Competition, WWW Design Competition, and faculty exchanges.

Conclusion

PEN-International will continue to expand its network and train and develop faculty within each of the participating countries. PEN-International will also actively seek and expand its network to other countries. Through research and evaluation, PEN-International will continue to gauge and be able to address the needs of its partners, while succeeding in its goal to improve and expand faculty development and training throughout the world.

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Perspectives on Errors in Deaf College Students' Texts: Correction at the Roots

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Abstract

Responding to students' texts is an ongoing issue for those teaching English as a second language, especially to deaf students. For a basis for conversations about errors, one response model uses rules governing a Basic Variety (BV) of English. This presentation explores the differences between deaf and hearing nonnative users of English and the parallels between the BV used by these users. Deaf students' English has been traditionally characterized from an error standpoint. We argue, however, that such deviances from English are productions following rule systems in this population's interlanguage. Using student texts we demonstrate deaf students' use of an interlanguage with BV characteristics. We suggest that student texts reveal rule systems, and understanding these systems enable teachers to better guide these learners' linguistic development.



One of the hardest tasks facing English instructors is, not only knowing what to correct on students' texts, but how to correct it. With regard to the WHAT, we correct with a very light hand for reasons which we hope will become clear. The HOW part of correcting texts can be even trickier. This paper explores both the WHAT and the HOW of error correction through discussions on:

1. Deaf students as ESL learners;
2. Characteristics of the English used by deaf students;
3. Why deaf students' deviations from Standard English should not be viewed as errors but rather productions that adhere to rule systems;
4. A recently identified rule system in the field of ESL called the Basic Variety or BV; and
5. Similarities between the rule systems used by deaf students and hearing learners of English as a second language (BV).

This paper also demonstrates the use of the Basic Variety in action through a deaf student's written text and concludes that deaf students texts reveal their operating rule system and suggest that understanding these rules will enable teachers to guide these learners' linguistic development.

Deaf Students as ESL Learners

Deaf students can be viewed as ESL learners for two reasons:

- The nature of their first and second language; and
- The similarities in nature and kind of errors shared by these populations.

The nature of the first and second language

Deaf students are rarely considered native users of English because it is not acquired from their primary caregivers and because it is acquired differently from their hearing counterparts – up to 95% of deaf children are born to hearing parents. Their hearing loss impedes natural acquisition. However, ASL is not considered a native language either because it is not – at least initially – shared between caregiver and child. While many deaf students eventually use ASL or a variant, there are significant differences between ASL and many spoken languages:

- ASL has no written form.
- Deaf students have to learn to make sense of print which has no usable aural counterpart and for which there is no model in their manual language.

As a result, English is a language arrived at late and learned ‘imperfectly’ because of delayed exposure both aurally and in print. This English used by deaf students is called a “primary language” rather than a first or even a second language. Berent (1988) states that once deaf children have some functional use of English, their acquisition of English proceeds similarly to those hearing students learning English as a second language.

The similarities in nature and kind of errors between the deaf population and ESL students

Errors found in ESL students' texts that occur with enough regularity to be labeled, are called developmental. These same kinds of errors can be regularly found in deaf students' writing. According to Dulay, Burt and Krashen (1982), these errors show that the learner simply has an incomplete second language rule system. These researchers believe that many, if not all, of these errors self-resolve as student's knowledge of the target language becomes more complete. These errors are: (a) omitting grammatical morphemes which do not contribute meaning, e.g., *She opened present*; (b) double marking a feature when only one marker is needed, e.g., *She didn't walked home*; (c) generalizing rules, e.g., *oxes* for *oxen*; (d) archifoms, or using one form in place of several, e.g., *Her walk with Bob*; (e) using two or more forms in random alternation, e.g., using he and she randomly regardless of the gender of the person in question; and (f) misordering items in constructions, e.g., *What you are doing?* (Dulay, Burt & Krashen, 1982).

The English Used by Deaf Students, or the Characteristics of Deaf Students' Texts

Given the above developmental errors, then, what does the English used by deaf students look like? First – it is just shorter. Deaf students use fewer words and clauses per T unit – a group of words that function as a sentence. They use fewer words for two reasons: (1) they have difficulty understanding relationships between major parts of the sentence, and (2) they have a small English vocabulary – generally one lexical item per referent.

Another characteristic of deaf students' English is its simplicity. These students generally use unembellished agent/action forms when they express themselves in writing

A third characteristic of Deaf students' texts is its cohesion – or the way text hangs together. Studies have shown that it may differ both quantitatively and qualitatively. For example, DeVilliers (1991) found that deaf students use fewer cohesive devices than hearing counterparts. However, Maxwell and Falick (1992) found no quantitative differences, but qualitative differences – mainly that deaf students rely on *and*, *then* and *because* and attribute this limited use to the way in which deaf students are taught English out of context.

A Different Perspective

What is common with both the above mentioned textual characteristics and the developmental characteristics that Dulay, Burt and Krashen (1982) identified for ESL learners is that they are all labeled as errors – that is, deviations from Standard English. We are suggesting a different view – one that is related to the nature and meaning of interlanguage.

The term interlanguage describes the language system – or grammar that is being used by second language learners. Corder (1991) believes that second language learners induce rules which are mirrored in their language production. He believes that there is evidence that these rules exist and this evidence lies in the systematic nature of the errors themselves.

What this means is that any learner – and here we are including the deaf – acquiring a language passes through a series of grammars on his way to the target language. These grammars are completely systematic even though they don't match the target language. Put another way, the learner constructs an interlanguage system with its own rules and these interlanguage principles drive his communicative production. The communicative production of a second language learner, then, should best be described as a perfect interlanguage production rather than an imperfect target language production.

The best way to help students improve their communicative production is to know what rules are driving their interlanguage. Yates and Kenkel (2002) believe that any second language learner's interlanguage system is informed by what they know about communicative organization and what they know about language.

What deaf students know about communicative organization

They know:

- Conversations follow structures and involve turn taking;
- This turn-taking varies according to the social setting;
- The static nature of speech acts;
- How information is organized for purposes of communication -- deaf students know – and use – the rhetorical organizational mode known as given/new;
- How to organize their communication. They organize visually -- they structure their texts in visual images and scenes, rather than presenting events chronologically or thematically, producing what Maxwell (1994) terms a vision-centered narrative; and
- ASL uses other ways to organize communication. Campbell (personal communication) identifies another discourse structure in ASL, one with emphatic organization, where the most important information is communicated first and increasingly obscure details follow. This is called "Discourse in an ASL lecture."

Discourse in an ASL lecture follows this pattern – the main point is introduced—details follow – the main point is stated again and then, when a new topic is introduced, the sign NOW is made.

What deaf students know about language

By around age 13 deaf students know:

- The function of nouns and verbs and their interrelation in simple sentences;
- The use of subject-verb-object (or agent-action-patient) word order;
- The purpose of simple negation;
- The use of adjectives and adverbs for embellishment and clarification;
- The function of prepositions to denote relationships;
- Question forms;
- The use of coordinate conjunctions to show relationships;
- The use of some subordinate conjunctions;
- The use of some demonstratives;
- The completion of a thought must be denoted in some way; and
- Time must be identified in some way.

Klein and Perdue (1997) found enough similarities in their subjects' interlanguage, or operating rule system to formulate what they called the Basic Variety of English. We are suggesting that the rules operating in the BV are so similar to what we have observed with deaf students' writing that this operating rule system can be used as a jumping off point for knowing HOW to correct students' texts. That is, deaf students who are not skilled in English demonstrate common characteristics in their writing that can also be found in the BV. Instructors may be better able to help students work with their texts if they understand that these are the rules that are driving the deaf students' production.

Deaf Students' BV in Action

Below is a paragraph taken from a deaf student's exam and some possible changes based on what is now known about the student's knowledge of English (his use of the BV).

Deaf college student tend to be good along with other deaf students than hearing students. Deaf students are more thrills to meeting new people than hearing students. Some of hearing people are tried to be act cool and some of them have hard time to accept cultures. However, most deaf people always want to meets new people and does not matter what are their cultures and religions preferences. Deaf students always make new friends as quickly in college while hearing do not. Hearing students tend to be isle [sic] due to their lack interest in college socials such as focus more time with computers, computer games, and television. Deaf students have many times to be isle [sic] in their home state that have lack of social with deaf students. I noticed myself that deaf students hated to be isle [sic] while hearing students do not at the college.

The first sentence of this paragraph contains a simple error in number (student), but it also contains other syntactical problems that could be corrected in more than one way. The original text reads: *Deaf college student tend to be good along with other deaf students than hearing students*. Before offering suggestions, the teacher needs to know the student's intention. That is, did he intend to show a comparison between deaf college students and hearing college students

or to simply state the preference of deaf college students to be with their peers than with hearing students? The sentence could be corrected either way, and the student's intended meaning should drive the decision.

Correcting this sentence strictly by following the principles of English, which the writer clearly does not yet fully control, could result in several different versions.

Possible corrections:

Deaf college students tend to be better/happier/more comfortable with other deaf students than with hearing students.

OR

Deaf college students tend to get along better with other deaf students than hearing students do.

The second sentence of this example paragraph shows further evidence of this student's adherence to the characteristics of BV. The sentence reads: *Deaf students are more thrills to meeting new people than hearing students.* The error "to meeting" represents either the incorrect use of an infinitive or the incorrect use of a participial, depending on which of these rules is resident in the student's interlanguage. The absence of quantifiers (some, many, etc.) in this sentence is another feature of this student's BV. Furthermore, the absence of a verb for the second referent (hearing students) reintroduces the potential confusion encountered in the first sentence of the paragraph: whether the student writer intended to establish a comparison between deaf and hearing students or state the preference of deaf students. The error, "thrills," does not create confusion in the same way as the missing verb does.

Possible corrections:

Deaf students tend to be more thrilled to meet new people than hearing students are.

OR

Deaf students tend to be more thrilled meeting new people than hearing students are.

The next two sentences in the paragraph demonstrate additional features of the student's BV. These sentences are: *Some of hearing people are tried to be act cool and some of them have hard time to accept cultures. However, most deaf people always want to meets new people and does not matter what are their cultures and religions preferences.* Once again, we see a lack of quantifiers, specifically for "cultures" and "hard time," and we also see an overuse of prepositions ("some of hearing people"). In addition, we see a common BV feature, the use of a temporal adverb ("always"). We also see the student following his referent system in the second sentence, establishing deaf people as the first referent and new people as the second, with "their cultures and religions preferences" applying to "new people" in this student's BV.

Possible correction:

Some hearing people try to act cool, and some of them have a hard time accepting other cultures. However, most deaf people want to meet new people, whose cultures and religious preferences do not matter.

A final feature of BV is the use of specific kinds of textual organization. In this paragraph, we also see this student's use of the given/new type of text organization in his BV. He begins his paragraph by discussing the meeting of new people by deaf students. In the second sentence, he repeats information about deaf students (given information) and then provides information about hearing people in this situation (the new information).

Conclusions

Second language learners – including the deaf – begin writing with rules they know. And we are suggesting that many of the rules coincide with the BV. As they feel more confident, they attempt more sophisticated language use and alter their interlanguage to accommodate. Eventually they may elaborate their interlanguage until it becomes almost indistinguishable from the English of native users. This is our goal as teachers and we see evidence of this process with our students.

Instructors of deaf students may wonder if their students are making progress in acquiring English. We believe that focusing on correcting grammar and taking the perspective that their grammar is wrong in a way that disregards the students operating rule system will not help the student to internalize rules that move them to more complex use of English. Students' texts reveal the linguistic knowledge they bring to the English language learning situation. These texts are a reflection of their understanding of and ability to use the English language, competently or not. Understanding their operating rule systems enables teachers to more effectively appreciate, support and guide these learners' linguistic development.

Characteristics of the Basic Variety (BV)

1. BV is an uninflected form of English, meaning there is no marking of case, gender, number, aspect, agreement or tense. Lexical items typically occur in one form, which frequently corresponds to the stem form.
 - Pronoun system limited to references to the speaker, the hearer and a third person.
 - Limited use of quantifiers (*each, every, all, some*, etc.).
 - Single form for negation (e.g., exclusive use of *no*).
 - Limited and overgeneralized prepositions.
 - No complementizers. A complementizer is a subordinate conjunction that marks an embedded complement clause. For example, *I know that John is lazy* where *that* marks the clause used as a direct object or complement in the sentence or *I planned for my son to go with you*, where *for* marks a phrase that complements plan. The most common complementizers are *for, that*, and *whether* (Crystal, 1991).
 - Some demonstratives, but no determiner system (e.g., use of *these*, but not *those*). Determiners are words that mark nouns – articles, possessive nouns, possessive pronouns, indefinite pronouns (*few, more, all, every*), numbers and demonstratives (*this, that, these, those, such*) (Celce-Murcia & Larsen-Freeman, 1983).
2. The bare stem of a verb is most frequently used. Utterances frequently lack the copula (*to be*). The verb plus *-ing* is also used often, but without the assisting copula.
3. Temporal adverbs are frequently used. The repertoire of these kinds of adverbs includes:
 - Calendric adverbials – *Tuesday, in the morning*.
 - Anaphoric adverbials that show the AFTER relation (*then, after*) and the BEFORE relation (*before*).

- Deictic adverbials (*now, yesterday*).
 - Frequency adverbs (*often, always*).
 - Durational adverbs used as bare nouns (*two hour*) (Klein & Perdue, 1997, p. 320).
4. The referent with more control takes the head position.
 5. Some boundary markers are used which show the beginning and end of a situation (*work finish*) (Klein & Perdue, 1997, pp. 320-321).
 6. Text organization is of two types. The first is given/new, or backgrounded/foregrounded. The second structure is topic-focus.

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Educating Deaf Students: Is Literacy the Issue?

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Abstract

For more than 100 years, teachers and investigators have sought to improve the reading achievement of deaf students. Although progress has been made in some domains, it has been limited. Recent evidence, however, suggests that academic challenges that traditionally have been ascribed to deaf students' literacy skills, and challenges in literacy per se, may have more general language and cognitive underpinnings. In fact, several studies have demonstrated that deaf students experience similar difficulties in learning via text, on the printed page or real-time text, or sign language. Such findings suggest that literacy may not be the issue. This paper reviews what we know, what we don't know, and what we think we know (but really don't) about deaf students' reading. It is suggested that the lack of progress in promoting deaf students' reading achievement is largely the result of our having been looking in the wrong places.



Educating Deaf Students: Is Literacy the Issue?

Since the beginnings of my interest in children who are deaf and deaf education, I have wondered why it is that students who are deaf have so much trouble reading and writing. With other investigators, early on I assumed that the challenge must lie in the difficulties associated with acquiring phonological codes (or phonemic awareness) in the absence of normal hearing, vocabulary in early language-impooverished environments, and/or English¹ grammar and discourse structure with only limited access to the language. I now realize that, with those other investigators, I have been looking in the wrong place(s). Findings from research with my colleagues over the past several years involving cognition, language comprehension, and learning by students who are deaf have convinced me that the challenges in educating students who are deaf usually ascribed to reading and writing are not literacy-related at all. It might be overly simplistic to suggest that literacy challenges of students who are deaf are a symptom rather than the cause of academic challenges – because surely less-than-fluent print literacy skills surely impede academic progress – but I believe that such a statement is more accurate than the widespread belief that reading is the villain.

Research into how students who are deaf learn via sign language interpreting (e.g., Marschark, Sapere, Convertino, Seewagen, & Maltzan, 2004a; Marschark, Sapere, Convertino, & Seewagen, 2005a; Marschark et al., 2005b) and the organization and use of their concept knowledge (Ansell & Pagliaro, 2006; Bebkö, 1998; Marschark, Convertino, McEvoy, & Masteller, 2004b; McEvoy, Marschark, & Nelson, 1999) have led to a new perspective on academic achievement by students who are deaf. Such studies have suggested that the challenges observed in deaf students' comprehension of print are closely paralleled by challenges in their

comprehension of sign language and in problem solving more generally (see Marschark, Sapere, Convertino, & Seewagen, 2005c, for a review).

Together with a much larger literature from investigators interested in the development and education of deaf children, our research with college students has led us to re-examine assumptions about barriers to print literacy and academic achievement by students who are deaf, regardless of their communication orientations and school placements. The convergence of several different lines of investigation has led us to the now obvious conclusion that if we want to understand the strengths and needs of students who are deaf in educational settings, we first have to understand the cognitive underpinnings of learning and of educational interventions (Detterman & Thompson, 1997). Instead of continuing to chase after reading for another 100 years, perhaps it is time to re-examine our assumptions and consider the possibility that the culprit lies elsewhere.

What We Know and What We Don't Know About Deaf Students' Literacy Challenges

Current data indicate that about 50 percent of 18-year-old students who are deaf and hard-of-hearing read below the fourth grade level (Traxler, 2000), essentially leaving them functionally illiterate (Waters & Doehring, 1990).² This compares to less than one percent of their hearing peers being in the same situation. And, notice that it is deaf *and hard-of-hearing* students who are referred to above, all part of the normative sample of the ninth edition of the Stanford Achievement Test. If one were only to consider students who are deaf, those reading levels would likely be even lower. Then again, for those interested primarily in college students, the Traxler (2000) findings may be an underestimate, as the national samples in her report included students who were not college bound. Nevertheless, the general finding raises three issues of importance here. First, given that 80 percent of children who are deaf and hard-of-hearing are in regular public school settings, how is it that those schools are graduating students who are deaf and who (apparently) cannot read? Second, if at least half of the deaf adults in the United States read below the fourth-grade level, how can it be that deaf children of deaf parents are supposed to be better readers? And, third, why have we not made more progress in changing the situation which has plagued deaf education for decades?

What Makes Some Deaf Children (but Not Others) Good Readers?

The reading and writing abilities of children who are deaf have been the focus of attention from educators and researchers for a long time. Taken together, the results and conclusions of relevant studies provide an enlightening, if disappointing picture of deaf college students' skills, as well. Many of the errors that students who are deaf exhibit in reading and writing are the same as those made by people learning English as a second language. A variety of programs therefore have been developed to instruct teachers of students who are deaf in methods like those used in teaching English as a second language (see Schirmer & Williams, 2003). Most deaf children also come to school without fluency in sign language, and yet, for some reason, we do not have programs to teach them American Sign Language. Without either English or sign language fluency, we thus deprive children who are deaf, at the outset, of an essential learning tool and access to the full richness of the world. This may help to explain our recent findings that deaf high school and college students do understand either sign language or print as well as they (and we) assume they do (Marschark et al., 2005a; Marschark et al., submitted a). Their reading behaviors and their writing may look similar to second language learners, but they do not have a

fluent first language on which to construct a second. This means that second language learning methods may be inappropriate or only address some of deaf students' needs (Mayer & Wells, 1996).

A large portion of the effort devoted to improving deaf children's literacy has gone into trying to teach them the skills and strategies that work for hearing children, even though it is apparent that deaf and hearing children often have very different background knowledge and learning strategies (Marschark, Convertino, & LaRock, 2006). Obviously, this approach has not worked very well, and most deaf children in this country still progress far more slowly than hearing children in learning to read. This means that deaf students leaving school are at a relatively greater disadvantage, lagging farther behind hearing peers, than when they entered. At the same time, there are clearly many deaf adults and children who are excellent readers and excellent writers. What accounts for the differences?

A variety of sources suggest that deaf children of deaf parents, on average, are better readers than deaf children of hearing parents (e.g., Padden & Ramsey, 1998; Singleton, Supalla, Litchfield, & Schley, 1998). Why? Deaf children's relative lack of early language experience when they have hearing parents clearly plays an important role in their reading difficulties, and several investigations have found a relationship between deaf children's ASL skills and their reading levels (e.g., Strong & Prinz, 2000; Padden & Ramsey, 2000). These studies have all been correlational, however, demonstrating that high or low levels of performance in one of these domains are often accompanied by similar levels in the other. At the same time, other investigations have shown a similar link between spoken language and literacy skills (e.g., deVilliers, Bibeau, Ramos & Gatty, 1993; Geers & Moog, 1989), although that relationship usually reflects the link of both to more residual hearing. This suggests that it may be early access to fluent language that explains all of these results, but the situation is more complex.

Back when my interest in this field was primarily curiosity, I reviewed 30 years of studies concerning the reading abilities of deaf children of deaf parents as compared to deaf children of hearing parents (Marschark, 1993). The results were surprising because I fully expected that deaf children with deaf parents would always come out on top, due to their early exposure to language. Well, deaf children of deaf parents have been shown to be better readers than deaf children of hearing parents in some studies, but others have shown no difference. Importantly, none of the studies to date have considered the reading skills of parents, and those investigations that have included deaf parents largely have been conducted in cities known for having relatively high numbers of educated deaf adults. It therefore seems likely that any generalization about a link between children's reading abilities and parental hearing status per se will be extremely limited. Indeed, it now appears that regardless of whether their parents are deaf or hearing, deaf children who are better readers turn out to be the ones who had their hearing losses diagnosed earlier, had early access to fluent language (usually via sign language), *and* were exposed to English. At the same time, having a mother who is a good signer appears to be more important than whether she is deaf or hearing or the precise age at which a child learns to sign, as long as it is early (Akamatsu, Musselman, & Zweibel, 2000; Strong & Prinz, 1997).

There are other differences between deaf and hearing parents other than their primary mode of communication that might affect the development of literacy skills. For example the two groups may have very different expectations for their deaf children in terms of academic achievement. They also may differ in their ability to help their children in reading-related activities – at least for those parents who have good reading skills themselves – and we know that children whose parents spend time working with them on academic and extra-curricular

activities are more motivated and have greater academic success. So, parental hearing status does not seem like is a variable with a “causal role,” and we have to look elsewhere.

Thinking About Reading

Earlier, I suggested that if we want to improve the reading abilities of deaf students, we have to understand their cognitive foundations. With regard to reading, in particular, there are higher-level cognitive skills shared by fluent readers that often seem less well-developed in deaf students than their hearing peers. Of current interest to me, given similar findings with regard to sign language are deaf students’ *metalinguistic* and *metacognitive* skills. Knowledge of language and knowledge about thinking are essential components for students across academic areas, allowing them to consider alternative approaches to learning and problem solving, assess their own understanding of face-to-face communication and print, and adapt to new materials and new contexts. Deaf children and hearing children who are beginning to read or who experience reading difficulties generally have relatively inefficient metalinguistic and metacognitive skills. Deaf students in particular appear to be relatively poor at assessing their reading comprehension and often consider themselves to be good readers even when they are largely unaware of what it means to be a good reader (Ewoldt, 1986). Similar findings with regard to deaf college students’ sign language comprehension skills have led us to the position articulated here: that print literacy may not be the barrier we have assumed it to be, but then where do we look?

Perhaps because of the ways we teach them, deaf students may demonstrate *instrumental dependence* in their reading strategies, looking to teachers and peers for explanations of text rather than attempting to determine figure out the meaning themselves. In at least one study, however, deaf adolescents were found to use a variety of independent (metacognitive) reading strategies, such as re-reading the text or looking up words in a dictionary, while their teachers appeared to encourage more dependent strategies (Ewoldt, Israelite, & Dodds, 1992). Parents and teachers, also, may inadvertently foster dependent strategies in young deaf readers, underestimating their reading abilities and demonstrating the over-directiveness often seen in hearing parents of deaf children.

Teachers and parents also appear prone to devoting so much time attempting to teach the fundamental skills underlying reading, that they may overlook teaching the goals of reading. Several investigators have noted that reading and writing are labor-intensive, frustrating activities for many deaf individuals, and they are thus often reluctant to engage in them for pleasure (Marschark, Lang, & Albertini, 2002; Wilbur, 1977). We know, however, that children who read more become good readers (not simply the other way around; Stanovich, 1986), creating a “Catch-22” situation for young deaf readers. By not reading and not having the desire to read more, deaf children may not spontaneously develop the literacy-related metacognitive skills easily acquired by many of their reading, hearing peers. Those skills can be explicitly taught (Akamatsu, 1988), but their durability is likely to be far less than if they were actively acquired by children through their own reading.

If Not Literacy, Then What?

It will not be surprising to most readers that deaf students’ language skills expressed through sign typically are superior to their reading and writing in English. Such findings suggest that literacy skills are independent of general intellectual abilities and should not be taken as

indicators of any general language fluency or language flexibility (but see Marschark, in press, Chapter 8). Those findings thus suggest that literacy should be within their grasp. Why then have we not succeeded in making much of a difference?

Overall, deaf students' reading difficulties also do not appear to be the result of any particular orientation in their early language experience. What appears to be a literacy advantage among early sign language users may actually be the result of sign offering earlier access to the world – and thus a more rich cognitive development than spoken language – even if it does not provide a bridge to print (Mayer & Wells, 1996). Yet, our research on sign language interpreting and the use of real-time text in the classroom have been disappointing, indicating that deaf students in mainstream college classrooms only learn about 75-80% of what their hearing peers learn, regardless of which support service is provided, and even when we have controlled for prior knowledge and provided the best interpreters. Having deaf parents does not make any difference in this regard, nor for that matter does students' language orientations (toward speech or sign), their academic credentials, or a variety of classroom and variables (Marschark et al., 2004a, 2005a, 2005b).

On the other hand, we also have found that neither real-time text nor text plus interpreting provides a significant advantage over interpreting alone in high school and college classrooms (Marschark et al., submitted b). Indeed, we also obtained similar results when we investigated deaf students' face-to-face communication with each other, through sign or speech (Marschark et al., submitted a). What ties these studies together is a common thread of cognitive differences between deaf and hearing students that go beyond literacy per se. These and a variety of other studies involving reading and problem solving have demonstrated that deaf students tend not to automatically adopt processing strategies needed for information integration during language comprehension and learning. This orientation is apparent in both verbal and nonverbal domains (e.g., Ottem, 1980; Todman & Seedhouse, 1994). The issue therefore is not just one of language and literacy, even if the impact of such differences is evident in those domains. Moreover, it is now clear that this orientation is not just a result of "how we teach them," because the effects of lesser reliance on relational processing can be seen even in the early vocabulary learning of deaf children of deaf parents (Anderson & Reilly, 2002).

Findings indicating that deaf students are less aware of their levels of comprehension than hearing peers (metacomprehension) in both print and sign, and similar results indicating that their conceptual knowledge is not as strongly interconnected or well-bounded as is true for their hearing peers, all point to very different learning strategies for deaf and hearing students. This is neither good nor bad, it's just different (unless one happens to end up in an academic setting that does not match their learning styles). Nevertheless, until we acknowledge that deaf and hearing students have somewhat different academic needs, we will not be able to adapt instructional methods to best match their strengths and needs. In order to optimize our teaching – and their learning – we have to take into account "whats," "whens," and "hows" of deaf students' cognitive abilities. Whether it is differences in their lexical knowledge (McEvoy et al., 1999) or metacognitive strategies (Strassman, 1997), their motivation (Stinson & Walter, 1997) or their earlier educational placements (Stinson & Kluwin, 2003), it is essential that we recognize that deaf students are not hearing students who cannot hear.

It is time to acknowledge that we have made relatively little progress in advancing deaf students' reading and writing skills, despite decades of trying with a new "strategy du jour" every few years. To the extent that recent findings concerning deaf students' learning via sign language interpreting and real-time text (did we really expect that the latter was the answer when

we knew of their reading challenges?) indicate that neither of these is the panacea we expected, perhaps it is time to take a new tack and approach our education of deaf students from another perspective. That approach has to be an objective one, letting go of our assumptions and philosophical biases. It also has to be an empirically-driven one, building on what works, and perhaps re-examining methods previously abandoned because of our obsession with literacy as both the barrier and the solution. I honestly believe that all of this places us at a threshold – with a better chance of advancing the education of deaf students than we have had at any other time during the last century. Whether or not we are ready to take on this opportunity remains to be seen.

Endnotes

1. “English” is used here only for convenience and refers to whatever spoken and written language is used by the community in which an individual lives. Similarly, references to “American Sign Language” could appropriately be replaced by any other sign language.
2. Note that this is not the same as saying that “deaf students graduate from high school reading at a fourth grade level,” a statement that is frequently seen.

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Postsecondary Education Abroad: Optimizing the International Postsecondary Experience for Deaf and Hard-of-Hearing Students

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Abstract

Study abroad is becoming more prevalent in the total postsecondary education experience for all students, including those who have disabilities. With the increasing globalization of the workforce, study abroad offers students the opportunity to learn about other cultures, languages, and employment. Providing reasonable accommodations for study abroad students who are deaf and hard of hearing can be done, with the right attitude, information and some advance planning by both the student and the university. This presentation will cover laws, court cases and Office for Civil Rights rulings which impact how and when reasonable accommodations are provided for students who are deaf and hard of hearing who wish to study abroad.



Introduction

Students in higher education have access to a full range of activities and services related to enhancing their college experience. One of these activities is the opportunity to participate in study abroad programs. Whether the student participates in a short visit to study an aspect of a particular culture or a full semester of study at a university in another country, this is an experience that is unique, interesting, and irreplaceable.

Why would any student want to study abroad? The obvious answer might be “to see the world.” Yet, there are also other reasons such as enriching one’s educational experience, widening one’s horizons, improving one’s employability, and perhaps even to enhance one’s self-esteem and confidence.

Most of these issues are clear, but some people might question how studying abroad would enhance one’s employability. The reality is that today we live and work in a global society. Students who have studied abroad have a richer understanding of the world at large, the diverse cultures and languages that make up the global society. By being aware and understanding different languages, cultures and traditions, students gain skills which readily transfer to employability.

Types of Study Abroad Programs

Study abroad comes in many forms. Many people think of it as simply going across an ocean to a new country to study for a year at a university. While this may be one type of experience that a student may have, there are also other forms such as “cluster programs” wherein students are taught in clusters away from the host institution’s students. In another form, international students are taught in fully integrated programs where the students take classes with host students, in the language of the host country. In still another version, students study at partner institutions for a summer, semester, or even a year. Finally, there are short stints – perhaps two or three weeks – wherein the study abroad is a component of the student’s home university curriculum and is taught by the university’s own faculty who travel abroad with the students.

Study abroad programs may be administered by the student’s institution, and course may be led by that institution’s faculty. However, there are international programs which originate as part of an organized consortium, not the student’s home institution. These third-party providers may be other schools or private companies. They may offer a greater variety of schools and countries from which to choose.

Laws in the United States

There are several U. S. laws address civil rights, disabilities and access that may be applicable to study abroad programs. These laws include the Civil Rights Act of 1964, the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990.

The Civil Rights Act of 1964 provides that “All persons shall be entitled to the full and equal enjoyment of the goods, services, facilities, and privileges, advantages, and accommodations of any place of public accommodation, as defined in this section, without discrimination or segregation on the ground of race, color, religion, or national origin.” It served as the cornerstone of future civil rights legislation such as the Rehabilitation Act and the Americans with Disabilities Act. The Civil Rights Act (CRA) Amendments Act of 1991 amended Title VII of the Civil Rights Act of 1964 and Title I of the Americans with Disabilities Act of 1990 to cover Americans employed by American-owned or American-controlled companies outside the United States. This is important because it creates precedence for the extension of U. S. laws abroad.

The Rehabilitation Act of 1973, as amended, states any institution receiving federal funding, directly or indirectly, may not discriminate against individuals with disabilities. This means that almost all postsecondary education programs must make education accessible to persons with disabilities. Federal grants to universities and financial aid to students are sufficient to qualify the educational institutions under the Rehabilitation Act. Section 504 is most frequently referenced when discussing the Rehabilitation Act.

The Americans with Disabilities Act of 1990 was signed by President George H.W. Bush on July 26, 1990. This law has been heralded as the most important law for persons with disabilities in America. The Americans with Disabilities Act of 1990 forbids discrimination against individuals with disabilities. Both private and public universities are covered by ADA, under Titles II and III, respectively. There is no mandate that the facility receive federal funds to comply.

Application and Interpretation of U. S. Laws

In 1992, the Office for Civil Rights (OCR) ruled that the College of St. Scholastica, in Duluth, Minnesota, was obligated to provide a sign language interpreter to go abroad with a deaf student. The student was participating in the college's study abroad program in Ireland. In the St. Scholastica case, OCR ruled that the Rehabilitation Act applied. It went on to state that the college received federal funds and was, therefore, prohibited from keeping a student with a disability from participating in its programs, including study abroad.¹

On December 3, 2001, the Office for Civil Rights ruled that Arizona State University did not have to provide an interpreter for a deaf student who wanted to participate in a study abroad program at the University College, Cork, Ireland. In its letter to the president of Arizona State University, OCR wrote that, "We have concluded that the University's refusal to provide and or pay for interpreter services for the complainant while participating in the Study Abroad Program in Ireland is not prohibited discrimination."² When OCR ruled in favor of Arizona State University, the student decided not to participate in the program. It is worthy to note that this program was actually operated by Butler University, not Arizona State University. This may have been a factor in the OCR ruling. Kanter notes that the decision only addressed a prior court decision in Equal Opportunity Employment Commission vs. Arabaian American Oil Company (Aramco) which ruled that U. S. laws do not apply extraterritorially.³ Nowhere in the letter to Arizona State University was any mention made of the rights and protections provided under the Rehabilitation Act and the ADA.

The Bird vs. Lewis and Clark College case involved an American student who attended an American university's overseas program, taught by American faculty.⁴ The courts found that since Lewis and Clark College received federal monies, the school was obligated under Section 504 of the Rehabilitation Act to provide an accessible program. The court found that even though the program took place overseas, the application of U. S. laws still applied while abroad. This decision echoed the decision made a decade earlier in the OCR ruling regarding the St. Scholastica case.

Providing an Accessible Study Abroad Program

While students who are deaf or hard of hearing in the United States have come to expect accessibility to mean provision of the appropriate auxiliary services, such services may not be available in the country in which the student is studying. In some situations, for example, the provision of an ASL interpreter may be very difficult, while having a captionist or an oral interpreter in England may be feasible. It should be noted that sign language differs from country to country. More over, it can vary from region to region in the same country.

In light of differing cultural values and laws, providing auxiliary aids and services abroad must be done within a creative context. It's also important to remember that services for students who are deaf or hard of hearing are ongoing services, not one-time solutions. Auxiliary services for deaf and hard of hearing students may include interpreters, notetakers, assistive listening devices, signal systems (lights), text devices for telecommunications, captioning, speech-to-text services, extended testing time, syllabi in advance and others. What works for one student will not necessarily work for others. The important thing is to ensure that effective communication occurs.

Historically, Deaf people have always found ways to communicate with other Deaf people

from another country. However, figuring out ways to communicate in a social situation is very different than the communication necessary in an educational setting. These are some questions that should be considered by both students and institutional staff.

- Are ASL, PSE, or Cued Speech interpreters available, or can a remote connection be established? If the interpreters are from the United States, who is responsible for paying for their services, travel, lodging, etc.?
- Does the student possess the English competency necessary to comprehend speech-to-text services? If so, are speech-to-text service providers available, or can a remote connection be established?
- Are assistive listening devices available? If so, does the student have enough residual hearing and speech discrimination to benefit from these?
- Does the student know the host country's spoken/written language? If so, would speech-to-text services be sufficient to meet the student's needs?
- Are there oral interpreters available? If so, does the student have strong lipreading skills?
- Does the student know the host country's sign language?
- Are notetaking services needed? If so, how will they be provided?
- How will communication during field trips or other out-of-classroom settings be handled?
- What happens during non-classroom time? How will the student interact with his peers or host family?
- Are the electrical and internet connections compatible with U. S. electronic devices? ALDs need to be charged on a regular basis.
- How is the need for visual alerting devices addressed in classroom buildings and residence halls?
- Will the student's pager/text messaging device work in another country?

Roles and Responsibilities

When working with students who are deaf or hard of hearing as they plan a study abroad program, it would be helpful to approach this as a team effort. The study abroad program advisor should encourage the student to identify priorities and issues, such as countries or cultures of interest, courses available, program cost, or languages. Flexibility in options may be a factor in a successful outcome.

In order to identify and provide appropriate auxiliary aids and services, students should be encouraged to disclose their hearing loss early in the application and planning stages. If the student does not reveal his hearing loss, there is no responsibility for the institution to arrange accommodations. Determining a student's accommodation needs and matching those with the proper international institution can prove daunting. The University of Minnesota <<http://www.umabroad.umn.edu/access/professional/index.shtml>> has an exemplary survey that can be most helpful to the advisor.

Ideally, staff from the study abroad program would also work closely with staff from the disability services office at the host university in sharing all appropriate information and planning auxiliary aids and services. The advisor should also design pre-departure information for the student; it can be shared with the host institution if the student signs a release form. In addition, it is important for the advisor to encourage the student to attend all preparatory

programming prior to departure.

Student Preparation

Student advance preparation is one of the most important aspects of planning and experiencing a positive, enriching international education experience. In addition to some of the questions listed in a previous section, there are other key points for students who are deaf or hard of hearing to remember. Students should:

- Inform the study abroad office of their interest in participating in the program as well as disclose their hearing loss.
- Identify more than one study abroad program that is of interest to them.
- Provide appropriate documentation about the hearing loss. Students with cochlear implants should be sure that information is included. Keep in mind the information may need to be translated to the host country's language.

Medical issues may need to be taken into consideration when planning for a study abroad program. Health care abroad will likely vary significantly from what is available in the United States. Students should:

- Make sure to have sufficient supplies of prescription medications needed while abroad.
- Determine if testing for tuberculosis, polio, HIV/AIDS, or other disease testing and immunizations are required prior to departure.
- Verify that any necessary medications are not on the list of banned substances in the host country. If they are, the student should work with the U. S. Consulate in that country prior to departure to resolve the issue.

Institution Financial Issues

As reviewed earlier, the Americans with Disabilities Act of 1990 (ADA) clearly states that an individual with a disability is not responsible for the cost of auxiliary aids and services. Institutions, however, need to address financial issues that may arise with students who are deaf or hard of hearing who are interested in studying abroad. Providing access for students who are deaf or hard of hearing is not a one-time cost, and a budget needs to be developed to reflect the various auxiliary aids and services needed by the students. Services to consider may include sign language or oral interpreters, speech-to-text services, notetaking services, etc.

In planning a budget, various scenarios can be explored. For example, what would the cost of speech-to-text services be if the services were purchased in the host country? How do these fees compare what the cost would be to send a speech-to-text staff member from the sending institution? As technology access increases, it might be worthwhile to investigate the cost and availability of using remote services via telephone or internet lines.

Since sign language is not a universal language, care should be given when arranging sign language interpreters. Although students may participate in educational programs in English-speaking countries, British Sign Language (BSL), for example is very different from American Sign Language (ASL). Consequently, it would be difficult to use a BSL interpreter in a classroom setting. The institution may consider sending interpreters from the U. S. to provide services. Some service providers are eager to have experiences abroad and may be willing reduce their usual fee for services to a lower cost in exchange for travel, room and board, etc. It may also be possible to identify qualified interpreters who already live near the host university.

Contacting the Registry of Interpreters for the Deaf may be helpful in identifying interpreters who may be able to provide services.

Student Financial Issues

The student is responsible for services and activities that are of a personal nature. This may include personal travel, meals not included as part of the program fees, and entertainment expenses. For a student who is deaf or hard of hearing, additional personal expenses might include hearing aids and batteries.

Supplemental Security Income

Some college students with disabilities are able to draw Supplemental Security Income (SSI). Students who study abroad can often maintain this source of income. The Social Security Handbook (2004, § 2116) states: "A student of any age may be eligible for Supplementary Security Income (SSI) benefits while temporarily outside the U. S. for the purpose of conducting studies that are not available in the U. S., are sponsored by an educational institution in the U. S., and are designed to enhance the student's ability to engage in gainful employment. Such a student must have been eligible to receive an SSI benefit for the month preceding the first full month outside the U. S."

This may seem that the student uses SSI to pay for access. In reality, SSI and vocational rehabilitation services are ways that the student may fund college and its related expenses such as housing, food, books, etc. Students who wish to continue receiving SSI benefits must ensure that the international exchange course of study is not available in the United States and that the study abroad program is sponsored by a school in the United States. In petitioning the Social Security Administration for continuance of SSI benefits, students should emphasize that a) participation is critical to the student's educational and vocational success; b) the student is eligible for SSI for the one month immediately prior to leaving the U. S.; and c) the student will earn academic credits towards a high school or college degree while abroad.

Vocational Rehabilitation

Every state has an office of vocational rehabilitation (VR) that may provide support for students with disabilities as they pursue training or education in preparation for employment. Although policies and practices vary among states, there have been some situations in which a state vocational rehabilitation office has supported a student in a study abroad. Examples include a) tuition, room, and board for a student who is Deaf to study Spanish for one semester in Costa Rica, and for one month of summer school in Mexico; b) program fees for a student who is blind participating in a summer educational program in Costa Rica; c) rental of a golf cart for transportation for a student using a wheelchair on a large university campus in Australia; and d) tuition, fees, housing, and books for a student who has a visual impairment to study for a year in England.

Many students who are deaf and hard of hearing are the beneficiaries of vocational rehabilitation services. Some students may be eligible for vocational rehabilitation funding while studying abroad. The student should work with the vocational rehabilitation counselor to demonstrate how studying abroad is directly related to his education goals, include study abroad in the rehabilitation plan, and provide a rationale as to how studying abroad will enhance employability after graduation.

Cultural Considerations

For all students interested in studying abroad, learning about and respecting the culture of the host country is extremely important. Each culture has its own expectations and norms. When a deaf student chooses to study abroad, she must work with her advisors to learn about the new culture and identify ways in which she can fit in.

Attitudes and cultural norms will often be different. For example, not greeting a host family verbally each morning, as is the custom, may cause the family to feel offended. For a deaf student who might not use her voice, greetings may be more visual, such as with a smile or a nod. Once a conflict like this is identified, it usually can be resolved easily.

In other situations, the ability to communicate through means other than spoken words may be an advantage to the deaf or hard of hearing student. Although some hearing students in the group may not be as comfortable using body language to communicate needs and issues, students who are deaf or hard of hearing may be able to by-pass language barriers by using gestures or pantomime to convey their wants or needs.

Students may be interested in meeting deaf or hard of hearing people from the host country. The World Federation of the Deaf may be a resource for identifying people who could become guides or supports during the stay. Other resources may include the National Association of the Deaf or the Hearing Loss Association of America (formerly known as Self Help for the Hard of Hearing or SHHH).

Resources

While there are many resources that address the typical student planning to study abroad, relatively few consider the issues faced by students who are deaf or hard of hearing. A well-established resource for students as well as faculty and staff is the National Clearinghouse on Disability and Exchange which is part of Mobility International <www.miusa.org>. This organization strives to educate people and groups about international exchange opportunities and provides a vast array of resources and information to assist students and service providers.

Several years ago, the University of Minnesota, through a FIPSE project, developed extensive materials to help staff from the study abroad and disability services offices encourage and support students with disabilities to experience the benefits of study abroad and ensure their success. Although the FIPSE project has been completed, the materials have been maintained on the University of Minnesota's Learning Abroad Center website at <<http://www.umabroad.umn.edu/access/professional/index.shtml>>. In addition to previously-mentioned tools to assess site accessibility, the website also includes guidelines for advisors, program promotion strategies, suggestions for student advisors, an overview of roles and responsibilities, and considerations for staying with host families.

Endnotes

1. Refer to *College of St. Scholastica*, 3 Nat'l Disability L. Rep. 196 (Sept. 15, 1992).
2. Refer to *Arizona State University*, 22 Nat. Disability L. Rep. § 239 (2001).
3. Refer to *Aramco*, 499 U. S. 244 (1991), superseded by Pub. L. No. 102-166 (1991).

4. Refer to *Bird v. Lewis & Clark College*, 303 F.3d 1015 (9th cir 2002)

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Increasing Campus Sensitivity: Building Deaf Awareness through Media and Meetings

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Abstract

Creating a campus environment where deaf and hearing individuals can work together effectively requires sensitivity to communication and an understanding and appreciation of cultural differences. Finding attractive ways to introduce these concepts to students and faculty who have had little or no prior exposure to deaf people is at times challenging. Designing educational strategies that provide people the opportunity to understand the needs and desires of each other has built bridges through increased sensitivity. Specifically, the use of cinema is a powerful vehicle for reaching out to these audiences. This session highlighted video clips from a film, “Being Deaf” and described how campus programs can use film to create opportunities for dialogue and learning. Additional print media, coaching practices, and interactive participation strategies that have been successful on our campus were shared.



The National Technical Institute for the Deaf (NTID) is the world's first and largest technological college for students who are deaf or hard of hearing. It is one of eight colleges of Rochester Institute of Technology (RIT), a privately endowed, coeducational university that is student centered and career focused. One of the unique features of RIT/NTID is that more than 1,100 deaf and hard of hearing students study, share residence halls and enjoy social life together with more than 14,000 hearing students. Working in the Student and Academic Services arena, we are often called upon to facilitate the interaction of deaf and hearing students, faculty, and staff. We have found that providing interactive learning experiences focused on enhancing understanding of communication strategies and developing sensitivity to deaf culture helps diverse groups function in a more effective manner.

As facilitators of deaf and hearing student interaction, we often think of ourselves as “environmental engineers.” We inspect the educational system and think about what may or may not be working. Are the bridges sturdy, do we need better foundations on the buildings? We need to think about altering educational environments to make them more conducive to student learning. When we are considering changing environments, we need to be cognizant that we do this work with and through people. Often it requires first changing the hearts of people, before you can begin to expect changes in practices and behaviors. All of this requires extra work. So as

“environmental engineers”, our role is to inspire other people to do the right thing. People want to do the right thing, but sometimes they don’t know how. Some of the examples below demonstrate strategies we use to enhance awareness and sensitivity on our campus.

As a way of demonstrating an example of the interactive learning experiences provided to students, let us highlight a sports team orientation. Before the season begins, we work with coaches to schedule a team-building session. We start the interactive program without voice, forcing people to move out of their comfort zone for a few minutes. Interestingly, the athletes manage to understand a good proportion of the presenter’s message. Questions about how participants understood the information that was presented led to insights about the importance of body language, lip movement, facial expression, and environmental context. Next team members learn the manual alphabet and some basic signs that would be used later in the workshop. An interactive activity designed to use body language and the signs they just learned in an effort to communicate without voice helped them to understand the communication challenges between hearing and deaf people. At the conclusion of the activity a discussion was held to process the experience and talk effective communication/strategies that can be used during the season. Interestingly, the increased awareness propelled many athletes to sign up for sign language classes. Coaches commented that the workshop “leveled the playing field” and that the deaf and hearing athletes were much more open with each other following the activity.

An additional strategy we have employed on our campus takes place during the new student orientation. We negotiate to have time on the orientation program to focus on deaf and hearing interaction. A film depicting deaf and hearing interaction and attitudes on the RIT campus, “Two Worlds” is shown. The film itself is quite realistic and shows that some students are open to interaction while others (including faculty and staff) are not. The film is followed by a discussion led by deaf and hearing student facilitators. Again this is an awareness building exercise and many new students then register for sign-language classes and Deaf study courses.

Another powerful media opportunity is the use of the DVD, “Being Deaf.” This film was made to inform people about aspects of deaf culture, diversity within the deaf community, traditions, values, beliefs, and Deaf pride. Deaf and hearing people share their personal experiences and views in this portrayal and celebration of their various accomplishments. Much of our PEPNET session focused on showing the DVD clips and discussing how these clips might be used in sensitivity and awareness training programs as well as other classroom applications. Controversial issues are purposefully portrayed in the film to stimulate discussion. Viewing the film can assist in enlightening and bridging deaf and hearing communities as well as taking the “dis” out of disability. Starting this fall, all incoming RIT students will view the DVD as part of the global awareness component of the First-Year Enrichment curriculum. To request a copy of the DVD, please contact Jan Strine: <JNSDHD@RIT.EDU>.

As you begin to look at how to improve access on your campus for deaf and hard-of-hearing students, you will want to cultivate your allies. Who are the influential people on your campus? Who might be open to helping improve the campus for both deaf and hearing individuals? It is often important to get administrators on-board. Look at the overall systemic efforts on your campus and where you can have an impact. Integrating Deaf awareness programs in established campus activities like Orientation, First-Year Experiences, Faculty Development, and diversity programming can be very effective.

Getting deaf awareness on the faculty’s agenda can be a challenge. Often the strategies that facilitate the classroom success for deaf students also enhance the experiences of all students. We often recommend that faculty and staff reference the Class Act web site

<<http://www.rit.edu/~classact/>> to gain additional information on facilitating learning for both deaf and hearing students.

The “Learn and Earn” program has been another successful strategy that we’ve used on the RIT campus. In this effort, our campus fitness facility student employees are paid for the hours they attend sign language class. The RIT Center for Intercollegiate Athletics and Recreation makes this a priority and budgets accordingly. When these student employees go to other deaf awareness programming, they also receive merit pay. The department is motivated to employ this strategy because when their employees use sign language it eases communication and demonstrates a commitment to deaf student access and improves the interactions deaf users have while using the fitness facilities.

In conclusion, by integrating strategies like these into established university practices, deaf and hearing members can begin the process of learning about and appreciating the contributions each has to make to the goals of the college. Initiatives for enhancing learning for deaf and hearing students do not happen by having one workshop or program. Making systemic changes takes constant vigilance and cultivation. As “environmental engineers”, we must lay the foundation properly so that each additional building block is part of our comprehensive campus design for enhanced access and understanding.

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The Future Starts with You – Accommodation and Students with Hearing Loss

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Abstract

Supporting students who are deaf or hard of hearing is a challenge facing many post-secondary educational environments. This paper reports the results of two research projects, *Accommodating Students with Hearing Losses in Post-Secondary Settings*, conducted for Specialized Supports and Disability Services (SSDS) at the University of Alberta, Canada and *Accommodating Learners with Disabilities in Post-Secondary Education in Alberta: A Review of Policies, Programs, and Support Services* that examined the experiences of learners with disabilities in post-secondary settings in Alberta, conducted for Alberta Learning. Research participants had an opportunity to explore what is working well for them, and to identify the gaps that need addressing in order for institutions to offer an equitable and accessible education. Service providers identified their challenges, successes, and recommendations for making the post-secondary environments accessible.



Introduction

During 2004 and 2005, two studies were undertaken; one specifically examined the experiences of deaf and hard of hearing students, and the other examined the current status of accommodations for post-secondary students with disabilities. This paper summarizes the data from the *Accommodating Students with Hearing Losses* research, and where appropriate, includes data from the broader study. We begin by reviewing the legislation that propels the accommodation policies within the post-secondary system for students with disabilities.

Legislative Background

In 1982, the federal government of Canada created the *Charter of Rights and Freedoms*¹ in which it is stated that all individuals deserve equal treatment before and under the law, and equal protection and benefit of the law without discrimination. While the Charter gives an overview of the rights and freedoms shared by Canadian citizens, each provincial government also has its own document that details the specifics of those rights and freedoms. In 1998, the Alberta government created the *Human Rights, Citizenship and Multiculturalism Act*² to foster equality for, and to reduce discrimination against Albertans. In 2004 the *Duty to Accommodate Students with Disabilities in Post-Secondary Educational Institutions* bulletin further specified that education is a service and that students with disabilities have the right to its full access.

Research Methodology

The *Accommodating Students with Hearing Losses in Post-Secondary Settings* study was conducted at four major post secondary institutions in Alberta that are currently serving deaf and hard of hearing students. A review of the literature regarding the forms of accommodation for deaf and hard of hearing students was completed prior to conducting focus groups and individual interviews with students and service providers. A total of fifteen students participated along with four service providers. The provincial study also included deaf and hard of hearing students through focus groups conducted at 13 post-secondary institutions. A total of 142 students participated in the provincial-wide study.

Across both studies, the demographics revealed that fifty-nine percent of the participants were female and forty-one percent were male. The age range was between 18-48 years, with an average age of 26 years.

Research Results: Students

Overall, students in all focus groups agreed that there are many aspects working to help them in obtaining their post-secondary education. Within the Disability Support Offices, counsellors do their utmost to support learners with disabilities, including offering psychological support in time management, dealing with anxiety, enhancing self-esteem, improving concentration, etc. Without these key personnel, students doubted that the institution would be able to accommodate them effectively. Deaf and hard of hearing students at the post-secondary level are aware that they can receive accommodations if they need them and are generally satisfied with the level and variety of services available. They also feel that the accommodations services they receive do not negatively affect their grades, however the participants were unsure if the supports affect their grades in a positive manner.

These students are also satisfied with their exam accommodations. Most do not use exam accommodations, and take their exams in the regular classroom using their regular communication supports. The students report that their instructors and programs are generally supportive of their accommodation needs if the instructors feel the students can be successful within their chosen field.

In terms of financial supports, the application process for Disability Resources Employment Services (DRES) has improved and there appears to be greater coordination and collaboration between post-secondary institutions and DRES. DRES can support a learner with a disability for up to \$75,000 per year, which is necessary to cover the expenses of interpreters and/or CART.

The increase in supports and the level of disability awareness has increased over the past five years partly because the *Duty to Accommodate Bulletin* provides a framework for institutions. There has been a corresponding improvement in adaptive technologies that support students, such as CART, Audi-See, and text messaging.

However, there are a number of areas within the post-secondary system that are not working well for the students. Most deaf and hard of hearing students are only generally aware of their accommodation rights, and are generally unsure of how it affects them educationally and for their future employment. It has been noted that some students are passive recipients of accommodation services and do not actively seek to understand accommodation processes unless an inconvenience arises.

Some deaf and hard of hearing students are also unfamiliar with the full range of communication technologies available to them. None of the participants mentioned using voice recognition software. This may be because traditionally it is an accommodation technology used by the visually impaired or blind. It may also be due to the fact that students don't recognize how they could use it to their benefit. While voice recognition software must be trained, it could be beneficial if the student had the same instructor more than once. Most students identified the need for wireless technologies, such as personal digital assistants (PDAs) and laptops to help them communicate with their peers and instructors through text messaging. If students want access to these specific technologies, they are expected to cover the costs.

Some students report that within certain programs, such as nursing, where it is believed that hearing is a requirement, some instructors create barriers through an obstructionist attitude and discrimination. Some programs also require field and practicum placements. Accommodations within this area are still an issue as institutions work out the details of accommodations for off-site placements.

Some institutions have eliminated the position of Disability Service Provider and are providing accommodation services through the Office of the Registrar or regular Counselling Services; however, these services do not have the specialized skills and knowledge to deal effectively with students' accommodation needs. This trend is reflected in the Delivery Centres, referred to as Canada Alberta Service Centres. Bureaucracies in the Canada Alberta Service Centres can be overwhelming to potential learners and end up providing very little support to students with disabilities. This problem is compounded by the difficult transition from high school to a post-secondary institution. As a result, students must determine how to make the transition to university or college on their own with the help of family and friends.

Added to this are the financial challenges that create systemic barriers for students who do not qualify for support through student loans. After working through layers of bureaucracy and requirements, many students report "giving up" on the goal of attaining a post-secondary education based on these barriers.

The Student Finance Board can add to this financial pressure because they will not fund a student with less than a 40% course load. They also insist that the student complete their program within five years. This can cause difficulty for a student who finds a full course load exhausting, especially if they have another disability other than hearing loss.

To receive accommodation services, many learners with disabilities must provide educational/psychological assessments. Most deaf and hard of hearing students are the exception to this rule, but occasionally they do need assessments completed if they wish to apply to DRES for funding for adaptive technologies, such as hearing aids or if they have another disability, such as a learning disability.

These assessments are expensive and at times must be paid by the student, and there are inconsistencies in wait times for assessments. Some students report a quick turn-around time; others report waiting one year. There are also too few psychologists who can perform the specialized range of assessments that are necessary to evaluate a student with disabilities in a post-secondary context. For deaf students there are limited numbers of psychologists who possess sufficient sign language skills to conduct the assessment themselves, which means using interpreters.

Finally, there is also a shortage of qualified support personnel in other areas, such as interpreters, real-time captionists, and qualified tutors in academic and/or technical areas. If students need to access other services, such as counselling, the professional is often lacking

background knowledge and/or sign language skills, and is not equipped to communicate with deaf and hard of hearing students.

Research Results: Service Providers

Overall, service providers agreed that there are many aspects that are working well for students who are deaf or hard of hearing and obtaining their post-secondary education. Service providers' understanding of the needs of deaf and hard of hearing students are reflected in the fact that these students are generally satisfied with their communication and technological accommodations. Sometimes there is the need for the student to experiment with different communication and technological accommodations. But once the student decides their preference, he or she is capable of being successful in his/her program of choice.

There has also been a general increase in acceptance of learners with disabilities in the post-secondary setting and a corresponding increase in faculty knowledge of Disability Support Services, and their duty to accommodate. As more and more instructors become aware of their duty to accommodate, they try to develop inclusive practices within their classrooms and courseware. Because they have very little or no exposure to disabilities, they can become very creative and develop new and flexible ways of teaching, which can positively impact the accommodation process.

The post-secondary institutions have accommodation policies that document their commitment to supporting learners with disabilities. Every public institution either has a centre for learners with disabilities or very supportive counsellors. In the spirit of this commitment, the provincial list serve allows all service providers in post-secondary settings, DRES, and Alberta Human Resources and Employment (AHRE) to communicate with one another and share information. Bi-annual meetings allow service providers to implement research activities and applications that work well for Alberta institutions and learners with disabilities. Increased information sharing has impacted both service providers and learners with disabilities in very positive ways, leading to more student self-advocacy and community advocacy. Increased numbers of learners with disabilities are self-identifying and advocating for the supports they require in order to be successful in a post-secondary setting.

Service providers point out, however, that there are many aspects that are not working well. For example, CART is still a relatively new technology in an educational context and exactly how and when it should be used is still being studied. Some institutions in Alberta and British Columbia have conducted pilot projects on the use of remote CART. The ethics and the legal aspects of using transcripts is something that also must be further explored. Further exploration is also needed for exam accommodations. The degree of exam accommodations and when they should or shouldn't be provided is not well understood and can be a source of frustration for service providers.

Service providers also report being frustrated by financial issues. They note that there are inconsistencies in funding across provincial institutions. As a result, while all service providers would like to consistently apply the same standards to all accommodations, they are unable to do so. Generally speaking, large institutions in urban settings have the most money, meaning that accommodation services in rural and small colleges often suffer from a lack of funding. As a result, qualified interpreters or captionists are difficult to secure in rural or small post-secondary institutions. This creates barriers for students who wish to attend a rural college/university that may be the only institution offering the unique program of study that they wish to take.

Furthermore, many educational intuitions, faculty, and instructors don't understand the difference between accommodations and lowering of academic standards. Too many individuals believe that accommodations yield lowered academic standards, especially when dealing with the literacy issues that can be common for some deaf and hard of hearing students. Many instructors also do not understand how communication and technological accommodations work for the student. There is a misperception that accommodations remediate the hearing loss. There is also the misperception that online learning is assessable to all, and that accommodation services are not needed for these courses.

Unfortunately, accommodation needs for learners with disabilities have not been carefully considered in the development of these courses and software. In text-laden online courses, some deaf and hard of hearing students have issues with understanding course content and following and participating in online discussions. Most audio information is also not captioned.

The transition from high school to a post-secondary institution is difficult due to inconsistencies in accommodation standards. It creates confusion for the student and hinders the accommodation process. Students who come from the high school setting do not necessarily realize that what worked for them in terms of accommodations in high school may not be appropriate or may be unreasonable in the post-secondary setting. They can have difficulty in adapting to the expectations of independence, isolation, and large class sizes found in post-secondary settings. For example, a FM loop may not work well in large lecture halls and the student may not have had access to CART in the K-12 system, so he/she does not know to ask for it. Students may have had aides who helped them too much in the K-12 system, and as a result, they expect interpreters to provide this kind of support at the post-secondary level.

Adding to inconsistencies in accommodation services is the lack of trained support personnel such as tutors, adaptive technology trainers, interpreters, and captioners. There are also few chartered psychologists who know how to do fair, balanced, and useful assessments for learners with disabilities in a post-secondary setting; especially when working through an interpreter.

Increased demands on resources and complexity of student needs lead to inconsistencies in accommodation services and job stress, fatigue, and illness among service providers. There is a need for more funding for resources, such as assessments, adaptive technologies, and qualified staff, as well as increased resource sharing with small and rural institutions in order to deal with the needs of complex learners.

Recommendations

Disability service providers need the resources necessary to manage the increased number and increased complexity of learners coming to post-secondary institutions. Where there is a need for specialized skills services for students with disabilities it could be contracted out. This includes the use of remote CART and/or remote interpreting and the need for qualified tutors who can work with learners with disabilities in highly technical and academic environments. Tutoring processes need to be streamlined so that students have access to assistance prior to "failing their first exams."

Service providers need to ensure that students with disabilities understand their rights and responsibilities regarding accommodation processes in post-secondary settings. With this understanding, students can be effective self-advocates. Exploring new technologies combined with adequate guidance from service providers can help deaf and hard of hearing students to make effective technological choices that will improve their post-secondary experience.

Increased technologies means that service providers need to educate DRES and other funding agencies about the need for PDAs and laptops that allow students to access wireless technologies on campus and use text messaging for effective communication with instructors and peers. The education of funding agencies must address the need for appropriate accommodation services for field placements and practicum placements.

Post-secondary institutions also need to educate their faculty, sessional instructors, and administrative personnel so that they can more effectively work with diverse learners. Instructors need to be given the knowledge and the tools to help them develop inclusive classrooms and courseware. For example, all online courses should be developed from the outset with universal design principles so to make the course accessible to all types of learners. Implicit within this training is the need for faculty to understand that accommodations are an attempt to level the playing field for learners with disabilities, and that they do not give the student an “unfair advantage” or alter the academic standards.

To avoid issues of unfair advantage, exam accommodations for deaf or hard of hearing students need further research to develop effective guidelines for service providers. There also needs to be guidelines established on how to manage CART while taking into account a student’s needs and the academic rights of faculty members. This should include training in ethics for service providers, and the use of transcripts among students. The use of remote CART should also be explored in order to facilitate resource sharing with the institutions that do not ordinarily have access to CART.

In the spirit of equal access, there is a need to follow the precepts of universal design in all areas. This includes ensuring that buildings, classrooms, and labs are accessible, and that safety requirements, such as mandatory flashing alarms in labs, are not neglected. It also means examining policies that are discriminatory towards deaf and hard of hearing students. Implicit within universal design is the need to recognize that access to post-secondary institutions should mean complete access, including out of class events and extra-curricular events. It is often at these events that students create networks that offer social support, lead to employment and access to other opportunities, and yet deaf and hard of hearing students rarely have access to interpreters and CART for these events.

The field of disability is complex and ever-changing, and the disability support providers who work with learners with disabilities need the specialized skills and knowledge to support these learners. Where the Registrar’s Office and/or Counselling Centres are being asked to take on the responsibility, disabled learners are experiencing great frustration dealing with service providers who lack the training needed to understand the nature of disability support and accommodation.

Conclusion

In Alberta, all post-secondary institutions are guided by the *Duty to Accommodate Students with Disabilities in Post-Secondary Educational Institutions*. Despite this, there are no set guidelines that state exactly how deaf and hard of hearing students should be accommodated. Ultimately, there are ambiguities in the current policies, and the details of providing accommodations are left up to service providers. As a result, service providers are advocating for further research into this area to help them to determine best practices.

Endnotes

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From Roots of One to the Wings of the Team

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Abstract

There has always been a need for an effective scheduling system for educational institutions. The University of Minnesota has gone from the roots of having a sole scheduler to the wings of a group scheduling process that fills that need. Utilizing a round-robin style of selection, service providers are able to set their own schedules, capitalizing on their strengths. This article describes an innovative scheduling process in full, providing detailed information about this process and how it can be applied other institutions.



Historical Perspective

Historically, the Interpreter Coordinator at the University of Minnesota scheduled all assignments, both on-going and daily needs. The staff grew from only one staff interpreter in 1991 to 19 interpreters and four captioners in 2006. Is having the Interpreting/Captioning Coordinator or Scheduler distribute all the work successful? Yes, and it is probably the most predominant method of scheduling at institutions around the nation.

At the time this process was developed, the interpreters didn't feel they had ownership of their schedules. In 1991, for example, interpreters would get a call on the Sunday night before the first day of school that indicated their schedule that started the next day. Interpreters felt a need for ownership and started developing a prototype group-scheduling process on their own.

Process and Scheduling Committee

After working through the initial brainstorming ideas related to the process, the interpreters asked if the administrative part of the unit would be involved as well. A committee evaluated and assessed what was occurring in the unit and how this process would impact business on a daily basis. This committee was comprised of the Interpreting/Captioning Unit administrative team (the Assistant Director of Disability Services, the Interpreting/Captioning Coordinator, and the Interpreting/Captioning Scheduler), four staff interpreters, and two captioners. Regular meetings were held during the academic year to discuss what was working well, what was still missing, and what needed to be changed in the process.

This committee discussed ongoing issues related to general scheduling concerns and work to improve policies and procedures related directly to scheduling day. The group also took on the task of distributing, collecting, and disseminating a survey related to all aspects of the scheduling day.

If everyone participates in the process of scheduling, it takes away the mystery. This method of scheduling was more palatable than giving schedules to service providers a few days or a

week before the semester began. Among the staff members, the process also created cohesion, empowerment, a sense of belonging, and ownership over their own schedules. Group scheduling encouraged teamwork and created peer accountability during the process and beyond.

Service providers found they had more flexibility in scheduling because they could choose their own starting and ending times based on the work available. By having the privilege of selecting their own schedules, satisfaction increased for the service providers, which led to greater satisfaction among deaf consumers. The process also contributed to greater accountability as the service providers became responsible for their own schedules. The interpreters or captioners knew their strengths and weaknesses to related subject areas, consumer styles, and most productive time of day.

Consumer Confidentiality

In implementing this process, one big concern was consumer confidentiality. The interpreters adhere to the RID Professional Code of Conduct. The captioners adhere to the C-Print Captionist Code of Ethics. In addition, the group has an "in-house" confidentiality policy, which is included below.

University of Minnesota
Interpreting/Captioning Unit

In-House Confidentiality Statement

With respect to confidentiality, Interpreters must adhere strictly to the NAD-RID Professional Code of Conduct, as established by the Registry of Interpreters for the Deaf and the National Association of the Deaf. Captioners must adhere strictly to the C-Print Captionist Code of Ethics, as established by the National Technical Institute for the Deaf.

Interpreters and captioners should feel free to discuss student/consumer information with the Interpreting/Captioning Coordinator (ICC) and/or the Assistant Director (AD) of the ICU.

Issues that should be discussed include:

- Communication problems
- Difficulty meeting student/consumer needs
- On-going pattern of no-shows/absence without notice
- Any problem that the Interpreter is unable to resolve directly with the student/consumer.

Interpreters and captioners should use their professional judgment in sharing student/consumer communication preferences with another interpreter or captioner who is assigned to that student/consumer. This does NOT include the student/consumer's interpreter or captioner preferences. Information regarding the student/consumer's interpreter or captioner preferences should not be discussed within the unit other than with the AD or ICC.

As a general guideline, some issues that should be discussed with the Assistant Director or the Interpreting/Captioning Coordinator include:

- Communication problems;
- Difficulty meeting student/consumer needs;
- An on-going pattern of no shows/absences without notice; and
- Any problem that the service provider is unable to resolve directly with the

student/consumer.

When trying to determine whether or not to talk with someone about an issue, consider these questions:

- Why do I need to share this information?
- With whom should I be sharing this information?
- With whom should I not be sharing this information?

How it All Comes Together

The scheduling process will now be explained from beginning to end. Much happens behind the scenes prior to the actual scheduling day. First, a letter is sent to the students and staff/faculty members soliciting their enrollment summaries and on-going needs for the semester.

Upon receipt of consumer needs, information is put in folders that are not accessible to the general public. The reason for these folders is for the service providers to see what work is available. After that, they are able to start drafting a skeleton schedule for their semester.

How many times have these draft skeleton schedules actually come true in the end? The interpreting staff members start the day with what they like and a sense of where their skills fit in with the classes offered. However, by virtue of the process used, they don't usually end up with that exact skeleton schedule. Next, the "match/not a match" list is distributed to the service providers. This process will be explained later. Basically, the list answers questions as to who is a good fit to work with which consumers, and vice versa.

Next, the committee takes on the responsibility of preparing for scheduling day. They meet as a group to identify what areas of change they will implement. They type the consumer schedules into wall signs. They gather all the needed supplies, such as pencils, markers, dice, and blue masking tape that won't peel the paint off the wall. We set up the tally board and bring campus maps for use as a reference. Tables and chairs are arranged so everyone can see each other and also see the scheduling wall. Roles for the day are established. Who will be the facilitator? Who will keep track of the tally board?

After the scheduling day is completed, the schedules are entered in 4D, a computer program that has been used for four years. This product is being developed for sale to other institutions; additional information about it is available from the staff at the University of Minnesota.

Matching Consumer Preferences

We remind ourselves why we are all here, which is to meet the individual needs of the consumers that we serve to the best of our ability. The main goal of our unit is to serve our consumers. Their preferences do matter!

“Match/Not a Match” List

How are these lists developed? In the past, if there were student/interpreter issues and the student asked us to send a new service provider, the request would be honored. However, that didn't seem fair to anyone--not to the deaf consumer nor to the service provider. If we are not providing services to the consumer's satisfaction, most often it is because the expectations are not clear between the parties.

Consequently, a new process was developed in which the student could let us know

specifically about what is not working. We provide the feedback to the service provider directly. We tell the student when the feedback has been given and let them know that the service provider will be coming back into the classroom to implement the feedback. Communication is the key. In almost all situations when the service provider has been provided the feedback and given the opportunity to implement it, the problem has been solved.

As a result, the “match/not a match” list was born. The Interpreting/Captioning Coordinator keeps a master list in a confidential location. Lists are updated each semester and disseminated to the service providers. These are for individual interpreters or captioners eyes only, to use on scheduling day. They can also use the list to figure their skeleton schedule in advance. That has been very helpful. An example of this is included below; the names have been changed to maintain confidentiality.

Hilary Messner	Match	Not a Match
Students-Active	Amber Bkrich (Specific Spring 05-How to Be Rich)	
	Rudy Boesch-2nd Pref	Rupert Boneham (straight tactile)
	Tom Buchanan	
	Colby Donaldson	
	Elisabeth Filarski-1st Pref	
	Richard Hatch-(Spring 05 specific Firemaking)	
	Jerri Manthey	
Students-Inactive	Lex van de Berghe	Alicia Callaway
	Susan Hawk	
	Jenna Lewis	
Staff-Active	Christy Smith -1st Pref	
	Tina Wesson	
Staff-Inactive	Ethan Zohn	

When a deaf consumer informs us of who they work well with, their names are put in the “match” column. A name cannot land in the “not a match” column unless the deaf consumer has followed the feedback process which was previously described. A name is not added to that column without the staff person knowing. Consumers can also make specific semester preferences, indicated in parenthesis.

Roles for scheduling day

It was necessary to develop a way during the scheduling process to select assignments while adhering to consumer preferences. There are four specific roles for scheduling day: (a) facilitator, (b) assistant director, (c) coordinator, and (d) scheduler. The role of the facilitator is to manage the overall day. One of the captioners will facilitate the interpreting scheduling day and vice versa. The facilitator could also request help from the “floating” staff member who does not take a regular schedule. This person will handle all announcements, monitor the time, control

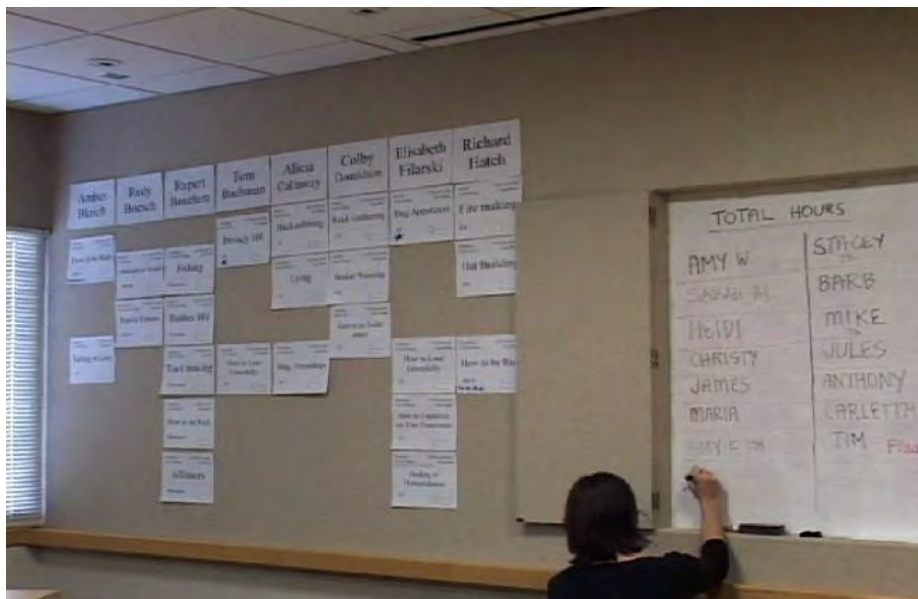
turn taking, read the wall signs so all know which assignment is being discussed, write the initials of the service provider who takes the job, and pass the wall sign on to the service provider so they can write down their information. This wall sign eventually ends up with the Interpreting/Captioning Coordinator and the Interpreting/Captioning Scheduler to cross-reference while entering information in the computerized scheduling program.

The assistant director oversees the day. This person works with all involved to make sure things run smoothly; he or she also answers questions, solves problems, oversees the master “match/not a match” list, and occasionally keeps track of the tally board.

The coordinator also oversees the day and works to make sure things run smoothly. This person informs the service providers of any specific information regarding the consumers’ language, or communication preferences, tracks the assignments filled, and oversees the “match/not a match” list. The scheduler assists the coordinator with his/her duties for the day and tracks all assignments as they are filled.

Wall schedules

The room is arranged so staff members can see the consumer names across the top of the wall, the times down the side of the wall, and the classes listed underneath the names, in time order. The photo included below shows this wall.



This is a sample of the generic wall sign:

Day(s) of week Time	Room # & Bldg. Campus
Class Name	
Consumer's Initials	1. _____ 2. _____

This is a sample of a specific class using the wall sign:

M/W/F 8:00-8:50 a.m.	30 Brown Hall East Bank
Fire making	
RH	1. _____ 2. _____

Starting the day

The facilitator starts the day with some general comments and reminders. The transcript of the video illustrates the process.

Facilitator: Let's start this process. Keep an open mind; keep side conversations to a minimum. Let's go through the match/not a match class list. If you are a match for the spear fishing class, when the first slot is filled, the second slot is open to anyone if you are not on the 'not a match' list.

Another unique thing is starred classes. That means that Jenna has requested specific interpreters. This class is only open to the people with a star on their match list first. You will know that you are specifically preferred for that because her name is in parentheses on your list. If the preferred interpreter is not available, it goes to the general match list, and then slot 2 is open. Questions?

Think about travel and lunchtime. Think about how many hours you have in comparison with other people and think about your comfort and skill level with this class. Suppose we start here with Heidi and we will do that until we get classes filled or break time. You can self-monitor. Also, if it's time for break, we will start over with who will go next. It doesn't matter when your turn comes up.

Let's say Stacy is interested in Spear fishing. You can say you want to go for that class, and I will read the sign. That's on MWF at 1:45 on the East Bank. At that point, it's open to bidding. Do you understand how that goes?

Service Provider: What if I prefer a class and I don't get it?

Facilitator: You can wait until you go for another class. Everyone is available to bid for anything at anytime. If there was a lecture and lab combo, we try to have the same interpreters for both. That means if there are interpreters for both lectures and labs, they get priority of they are not on the not a match list. Consistency is very important. Questions? That's all if it's a discussion or lecture and recitation.

Each interpreter is responsible for your own schedule. I will pass this around and you can write down all the information you need for getting books. That information is listed on the back. Pass the information on to the scheduler. Questions?

Service Provider: I'm at .75 hours. Do I need to get a full 40 hours?

Facilitator: If you are a 40-hour interpreter, you will go between 25 and 30 hours and you will go for 20 or 25 hours of interpreting. Keep that in mind to see who has more hours because those won't have as many. Let's get started.

End

This is one way of starting the day. It may be changed to fit other institutions.

A tally board is used to indicate the number of interpreting or captioning hours a service provider has ongoing for the semester. It will also designate who the “floaters” are for the semester and will indicate if someone is 75% time, which means they would be vying for fewer hours than someone who is 100% time.

Each semester the scheduling committee also determines a “cap” amount of hours that any service provider can take before waiting for others to catch up. The cap was implemented from feedback from the survey and designed to create equity and balance in hours.

How do you build your schedule?

Schedules are built using a round-robin style of turn taking. Starting at the left side of the room, a staff person will pick a class of their choice. The facilitator reads aloud the class information. The first slot is open to people who are on the match list only, as a means of retaining consumer preferences. The second slot, if there is one, is open to everyone on the match list, plus others who are interested and available. If there is more than one service provider interested in the same assignment, all those interested will have an opportunity to “shake” for it. Dice are used to determine who gets the job since the group decided that would be the most equitable and fair means of breaking a tie. If only one person wants the class, he/she will get the class; the process will continue until the class is brought up again for the second slot.

What does this process look like?

This may be difficult to explain in a written format; however, the transcript of the video illustrates the process.

Facilitator: Stacey, you are next.

Stacey: Richard Hatch for Hut Building on Mondays 9:05 to 12:05.

Facilitator: This one is over in Green Hall, room 410, over on East Bank. It is a three-hour class so we need two interpreters. Who is on his match list that is interested?

Maria: I have a question. Is Green Hall near the West Bank?

Facilitator: Yeah, it is on that end of campus.

Maria: Okay.

Facilitator: I saw Heidi and Ardis and then Stacey you on his match list? Okay, why don't you three roll for that slot?

[rolling of the dice]

Heidi: Uno. Ardis: 5. Stacey: 6.

Facilitator: Okay Stacey. Then we will roll for the second slot, and we will open it up anyone that is interested as long as you are not listed on his not-a-match list.

Sarah: I am not on the match list, but I can bid for this slot right?

Facilitator: Yes. We have Heidi, Ardis and Sarah. Go ahead.

[rolling of the dice]

Ardis: 6. Sarah/Heidi: 4.

Facilitator: Okay so it will be Stacey and Ardis. I'll pass this around.

Sarah: I'll get the next one.....

END

This is an example of one bid for an assignment. We would continue in this manner until all work, that can be, is filled.

What if a consumer has a specific preference?

The transcript of the video illustrates how this is handled.

Facilitator: Maria, you are next.

Maria: I want the Monday, Wednesday, Friday with Elizabeth Filarski -- Bug Appetizers. I am interested in that one.

Facilitator: This one is in Brown Hall, Room 115 on West Bank. I see a star down here. So, is the person who has the star interested in the class?

Ardis: I am on her preference list. I am wondering if this class was a specific request.

Facilitator: Does it just have her name under your match list or does it say Bug Appetizers?

Ardis: Oh, I see I am not on the preferred list for that particular class.

Maria: I have the star.

Facilitator: Okay, so Maria you have the class.

END

It's possible that a staff member can go in with an idea of what his/her schedule will look like and come away with nothing that was originally selected. To combat that feeling of, "I got nothing I wanted," the "yellow sticky" technique was developed. Staff members can place a yellow sticky not with their initials printed on it on the wall sign of the one class of their choice that they really, really want. The only time we would roll for that assignment is if more than one person wanted that same class as their "yellow sticky" choice. At the end of the day, we hope everyone has one class that they wanted, even if they lost the rest of their dice rolls.

When the process is complete, if coverage needs are not being met, we gather around the table as a team to resolve any requests that have not been met. The service providers belong to a union; therefore, it is essential to also follow the union contracts in establishing any new processes.

As a team, the group also discusses situations in which there are multiple consumers in the same class. We try our best to match preferences and provide teams that can meet the diversity of the student needs.

Benefits and Drawbacks

The staff members have become empowered and have developed a sense of ownership over their schedules. There is better communication, and the staff members have learned how to be better team players. The staff has flexible scheduling, which can enable them to meet the needs of their personal lives. Peer accountability, a sense of belonging, being involved, and cohesion have developed among the entire unit as a direct result of this group scheduling process.

One of the drawbacks is that we need to find substitute service providers for any consumer requests made for the scheduling day. Another negative aspect is that student preferences are respected, but sometimes it isn't possible to fulfill every preference through this process. When this happens, we try hard to meet their preferences with any additional scheduling needs that they may have throughout the semester.

Loss of control was an issue for the administration when this started because service

Day(s) of week
D ~

providers set their own starting and ending times. Also, many staff members wanted to work long days on Monday through Thursday to have Fridays off. We developed a “Friday-off” cap to make sure the needs of the unit were being fulfilled.

Evaluation

After each scheduling day, staff members complete a survey to provide their feedback. Many changes have been implemented as a result. It is invaluable to fine-tune the process. In order to gather more meaningful feedback from consumers, we are also revising consumer feedback forms. Consumers are always welcome to meet with the Assistant Director and/or the Interpreting/Captioning Coordinator to solve any problems.

Adapted to You!

This group scheduling process could be adapted to anyone, except for institutions with a very large number of service providers. This process has been used with groups that include as few as two service providers and as many as 24 service providers. It can be used with staff interpreters first and then expanded for use with contract workers.

We are very pleased and proud of our group scheduling process, and we welcome your questions. You may contact us at <ICURequests@oma.umn.edu>. Staff members from the University of Minnesota are also willing to go to other institutions to help implement this process. Consultation is available by contacting us at 612-624-7338. We think this is a wonderful process to use and would love to see more campuses trying it out!

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Postsecondary Education Programs Network of Japan

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Abstract

Postsecondary Education Programs Network of Japan (PEPNet-Japan), a grant program of Nippon Foundation and supported by PEN-International, is a collaborative network among pioneer universities and colleges which provide effective services to Deaf or hard of hearing individuals. It is led by National University Corporation-Tsukuba University of Technology (NTUT), which is the only university for Deaf or hard of hearing individuals in Japan, and 12 partner institutions across Japan. The mission of PEPNet-Japan partner institutions is to develop the best support model for students who are Deaf or hard of hearing, and assist other institutions using know-how developed by them.

In this paper, after the sharing current situation surrounded students who are Deaf or hard of hearing, the process which PEPNet-Japan has been taken shape is cited. Based on this information, the role and mission of PEPNet-Japan will be discussed.



Current Situation of Postsecondary Education for Deaf or Hard of Hearing Students

In recent years, a great deal of effort has been made on enhancing accessibility to the students who are Deaf or hard of hearing in postsecondary educational institutions in Japan. More and more universities and colleges accept Deaf or hard of hearing students and provide better services. However, it is not yet enough. Before discussing the mission and role of PEPNet-Japan, it is important to consider the current situation of postsecondary education for individuals who are Deaf or hard of hearing.

In Japan, there are approximately 1,200 universities and colleges. According to the nationwide survey conducted by PEPNet-Japan, individuals who are Deaf or hard of hearing are enrolled in about 30% of the universities and colleges throughout Japan. This includes 237 institutions, or 287 institutions if we include the data for the past three years. However, only half of these institutions (132 institutions) provide support services to access information in their classes. One of the most common services is notetaking which is done by volunteer students who are trained as notetakers. In this survey, all 132 institutions that provide any kind of student service for Deaf students provide notetaking service. But interpreting and speech-to-text services are rather limited. Only 18% of institutions provide interpreting services, and only 14% provide speech-to-text services. However speech-to-text services are now expanding and we can expect that it will be one of the major services in the near future. Regarding the organization of student service systems, only 10% of universities and colleges have disability service office in their institutions, and less than five of them hire sign language interpreter.

Examples of student services available from institutions

Notetaking services. Notetaking services in Japan are much different from those in America. It is more like text interpreting using handwriting. The notetaker provides a text message by handwriting and deriving what the instructor says by summarizing meaning for meaning. Deaf or hard of hearing students usually sit next to the notetaker and use the notes as a real-time access service. Short-term training programs for notetakers are sometimes offered by the institutions. Most of notetakers are volunteer students in their institutions who are not in that particular class. Hourly based wages might be paid.

Speech-to-text services (laptop-to-laptop). Speech-to-text services are now expanding in Japan. More and more institutions which already have notetaking services have been considering starting speech-to-text service as another option for their students. In Japan the most common technology in using speech-to-text services is a laptop-to-laptop service that uses IP-Talk software. In this method, text chat technology is used and two or more people can type simultaneously to provide one sentence. Three or more laptops are linked by a local LAN: one for the student and the others for the operators. One operator types the first part of the sentence which is delivered by a speaker, and the second operator types the next part of the sentence. Thus these sentences are connected together and displayed in the student's laptop. Students can get much more information than normal typing and be able to access their class easily. Two or four operators usually work together in one class, and most of them are trained volunteer students, similar to notetakers.

Interpreting services. Although interpreting services are very important to ensure real-time access to classes for students who are Deaf or hard of hearing, they are still very limited in this country. No university or college has an interpreter training program in Japan, and only two programs are available throughout the country: one is in a two-year technical school, and the other is in a two-year vocational rehabilitation school. Although some universities or colleges provide interpreting services for Deaf or hard of hearing students, most of them use this service only for seminars which are likely to have interactive communication, and in which having support from notetaking services would not be successful. Therefore, only a few students can access interpreting services. Most interpreters are freelance interpreters who are registered in the region agency. Most of them do not have an opportunity to take specific training courses focused on postsecondary educational interpreting.

Establishment of PEPNet-Japan

Let us turn to the establishment of PEPNet-Japan. The first trigger in setting up PEPNet-Japan was the faculty development activity in April 2004 held by PEN-International supported by Nippon Foundation. In this faculty development activity, six Japanese people (three from NTUT and the others from three different pioneer institutions which provide advanced support service for students who are Deaf or hard of hearing) had an opportunity to observe the NTID support system and join the PEPNet 2004 conference in Pittsburgh, Pennsylvania. At that time, there were several institutions that had outstanding support services in Japan; some of them discussed establishing some sort of collaborative network among these institutions. But lack of communication between those institutions kept them apart and never gave them a chance to start up. That is why the attendance of delegations from different pioneer institutions had a great impact on changing the situation. After a ten-day faculty development activity, delegates from

pioneer institutions agreed to continue collaborative work to improve their practices and exchange information with each other, and then expand this connection into the collaborative network similar to PEPNet in America. As a result, they decided to establish PEPNet-Japan six months after the faculty development activity.

Mission and Projects of PEPNet-Japan

According to decisions from the first business meeting in October 2004, PEPNet-Japan is a collaborative network among pioneer universities and colleges which provide effective services to Deaf or hard of hearing individuals. It is led by National University Corporation-Tsukuba University of Technology (NTUT), which is the only university for Deaf or hard of hearing individuals in Japan, and 12 partner institutions across the country. The mission of PEPNet-Japan partner institutions is to develop the best support models for students who are Deaf or hard of hearing, and assist other institutions using know-how developed by them.

After a few months of discussing and reviewing the situation surrounding students who are Deaf or hard of hearing, PEPNet-Japan has addressed three major issues that all Japanese universities and colleges should look into:

- Volunteer-based support services which are currently adopted by many universities and colleges must be introduced into all of institutions which accept Deaf or hard of hearing students. This is the most fundamental and critical issue.
- Universities and colleges which currently provide volunteer-based support services must move into the next stage which provides a higher quality of access services.
- Partner institutions which already have advanced access services have to be a good model to other institutions as they introduce high quality services and experiment with putting new technology into practice.

Based on these issues, PEPNet-Japan has decided to work on three major projects as well as offering workshops, symposia, informational guides, and consultation to help postsecondary institutions improve the accessibility of their programs.

- Development of Japanese tipsheets
 - Develop a reference booklet on support for Deaf students applicable to Japanese universities, based on the tipsheets developed by NETAC.
- Development of curriculum and materials for notetaker training
 - Evaluate notetaker training programs currently provided in postsecondary education institutions, and develop audio-visual materials and curricula for successful training.
- Development of a manual on how to create and operate student support systems
 - Develop a manual that provides the know-how to structure a support system for Deaf or hard of hearing students at each institutions, including how to set up a support office, hire interpreters, etc.

These projects are mainly focused on first issue cited above. However since notetaking services or other volunteer-based services have rapidly spread throughout the country, it can be suggested that next project for PEPNet-Japan after these might be to standardize higher quality services in institutions, such as speech-to-text services or interpreting services. In addition to this, studies on video remote interpreting, evaluation and training of interpreters, and trial training of speech-to-text providers using voice recognition technology have been initiated by

some partner institutions as practices on the third issue. Since these studies can be a key to further progress, more effort should be emphasized in the future.

Conclusion

In Japan, establishing student services in each institution has been a significant issue for a long time. However volunteer-based support services have been rapidly increasing these days, and it became not impossible to make all of institutions provide some kind of student services to improve their accessibility for students who are Deaf or hard of hearing. Materials which PEPNet-Japan is developing can provide the impetus for making this a reality. However, as soon as these three projects are accomplished, the focus should be shifted into the next stage which focuses on higher quality services. Specifically, evaluation and training of interpreters is a very important issue as well as increasing number of institutions which hire interpreters as service coordinators. To address these issues, the expectation toward PEPNet-Japan has been increasing.

Acknowledgment

PEPNet-Japan is supported by PEN-International, a grant program of Nippon Foundation. The establishment of PEPNet-Japan was made possible largely through great deal of corporation by Dr. James J. DeCaro, the Director of PEN-International and Ms. Pat Billies, the NETAC Project Coordinator. I would like to acknowledge here the generosity of them and these organizations.

Appendix: Footprint of PEPNet-Japan

The major progresses of PEPNet-Japan are the following:

Year 2004

- April 14-25
 - The first faculty development activity at NTID and PEPNet 2004 conference
- May to September
 - Conducted a nationwide survey on student services for Deaf and hard of hearing individuals
- October 29
 - The first business meeting
- January
 - Publication of the report of American support system for students who are Deaf or hard of hearing

Year 2005

- January 4-8
 - Visited NETAC office and NETAC site in New York City
- January 28
 - The second business meeting
- March 13-24
 - Faculty development activity at NTID and NETAC New York site

- April 3
 - Exchange event for Deaf and hard of hearing students in the Kita-Kanto and Tohoku areas
- May 14
 - The third business meeting
- June 12
 - The first project operational meeting
- July 24
 - The second project operational meeting
- September 23
 - Symposium: “Toward the development of a postsecondary educational support network for deaf and hard of hearing students”
- October 7-11
 - Visited partner institutions by PEN-International board members
- October 8
 - The first PEPNet-Japan symposium
- October 9
 - The fourth business meeting
- December 16
 - Training seminar for service coordinators: “Support services in postsecondary educational institutions for individuals who are Deaf or hard of hearing:

Year 2006

- January 28-29
 - The fifth business meeting
- February
 - Construction of new website
- February
 - Started listserv service
- March 29-April 9
 - The third faculty development activity at NTID and PEPNet 2006 conference in Kentucky

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Combining Interpreting and Captioning to Make College Classrooms Accessible: Techniques and Technology

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Abstract

This workshop will describe how the use of interpreters to provide C-print® captioning in mainstreamed classes with Deaf/hard of hearing students at Miami Dade College has evolved over the five years since its inception. It will include information on the advantages to interpreters becoming trained as C-print® captionists; the students' perspectives on their use of the interpreter/captionist; the interpreters' perspectives on implementing both interpreting and captioning (sometimes both within the same class) and other applications of C-Print® captioning in a postsecondary institution. There will also be a demonstration of the technological enhancements now used to improve the captioning (especially in math and science classes).



When we were looking for a real-time captioning system at Miami-Dade College, Kendall Campus, we chose C-Print, because it was a system designed for Deaf students mainstreamed in hearing classrooms. It was also adaptable in its presentation. This adaptability allows the captionist to break from typing each word that is spoken (verbatim) and to condense and summarize what is spoken, using specific strategies. We found this seemed to help the students with lower reading levels and, surprisingly, to also help the literate students by taking the spoken discourse and converting it into captions that read like written discourse (as opposed to reading the text of spoken discourse). This appeared to make reading the text easier for both populations. C-Print is also relatively easy to learn and this makes it more expedient when training new captionists. It was also helpful that there has been financial support for training through PEPNet stipends.

We began by selecting our sign language interpreters to be our first trainees. Interpreters already have the processing and translation skills that are prerequisites for being good captionists. And because they can interpret, students who sign are comfortable in trying captioning services (for example, the students are not held to the service if they should change their minds or if a class is not conducive to real-time captioning). Students who sign are also free to use the captioning for receptive information and use ASL for their expressive communication (something not available to Deaf students who do not possess or do not choose to speak for themselves in class with captionists who are not interpreters).

In practice, since most of the students coming to us from mainstreamed settings have had no experience with real-time captioning in their classes, we give a demonstration of the service to all of our Deaf and hard of hearing students. Prior to receiving the captioning for the first time, we also give them choices as to what their captioning/notes could look like: outline form or verbatim-style; leave in or take out digressive comments; bolded or italicized vocabulary, assignments, announcements, etc.; headings added or not; include information written on the

board or not. We also offer them a choice as to what kind of expressive communication they will use: voice for themselves or sign and have the interpreter/captionist voice for them. Each Deaf student has the choice of interpreting or captioning for each course, as a separate decision. This gives both the staff person and the Deaf student the flexibility to switch over to the other service, should one or the other not provide the access that was anticipated. Because all of the staff are dually trained (or cross-trained) as interpreters and captionists, this doesn't pose any strain on the department coordinator should a student want to switch his/her services mid-semester.

No student is given both a captionist and an interpreter in the same class together. However, just because a Deaf student who signs has selected either interpreting or captioning for a particular course doesn't mean that they use only that one service for the entire class (or for the entire semester). As the students began to get comfortable with using the two services, they also began to be more sophisticated in their use. Responding to specific student requests, we began to combine the two services in some novel ways.

Lectures are easier to caption—because there is generally one speaker (and this makes it easier for the Deaf/hh student to follow the content in captions). In this way, even if the Deaf student signs, there may be vocabulary words or phrases that the student wants access to in print. Often the phrases and vocabulary from the lectures are what will be seen later on the tests and exams—so the captioned transcripts make excellent study tools for the Deaf students to review after the lecture.

But instructors don't always lecture for a full class period. At times, some instructors will break up the class into group discussions. Discussions are usually easier for the Deaf student to follow through interpretation. In this way, the student can follow multiple speakers and get more direct emotional feel of the discussion. If notes are desired—the student can ask a volunteer in the class to take notes on carbonless paper (or make copies of a group member's notes).

In classes with lots of information, board work, book work or computer activities, captions offer time for the students to break eye contact with the spoken information presented visually and look at the activity or problem being discussed. The student can then go back to the captions and catch up with whatever s/he may have missed by looking away.

When captioning a lecture, switching to interpreting can also emphasize the difference between information that is important from environmental sounds or asides that are not a part of the academic flow. At times the students become so wrapped up in reading the captions and trying to absorb the information that they read information such as: off-topic remarks; jokes; environmental sounds as information that is equally important. By the time they realize that this is not a part of the lecture, they can be thrown off. It is often easier to take side comments or stories unrelated to the course content and interpret them. In this way the student has access to the information but doesn't confuse it with the course content that needs to be closely attended to. In a similar fashion, courses that are vocabulary laden can have the vocabulary captioned and any lengthy explanations can be interpreted.

In courses that contain a lot of text (such as literature or history classes) that is read in class, there is no need to caption what is already in front of the student. But in these instances, interpreting offers additional modality to present what is in print, and the students do at times request that portions of the text be interpreted (even though they are receiving captioning for that class).

Other advantages to having the captionist also an interpreter are that:

1. The captions can be clarified with interpretation (i.e.: if the student has a question about something s/he read in the captions, s/he can ask the instructor and for the second presentation of the same information, it can be interpreted rather than re-captioned).
2. D/hh student's questions can be expressed with sign-to-voice interpretation
3. If the instructor repeats information; it can be captioned first and then interpreted for emphasis
4. If the D/hh student is experiencing visual fatigue from reading the captions on a laptop screen for a long period of time—the interpreter/captionist can switch to interpreting.
5. When team interpreting: captions can be used to put down technical vocabulary or assignments by the team interpreter. (And when team captioning, the team captionist can be the interpreter who interprets the environmental sounds, jokes, etc).
6. When using media (that is not closed captioned): depending on how the film/video is intended to be used in the course lesson: they can either be interpreted with notetaker or captioned. If the DVD or video contains course content, the student may want the film captioned (in which case it is easier visually to project the captions beneath the film). If the film is used to support class content or to illustrate a point (and the details are not necessarily important), the student may prefer to have it interpreted.
7. Classes using Power Point presentations already have a significant amount of the important text available on the slides. If the instructor makes the slides available to the students and the captionist, then captions can be added to the Power Point slides (we have found this is most easily done by having the Power Point presentation loaded into the captionists laptop in the "View: Notes Page" with a small separate window in Microsoft notepad; and then captioned using Instant Text software. The alternative is to interpret the comments and use the slides as notes

Since implementing the choice for students who are deaf and hard of hearing to utilize interpreter/captionists in their classrooms, Miami-Dade, Kendall has seen a noticeable increase in student retention and graduation rates and a decrease in repeated coursework. The concept has been so successful that it has found it's been accepted into my EdD dissertation proposal to be analyzed more formally.

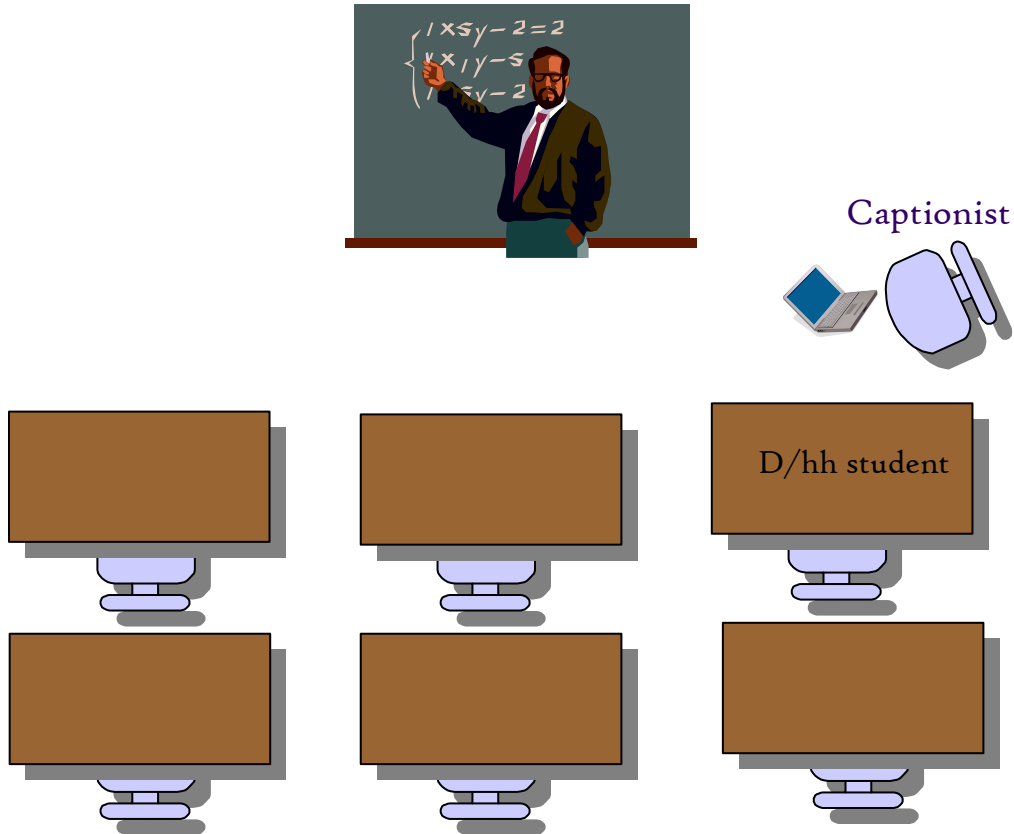
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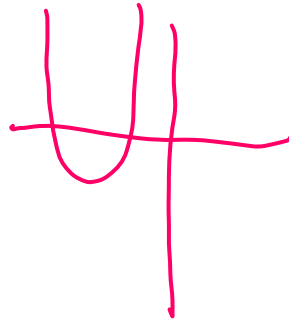
Appendix 1: Classroom Environment



Appendix 2: Captioning with a Tablet PC

1. Connect Tablet PC to student laptop
2. Open IT + WORD doc
3. Begin captioning
4. Graphs, diagrams or equations can be written on as you caption—

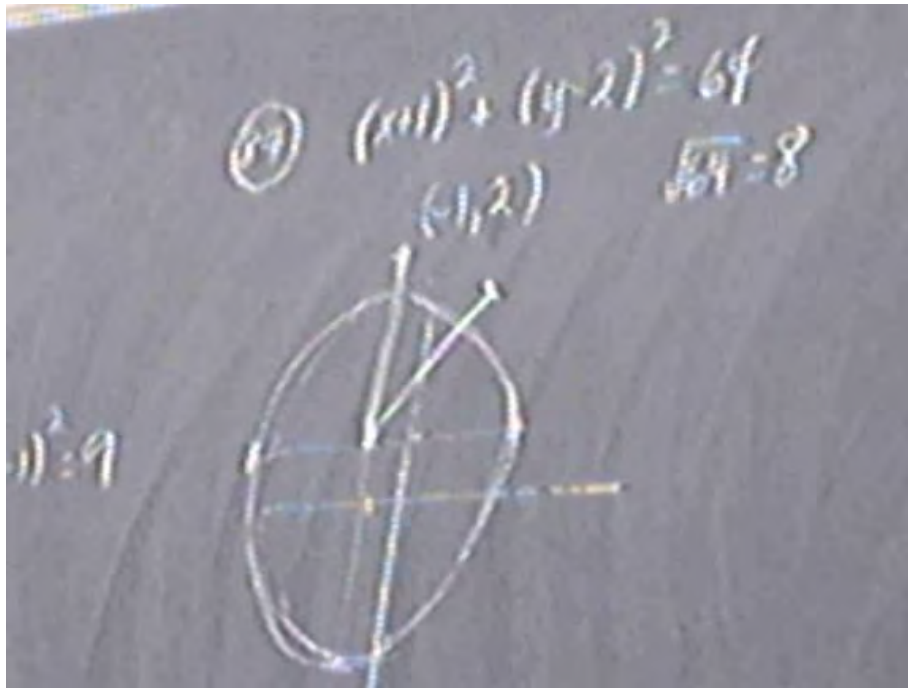
$$(2y^{\frac{1}{3}} - 3)(y^{\frac{1}{3}} + 5) = 0$$



Appendix 3: Other Media

Adding Digital pictures:

1. Small web cam in USB port
2. Take the snapshot and insert into the notes later



Virtual captioning:

1. Log onto network/internet
2. Open chat window (AOL IM or Yahoo IM)
3. If using a web cam: hook up the web cam
4. Open IT and connect to the chat window
5. Begin captioning

Biographical Information

PEPNet 2006 Plenary Session Presenters

Jennifer Buckley is a senior at the Rochester Institute of Technology, majoring in Biology/Pre-Vet. During the 2004-05 school year, Jenny was a junior in college, trained as a member of the U.S. Women's Deaflympics soccer team, worked as a Resident Advisor, and maintained a high grade point average. She demonstrates daily how to manage life and school. Jenny was recently accepted into the College of Veterinary Medicine at Michigan State University.

Andy Firth serves as an Outreach Specialist for PACE and the SOTAC. Prior to joining UALR, Andy spent nine years as an attorney with the Federal Communications Commission (FCC) in Washington, D.C. At the FCC, he worked on telecommunications relay services (TRS), universal service, and "e-rate" funding issues, and was also a special assistant to the FCC's Disability Issues Task Force (now the Disability Rights Office). Throughout his career at the FCC, Andy was involved in various disability rights initiatives, including the original implementation of section 255 of the Telecommunications Act of 1996 and the addition of video relay services (VRS) and speech-to-speech service (STS) to TRS. Before joining the FCC, Andy served as the Government Affairs Manager for the National Association of the Deaf (NAD) for a brief period, and spent three years as a staff attorney with the National Center for Law and Deafness, where he worked on various ADA and Section 504 litigation and advocacy initiatives on behalf of individuals who are deaf and hard of hearing. Andy is a 1992 graduate of Notre Dame Law School, and received his Bachelor's degree in English from Gallaudet University in 1988.

Lawrence Forestal is an Assistant Professor of American Sign Language and Director of the ASL Teacher Education program at the University of Wisconsin - Milwaukee. He has extensive experience as a professor of American Sign Language and Deaf Studies. Dr. Forestal has a Ph.D. in Deafness Rehabilitation from the School of Education at New York University, and a Master of Science degree in Education of the Deaf and a Bachelor of Arts degree in History from Gallaudet University. Active in Deaf community activities, he has taken on leadership roles in several organizations, including the Illinois Association of the Deaf (as President), the National Association of the Deaf (as Vice-President, President-elect, and President), the Utah Association of the Deaf (as a board member), and the Valley of the Sun Chapter of the Gallaudet University Alumni Association (as Secretary).

Brock Hansen is a first-year graduate student at the University of Wisconsin-Milwaukee in Rehabilitation Counseling program. His undergraduate work also took place at UWM, majoring in History with a minor in Political Science. Brock had a moderate hearing loss coming into college and at about the mid-point of his undergraduate work completely lost his hearing due to complications with Neurofibromatosis Type 2 (NF2). Up to that point he used little to no classroom accommodations; after he decided on captioning services which he has used ever since. He has also been implanted with a cochlear implant (no longer used) and an Auditory Brainstem Implant, which have been useful mainly in lip-reading situations. In his free time he enjoys speaking about his experience with NF2 and his hearing loss. His love for music still exists but has been refocused on movies. After completing his graduate work he looks forward to working with individuals and families going through and dealing with similar situations.

David LaDue, Civil Rights Attorney with the U.S. Department of Education, Office for Civil Rights, San Francisco office. For many years David was an attorney in private practice with an office in Walnut Creek, specializing in employment law. He developed an interest in special education and disability law. He was employed at the Center for Law and the Deaf in San Leandro, California where he worked for several years as an advocate for Deaf and hard of hearing clients and organizations. At OCR he works on a team with investigators and has a special interest in resolving access complaints at the postsecondary level involving Deaf and hard of hearing students.

Cassie Manuel works as a Deaf and Hard of Hearing Student Advisor at the University of Wisconsin - Milwaukee (UWM) and also works with the Midwest Center for Postsecondary Outreach, mainly as the PEPNet Listserv Administrator. After Cassie's graduation from UWM with her Bachelor's degree in Social Welfare, she has also worked as a Child Care Counselor at the Wisconsin School for the Deaf and a Deaf and Hard of Hearing Specialist for the Office for the Deaf and Hard of Hearing with the Department of Health and Family Services for Wisconsin.

Marc Marschark, Ph.D., is a Professor at the National Technical Institute for the Deaf, a college of Rochester Institute of Technology, and the School of Psychology at the University of Aberdeen, Scotland. He also is Director of the new Center for Education Research Partnerships at RIT (www.rit.edu/ntid/cerp). Active in research concerning deaf individuals since the 1980s, his primary interest is in relations among language, learning, and development. His current research focuses on relations of language and learning by deaf children and adults in formal and informal educational settings. He founded and edits the Journal of Deaf Studies and Deaf Education and a new book series, Perspectives on Deafness, both published by Oxford University Press.

Cynthia Patterson is a junior at the University of Wisconsin-Milwaukee. She is a returning adult student who also attended Gallaudet University several years ago.

Gary Talley was raised in Virginia. He attended schools in Matoaca, Virginia Beach, and he graduated from Dinwiddie County High School, Virginia. Gary lost his hearing during a 6-week period in the spring of 2003, and is now totally deaf. He began sign language classes at Gallaudet in July of 03, speech-reading that fall in Memphis, TN, and continued sign language classes at the University of Arkansas at Little Rock in Jan of 2004. In August of 2004, he was accepted into the Master's program for VR Counseling for the Deaf at U of A, Fayetteville. Gary has 12 years experience in Emergency Management, working for the Arkansas Dept of Emergency Management and at FEMA during then-President Clinton's first term. He has taught leadership, management, and communication courses for more than 20 years. Currently, Gary is the Outreach Program Manager for the Virginia Department for the Deaf and Hard of Hearing in Richmond, VA. He oversees the Contractors who provide services to Deaf and Hard of Hearing consumers throughout the Commonwealth. He is the father of Stephanie K. Talley, who is a nursing major at the University of Central Arkansas.

Kim Thornsberry is a second-year graduate student with the Rehabilitation Counseling with the Deaf program at Western Oregon University in Monmouth. Kim has had a variety of educational experiences that range from oral programs to using SEE to having note takers in classroom. With double undergraduate degrees in Psychology and Family & Consumer Studies with specialization in Child Development from Gallaudet University in Washington, D.C., Kim chose to pursue her master's degree at Western Oregon University. She is currently doing her internship as a Rehabilitation Counselor intern at the College of Southern Idaho and at the Idaho School for the Deaf and the Blind. Kim is married to Brian Thornsberry and have a daughter, Stormi.

Karla Ussery, Civil Rights Attorney with the U.S. Department of Education, Office for Civil Rights, Cleveland office. Karla has extensive experience in the area of disability law at both the elementary, secondary, and postsecondary levels gained during her years as an attorney with OCR. She is a frequent participant in OCR's Disability Network, which includes OCR's most experienced staff in the disability area. Prior to joining OCR, Karla co-authored a treatise on disability law for a noted on-line legal research provider and worked as a teacher and administrator at the secondary level.

Biographical Information

PEPNet 2006 Concurrent Session Presenters

Heidi Adams is the Community Outreach Specialist for the Center for Sight & Hearing in Rockford, Illinois. She has worked as a Rehabilitation Counselor and Planning Specialist/co-owner of the Communications System for Illinois' Division of Rehabilitation Services. Before becoming deaf, Heidi worked as a Speech/Language Pathologist. She holds Bachelor's and Master's degrees in Communicative Disorders from Northwestern University.

Robb Adams completed his Ph.D. in Counselor Education at the State University of New York at Buffalo in 2001. He was a teacher and administrator for the Deaf for eleven years before joining NTID in 1983. He currently serves as Chairperson of the NTID Department of Counseling Services.

Jo Alexander is a sign language interpreter and Coordinator of Services for deaf students at Oregon State University. She supervises sign language interpreters and speech-to-text service providers. Her passion for disability services began in 1974 when she became the Executive Director of the Regional Handicap Association in Colorado. Jo's first child was born profoundly deaf.

Paul Almonte holds a Ph.D. in English Literature from New York University. As Dean, he's responsible for a division consisting of Arts & Communications, English, Philosophy & Religion and Languages & World Cultures. Prior to coming to BCC, Dr. Almonte was an Associate Professor of English at Salt Lake Community College, where he also served as Chair of the Humanities Division. In addition to developing and teaching numerous writing, literature and humanities courses, he's also led many grant projects the most recent of which was a year-long, National Endowment for the Humanities-sponsored, faculty development seminar on "Teaching and Learning in the Humanities."

Kristin Murphy Amey, M.A., Project Coordinator of the Western Region Outreach Center & Consortia (WROCC). Former Academic Adviser and Instructor of a Freshman Experience course for the National Center on Deafness at California State University, Northridge

Catherine Andersen, Ph.D., is Director of the First Year Experience at Gallaudet University. In 1994, she was named Gallaudet's Distinguished Faculty of the Year. In 1997, she was selected as an Outstanding First Year Advocate by The National Resource Center on the First Year Experience and Students in Transition and in 2004 was appointed to the National Board.

Glenna Bain coordinates Deaf and Hard of Hearing Access Services at Central Washington University in Ellensburg, WA. She is an interpreter and certified TypeWell transcriber. Glenna serves STSN as the chair of the Membership Committee and one of the tri-chairs of the Continuing Education Committee.

Sharon Baker is an Associate Professor and Director of the Deaf Education at the University of Tulsa. For the past six years she has been a Team Leader for the Association of College Educators of the Deaf and Hard of Hearing (ACEDHH), Preparing Tomorrow's Teachers for Using Technology (PT3). She has been involved in several technology-focused projects including the distribution and field testing of videoconferencing technologies to university Deaf Education teacher preparation programs and the piloting of various applications of video-based technologies. Dr. Baker is the co-author of *Language Learning in Children Who are Deaf or Hard of Hearing: Multiple Pathways*, a textbook published by Allyn and Bacon. In 2001 Dr. Baker was selected to conduct a national Impact Study of the five-year Star Schools project: ASL/English Bilingual Education for the New Mexico School for the Deaf. In addition, she serves as a grant evaluator for several projects including the Gallaudet Leadership Institute. Dr. Baker holds a doctorate in Curriculum and Supervision from Oklahoma State University.

Wanda Berry, PASS Specialist, has 34 years experience with the Social Security Administration. The past 12 years has been working exclusively with Plan to Achieve Self Support and other important work incentives. She trains extensively throughout the Southeast and served as National Trainer for SSA PASS specialists.

Evonne Bilotta-Burke is a sign language interpreter at the University of Minnesota.

Barbara Borich, M. A., CI, CT, graduated from the University of Arizona with a B.A. in special education and rehabilitation. She earned her M.A. in Language, Reading and Culture. Barbara has been interpreting for 25 years and has worked as a Disability Access Consultant for 12 years.

Jennie Bourgeois is Coordinator of Deaf & Hard of Hearing Students at Louisiana State University, Coordinator for the State Outreach & Technical Assistance Center, and State Outreach Coordinator for the Captioned Media Program. Ms. Bourgeois has a BA from Louisiana State University and is a certified interpreter, and a C-Print captionist and trainer.

Barbara Boyd is a professor of English at California State University, Northridge. She has consulted with numerous school districts and colleges regarding the development and implementation of successful programs in writing. Two of her students and Teaching Assistants will join her in demonstrating the tasks involved in the transitioning process from high school to college settings.

Maureen C. Brady, A.A.S., IC/TC, Support Services/Interpreter Coordinator at the MidAtlantic Center for Deaf and Hard of Hearing Students at Camden Country College, New Jersey.

Alton Brant is an Associate Professor of American Sign Language and teaches ASL and Deaf Studies at Clemson University in South Carolina. He has served as teacher, lecturer, administrator, and advisor to numerous institutions and agencies in SC. He has lectured in the Czech Republic, Palestine, and Russia.

Debra Brenner recently joined Georgia Perimeter College as the Deaf/Hard of Hearing Coordinator following a fifteen year career at the University of Georgia, Disability Resource Center. She earned her B.A. from Hofstra University and M.Ed. from the University of Arizona.

Pamela Broadston currently coordinates the Deaf Education Program at the University of Arkansas at Little Rock. She received her Doctorate in Education from Texas Tech University with specialization in the areas of deafblindness and assessment. She has presented at numerous regional, national and international conferences.

Margaret Brophy received a master's degree in Education from the University of Rochester and came to NTID to teach English. Later, at SUNY Brockport, she managed a peer-tutoring program. After returning to NTID, she was able to utilize her skills to establish a peer-tutoring program.

Katherine Bruni is Georgia's Outreach Specialist, SOTAC/PEC/PEPNet. She has taught English to students who are Deaf and Hard of Hearing at Georgia Perimeter College for eighteen years. She taught children in the 1970's, has been a free-lance interpreter, Community Education Coordinator (law center), and assistant administrator for the NLTP, CSUN.

Cindy Camp holds a masters degree in English as well as an NAD level IV with twelve years of interpreting experience. She is currently the Disability Specialist in Deafness at Jacksonville State University in Alabama. Also, she is an adjunct instructor of English, Outreach and Technical Assistance Specialist for the PEC (Postsecondary Education Consortium) in Alabama, and Depository Manager for the JSU Postsecondary Captioned Media Library.

Beth Case serves as the PEC Texas SOTAC Outreach Specialist and also Disability Counselor for North Harris College in Houston. She is the immediate past president for AHEAD in Texas, and NAD Level III interpreter, and host of the Disability411 podcast. Her M.A. degree in Clinical Psychology is from DePaul University.

Ginny Chiaverina is currently the Program Manager for the University of Wisconsin - Milwaukee Deaf/Hard of Hearing Program and an Outreach Specialist for the Midwest Center for Postsecondary Outreach. Ginny received her interpreting training at Waubesa Community College in Sugar Grove, IL. and her master's in Administrative Leadership from UW-Milwaukee.

Catherine Clark is NTID's Cochlear Implant Program coordinator, and an assistant professor in the Audiology Department at NTID/RIT. Since 1986, Catherine has worked with students who have cochlear implants. She provides and coordinates cochlear implant evaluations, speechreading/listening practice, counseling and social support for the 100 NTID/RIT students who have the implants. Catherine has presented and published in the areas of speech perception, speechreading, communication technologies and NTID's Cochlear Implant Program. Her bachelor's degree in Speech and Hearing Sciences is from Bradley University and she earned a master's degree in Audiology at the University of Louisville. She also received cochlear implant training at the House Ear Clinic in Los Angeles, Calif.

E. William Clymer, MBA, MS in Ed., is an Associate Professor at the National Technical Institute for the Deaf at Rochester Institute of Technology, serving as the Coordinator of the Postsecondary Educational Network - International. His primary professional focus is on the application of instructional technology and deaf education. He has served as the chair of the NTID International Symposium on Technology and Education of the Deaf in 1994, 2001, 2003 and 2005.

Judy Colwell was one of the founding members of STSN in 2002. She has served as Secretary and member of the Advisory Council for the last two years. Judy is the co-developer and lead trainer of the TypeWell Speech-to-Text system. She has been involved in teaching and research in the areas of communication, language, and deafness for 30 years.

Patty Conway, B.S., CRC. Patty is currently the Program Administrator of the Deaf and Hard of Hearing Services Branch with the Kentucky Office of Vocational Rehabilitation responsible for oversight of all services to persons with hearing loss. These services are individualized to persons who are deaf, deafblind, deaf at risk, oral deaf, hard of hearing or late deafened depending on their specific needs. Patty also serves as the State Coordinator of Deaf Services (SCD) working directly with Rehabilitation Counselors for the Deaf (RCDs) who serve individuals who are deaf and use sign language. Other programs under her management include supervision of administrators directing the coordination of Communication Specialists who provide services to persons who are hard of hearing and late deafened and the coordination of service providers working with individuals who are deafblind and deaf at risk. Patty has held her current position since 1989 and has established partnerships and linkages at the state, regional and national level to improve service delivery. Under her leadership, Kentucky Vocational Rehabilitation has become nationally known for quality, specialized services to meet the unique needs of the diverse populations within the group of individuals with hearing loss. She has been involved in numerous national initiatives and has presented on an array of topics in this area.

Roberta "Bobbi" Cordano, J.D., is the Director of Disability Services at the University of Minnesota. Prior to her current position, she was a prosecutor at the Minnesota Attorney General's Office for ten years. As an Assistant Attorney General, she also served as a member of the Minnesota Supreme Court Advisory Committee on Court Interpreters from 1994-2004, which worked to increase access to the courts for Deaf and hard of hearing people and non-English speaking people. In this role, she helped develop Minnesota's Code of Professional Responsibility for Court Interpreters and drafted the rule on certification of Minnesota court interpreters. Bobbi grew up in a Deaf family and is a native speaker of American Sign Language. She graduated with honors in Sociology from Beloit College in 1986 and received her law degree from the University of Wisconsin Law School in 1990. She is a member of the Minnesota Bar.

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Putting the Pieces Together

Proceedings of the PEPNet Biennial Conference



**Columbus, Ohio
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Putting the Pieces Together **PEPNet 2008 Biennial Conference**

Providing access services, addressing academic issues, focusing on testing accommodations, utilizing technology for access and instruction, identifying non-college options, and coordinating transition services are just a few of the “pieces” that service providers must figure out when working with students and young adults who are deaf or hard of hearing. When planning the recent PEPNet conference, *Putting the Pieces Together*, we wanted to highlight the variety of experiences that our colleagues have in providing services to this population. We recognize their creativity in adapting existing practices and developing new strategies and resources to address the needs of an ever changing population.

Putting the Pieces Together provided a distinctive opportunity for professionals to interact with their colleagues to learn more about effective practices and strategies for meeting the needs of deaf or hard of hearing students at the secondary and postsecondary levels. Conference participants engaged in sessions that focused on identifying and implementing research-based practices as well as the “nuts and bolts” of managing and delivering effective access services. One of the goals of the conference was to more firmly establish collaborative efforts among professionals who share a common goal: ensuring provision of the most effective educational programs for students who are deaf or hard of hearing. Instead of operating in isolation, we can create additional opportunities to share knowledge and experiences that will have a positive impact on our students as they transition from secondary education to postsecondary education and training programs. It is our hope that this information will truly support each reader to put together the pieces in providing effective services to students.

We are grateful to the support and involvement of colleagues who helped make this conference so successful. We would like to thank the U.S. Department of Education, Office of Special Education and Rehabilitative Services for their support of the four regional centers and our related activities. We’d like to offer a special thanks to the session presiders, friends of PEPNet and other conference volunteers and planning committee members for their willingness to assist throughout the conference. Our deep gratitude goes to those who provided additional support for this conference, including:

- PEN-International in Rochester, New York (co-sponsor)
- National Technical Institute for the Deaf in Rochester, New York (donor)
- Hands On VRS (donor)
- Hamilton Relay Service in Aurora, Nebraska (donor)
- Beyond Hearing Aids in Erlanger, Kentucky (donor)
- Described and Captioned Media Program in Spartanburg, South Carolina (donor)

Of course, the interest and enthusiasm of all of the presenters and participants made this conference a very meaningful event. We appreciate the time and effort extended by many of the presenters to also submit an article for this volume of conference proceedings. To everyone involved, thank you very much.

Marcia Kolvitz, Ph.D., Editor
Director
PEPNet-South
www.pepnet.org

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PLENARY SESSIONS

The Diversity Piece -- Where Does It Fit in the Puzzle?

Sam Atcherson, Tina Abdul, Martha Davies, Teraca Florence, & Parvin Karobi

Abstract

“Multiculturalism” and “diversity” are terms that are frequently used on campus and in the work environment, but what do these really mean? How do we as educators help to build a more inclusive environment? How do students from underrepresented ethnic or racial groups survive and thrive in postsecondary settings? A panel of students and young professionals shared their thoughts and experiences about deafness and diversity as it relates to their secondary and postsecondary educational programs.



Elise Knopf: Good afternoon, everyone! Welcome to the last session of the day. I hope you've enjoyed today's workshops, and the networking that has been available to you.

We're excited to introduce the final panel. It's a wonderful group of diverse people from around the country who have come to give you a special treat. They will be talking about their experiences, their frustrations, their struggles, and you will hear their stories of their successes and their struggles.

Leading this session, facilitating will be Dr. Samuel Atcherson. Sam is a professor at the University of Arkansas. He is deaf, himself. He also has a cochlear implant, and he is an audiologist. I am really impressed. It's really nice to see that. So he will be leading and facilitating the panel. We ask that you hold your questions until the end. And if you have questions, please come up to the front. We're setting a communication rule here, and it's important because we want everyone to have access. So without further ado?

Sam Atcherson: Thank you. Welcome all of you. It's really a pleasure to be here, but it's really an honor to be in the presence of these students here. I have had a brief opportunity to chat with all of them, and their stories really – well, 75 minutes is not enough.

At the end of this presentation, you can come up and talk with them some more about their lives and their stories. They're just so wonderful. At lunch, the hair on my neck was standing up after hearing some of the stories they were sharing with me. So really it's a wonderful treat to be here.

I want to introduce them, but I am only going to say their first name because already in your program there is a short bio about each one of them. I encourage you to read them for yourself.

The panel includes Parvin, Teraca, Martha, and Minoru.

How do I start? There are so many questions that I want to ask. Let's start with some general questions, and then ask some very specific questions for each one of them. So let me just start by having all of you share something about why you are here now. How did you arrive here? Maybe something about family or your educational background.

Parvin Karobi: Hi, everybody. My name is Parvin. I am from Iran. I moved here about eight years ago. My dad had some reasons about why we moved to America. We had to get away from there. We went to Pakistan, and then we had to get accepted, and it takes a really long time. It's a really long process because you go to this huge building. It's kind of like an immigration, and they tell you that you can go to America, or you have to go back to your country, or they send you to another country. It depends on them. They make the decision. Because of my dad's good reason, they told us that we can come here. So after six months we came to America.

I was brought up oral. I just two years ago learned sign language. So to this day I am still learning a lot, and I had a really tough time when I moved here because of the culture, and language.

Teraca Florence: Hello. I grew up in Atlanta, Georgia. I went to a mainstream school my entire life. What about my background and my family? Some of them had dropped out of high school. Some had gotten a high school degree, and that really encouraged me to get a better education. My goal was to get my high school degree and graduate with distinction. So basically, I'm the first in my family to do that.

All my life I've noticed that my parents have struggled. That's caused me to become a lot more independent, and for me to think about what I need to do to be successful.

Martha Davies: My name is Martha and I am from Africa. I am actually from Sierra Leone which is in West Africa near the ocean. I live in Minnesota now with my mom and with my grandmother.

First of all, when I was in Africa, we lived in a refugee camp. There was civil unrest. It was a horrible war, and we were able to escape to a refugee camp. There were no educational opportunities for me there, so we moved to another refugee camp that was called Gambia. We continued there for six years with no educational opportunities.

Fortunately we were able to move to America. We came with our family, and I'm living with my family now. I was able to go on to school and to college. I attended Hennepin Technical College. I was able to get my certificate of completion this past May. And that's me.
(Applause)

Minoru Yoshida: I was born in Japan. The town that I was born in was Kyoto, and this is the sign for that. (*demonstrates sign*)

I went to the deaf school there probably until I was four or five. Throughout Japan in deaf schools oral education is a very common philosophy. From there I was mainstreamed for elementary school through high school. My dream was to learn English, a foreign language. I pursued that dream when I became a senior.

My dream was to go to a university and study foreign language. Mostly that foreign language was English. The problem was that most universities looked at me and said, "Well, you're deaf and how can a deaf person study a foreign language? How do we support that endeavor?"

I had a chance to visit several universities. I could apply, I could go in, and I could take the test, but once I got in, their philosophy was, "This isn't our problem. This is your problem. You need to take care of yourself." And that caused a problem for me.

One option was to go to America. So in my senior year I made the decision that I was going to America. I arrived about 10 years ago, in 1998. I first went to school, and it was a ESL program. There were no support services for the first six months. It was a very frustrating experience. Lipreading English was tough. Reading and writing was okay, but lipreading was most difficult.

So I transferred to Harper College in Illinois for one semester. It was a wonderful semester with an ASL/ESL program for the deaf. After that I transferred to the Rochester Institute of Technology (RIT) and NTID, and I have been there for nine years. I graduated with my BS degree in technology, BA in technology, and now I am working full-time at NTID while at the same time attending graduate school which brings me to where I am today.

(Applause)

Sam Atcherson: Now I am sure that many people here are curious about cultural barriers you might have experienced. One culture may be your country or your community, but another culture is the Deaf culture. I am sure that there were some shocks involved. So can you share some of that, not specifically educational experience, but your culture? How did that affect or impact your communication?

Parvin Karobi: Well, first of all, there is culture and also religion, too. I am Muslim, and I have had a hard time here because most of the people tend to be Christian. Sometimes people do not understand where you are coming from, or they could be a little bit racist. People misunderstood me sometimes because they think I talk really good and they assumed I was hearing. That happened, too.

Teraca Florence: As most of are you probably familiar with, the Black community, we tend to know everyone. People tend to be involved in gangs, and drugs, and violence and all of these different issues. And it's a lot of drama. But that's not always true. It's not true.

In the environment that I am actually from, it's much more the „hood. We use a lot of slang language quite frequently. It can be really hard for me because I have bad habits of swearing. I realize I have to change that. I know that I am in a different environment now from where I was. And English in a more formal environment is different.

So in my mind, I have to change what is normal to me or natural to me. I have to change myself and get out of that small box. I have to expand my mind and really envision learning from a different culture, a different community, a different language and everything that's involved in that. Everything was thrown at me all at once, and I've just had to adapt.

The high school dropout rates in the Deaf Black community are very high. But most of us have motivation, and that motivation is from our friends and from our parents. Because we feel like we have to hold those things, sometimes people say, "You trying to be white now?" We get that kind of attitude back from our community. "Oh, you want to be out there with white people. Oh, please, stay with us." This mentality. And it's whatever they think. What's my response? No, I'm not white. I'm still black. Look at my skin. See? You see it's black. That hasn't changed.

Inside of me there is a change that's happening, but the outside is still the same as it was before. So that's something that I struggle with.

Martha Davies: Well for me in West Africa, wow, there were so many concerns that our family had in trying to go to the deaf school when I was a younger child. It was difficult. There was no education for deaf children there. There were no interpreters available. There were no teachers who knew sign language. It just wasn't even available.

There were a number of deaf children in my classroom, and we would wait for a teacher. The teacher would start speaking or writing on the board, and the deaf students in my classroom could not hear who did not understand. I would advocate for myself; I stood up and I said, "Excuse me, I can't hear you. What are you teaching us because I can't hear anything?"

The teacher looked at me and said, "You need to sit down and wait. I will talk with you after class. I will teach with you one on one. You wait."

I had to tolerate that treatment, and I felt so sad for all of the deaf children that were in this mainstream classroom. The teacher would speak and write on the board, and we were totally lost. When the teacher got finished, she immediately left the classroom. There was no one-on-one time, and how were we going to pass our course work? We couldn't. The education was so poor. So I had to tolerate that.

As time went on, I moved into high school. In high school I was the only deaf student in the entire class. The same education went on where the teacher would write on the board. I struggled and was frustrated; I got sad. I wanted to have education. I wanted to improve my experiences. I wanted to be on par with my hearing peers, but I felt so alone being deaf.

Then I felt that there needed to be more advocacy, and so I had to advocate for myself once again. I would raise my hand, and say, "Please, I am deaf and I can't hear what you are saying to me and I don't understand." There's no access. I got punished for that, for standing up for myself. The teacher did so with a rod and hit me on my head and I began to cry. Of course, all of my classmates laughed. And I had to endure that, sit in class, and cry. I realized that all of my grades were going down. My self-esteem was going down. We were very poor, and my family was very sad for me.

Once we moved to America, they saw a great improvement. I was able to work with Greta who is in the audience with me, and she was a great deal of help for me. She helped me understand what was going on. I didn't even know about currency. I was thinking that the dollar was equivalent to \$100. My mom, she used to give me \$2 and \$3, and I was able to say I am happy with that. Going to school with that I felt like I was rich, realizing now I was not.

(Laughter)

But to me, you have to understand, for me that was. Greta was able to educate me. She taught me about mathematics, how to budget my money, and about currency. Oh, okay, now I realize I am not so rich.

(Laughter)

When I went home, my mom would work with me and she would say to me, "Come with me. I will give you three or four or five dollars." I would say, "Fine, Mom." When she gave me money, I asked, "How much money are you giving me?" And my mom replied, "Well, you know this is the normal \$3. "Ah, Mom," I said, "That's not enough. I need to have \$20 or \$25."

(Laughter)

My mom would be somewhat shocked and wanted to know how I learned about these currencies. I told her that was why I was going to school. I am getting that experience. I didn't learn anything before, but Greta has taught me a lot, and so I appreciate that it's changed my life.

(Applause)

Minoru Yoshida: Well, I have been here for almost 10 years, and memory has faded over that period of time. But I'll be leaving the U.S. in three months in July.

In looking back, one of the similarities among Asian cultures is that the parents tend to not praise you. You don't tend to hear "Congratulations, good job." Parents will tell you to work and get good grades, and you do that. Well, of course, that's what I am going to school and studying for. When I came to the U.S., I started receiving many more positive comments. In the back of my mind, it made me wonder, "Did they mean it, or did they not mean it?"

I was never exposed to that at home. Once in awhile I would get a comment, but, you know, you are supposed to be humble in public. Then here I come back and I receive these accolades and congratulations and everything directed at me. I am not saying that my home culture was wrong, but it was just different coming to America. I had to learn how to accept these compliments. That was a bit of a shock.

Sam Atcherson: Now I want to change the topic to something more educational. All of are you going to college, or maybe you just graduated from college. Can you share your experience what was interesting to you? What was shocking to you? What was maybe some of your barriers educationally when you went into college or school? I'm talking about after high school. What was different for you?

Parvin Karobi: This is my second year at Georgia Perimeter College (GPC). In college you have more opportunities, like you have more access like note-taking, sign language interpreters, and C-Print. In high school you don't have that many options. Not all schools have all the interpreters. For me, so far, I have been doing really good. I have no problems with anything at all So it's been good, yeah.

Teraca Florence: I've always grown up with deaf and hearing and in the mainstream. Most of my interpreters are pretty good, but it was always limited for me. I just graduated from high school a few years ago, so I am still learning what to do in college and how things go.

My first exposure in college surprised me. I sort of thought, "What?" They said, "You have to take care of things." And I said, "Me? I have to take care of it? You are relying on me?" Back in high school I was so spoiled. They would take care of things for me. They would say, "You need to do this, and now this is your homework."

(Laughter)

And in college, uh-uh. It wasn't like that.

(Laughter)

It's like it's all you on your own, girl.

(Laughter)

I thought, "Okay." Well, the first time my dad and I went to the disability service office, I remember we sat down and talked about all of the different things that needed to be done. My dad said, "Thank you. We're done." And I kicked my dad out, and I said, "I am going to take care of it

now. I wanted to be more independent.” I didn't want to depend on as many people so much. So I got him out of that room, and I did not want to have to be dependent on anybody. I only wanted to depend on myself. I wanted to be my own self-advocate.

When it came to class work and everything in my schedule, everything seemed fine. I was able to pick the courses I wanted. I am not a morning person. I hate the morning. So I picked all afternoon classes, and I really had a lot more options than I have ever had in high school.

High school seems so limited now. If I wanted an interpreter for a class, I couldn't ask for it back in high school because there were no interpreters there. But someone was already there taking care of it. Now in college, I can ask for and request a specific interpreter by name. Maybe some aren't available, but some are. There's no guarantee.

I just started to learn that sometimes we really can't get exactly what we want because of limitations, but if we know we can always speak what's on our mind. So that was a huge shock and change for me. I'm still learning, though.

Martha Davies: Well, remember coming from West Africa there was no education. What I did get, my education was poor. So when I came to America, I went to a school and participated in the Vector program at school. It's a transitional program that was where I was able to take a number of different courses, such as English, mathematics, reading, banking courses, and things like that. I was able to take a number of different courses, and I was able to work with interpreters one-on-one in each of those courses.

Then I took a course in the printing program at Hennepin Technical College. I was able to complete a certificate in that printing program, and I learned so many different things. I gained experiences on the various machines. I was able to learn how to do graphics. I was able to work with the various inks and the various colors that we had. Sometimes the machines were quite complex and I didn't quite know what the name of that was, or what this part was, and I would ask the interpreter, “What's this?” or “What's that?” and the interpreter was able to provide that information for me. The interpreter for me was really a huge help.

In Africa we didn't have that service. How was I supposed to learn? How was I supposed to gain a skill? In America you are quite lucky to have that.

The interpreter worked with me on the various machines that I had in printing. I was able to concentrate on how the machines worked, and I was able to work in my first class. We had to learn how to do maintenance and various machines and learn how to fix things. That was the first class I took.

The teachers were smart, too. They would do something to the machine that would make it not work right. We would have to try to come in and figure out what they had done. I wasn't stupid. I had read the manual.

(Laughter)

So I was able to figure out that it's supposed to look like this, and it's supposed to run like this. I was able to fix things according to steps -- number one is supposed to do this and number two is supposed to do this. And the interpreter would work with me. She was very encouraging. So that increased my motivation to learn. I wanted to do that.

Coming from Africa, you know, I knew that I wasn't going to learn anything. Now I had the opportunity and the motivation to gain education, and I wanted to finish it while I was still young. You people here have already gone through school and have already finished college. I have the same motivation as you to learn. So I am working with the machinery.

The first course I took was one-color printing, and then I moved on to two-color printing. After that, I took three-color printing, and that's all on one sheet of paper where you have multiple colors. My teacher even complimented me that I learned quickly, and I said, "Yes, when you have a good teacher it's easy."

We learned so much. So I've just graduated with my certificate of completion and I am looking for a job. I am also taking care of my grandmother. She has been quite ill, and so that's what we're doing now. Thank you.

(Applause)

Minoru Yoshida: When I was in Japan we never had interpreters or any type of support services. I just relied on lipreading throughout that educational experience.

However, when I got to the U.S., I attended three different schools. Now, at the first school there were no support services. Harper College, the second school, had some wonderful support services there. The third school was RIT which has, as you know, over 130 full-time interpreters and provides thousands of hours of note-taking services. So I was able to compare these three experiences. I've had to adjust going from having nothing and not knowing how to advocate for what I needed.

Please understand that when I came to America, it was a new place. My ASL skills weren't all that great, even in the second situation where there were support services. I had to learn "A-B-C," and "My name is...." It's kind of hard to understand what's going on in the college classroom when you are learning language at that level. But they did provide CART services and captioning, and that was wonderful.

They tried providing an interpreter as an experiment, and that just worked well for me because I could go back and forth from there. With my strong English background through studying English in high school, I was able to pick up vocabulary. So my ASL skills improved as time went by. From there I was able to get into RIT.

RIT became more of a challenge because the academic level was higher and the information was much more complex. Sometimes the class moved at a pace that was much faster than I was used to with having other hearing classmates in there. But over time and by having accommodations and note-takers, I was able to get by. There was a challenge with resources there because there are so many deaf students. RIT provides excellent coverage, but there are last-minute exceptions where somebody is sick and can't show up. So, you have to deal with that.

I now am in my graduate program, and I am studying public policy. There's a lot of discussion that goes on in the classroom and the interpreter has to keep up with that. It's a little frustrating for me because the back-and-forth discussion is kind of hard to follow, and I am learning how to advocate for myself. That includes telling my classmates about using an interpreter and slowing the pace down. I say things like, "I am deaf, I have an interpreter. I need the opportunity to learn here. Can we create more pauses during the discussion?" and that works out well in that environment.

(Applause)

Sam Atcherson: Wow! I am already very, very impressed with this group. They seem like very, very goal-oriented people. But I am curious about something. What is your ultimate goal? What do you want to do? What do you see yourself doing in the future?

Parvin Karobi: My major is in social work. So that's like number one. I want to really get my bachelor's degree. Hopefully I will go to New York to RIT to get my master's. That's my number one goal.
(Applause)

Teraca Florence: My goal when I finish Georgia Perimeter College is -- well, let me back up before I really get started. I'd like to become a teacher.

I am from a small family. My friends and teachers also have motivated me because I tend to be more of a bossy personality type. That's just my habit. And I love to help kids. I want to show kids what you can do as a deaf person. I don't care whether you can hear or not. You can't stop us. So we need to put that aside, period.

I'm trying to get my bachelor's degree, a master's degree, and perhaps a Ph.D. We'll see how the money situation works out.
(Laughter)

I love to teach, and that's it. So we'll see how it goes.
(Applause)

Martha Davies: Well, my ultimate goal is that I need to get more education. The reason is I'm from a place that offered no education to me. I'm in a place now that I know that I need more education. I need to be focused and I need to continue in college educational experiences. I want to work toward a good job. I want to be like you people.
(Laughter)
(Applause)

Minoru Yoshida: For me, I've had enough of education.
(Laughter)

I've been in school for quite some time and I'm ready for the world.
(Laughter)

I used to be in information technology, the IT field, and right now I am working at NTID in a program called PEN-International. I've learned a lot through that work over the past three years. I guess my passion is to involve the community on that level. So I've changed my major to public policy.

After I leave RIT, I hope that some day, in my 30s or 40s, I might be involved in the WFD, the World Federation for the Deaf, or the U.N. I'd enjoy working with a variety of different disability organizations. I am improving my skills working toward that end. So, you know, the dream doesn't stop. You continue on towards the dream. But school is done.
(Laughter)
(Applause)

Sam Atcherson: The next question that I have may not apply to all of you, but some of you have had to learn different languages. When you came to America you really had to learn English as one language, but you really had to learn ASL, too. Can you share with us your experience on that? Did you have frustrations? Are you happy about it? How do you feel?

Parvin Karobi: At home I speak Farsi. It's really hard because when I go home I have to speak Farsi with my parents because they don't speak English at all, and they don't know sign language either. So I have to keep translating back and forth. It can be frustrating because sometimes I know the words for English, but I don't know the Farsi. Sometimes I know the Farsi, but I don't know the English word. So that's a huge problem I have right now, even though I am trying and working on it.

Martha Davies: Well, for myself, there was a different language. You have to understand that in Africa it's a much slower pace. It's more like your old sign language that we use in West Africa, but it's in a much slower pace. When I came to America and I saw deaf people signing, I thought they went so fast and I would miss so much. I felt like saying, "Excuse me, would you slow down? I don't understand what you are saying."

Sometimes I would embarrass myself. I was too shy to even ask. I took a ASL course at the Vector program, and so I would start kind of "stealing" signs from deaf students. I felt that I'd miss so much if my eyes ever closed. I was afraid to blink them, and I would work with my friends and say, "Practice with me, practice with me." Sometimes my friends would say, "Wait a minute," and they would work on their SideKicks. And I'd wait for them, and we would practice and work on that. I got to a point where I felt I was more natural in my signing, and so now I have a SideKick, and now I tell my friends, "Wait a minute."

(Laughter)

(Applause)

So I have learned some things. I am "stealing" ideas from the bright kids as far as what they've already learned. They already know many things. I didn't want to follow people who didn't know how to learn. I wanted to learn how to do things, too.

When my mother had me, she said that I was born hearing, and that I had gotten ill; I became deaf, profoundly deaf, and I didn't hear anything. And my voice went down, as she said. But my family didn't know any sign language. They only spoke. But I never forgot my home language. I never forgot how I spoke with my mother, and so we have home sign languages that we use, but other people wouldn't necessarily understand that.

Now I'm able to communicate with my friends, and I feel like I am on par with them where I didn't feel that way before. I did have wonderful teachers in my school, and I really appreciate that. They worked so hard with me to improve my experiences. They were so patient with me. Two of my teachers are here. One is Greta, and the other one, Kathy, is here as well. They've been such wonderful teachers. I am proud of myself as well. So thank you.

(Applause)

Minoru Yoshida: I knew Japanese Sign Language before I came here. It was a challenge for me to learn a new sign language. When I was at Harper College, that's when I was in for my first deaf culture shock. That was my introduction to American deaf culture. The friends that I met with were your tougher type of students. They would sign a particular way, and then they would say, "Well, you don't understand?" And they would just keep moving on. That's the environment that I learned in. I wouldn't ask them to repeat, but after a couple of months I learned how to behave with the

group. As time went by, say within three or four months, I started signing. I was able to express my opinion much better. But I had to do that by setting aside Japanese Sign Language. I don't have enough memory capacity for all of those languages.

(Laughter)

It was successful for me, but I had to put Japanese Sign Language on the side. I did learn ASL, and when I got to RIT it was a very diverse environment. It's a broad spectrum: you have oral students, you have some students that use Sim-Comm, you have some that sign PSE, and you have those who use ASL. You pick up the culture that you are in, and you learn how to traverse that continuum working with those who are oral deaf and those who use ASL. The deaf community is not a community of only ASL users. The deaf community itself is a diverse community.

(Applause)

Teraca Florence: I wanted to say before in my previous environment, we used to use Ebonics, which sort of means that we would -- I guess it means that we would not pronounce everything. Like "Wassup?" or "You is something, something, something," and we would talk like that.

It was so hard for me because I was signing, and there was English. When I was with my Black hearing friends, they're like, "Yo, wassup girl, and what's going down?" Et cetera, et cetera. I couldn't follow it. When I was signing with people, that kind of threw them off, too, because they couldn't understand me. I was trying to figure out who am I? Where do I fit in? Who am I talking to? It all depends.

With my mom at home, we have some home signs. I struggle a lot trying to teach my mother the right way to sign things because she wants to do it her way. When I'm talking with my friends, we sign and talk at the same time because we grew up with each other. I know hearing people. I know what they're like and I want people to understand me better. So I try to use my voice and switch a little bit.

With deaf people, I am different. I've been exposed to that since I was 14. It was a little late. I hadn't learned ASL until then. But I did Sign with deaf people around the age of 14. Some deaf people say, "Oh, you sign too English, girl. We're not going to sign with you." I was surprised and said, "What? I sign too English? I am deaf like you. I don't have a problem with you. I don't get it." So I thought, "Okay, fine. I am going to figure out what's going on." And I would study the way that they would sign with each other and their communication styles. I would figure it out, and now I think that I have improved 1,000%. It's the same people who used to put me down, but now I can go back to them and use American Sign Language with them and say, "See, I got it now! Uh-huh."

(Laughter)

It didn't take me forever to learn it, but I did.

(Laughter)

(Applause)

Martha Davies: You go, girl!

Sam Atcherson: I thought this was a panel and not a comedy.

(Laughter)

This is really wonderful. About 15 minutes before we arrived for this panel, I was just noticing that we're altogether in a room, and we have some people from international countries, and still we are

communicating. Wow. And I think that's something impressive about ASL itself. So now we have this great networking opportunity.

Anyway, changing topics, hmmm, what do you do for fun?

(Laughter)

Parvin Karobi: I love hanging out with my friends, and, of course, going to the club. It's good to go out in the mall shopping and fashion. I like just getting together with my family every Sunday.

(Applause)

Teraca Florence: I'm a teacher at heart and I just finished my second year of studying at GPC. I love dance and go shopping and playing sports, like basketball. I was into sports before, and I'm a fan of the University of Georgia. I like watching ESPN, and I'm very into sports. One of my goals was to be a dancer. I wanted to do dancing with the Atlanta Hawks. That's my dream.

(Applause)

Martha Davies: What I do for fun? I love to make people happy, and I just hate to be bored with anything at all. So I thank God that we, all of us, are able to use our hands and work hard.

I have been able to get lots of experiences making clothes. I make beads and chains and necklaces. So I have skills that I use to make jewelry. I feel quite good at it. I've made things at home, and when I've gotten bored I get all of my bracelets out. I've got them in a box. I get out my beads, and I come up with creative ideas about what I am going to do. What colors match? What goes with a particular outfit that I've got? So I will come up with some beautiful designs.

I have been able to sell some of my jewelry and make money from that. All of the beads have come from West Africa. I bought them here, but they originated in West Africa. There's one deaf boy who swims in the waters and dives to find some of the things in the water. He shapes those into beads, paints them, and does some intricate designs on these beads. He sends them to me in America, and I make jewelry and earn money. Then I am able to send money back to him for the work that he has done. Remember that West Africans are generally poor, and I am able to earn money here and send it back to him for the effort and work he has done.

At home I have been able to work with my family and we have fun. My grandmother oftentimes is very bored. So I ask her, "Granny, can you tell me about your past? What was your experience like? What was school life for you like? When did you meet my grandfather? When did you get married? I like hearing those stories. It's my time to hear the stories that you have to share."

So my grandmother will share how she went to school and how things used to be. It's very fascinating to me.

I love shopping.

(Laughter)

When I go shopping, I have to be careful with my money. You know, with no job right now, I have to be careful. Sometimes I will go shopping, and I am addicted, and it's like, "Mama, can I have that one?" I am somewhat of a pest when it comes to that. Yeah, I like having money, but right now I have no job so I have to depend on my mom. I can't shoplift, and I can't take it without paying for it. So my mom has been very gracious.

What else do I do for fun? I spend time working with friends, text messaging, VP'ing with friends, making my jewelry, and having fun with family. Those are the things that I take care of, like the kids at home. I am a very happy person always. That's my nature.

(Applause)

Minoru Yoshida: Well, you may think that I am boring person because I work all day and I go to grad school all night. Then I work on my thesis, so it's 24/7. I have no life.

(Laughter)

But it will soon be over this May when, hopefully, I will graduate.

I do love to travel. I've been to more than 30 states here in the U.S., over on the West Coast, the East Coast, and the Midwest. I haven't hit the southern states yet, but some day.

I also love to go out with my friends to coffee houses. We have a wonderful coffee house that's open until 11:00 or 12:00 midnight. Friends get together and we chat. We have tea. I complain about my work... yeah, who doesn't? But we do have a good time. And that's it. I really don't have the money to go out and shop, but, yeah.

(Applause)

Sam Atcherson: I am already seeing the four of you as future leaders. Maybe you already are involved in leading your communities, or your friends, or your school. If you are doing something now, you can share that? If not, what do you plan to do to impact your community and your friends? How are you encouraging them?

Parvin Karobi: I am going to think.

Teraca Florence: I need to think, too.

Parvin Karobi: That's a hard question.

Teraca Florence: Martha?

Martha Davies: Well, please understand I am not quite sure about this particular question. During one summer a couple of years ago, I worked at a camp in northern Minnesota. I worked there with a bunch of deaf children. There were other campers there as well who had physical problems, but there was one particular day where they had a deaf teenage party. It was on their last day at the camp, and I was able to teach a small group of kids how to act and perform. I had learned this in Africa.

So I took those experiences, and I shared that with the four girls and the four boys, and it was so wonderful. We got together. I shared with them. I said, "If you don't mind, I am going to teach you an African dance." So we worked that out, and we were able to show the audience what we did on our last day. We were able to do that before they went home. The kids were motivated to do it, so we taught them the entire week this particular dance routine. The boys and girls wore the same clothes, matching outfits. I was quite proud of what they did and quite proud of what I did as far as teaching them.

I was thinking that maybe one day I could become a leader for deaf individuals and teaching them dance and performing arts, and maybe try to be equal with the hearing community. Oftentimes we feel like deaf people can't do that. We're not animals. We can do things. We can do everything that hearing people can do, and that's what I've realized.

(Applause)

Teraca Florence: Okay. I am ready. I just realize what I wanted to say.

This summer I am going to be working with deaf children from 6-12 years of age, all deaf. I won't work the entire summer, but I am willing to give up part of my summer to work with children because I think that they need us as deaf role models more than I need my time because I'm not selfish. I'm more than willing to give back to the deaf community. I appreciate everything that they've done to give to me to help teach me to change my characteristics and become the person that I can be.

Also with the Atlanta Hawks, I want to dance with them. So, yeah, that's all.

Minoru Yoshida: Hmmm, I'm feeling a little guilty because I wasn't really involved lately. I have been focusing on myself.

I am involved in NTID deaf international students group. These are students who have come, like us, and have made their way to the U.S. We've established a support group. I was one of the founders of this group back in 2003. It's moved along, and it's done quite well. I've worked on that. The group has grown. It showed marked improvement, and I am happy to see how it's evolved over the years.

For the future, you know, I'm just not sure yet. If I don't finish my master's degree, I don't know what I am going to do, but I want to go back to Japan. I do want to get more involved with the deaf community there. I left there when I was 18, but what my understanding of community at the age of 18 was compared to what it is now is entirely different, so I want to go back. I want to go back to my country of origin. I want to go back and meet with the deaf community there and work with the deaf community there and improve things for the deaf community there.

(Applause)

Parvin Karobi: I haven't involved with the community that much. It's really hard for me because of my parents' situation because I have a lot to take care of at home. So I taught as much as I can. In the future I hope to get involved more in deaf culture, and give more of my time. I just wanted to say that.

(Applause)

Sam Atcherson: When the four of you look out there in the audience, you see teachers. You see VR counselors. You see disability specialists. You see audiologists. You see administrators. What would you want to share with them? They are working with the future children, so can you give them some advice?

Parvin Karobi: I'm thinking.

(Laughter)

Teraca Florence: Well, she stole that. I am thinking, too.

(Laughter)

I know I could go on and on and on here. But for the people who are here, I want to say thank you. Thank you for bringing me here. I'm from Atlanta, and this is my first time heading up north.

I am really blessed that I have the opportunity to see some the world and to see it while I am young. You have influenced me to become what I want to become some day. And I'll pay you back one day. Guaranteed. You are the best.

(Laughter)

Love to all!

(Applause)

Martha Davies: Well, that is really a good question. For me, if it had not been for Greta and the other professors, I would not be here. I would not be successful. You know what I mean? If I didn't have the teachers out there, how was I going to be successful? The teachers are who made me successful, and I thank you so much for making my name out there, for sharing my experiences. I truly want to thank God for blessing me with you and those of how work with deaf children.

There are some teachers who are not really good at working with deaf people, who are somewhat clueless, and sometimes when they're trying to teach the deaf children need more. They need motivation. They need a way. I have concerns about that because they're not able to work with the children well.

But my teachers have been phenomenal. They have worked so hard with me. They've endured with me. They've had patience with me. I came from a place where there was no education. I came here to improve my experiences, and they have worked so terribly, terribly hard with me. They've sat with me one-on-one, teaching me the basics, teaching me currency, what one penny was, and what the "cheap" word was. The lessons went from what was simple to more complex concepts. It was hard work. I appreciate so much the work that you have done with me. I wouldn't be here today if it had not been for you. I appreciate your time.

You teachers in the audience, you audiologists, you administrators, be patient with your deaf students. Work with them. Help them improve their experiences. Help them become the person that they need to be. The students – we students -- truly, truly need your help. I thank you so much.

(Applause)

Minoru Yoshida: I could name all of the individuals, and then I would take all of the 10 or 15 minutes that we have left doing so. I just want to say that I do want to thank the people that have given of their time throughout this process of mine. Without their support I wouldn't be here.

But I guess one simple message that I want to say is that I've learned to be frustrated with people's attitude. It's an attitude of always thinking inside the box. Now, I've met people out there, and they say, "Well, you are different." What does that mean? Well, I understand their perspective. They see students all the time.

But I encourage people to think outside the box once in awhile. It's an important thing to do. For me, as an international student, my struggle is to let people know what I see and what I understand and what I've been through. As an individual without language skills in the past sometimes, you meet wonderful people out there. Sometimes you meet some frustrating people out there, and sometimes it's very hard to get people to understand what you are trying to convey. Yes, I've been here for many years, and I understand that it's difficult for humans to change, but understand that there are different perspectives out there. I encourage you to think outside of the box and discuss that amongst each other.

Parvin Karobi: I just want to say thanks. I am so blessed that I have VR, audiologists, I mean, everything. There is one specific person I really thank God that I met her, and that is Katherine Bruni. If I didn't meet her, I probably wouldn't be here. I probably would have given up college.
(Applause)

Teraca Florence: I wanted to add something. I was not motivated initially at college. I was willing to drop out, willing and ready. I wanted to sit at home and do nothing. But, no. Without the help, pouring out their hearts to me, I wouldn't be the person who I am today. Without the two of them I would not be here. I wouldn't be here. I wouldn't have been able to learn as many things as I have. I wouldn't be where I am right now.

I want to tell all of you people -- all of you -- that you need to pour out your hearts to help children. It doesn't matter what they have. Help them. Be honest with them. Be patient with them. It's tough, I know, and it can get on your nerves and be hard. But be patient with them because one day they will thank you, just like I am right now. I am giving my thanks out to Kathy and to Debra. They have called me on all of these different things, because I have a habit of procrastinating. Oh, my goodness, they were on my butt to get me to where I am now. And they still are.
(Laughter)

So thank you. Thank you for that. I love you, mom!
(Applause)

Martha Davies: And I think, too, that being a teacher is quite important.

Sam Atcherson: Wow, anybody need a tissue?
(Laughter)

I think that we have 10 minutes left and I'd really want to open this up to the audience. Do you have any questions for our four panelists?

Audience member: I had the wonderful pleasure recently to go to a presentation about black deaf community. This man who is a deaf person and also African-American talked about how he balanced the two cultures, and actually how he chose to identify himself. So I am curious for you. Do you identify yourself first as a deaf person with the community and culture, or do you identify yourself as your ethnic culture, or do you balance both as a dual identity?

Teraca Florence: That's a good question. I don't know. I don't identify as black. I am black. Look at my skin. I mean, that's not a big point for me. But the point for me is to not label myself black, but I am, but to label myself as deaf, period. That's it, because that's my identity. I'm not being discriminatory to other people who label themselves, but you see my point? It's just who we are. It's a color of skin. So what?
(Laughter)

Martha Davies: Now for me, that question is probably a good question. Coming from West Africa to Minnesota, I have had to mingle with a lot of black people. I also socialized with the black and white communities. I have lots of friends who understand. I've met two black boys at my school who don't socialize with other blacks. They don't have that experience. They only socialize with white people. Does that mean they feel like they're white? No. But I have both black and white friends, so I really don't know much about that.

Audience member: I mean culturally, I know that you are Iran, so how do you balance the Muslim culture with the deaf community, and for Japanese as well.

Parvin Karobi: Ask the question, please, again.

Audience Member: As a Muslim person, there are a lot of cultural aspects. How do you balance that with the hearing community and as a Deaf person as well?

Parvin Karobi: It's hard. That's all I am going to say. I am just living through it. I keep going on. So, yeah.

Sam Atcherson: I am going to add to that question specifically for you. Which of those cultures do you feel strongest with?

Parvin Karobi: I would say American, because one problem with my culture is that... well, I don't understand them all the time because they are always talk oral, so I think that's a huge problem. If they would have signed more, I would say that it would be balanced more. But in America I am more connected and feel more for them.

Minoru Yoshida: Oh, me? I get to answer. Okay. I have to come up with an answer. In Japan it's a more homogeneous culture with about 95% of the people being Japanese. So in Japan I always looked at myself as deaf first. That was the only way I was different from other people.

When I came to the U.S., all of the sudden I have these different identities: I am Asian; I am male; I am deaf; and I am white. Suddenly I started wondering, "Who am I amongst all of these different identities?" Through that and through my experiences at RIT, that's what really helped me grow emotionally and mentally, and I can honestly say that I am deaf first. That's where I identify with my other friends.

We have similar struggles, similar issues, and culture around the world. I believe deaf people around the world struggle with the same things on a daily basis. I'll have to say that's my first identity.

Yet, at the same time, there is a part of me that goes back to the Japanese culture; as you know, they're more quiet and humble. That's a direct difference from the American culture which tends to be more forthright and straightforward. After 10 years I know that it's going to be hard for me to go back there and play the nice guy.

(Laughter)

But, you know, I will do my best.

Martha Davies: Now, for me, I love the world. I love the various cultures. I learn from various cultures. How does your culture work? What does it look like? So I like the diversity. I love the world.

Sam Atcherson: Wonderful. Are there any more questions?

Audience member: If each of you could change one thing tomorrow, what would it be?

Parvin Karobi: In general?

Minoru Yoshida: What do you mean? Change it to what?

Audience member: Right now I am giving you a magic wand, and you each have one. What would you change tomorrow?

Martha Davies: What I would change tomorrow?

Teraca Florence: Man, you kill me with this question!
(*Laughter*)

Martha Davies: Well, for me, if I saw something new that I had never experienced before, how I would look and think of that from my past experiences would be that I would look at that and try to perceive it. But if I looked at something new I would try to integrate that into what I am doing if I was impressed by it. I am not quite sure if I am answering your question.

Teraca Florence: What would I change? I'd stop cussing. That's one thing that I would definitely change.
(*Laughter*)

Martha Davies: Maybe that was a good question then, huh?
(*Laughter*)

Parvin Karobi: I don't think I would change anything because everything happens for a reason. So everything has a purpose. I don't think that I would change anything at all. No.

Minoru Yoshida: Change? Change the system? Change anything? Is that what you mean?

Audience member: We have an opportunity to improve something. What? Our world? Our world is better how?

Minoru Yoshida: If I had to pick one, what comes to mind is research and studies tell us that deaf people have a third, fourth, fifth-grade reading level. That's something that we struggle with. I would make it ninth, tenth, eleventh. We see 70% of deaf people in poverty, no education, or lack of parental support. It's not just because they are deaf, but yet, it is. Their hearing peers have an opportunity to go to school and get an education. They don't have an opportunity to learn sign. That's what I would change.

I've many wonderful, wonderful educational role models that inspire me, and I think that they could become that. But deaf people around the world don't always have that opportunity. That's what I would change. That's the effect that I would change. Deaf people like us go out and advocate and change that internationally. But, see, we have what we have in America because somebody had a dream, and we moved forward with it. That would be my dream.

Sam Atcherson: Please join me in thanking the panelists. This has been a wonderful experience.
(*Cheers and applause*)

Elise Knopf: Thank you so much, Sam, for facilitating this wonderful discussion. It's really been great. And to all of you, good luck! We wish you all of the best, and I hope to see you again soon. Come back. You are always welcomed this is your family. We'll always be here to support you. So always remember that okay? Thank you so much, everybody.

Help! High School's Almost Over...What's Next?

Greta Palmberg, Elissa Becker, Melody Eubanks, Janis Friend, & Sally Prouty

Abstract

What do you want to be when you grow up? Will you go to college? What kind of a job would you like? These questions are typically asked of teenagers as they progress through high school and start planning for the future. And it's pretty common for parents to wonder, Will my daughter succeed in college? or Will my son be able to get a good job? Parents of a deaf or hard of hearing teenager may also have additional questions and concerns, and the professional community may not always be sure how to respond. This panel includes a group of parents who have been an integral part in helping their son or daughter consider the options and develop a plan for the future. Each of them has a set of unique experiences related to making decisions, learning about the array of adult services available, and re-tooling their plan, as needed. For professionals, these insights into the parents' experiences will give them a better understanding of how they can be supportive of parents during the transition process, especially during the gradual, but often difficult, process of letting go.



Dianne Brooks: I hope that you are as excited as I am to begin this panel discussion. Yesterday we heard from the wonderful students. It was very inspiring. Several of them came from other countries, and that was really amazing for me because I really had not been around this for a long time. Yet it was an eye-opening experience for me as an individual to sit and listen to those young people's experiences.

We don't want to forget that there are also parents involved in the transition process. They have issues, concerns, and experiences that may be parallel to what the students are going through in the transition process -- transitioning from school to work or to postsecondary education experiences. This morning we are fortunate to have a group of parents who have been through the transition process themselves. They are here to share their experiences with us. Greta Palmberg will facilitate this discussion.

Greta Palmberg: Good morning. We have a hard act to follow. I saw the student panel yesterday and I thought, "Oh, no, here we are." But even as they have their own experiences, we as parents have our own experiences. I think that we are all in a new club. It's called the PODA: Parents of Deaf Adults.

I would like to first introduce the panel and give a brief overview of our sons or daughters and the transition experience that we've had.

My name is Greta Palmberg, and I have a deaf son who is attending the University of Wisconsin in Milwaukee. He is hopefully soon finishing his second year, his sophomore year, and he is studying architecture.

Melody Eubanks: I have a 24-year-old deaf son who attended NTID for three years and has currently been accepted to the bachelor's degree program at RIT for industrial design.

Janis Friend: I am the mother of a 30-year-old deaf son who attended a variety of programs, and I might get into that a little later. He attended NTID, Jacksonville State University, Eastern Kentucky University, and Jefferson Technical College. He is now working for United Parcel Service (UPS) in Louisville, Kentucky.

Sally Prouty: I have a son, Andrew, who is 26 years old, and Andrew is deaf-blind. He will say, "Mom, I can't see very far." We use that term to get the appropriate services. Andrew recently transferred from a job working for the U.S. Army Corps of Engineers, and he now works for the U.S. Fish and Wildlife Service. Just recently in January, he received an award for getting off all government assistance. So Andy is living in his own apartment, commuting back and forth to work, living independently, and is very happy.

Elissa Becker: My daughter is Rose, and she is 29 years old. She graduated from the Lexington School for the Deaf in New York, and from a vocational center for the deaf. She is presently living at home, and she is working.

Greta Palmberg: Well, you now have a brief introduction of our sons and daughters. The proud moms sitting here on the panel didn't get where they were without a lot of effort and without a lot of help. We would like to fill in the story a little bit. I would like each of the panel members to share a little bit about the K-12 years, especially the secondary years. What was your role as a parent on the IEP team, and how did you help the team come through the transition process on planning for your child?

Melody Eubanks: I became involved with the IEP process--actually the first one that my son had--when he was five years old at the pre-school hearing impaired program. I became involved with the deaf educator, the sign language interpreter, the speech therapist, and at some point, some other mainstream teachers. I worked closely with the goals of the current year and on projections for the following year.

Greta Palmberg: As you went through that process, Melody, were there times that were frustrating? Or in that process, did your role as a parent change?

Melody Eubanks: It did. I realized at a very early age at the very first IEP meeting that there were standards that my son was constantly compared to. The teachers would also say that as a deaf person, he probably wouldn't learn to speak higher than a fourth-grade level. There was a constant comparison and then ongoing testing. But I always felt like I was the only one in the room that had high standards for my son. From that day on, I knew that every IEP meeting that I would attend I would have to advocate for my son. I would have to be the one out there gaining the knowledge to see what options could be available for him.

Greta Palmberg: Thank you. Janis?

Janis Friend: Actually, until my son was in high school, the experience with the IEP process was a pleasurable one in that he was in good programs; he was at schools for the deaf. I didn't feel that he

was being compared negatively with the standards. But when we got to high school and he opted to be mainstreamed, this is when some of the struggles began in obtaining appropriate services and working through that transition process. So it wasn't as easy then, but we came through it.

Greta Palmberg: Sally?

Sally Prouty: We were, I guess, fortunate that my husband had a job that enabled to us transfer. So in Andy's first seven years of life, we lived in five states. We were always looking for the optimal education and services and medical services that he needed. We didn't have to battle too much because we felt as though we found excellent services where we ended up in Minnesota.

We did realize, like you have said, that we had very high expectations for Andy. I know that my husband and I would go home and he would say, "Do you really think that can he do that?" And I would say, "You know, I don't care because if I have high expectations, then the people that are working with him will have high expectations, too." I remember times in high school where we were told that the same thing about the expectations, "But your son Andrew already has the highest reading level in this deaf education program." And it was a very well thought out educational program. And we responded, "You know what? We don't care because he still has a long way to go." So it was constant advocacy.

Elissa Becker: I think that the term "constant advocacy" is absolutely correct; it begins from the minute that they are born. As soon as you know what you are facing and what you are dealing with, you need to teach the teachers what they need to be aware of. That's all part of constant advocacy.

The moment when I realized that I had a huge battle to fight was when I realized that the IEP team in my town knew nothing about the deaf and nothing about low-functioning deaf at all. And yet they were the ones who were going to make up her list of what needed to be done in her IEP outline.

Once I really could see clearly that their concerns were not about Ruth, but more about keeping the money in the township and having to use that as the basis for what her needs were, I realized that I had to go out and find all of the programs that she needed to continue to learn as much as she possibly could and not be isolated into a situation where learning was impossible for her.

Greta Palmberg: I think that for myself I had a difficult spot. I have been a deaf/hard-of-hearing teacher on the other side of that table for 20 years. Then I walk into the office as the "mom." I am sure that I may have intimidated some special education teachers when I walked in there. That was not my intent.

But I was a little bit disheartened every time in an IEP meeting to hear what my son couldn't do and also hear what we needed to work on without any acknowledgments about accomplishments he had made and where he was at. I can remember in second grade he was reading at a second-grade level. Why weren't we celebrating that? Because I was quickly told that I can expect him to read at a fourth-grade level. I said, "You have the next, what, 10 years to make him go up two more levels? That's an easy job for you." I wish that statistic could get thrown into the garbage because it just has done more harm than good.

I have battled the expectation at every single IEP meeting. I've been trying to say that until he shows you that he can't keep up with his hearing peers, then that is your expectation for him. And that's where it needs to be. So I was the mom and the coach. Sometimes I was the same as you where I felt like my husband and I left the IEP meeting and we wondered, "Are we the only ones here that have those high expectations?" That was a struggle.

The other thing was listening to our child. At the end of second grade when he was about seven or eight years old, he said to me, "I want to go to the hearing school." And I responded, "Well, you're kind of there."

(Laughter)

"Nope, nope," he said, "I want to ride the bus with everyone in the neighborhood. I want to go to the hearing school."

As a mom I think we always have that second level of fear... that second level of it sounds easy to everybody else.

Just put him in swim class.

Just put him in karate.

Just sign him up for the YMCA class.

What we're thinking in the back of our heads is, "How are we going to get the accommodation? Who is going to say no to us? What if they say they can't afford to pay for those services?" We always have that second level and that's not something that we can separate because we've had that level to deal with for 18 years.

So when they come to a postsecondary place, that's ingrained in us. We're always thinking ahead. What if those services don't work out the way that you promised because, from our history, that has happened before? So let me go to that question.

Can you tell me of a time where there was a frustration in services or an obstacle that your son and daughter or your family had to overcome or had to overcome, and how you did that?

Melody Eubanks: Steven started out in the oral program, and he was there for two years. This was before he was five years old. During the first year he did well, but during the second year he lost more of his hearing and became more profoundly deaf. He was actually severe when he was diagnosed, so the second year didn't do quite as well because his hearing decreased.

At 5 years old he was put into the Clayton County Schools and was introduced to sign language at that point. I think that my defining moment as a mother is he had been developing language from different language activities that we would do with speech. But at five when he learned sign language he was able to come to me and tell me, "Mom, I'm sick and I don't feel good." And for the first time in our lives he was able to communicate that. I was delighted.

He could communicate that through his language, and at that point is when I knew I would have to embrace to learn as much as I could to communicate with him. I taught him to never give up. Never accept no for an answer. And my goals were to persevere through kindness, to work with the teachers, to work with the speech therapist, to merge the two worlds because he was a deaf person who would have to function in the hearing world for his whole life.

I wanted him to grow up and learn this is one world, and we all have to learn to get along together. So through the IEP at an early age I worked with all of the teachers, sign language interpreters. They would poke me in the side and tell me, "Come here. This is what you need to advocate for."

And they had my direct line. You know, we didn't have cell phones back then, but as soon as I got home the teachers would call me, or the bus drivers would call me, or the sign language interpreters

would call me, and they would say, "This is what we need, Melody," because they knew I was part of their team. Our goal was to achieve that goal for our son.

Janis Friend: Wow. I am going to try to not get on my soap box here. This is going way back. When my son was first diagnosed as being profoundly deaf, he was about a year old. I had never met a deaf person.

When someone came to me and said, "We have just the program for your child and we can make him just like a hearing person." I said, "Oh this is great!" so we put him in the program. He was there for 3½ years, and it was called Verbal-Tonal. Remember, this is a profoundly deaf child who struggled for 3½ years and was saying, "Ba, ba, ba, ma, ma, ma," and that was about it. He was becoming increasingly frustrated.

We had no communication. Our communication when he wanted something was to go in the kitchen and stand and scream while I emptied the cabinets or the refrigerator or whatever he was screaming in front of until we found what he wanted. And then he stopped screaming.

So at five years of age he was kicked out of the verbal tonal program because his behavior was so bad.

(Laughter)

Imagine that. No communication, five years old. I can get really, really bitter about wasting all of those language development years. I try not to do that. But as hearing parents we're at the mercy of the philosophy of the program that diagnoses our child as deaf. I hope that's changed. But regardless, he was kicked out of that program.

We were living in Knoxville, Tennessee, and he was referred to the Tennessee School for the Deaf. He started learning sign language, and it was like 360 degrees. This kid took off. I started learning sign language at the time he learned sign language. But could I keep up with him? Never in 1,000 years because it was just a whole different world. And became, I think, a model child.

(Laughter)

Greta Palmberg: They all are.

(Laughter)

Janis Friend: My husband was in management for Nationwide--that big tower across the street--and we were transfer several times. We moved to Kentucky to live close to a school for the deaf. When we lived in Memphis, they had an incredibly great day program with over 300 deaf students in it.

So we were very fortunate that we moved back to Louisville which was too far for him to be a day student at the School for the Deaf. He had always been a day student. This was an assumption that I made that he would go back to the school for the deaf and live in the dorm or whatever.

And he said, "No. I want to be mainstreamed." So that was when our battles began, and it was a struggle then for the next four years. But it was his decision. I received a lot of flak from the Deaf community because I was also a professional in deafness, but it's his decision and we'll deal with it.

Greta Palmberg: Sally, what about you? Was there a defining moment that you can think of for your family in Andrew's adventure and transition?

Sally Prouty: I think many parents feel as though, “Okay, we’ve got this IEP. We’re going to be on this IEP until hopefully 21. We’ll take advantage of all of the services, and then we’re done. And then our job is over.”

Well, I think that the defining moment for our family was realizing that we are lifelong advocates for our son, Andrew, and I think most of us will agree with that. I have two other children who are now young adults, and, yes, I am an advocate for them. But it’s a lot different having a child who is deaf-blind.

Elissa Becker: I think my defining moment for Ruth was when she was out of the Lexington School, and nobody told me what to do. And it was the first time that I was not prepared to tell somebody else what to do. So it took a very long time for me to research and find help through the adult services.

What I found was, because she was not only deaf but also severely learning disabled, that was going to be something that people just didn’t know how to deal with at that particular time. So I had to go to the mental health offices and try to get help from them, along with vocational rehabilitation in the State of New Jersey. However, they didn’t talk to each other, and so it became my job to be messenger between the two and get services done between the two different organizations.

It took over a year, at which time Ruth was just sort of sitting there until I met a lovely man who is part of the Lexington Center in New Jersey who said, “Wait a minute, we can help you because we will go out of our way to find Ruth employment and we will support her needs with a job coach interpreter.”

It was at that moment that I realized that there were people out there who really cared, and there were services except that nobody told you about them. So it became my job to make sure that everything that happened with Ruth was marked down so that I could model it no matter where we were. That was probably the turning point in her life as well as mine.

Greta Palmberg: We all have different defining moments. I think that for my family, it came very early. I was a special education teacher before I had my first child. So I was in the world of learning disabilities, and emotional behavioral disorders. In the learning disability world, our philosophy was “whatever works.” We tried this, we tried that, we tried this, we tried that. Some of it worked for one child. Some of it worked for another. And the goal was to make progress. Whatever you could find that would make progress is what you used.

And then I had my son. At seven months old I found out he was deaf. As an educator I was shocked that nobody agreed on the communication system I should use as a parent, on the education system I should use as a parent, or on the medical treatments, if there was one to use. As a parent, I was placed and thrown in a battle. But my heart was about this little baby, the seven-month-old baby that I felt I was not connected with. And I had to find a way to connect with my baby.

We finally decided that I was going to do signing. I won’t say ASL because that didn’t happen until many, many years later, and I am still learning. But we were going to sign. I remember carrying this baby around the house pointing out things in the kitchen and the living room and signing. I had this little parrot with these little hands that would sign back to me.

The first sign was cookie, and I am looking in my dictionary, “What was that, what was that?” And it was cookie. And we were so happy. And then it was “mom.” Notice, before “dad,” it was “mom.”

(Laughter)

So and then of course it was “mom” and then “dad.”

(Laughter)

And so we went around to the parent class and saying, “Oh, he is speaking „mom“ and „dad“.” We're so excited.

(Laughter)

Until the sign language interpreter told us what that was.

(Laughter)

And then my husband wasn't too happy.

(Laughter)

But I still felt a disconnect from this little baby. I felt like who is this person in here? How can I connect? And I was just getting back everything. And my hands, I'm like, am I communicating? It was just so foreign to me.

When he was about 12 months old, I was driving in the car. At that time you could have the car seat in the front seat, so he was in the front. We were at a stoplight, and like all young little boys he was just enamored with trucks and cars and all of those kinds of things. While we're at the stoplight, he turns, looks at the gas station, and sees a car coming out of the car wash. He turns to me and he signs, "Mom, car cry." And that was my defining moment. I thought, “Okay, I know who you are. We can have a relationship we can communicate. This thing is working.”

(Laughter)

Keep doing it.

We all have those defining moments. I think what I didn't realize was the battles. I hate to call it a battle, but we go to battle for our sons and our daughters. We see them invited to birthday parties where we know they can't communicate with anybody at the birthday party. Do you send them there and let them be frustrated? Do you keep them home? Do you ask the neighbor if you can send an interpreter with them? You know, everything, everything that they do in their life is not easy. And that's part of our life. It becomes our life.

As we leave the secondary system and we go to the adult world, sometimes people don't tell us that the game just changed and the rules are different. And we have been there. We've been the advocates. We've been helping. And now the rules are different. We don't need you anymore. They're 18.

(Laughter)

Do you know my 18-year-old?

(Laughter)

I want to talk with the panel because here we have a lot of postsecondary, vocational rehabilitation and community rehabilitation people. What was that shift like from the school system to the adult world? How did your role change and how did you figure that out?

Melody Eubanks: Through trial and error and a lot of bumps and bruises along the way. The State of Georgia initiated a high school graduation test. When my son was in his junior year, I was told that he would have to pass all of the portions of it in order to get a regular high school diploma. He started taking the tests in his junior year, and he passed the math, science, and history. By the time he got to his last portion of the senior year, he did not pass the writing portion of the high school graduation test. I was told although he had a 3.8 GPA and had gone through the four years on honor roll, he could only get a certificate of completion. That was when my gears kicked in again, I guess my motherly instincts.

I was like, "My son fought four years to maintain a high GPA. He was a pretty good student, never had any problems with educational system, and you are telling me that he can only have a certificate of completion? Fine!"

So I told Steven. I said, "This is the bureaucratic stuff that we have to go through. We're going to get you through high school, and we're going to get out, and we're going to do what has to be done for you to excel."

At that point that's when we found out about a reading and writing course that was offered at Georgia Perimeter College in Atlanta taught by Katherine Bruni. We decided to send Steven there because we told him, "You didn't pass the writing portion of the Georgia high school graduation test, but you will." He knew in our home it wasn't an option. If he failed he picked himself back up and he carried on. And that's the attitude he's always given.

Part of the learning process is learning how to teach him to be an advocate for himself. So he got a tutor. He had a private tutor and he attended that class. He also went to the Georgia Council for the Hearing Impaired and got tutored there through a GED program. So he had like three different things he was trying.

It took him two years. During this time that he was attempting to pass the writing portion, he was there every time trying to pass it. And we had applied for a waiver request through the Georgia State Board of Education. We waited approximately one year. I kept calling, "Can you tell me the status?" The response: "Well, it will be presented at the next board meeting. It's a long process, and you will have to wait. And do you realize that there never has been a waiver granted?" And I was like, "I understand." Like I said, my motto was always perseverance through kindness.

So we waited, and approximately one year to the day I called that office, and the lady was puzzled that I had called. She said, "You didn't hear?" And I said, "Hear what?" She said, "Your son passed."

It was his 13th try. It saddens me to sit here today to say that my son was drug through, and his self-esteem was diminished. But we gave him no option.

I failed to mention that he had visited NTID. They said, "We'll look at the whole picture and consider what kind of diploma you will get from high school, and you may be able to get accepted." Well, lo and behold during this process we found out, that you need a regular high school diploma. So I told him at that point, "Steven, you're going to pass this writing test." I told Katherine about our struggles. Katherine said "We're going to get him through it and he is going to pass it." So on the 13th try, after two years of trying, my son never gave up.

Sometimes he would get the results two months after he took it, and he would come home and he wouldn't even tell me. I anguished and I hurt for him that he had to be drug through what I call

bureaucratic guidelines that were set up for this testing system; he was somebody being tested in English as his second language. But he did not give up, and he is at NTID. I have sent letters to the State Board of Education, and informed everybody about his continued success.

(Laughter)

He is at RIT. He is very independent. In fact, when he was at NTID for three years, he told me, "Mom, I'm going to RIT." And I was like, "Sure, son, okay."

(Laughter)

Sure enough, they wrote us and they told us that he was accepted in the bachelor degree program for industrial design. He never once came to me and said, "Mom, help me with my portfolio, and what am I going to do?" He did this all himself. And he is at RIT now.

(Applause)

Janis Friend: I am sitting here listening and I am amazed how similar this is to an experience that we had in Jefferson County Schools in Louisville, Kentucky. There were a couple of really, really tough moments.

First of all, when we moved to Louisville and we asked for him to be mainstreamed, they had never had a deaf student mainstreamed with a full-time sign language interpreter. He was the first, but they agreed and we moved on from there. But they did ask that he be mainstreamed in the same school where they had the program for deaf students. They didn't feel secure with him there without that backup.

For the first year he was in that school which was downtown, it took him an hour to an hour and a half from our home on the bus to get downtown and back. So his next year he asked to be mainstreamed in his neighborhood high school. I can tell you that I was a wreck before we went to that IEP meeting to make that request. I didn't sleep all weekend. I called a lawyer. I mean, we were prepared. My husband and I went out to lunch and discussed it and discussed it and just agonized. And when I say agony, yes, it was agony.

My husband got the idea of taking a tape recorder to the IEP meeting because he wanted to make sure that everything was documented in case we had to file a lawsuit or something. So we walked in and he said, "I hope you don't mind if I tape this meeting." He set the tape recorder down in the middle of the table, and everybody is like (indicating). Now, I know that IEP meetings can be intimidating. And, even as a parent, an educated parent, I was intimidated at IEP meetings, even though I attended them on the other side. It's very different.

I can just imagine how parents who don't have a lot of educational background feel when they walk in that room with table full of professionals, and we know it all. We know what's best for your child, even though as parents, we know our child better than anyone does. But we got through that. They agreed, and then he had the interpreter.

He was making "As" "Bs," and he may have had a "C" thrown in there once or twice. He got through his junior year and the school said, "By the way, we've implemented a mastery test he has to pass to get his diploma." And I'm like, "No, no, no. You are not telling me that he has worked this hard and made his grades for all of this time, and whether he gets a diploma or not will depend on passing an English as a second language test."

They were only allowed to take it three times. He took it once in his junior year and passed math the first time. He could not pass the reading comprehension test. They offered free summer school

if you didn't pass it as a junior. He went to summer school, took it again, and didn't pass the reading comprehension. And so I started writing letters and calling people and telling them how discriminatory this test was, and nobody would talk to me. Finally I got a letter from the man who was the head of testing for Jefferson County Schools, and he said, "Well, we will allow accommodations for the test. He still has to pass it but we'll allow the test to be interpreted."

I called the lady who was head of deaf education at that time, and I said, "I want an interpreter for my son to take the test. I want the test interpreted." And she is like, "No, you can't do that. Only the instructions can be interpreted." And I said, "I have a letter here from Dr. Romney, and it says..." She responded, "Let me go get my copy." When she came back, she said, "You are right. It does say that," and I said, "Yes." She said, "Well, we'll let his classroom interpreter interpret it for him." I said, "Uh-uh, because his classroom interpreter was not a certified interpreter." It's the law now, but it wasn't then. Some of you may know Norma Lewis who is one of the world's greatest interpreters, so I said, "I want Norma Lewis to interpret the test."

(Laughter)

And they said, "Oh. Well, if we have it interpreted for Rob, we have to do it for all of the deaf students." And I said, "Yes."

(Laughter)

The school representative said, "Well, how will we do that because they're all down at this high school and he is out there?" I said, "He'll drive downtown."

Norma told me that the first day he came in, he was white as a sheet. She said that she feared he was going to have a stroke or a heart attack or something. It's terrible to do that to a child --put that kind of pressure on them that they've worked and worked and worked, and then you are saying you've got to pass this little test before you can get your diploma.

So I related to everything that you said. But I guess those are two of the toughest things. He did pass it with Norma's interpreting the test, and she said that at one point the special education or deaf education coordinator came in, and she said, "I don't even want to know what's going on in here. And she left.

(Laughter)

But we got through it.

Greta Palmberg: Thank you, Janis. Sally, could you talk about the adult services and how that change came along?

Sally Prouty: You know when you have a child in special education, it's like -- well, I felt in Minnesota that we got the Cadillac. The kids get everything. They have a bus that comes to the front door and it waits. It doesn't just stop there while the kid waits. The bus waits. So we get kind of spoiled because so many things are provided.

In Andy's IEP meetings we sometimes would have 12 people around the table, and they all had Andy's best interest in mind...and then comes graduation. He did go through a wonderful transition program with Greta as his IEP manager. But when that ended, suddenly I was no longer an integral part of the team anymore. I mean, starting at age 14, Andy started coming to his IEP meetings. By the time he was a senior in high school he started running; and by the time Greta got a hold of him, he was running the meeting with a lot of assistance from her. So he was on his path to becoming more independent.

But then get out into the real world and people don't talk to the parents anymore. They talk to the kids. It's a helpless feeling. I can give you one example. Andy finished the program. He was bound and determined to be a designer. He was going to make the games that Nintendo uses. He wrote a letter to Nintendo of America in Washington, and this lovely woman wrote him a private two-page letter, a personal two-page letter back to him describing how rigorous the program was. Lots of math...lots of high-level math. She suggested that maybe he start taking a class in computer design and see if he liked that, and then he could consider going on.

So he takes the class, he signs up, he goes to the disability office. And remember I said he's deaf and he just can't see very far? Okay. So he neglects to tell the disability office that he has very low vision.

So here is Andy in this class. He has an interpreter, which is, you know, to be expected. But he didn't not provide information that he couldn't see very well. This is a computer class, so the instructor is demonstrating on a computer monitor. Well, guess where Andy is sitting? Right in front of that computer monitor, and none of the kids around him could see. And he is oblivious. And nobody says anything to him.

I don't know if it's this poor deaf-blind kid that nobody wanted to bother, but nobody said anything to him. So he gets a message from the disability coordinator and someone further up; he forwarded it on to me and he said there is a meeting. I said, "Andy, what do you think the meeting is about?" He said, "Oh, I think it's about I asked them to get a note-taker." I knew that wasn't going to be the case. I didn't know what was going on because to no one talked to me. I am just the mom.

So we get to the meeting and they just dumped on Andy about how inappropriate it was. I mean, this was not the time and the place. The time and the place was taking him out after the class and discussing with him that maybe he should have told them about his vision loss. But no, it came to this very end where he is humiliated. And that point was my defining moment that I will always be involved somehow. So, yes, it was a learning experience for him, but at a very high price.

We get spoiled as parents having an IEP meeting with 12 people around and everyone looking at the parent because we have all of the background information. But then you get to adult services and we're gone from the picture. How have we handled this? I shouldn't say that he doesn't depend on us. He is very independent. He is very open with us. He does come to us for advice. I guess we're just playing the game and if something comes up, he'll run it past us. We will discuss it, talk it over, and then goes back and present a solution. It's basically our voice, but he is presenting it. That's the way we've handled thing.

Elissa Becker: Your story about the recorder going on the table in the middle of an IEP meeting brought back fond memories for me. It was about the same story, but that's not the question right now. So I will tell you that one later.

Anyhow, I think a very defining moment for us, Ruth and I, was after Ruth had completed her program at the Hiram G. Andrews Center (HGA), and we moved to Westchester, Pennsylvania, because Lori Hutchison said that's where you have to live, and I said okay. I had no idea where Westchester, Pennsylvania, was, but it did turn out to be a sweet town. We hoped that it had all of the services that Ruth would need after graduating from the most wonderful experience of her life. We were there, and lo and behold, we're told that we now have to contact the Office of Vocational Rehabilitation (OVR), and they will help Ruth find a job.

Well, the defining moment came when the people from OVR said, “Oh, okay. We don't know what she can do, and we're not sure if we have any placements for her, nor do we have any coaches that will be signing.” When all of this was presented to me, I said, “Okay. I think we have a problem here.”

Because of the model experience that I saw in New Jersey with a job coach, and because of that same model I saw going on at HGA, I found people that I would hire on my own and train them. That was how we moved forward, so that Ruth would have a reason to get up every morning and fulfill her need to be part of her community, and that's what we do.

We just sort of manage around the situation because truly the services that we've been offered in Chester County fall short of what I know should be because of my past experiences, and I know it's perhaps because of the fact that Ruth is also developmentally delayed and learning disabled that the OVR doesn't have the support team that we need. But we've gotten past it, and I am hoping that there will be more people in Chester County who can be serviced with all of their needs based on the fact that many telling this story.

Greta Palmberg: I will just add that you are starting a foundation in your daughter's name for support services

Elissa Becker: I started it about four years ago, but because of the terrible situation in our country, the federal government is very careful of who they allow who can become a 501(c)(3) corporation. I don't think that I look that tough, but it did take four years. Finally a year ago we got our certification from the federal government, and we are registered as the Ruth Becker Foundation for Deaf Support.

Our mission is to provide services in and around our community. That's where we would like to start. We'd like to offer these services to people very similar to Ruth with her needs as far as being profoundly deaf, deaf disabled, learning disabled, all of those things that don't stop a person from wanting to be part of their community. It doesn't stop a person from saying, what did I do today? How exciting--tomorrow I'm going to work.

It's important to give them sustained support, not 90 days which is almost impossible, but a sustained support for a longer period of time based on the fact that most of these clients also have the support of MHMR who have utterly no services for the deaf. So this would be a way to connect all of that and help these adults find a mission and enjoy going to work and succeeding. The end result is success.

Greta Palmberg: Janis, this is also a passion of yours.

Janis Friend: Yes, it is. I am just appalled when I hear that these service do not exist, because I work for Vocational Rehabilitation, and Ruth is the kind of individual that we are set up to serve. So I would like to invite you and Ruth to come to Kentucky, Just move to Kentucky and bring your foundation.

(Laughter)

Elissa Becker: Yes. You're bourbon country.

Janis Friend: That's right. I am right in the middle of it.

(Laughter)

Greta Palmberg: We've got a few more minutes, and I have one big question for the rest of you. My son went right from high school into the postsecondary setting, I think that I want to address that just for a moment.

Being a teacher I hope that I'm giving my son all of the self-advocacy skills that he needs at 17 and 18 to join the college setting. I tried the best I could, but he still is an 18-year-old, and if you have an 18-year-old they know everything and you can't tell them a thing. And they don't know what they don't know. But they know it all.

(Laughter)

That was a little scary for me. I was also scared to be labeled a “helicopter parent,” and I have worked in my profession with helicopter parents, so I know what they look like, and I can feel the hover coming.

(Laughter)

I hope that none of the University of Wisconsin staff think I am a helicopter mom, which I don't think I am. But when my son got into college, I thought he had self-advocacy skills. I had no idea the level of self-advocacy skills that he would need on a big university campus. No idea.

Socially and emotionally, I don't think that I could have made him any more ready than he was. He did understand disability services and what he had to do there. He did not understand other places of the campus where he needed to go to other people. So when we arrived in his dorm room, as proud parents we helped to get him all set up in his dorm and we noticed a box that says "hearing impairments" on the bed. We open it up, and it's a TTY. It's like, okay, whatever.

(Laughter)

And so as the mom, I am just kind of suggesting to now this 18-year-old young man, “Hmmm, what's going to happen when your friends come by your dorm room? How are you going to know they're there?” In his brilliance he says, “I will leave my door open all the time.”

(Laughter)

Like that's going to work for you.

We noticed that the fire alarm was outside the hallway. So as soon as he closed his door, the lighted fire alarm was gone. “Who are you going to ask about this? This is not working for you. Where are you going to go?” I asked. So he is at college and so excited to be there, and I am still self-advocacy teaching here. “Where are you going to go for this? What are you going to do for that?” He has done remarkably well, but there are things like that that come up all the time.

My last question to the panel, because I know our time is running out, is what suggestions or advice would you give to either families or to adult services? What are your little words of wisdom?

I guess I will start.

For the postsecondary setting, my words of wisdom would be as a parent, I feel it's my last chance when I come visit your colleges or call on the phone to ask about your services. That's my last chance, and then I get cut off. So if you could just not put on your blinders, “Oh, no, here comes a helicopter parent,” and listen to some of the things that I am saying, because some of the things I am saying you are not going to hear from the student until they're failing. And if you would have just maybe listened and jotted a note down you would have known to catch up.

I think as a parent what I wanted to hear was at this college or university, "Here's our safety net. This is what we're going to do," whether it's, "We're going to watch their grades at midterm first quarter, not that we're going to let you know what they are, but we're going to follow up with your child if we see that things are not going right. We are going to send them e-mails to remind them to come to the disability service office."

So if I know what your process is, I'm the coach now on the sidelines. I had to do this with my son. I know he just registered for classes, so I am paging him, "Did you go to the disability service? Did you tell them what you need?" and I can be an advocate that way. But if I knew how your system worked and what was required of him, I could help more behind the scenes. That's my suggestion.

Melody Eubanks: When my son went to NTID, he started cutting the umbilical cord early, and he knew I was a helicopter parent. I landed when he was first born.

(Laughter)

He is just like his father, and God gave him the exact personality he needed. But when he went to NTID, he forced me to go to NTID. I thought, "You'll be fine at the community college in Georgia, come on." And he said, "No, mom. I want to go to New York and visit."

So early in his first experience at NTID, he started weeding us out. During the first three years we went and visited, stayed on campus online, finding out what he did, and kept up with him on the sidelines. I wanted to respect his independence. I wanted to respect the code of ethics that certain professionals have to follow. So it was easy because of the Internet to keep up with him and to reserve that respect for him.

But we asked questions and contacted his counselor once or twice. I remember the first year he came home, he lost 20 pounds. And I said, "You've got to go to the doctor. We've got to see what's wrong." Anyway, the doctor finally contacted me and said, "He is fine. He is just homesick. He is more worried about homework and socializing. He forgot about eating." But he is doing fine, and he has cut the umbilical cord and is learning how to stay focused. Be informed about the curriculum out there and the services. I've always told him even when he jumped from high school to college, if you need help, if you need tutoring, if you need note-takers, or if you need interpreters, ask. The services are out there. Grab them. Thank God he is in an environment that has the whole world opened up to him.

But you have to respect the teachers rather than creating animosity between the professionals; it's a learning experience for them. I used to think, "Well, they're on the other side of the podium and they know exactly what my child needs." But they don't. You soon find that out. And if you don't, then you are not doing your homework as a parent. You have to become informed. You have to know what's out there. Then you together with that team, regardless if it's K-12 or postsecondary, make that informed decision together. It's very important that you promote independence for your child.

Janis Friend: I'm trying to think back that far. My son is a little older, and you mentioned texting. We didn't have that.

Greta Palmberg: It's a great thing!

Janis Friend: I know. We didn't have e-mail when he started college. We didn't have texting, and thinking back to when he turned 18, he was still in high school. I do remember the first time that

somebody said something about Rob having an IEP meeting, and I was puzzled because I didn't get any information. And they said, "No, you wouldn't. He is 18." I had been going to IEP meetings since he was five years old, and they said, "He has to invite you, and he has to give us permission to share information."

Now, I had always pretty much been Rob's contact with the world because we communicated, so I was used to being a very integral part of his life. But I will never forget when he went to NTID that first day. We left him there. My husband and I drove off, and I can see him standing there on the sidewalk. And I cried all the way home. I mean, it's like this is my baby. He is there. He is alone. Does he know what to do? Will someone help him? Somehow he did.

He got what he needed while he was there, but I know that one struggle that he had was being mainstreamed in the '80s. He totally missed the deaf culture movement. When you have a deaf child going to a program for the deaf in a postsecondary setting like NTID or Gallaudet University, that can be pretty tough. He had some really tough struggles.

Weeks went by and I didn't hear from him. We didn't have text messaging. I was a rehabilitation counselor for the deaf at the time in Louisville, and I was frantic. I was just totally frantic. Linda is sitting here smiling at me. She knows my son. Finally I called someone I knew at administration at NTID and I said, "I haven't heard from my son in two weeks. I have no clue what's going on. I am going crazy." So she went down to his class, got him out of class, and said, "Come to my office and call your mother."

(Laughter)

Talk about a helicopter parent.

I said, "Son, why haven't you called me? What's going on?" He said, "I've been busy and having fun."

(Laughter)

So I knew he could get along without me.

Greta Palmberg: All parents feel that nervousness when they drop their son or daughter off at college. I do think that we have an extra level of nervousness.

I remember when we dropped my son off. We were taking him to the bookstore, and I lost him in the hallway. Age 18 just found him and all of a sudden he is signing to all of these girls. And I'm thinking, "Okay, looks good."

(Laughter)

Then you do the parent thing. You take him out to dinner, the last supper.

(Laughter)

So you take him out to dinner, you bring him home. Back at the dorm room there are three notes on his door from three girls in interpreter training with their room numbers and phone numbers.

(Laughter)

E-mail addresses. I looked at my husband and said, "We can go now."

(Laughter)

Sally Prouty: When Andy was born, he was fortunate that he got his diagnosis of being deaf-blind, right away. He was just under a month old. It wasn't so fortunate for us. It was really hard, but we won't get into that. We're talking about the other end.

My husband and I educated ourselves. We learned. We became involved in the deaf community. We belong to a deaf church. I went through an interpreter training program. We got to know adults who were deaf. We got to adults who were blind. We got to know adults who were deaf-blind.

Although we met very many successful people, there was also the population who didn't work, and who lived on SSI. We were bound and determined that this was not going to be Andrew's path. We just looked at an old videotape. We were interviewed when we lived in Oregon. Andy was a baby, and we said that he would be a tax-paying citizen. We didn't know what was between what happened then and where he is now, but that was always our goal.

So my advice to give new parents is that it's never too early. At age 14 when they started saying it was time for transition, I thought, "Oh, my gosh. He is only 14 years old." It could have been started earlier.

So what we started doing with Andy and all of our kids is that we gave them chores. Along with chores came money, just like a job would provide money. Then by the time Andy was in high school he wanted a part-time job. He wanted to earn some money. So we immediately went to our rehabilitation agency, and we said, "He would like to work." And they said, "Okay." Well, that was our cue that whatever is going to happen is going to be from us. So we were instrumental in finding Andy his first job.

He wanted to be a baker. He loved baking chocolate chip cookies, and he was going to be a baker, by golly. We walked into our bakery and the sign said "Help Wanted." We talked to Andy about it. He said, "Let's go." He went in to interview, and they hired him. It wasn't for a baking job but it was as a dishwasher. But it was a start. He got his foot in the door, he made money with hopes of becoming a baker. There were two owners of the bakery, and she had a sign language book and she was awesome. The other partner worked at night and did the baking. We thought, "He doesn't have to deal with the public, it's just the two of them, and they can bake their hearts out all night." But we got this kind of hesitancy. Finally we said to the other partner, "Mariah, what's going on?" She said, "You know what? My partner is concerned about communicating with Andy." We said, "It's not a big deal. There's not going to be a lot of communication. They can just write back and forth." And she said, "Well, that's good for Andy, but you know what? My partner is illiterate." Now, what's the likelihood of that?

(Laughter)

So he decided, "All right, I am not going to be a baker, I have to find something else."

The next job was another job that, again, was connections that the parent made. Our assumption was going into this like into the IEP world of school people are going to help you and do things for you. We thought people would bring Andy jobs. That just isn't the case. I would encourage all parents to use whatever connections they have in the community because you are the connection.

Andy's next job was from a neighbor who had a sister who I think is 55 now, and she was a preemie. The doctor out on the farm in Iowa sent her home in a shoe box thinking that she was going to die. Well, she didn't die. She grew up and she was deaf-blind. Our neighbor said to us, "I want to give Andy the break that my sister never had." It was our connection with that person that made that happen.

So my advice would be that it's full-time advocacy. My motto has always been "Be respectfully demanding."

Elissa Becker: Coming from New York, I say, "Be demanding."
(Laughter)

Sally Prouty: We have a term in Minnesota and it's called, "Be Minnesota nice."
(Laughter)

Elissa Becker: I think that my advice to parents would be to listen to your child. With someone like Ruth who needs continuing support, listen to what they're asking. Then go out and help them find it. They have the answers to what they need, and that's another success for them.

Just getting the right answers and knowing people are listening to them is important, even though it comes through another mode called "mom" or "brother" or "cousin." It really doesn't matter. Just get them out there and let them ask. Help them get their answers.

Greta Palmberg: Well, I just feel honored to be sitting on this panel with these other women who brought their children to a level of success that maybe others never thought they could attain, and with the help of wonderful support services. All of you women are doing things now in your career life to help other deaf and deaf-blind individuals meet their success. That says a lot about you.

Because I am a teacher and I sat on the other side of the IEP table, I think my experience changed the way I sat at that table. I always thought about the parent. What information did they need to know for empowerment? Did they understand everything? Should I slow down? Should I describe all those terms that I am throwing out that I'm used to saying? They have no idea what I mean when I say "community rehabilitation" or "vocational rehabilitation" because they don't even know what those are.

I guess my suggestion is for those parents who have trouble or are not advocating, it's our job as service providers to give them the information to empower them to help their deaf and hard-of-hearing and deaf-blind sons and daughters achieve what they can.

At this point we've got about 15 more minutes to go, and I would like to open it up for questions from the audience. If you have any questions you would like to ask of the panel, please remember to come up and use the microphone or stand up here and sign. So do we have any questions from the audience?

Audience member: Good morning, everybody. My name is Tom Dean, and I am originally from Cincinnati, Ohio, but I live and work in Louisiana now. Hearing you all speak reminded me of my own transition story way back when, when I first left Ohio, went to New Orleans to go to college. I'm hard-of-hearing. I grew up hard-of-hearing, I am hard-of-hearing now, went to all hearing schools, but I guess I give you the story from the flip-side. My mother and I drove down to New Orleans from Cincinnati. She dropped me off for college there. And I had to take her back to the Greyhound bus stop for the long ride back to Cincinnati. I guess it was when I knew them that the umbilical cord was really cut. I just want you to know that it's not only bittersweet for the parents, but it's bittersweet for the students as well. Thank you.

Audience member: I have a question from another point of view. I know that it's not any kind of situation where the interpreter would be in the position to be pitied, but as an interpreter and in

working with deaf students at a college and meeting their parents, there are many times when the deaf student will ask me, “What did she say,” or “What did he say,” because their parents don't sign. Of course, I know that in most cases, in many cases, the parents and child have very loving and close relationships, and that the parents feel a real connection with their children. But as an interpreter, I feel a little intimidated in that situation. I feel a little uncomfortable, but I'm not going to tell them how to run their lives. Have you ever seen that, and what advice do you have for the interpreter?

Panelist: Thank you. That's a great question. I work in a transition program for 18-21, and we work with a lot of refugee families. Maybe they didn't learn sign language in their native country for their child and their child didn't learn it there either. So they come to America, and they have other children, and they're trying to fit into the American culture. At our IEP meetings, it's the only time where we have maybe a Somalian interpreter, or a Hmong interpreter, and a sign language interpreter.

For me as a teacher and a mom, the parent never gets this communication set up at other times. So there are times when families have family issues to discuss and we will extend the IEP meeting. Everybody will leave and let all of the interpreters stay so that family can have a discussion that's not afforded to them any time else. Is it the perfect situation? No, but I'd rather give them a time to communicate than not at all. So I understand the awkwardness of being in that situation as an interpreter, but those are golden moments for families, and I thank you for being a part of that.

Audience member: I would just like to say that I loved your presentation, and the love for your children just came through. But I think that it's parents of middle school people who need to hear your message of today. I think that it would be a great idea if PEPNet could somehow - even though they're funded for college-level services - took this and turned it into a CD or a DVD and middle school parents could hear it. Thank you.

Panelist: I think that would be our advice to all. Start early! We didn't start early enough.

Audience member: First of all, I would like to thank each and every one of you for sharing your stories with us this morning. As a parent, I have been a very untraditional male in that I have been extremely hands-on in raising my son. I would like to know what part or role your husbands played in this process, if you could share that with us. Thank you.

Panelist: I would like to tell a funny story about my husband. My son is just like my husband, thank God. They knew he didn't need my emotional side. When my son was about six years old, my husband and I were tired of hearing, “No, no, no.” We wanted our son to grow up and experience the normal things of the hearing world. My husband signs, but he doesn't sign as proficient as I do, if you can call mine proficient.

But anyway at six years old they both came in, and my son said, “Mom, I signed up for baseball.” And I looked at my husband, and I had this look on my face like a deer caught in the headlights. “You did what?” I asked.

He said, “We signed up for baseball.” He was signing to me. “We signed up for baseball, Mama, and I start on Saturday.”

So I took my husband aside and I said, “Well, did you tell them he is deaf?” And he said, “No, why should I?”

Wow, that was a light bulb moment for me. It finally came on. Why should that hinder him?

So at that point my husband jumped right in. He said, "I am going to become assistant coach." And everybody loved him. I'll never forget this: At one point one of the coaches said to us, "I wish sometimes that all of my other players were deaf because they didn't have to be focused on."
(*Laughter*)

My husband was the breadwinner; we married young, at 21, and had a family, and we had big dreams. When Steven was born deaf, a boomerang was thrown in it. But my husband always had to be the one that worked. He went to college, worked third shift, lost a lot of sleep, but he was there. He was the support. He was the backbone of the family. I was the one doing the things, but he was the one to do this. He needs this. He was the silent, strong partner and continues to support us today and has given my son his attitude that don't give up. They tell you no; you find the yes.

Panelist: My husband was also very involved, and he learned to sign. He didn't sign as proficiently as I did because he wasn't around Rob as much. I was a stay-at-home mom when Rob was growing up when he was young. But they had a very, very close, very loving relationship. My husband was always there, and they did things when and if as they could together. My husband passed away this past fall, and it's been very, very, very tough for my son because he just idolized his father. They just had such a close relationship. So that's a big gap in his life right now. But he was very, very involved and very important to my son.

Panelist: I had the luxury of staying home with the kids, so, of course, I was more involved. My husband... I couldn't do what I do without him. He is my rock of Gibraltar. He has hired employees who are deaf so his signing skills have improved. But, again, he is not around it as much as I am. So, yeah, he has been involved.

Panelist: My husband is a techie, and I am a teacher. So we divided and conquered. He has kept up with all of the latest technology. When the Sidekick came out, I don't know if my son could text, but he had one. We've got the closed captioned hooked up on the TV, learned how to use the TTY, the computer is all set, hearing aids, that was his piece. So each of us took a piece and it worked out as a team that way.

Audience member: Thank you. My compliments to Greta and the panelists for a whole host of magical moments and a great conference. My question is for systems relationships and systems change. I am glad to hear that about FERPA, but we know that there are often gaps in what's desired, what's planned for, and what the systems -- vocational rehabilitation and postsecondary education -- can provide.

So this question is similar to what I asked the younger people yesterday: If you could change one thing, if you had magic to change one thing about systems in the relationships, what would you change?

Panelist: The only system I am familiar with is the vocational rehabilitation system. But if I could change anything that would better service the needs of the deaf people today, it would be where everybody from a professional viewpoint or standpoint -- a teacher, sign language interpreter, a speech therapist, a bus driver, those that are in constant contact with our kids -- are familiar, and they know their needs. They see their individual needs.

Because of bureaucratic guidelines and rules that are put in place, they are limited by their own code of ethics to go and spread this is what the kids need today. I had people come to me today to

say, “We need you advocate for the Georgia high school graduation test, the instructions to be, you know, interpreted.” I had to go out and petition, but I couldn't reveal to them and publicly thank the person who told me because it was against the code of ethics for them to speak for the deaf child.

I am so grateful that I was able to have that open opportunity, that open door with professionals, and they knew I was a parent there for my child. But I wasn't just there for Steven. I was there for them. I was there to help them facilitate their career and deaf education. They all knew my child better.

So if I could change anything, I would open the doors for proper communication to facilitate the needs of the deaf children and make it all right for everybody to communicate and not be threatened that they would lose their job.

Panelist: I would hope if I could do something that's really magical, I would love to see a joint meeting between MHMR, OVR, and all of the adult programs that are out in the different communities.

There are so many, so many deaf adults who have so many other labels attached to them now. There is truly no place to be social, no way to join together because the deaf are so separated from the other disabilities. It shouldn't be that way.

Greta Palmberg: I guess there's that magic line that's more like a chasm between K-12 and anything happening as an adult. I feel like throwing the child over the chasm and telling them, “Now you are in this world.” I wish we could bridge that better.

My son is very bright, but we struggled, struggled, struggled just to find him a high school job. And I needed help to do that, like Sally had to use family connections to do that. It would have been so nice if VR had some summer jobs for 16-year-olds or 17-year-olds to start building their resumes with employers who were used to working with the deaf so it would be a gentle start. They can't learn job skills in a place where they're teaching everybody about deaf culture. So that would be mine.

Thank you so much for coming to our panel discussion.
(Applause)

Sally Prouty: I want to thank you all for being here. Without you, we wouldn't do what we do.

Elissa Becker: I want to thank the students here yesterday, and listening to them. Kudos to all of you for bringing them there.
(Applause)

25 Years Later: Board of Education v Rowley: A Look at the Past and Looking Towards the Future

Amy Rowley

Abstract

Amy June Rowley shared her personal experience as a child caught in the middle of a special education litigation when her parents and her school district went to court regarding the issue of whether or not an interpreter was necessary for Amy to receive a Free and Appropriate Public Education (FAPE). In *Hendrick Hudson v. Rowley*, many issues were encountered and many directly impacted Amy's experience in school. Participants had the opportunity to analyze the information shared and see the transition from 25 years ago, when the Supreme Court decision was made to now. Amy June Rowley is a parent of deaf children and her experience in the case impact the decisions related to her children's education.



This is the kind of article you don't normally see in these kinds of publications. I have read many articles over the years and find that almost everyone has a scholarly perspective on the Rowley case. When I have a chance to talk with people about what they have read and what opinions they have developed as a result of these readings, I often find that the perspective that they have adopted is directly influenced by the readings. However, almost none of the articles published to date offer a personal perspective of Rowley.

As the child who grew up in these cases, I want to share my personal experiences. Not everyone will agree with my perspective, however I am not looking for sympathy or support. This is my story and not anyone else's story. What I hope readers will get from this is the understanding that in everyone's best interests, something will happen that is not in the best interest for the student caught in the middle of a special education litigation. The same is true for a child or children caught in the middle when parents are going through a divorce. Everyone wants to do what's best for the child, but everyone has their own ideas about what is best, which sometimes causes conflicts. I will show in this paper what some of the conflicts were and how I was caught in the middle at times. My comments in italics are exactly what I remember from that time.

A brief background on my parents and their educational experiences is essential to understand the full scope of things that were to happen regarding the Rowley cases. Clifford Rowley was a graduate of the New York School for the Deaf (Fanwood) in White Plains, New York which is not far from where the Rowley controversies took place in Peekskill, NY. Clifford Rowley is the younger child of Elmer and Thelma Rowley, who are hearing. Clifford was born as a healthy

hearing baby and became deaf shortly afterwards from an onset of meningitis. At the time, his parents contacted the New York School for the Deaf and inquired about educating their son. Elmer and Thelma were advised by educators of the deaf at the time that oral education was the way of educating the deaf and that they should not learn sign language if they wanted Clifford to be successfully integrated into society. Clifford was placed into a special program where all deaf kids did not sign; they were housed and schooled separately from the other deaf kids attending Fanwood who already signed. Administrators at Fanwood felt that the deaf kids who signed would prevent the new only-oral kids from learning to speak thus segregating the signers from the non-signers. However, this "experiment" was short lived as some deaf children in the oral-only group were from deaf parents and had already seen sign language even though their parents had only talked to them and not signed. But people back then did not know language could still be acquired from watching; therefore those deaf children from deaf families were able to successfully pass on the language of deaf people to those oral only children from hearing families. This is how Clifford Rowley learned ASL and the segregated program was soon declared a "failure" and the project was abandoned. All of the students then joined the rest of the deaf students in the Fanwood School and dormitories. Clifford Rowley grew up as a signing deaf person and was educated with full access to sign language, but his parents never learned to sign.

Nancy Rowley grew up in Rochester, New York and was born hearing. By the age of four, Nancy was struck with German measles and started to lose her hearing. By the age of 13 she could no longer talk on the phone and struggled with communication in school and with friends. She learned to read lips and her mother mostly filled her in on what was going on. As she became older, she learned of a college for deaf students in Washington DC. So she decided to attend college there upon her graduation from her Catholic high school. However many students at that college, Gallaudet College, knew sign language and she did not so she tried to learn as much as possible after she arrived at college. She eventually met Clifford and the two of them began courting. She graduated since she was older than Clifford, and attended a Master's program at Gallaudet to become a teacher of the deaf. Upon her graduation from graduate school, she moved to Pennsylvania to teach at Pennsylvania State Oral School (PSOS) in Scranton. The Headmaster from PSOS met with Dr. Powrie Doctor who ran the graduate program at the time and he explained to her about the importance of sign language being used in class. The headmaster interviewed and hired Nancy who felt very uncomfortable teaching orally due to her own experience of how frustrating it was in school. The headmaster gave Nancy her blessing to teach whatever way she wanted. Instead of wasting students' time, as she valued the opportunity she had to teach them, she used sign language in her classes and her students prospered greatly. A few other teachers from PSOS were also attending Gallaudet for their Master's degrees during the summer times, so PSOS made the transition from being an oral school to a deaf school that used sign language. After Clifford graduated from Gallaudet, the two of them moved to New York to start a new life there as a married couple. Nancy worked at Fanwood while Clifford worked as a chemist in nearby Ossining.

During her tenure at Fanwood, she saw how much potential many deaf students had and pushed her students to achieve and be the best they could be regardless of what others thought. Fanwood was considered to be one of the best schools during this time. However the environment at many deaf schools was that many other teachers there thought less of deaf children and thought that their being deaf equated with them not being able to achieve or learn adequately. When students transferred in to Fanwood from other schools, there was an obvious gap in the education of students transferred in and students who grew up at Fanwood. Despite Fanwood being one of the better schools around, students were still dealing with an educational gap compared with hearing schools because most students did not come into school with a language foundation from home. This was not always the case with deaf education but became more predominant in the 1880's and

1890's when Alexander Graham Bell pushed for the rise of oralism in American Schools. He is well known for his invention of the telephone but his passion was trying to assimilate deaf people into a hearing world. While he was trying to make a hearing aid, he invented the telephone instead. (VanCleve & Crouch, 1989). Bell helped the rise of oralism prosper and the focus on learning English by reading and writing shifted to learning to talk and read lips or use any residual hearing you had left. With that mindset, many deaf educators came in with a little purpose of teaching deaf children academically but pushed them to succeed vocally. This was still the method of teaching in the 1960's when Nancy Rowley first entered the education field. This may seem unique to Fanwood, but this is not the case. This was the general consensus of the environment at deaf schools at the time (Lane, 1999). Since oralism was supported by Bell and many others, many parents with deaf children never learned sign language thus their deaf children often had little or no language foundation when entering school. This automatically puts all deaf schools on an uneven playing field against hearing schools.

Deaf education has always had a lot of problems and continues to do so. Many other scholars write extensively on this topic and I will not delve into this here. The ground work for a shaky environment for educating the deaf had been laid and Nancy Rowley experienced this as a teacher and a former deaf pupil taught orally. Clifford Rowley experienced this as a student and as a deaf child with hearing parents who never learned to sign. Eventually Nancy Rowley left the teaching profession to raise her children at home. Her first child, E. John was born hearing and she communicated with him using her voice because she believed a hearing child needed to be successfully assimilated into a hearing world. If she used sign language to communicate with him, would he still fit in with other hearing people? She did not have any knowledge to support or contradict this so she always talked with John. A few years later I was born and she talked to me the same way she talked with my brother, John. It was not until about 15 months later she noticed I did not pick up on speech like my brother had. I also started signing because I had seen my parents sign with each other. Since both of my parents were born hearing, it seemed to be genetically impossible that I would be deaf, but Nancy had this feeling she could not shake. She knew I was deaf and made an appointment for a hearing test. But the appointment would not happen for several months. At this point, there was no time to spare and she dove into her former role as a teacher. She made sure I was always signed to and I always understood everything that was going on. She would continue with this role as my teacher for many years to come.

After the hearing test confirmed that I was indeed deaf, my parents started discussing what educational options were available for me. At the time, it seemed Fanwood was the only logical choice. I could also attend my local elementary school but that would mean I would have no access to the class because no one would be signing. That was an option that was unthinkable since Nancy Rowley remembers so clearly and vividly what frustration she went through in school without knowing sign language. It was only until she arrived at Gallaudet and learned sign language that she felt her world had been opened up with full access to information.

Shortly afterwards in 1975, Education for All Handicapped Children Act also called Public Law 94-142 was passed, which opened the door for disabled children to receive free and appropriate public education (FAPE) in the least restrictive environment (LRE). My parents looked at this new development as an opportunity for me to be mainstreamed and receive an education like other hearing students. Nancy Rowley certainly thought this was a better option than the deaf school because after she learned I was deaf, I was progressing normally like other hearing children with hearing parents were. I was not part of the 90% statistic where 90% of deaf children come from hearing families and often are language delayed because their parents won't, don't, or can't learn sign language. Being in the 10% population, I was lucky to always have access to language. Even though my parents did not sign directly with me until after 15 months old, I could see them using

sign language and was able to acquire it anyway. If I attended the Fanwood program, many of my peers would be part of the 90% population and would most likely be language delayed. Compounded with that information, plus the knowledge of working at Fanwood, Nancy Rowley could only imagine that the local school would become the better option along with getting necessary accommodations. My parents would not be accountable for the financial burden of providing services since PL 94-142 outlined the premises for providing children with disabilities as part of FAPE.

Nancy Rowley communicated with the school about her desires to have me attend the Furnace Woods School and they responded with willingness to provide necessary services for me including a sign language interpreter. John was already attending school there and she was able to follow up with them about making necessary arrangements. Furnace Woods had a TTY installed which is what deaf people used at the time for communicating with other deaf people over the phone. Since my parents had a TTY at home, the school could call them anytime. While the staff and administrators at the school seemed to be very sincere about wanting to work with my parents, they were still a part of a bureaucratic system, Hendrick Hudson School District, which required them to report to the Superintendent.

When I started kindergarten, Nancy and Cliff fully expected that an interpreter would be present for my class. When there was not one, my parents inquired more and this set up the tension between the school district and my parents. Nancy and Cliff Rowley only wanted what they thought was best for me which was a sign language interpreter to fully understand my teacher's spoken words. Hendrick Hudson School District was advised by their lawyer to exhaust all other options first. My mother was not willing to put my education on hold while everyone could agree on exactly what I needed. She talked with my teachers every day and made sure at home I learned what was taught at school. In every sense of the word, I was home schooled but I was also attending Furnace Woods School.

Eventually an agreement was made to have an interpreter placed in the classroom on a "trial basis." The agreement called for an interpreter in the classroom for four weeks.

One day this man shows up in my class. I know he is the interpreter because my mom has told me he will be coming. But I am scared. I don't know what an interpreter is. I have never seen one before. I am only 5 and I don't know what I am supposed to do with him. He also looks scary. He is very tall to anyone who is little like me and he is wearing normal interpreter attire of all black clothes. But I don't know that white interpreters wear dark colors to contrast with their skin color. No one in kindergarten is wearing all black so there must be something wrong with him. I am even more scared. I am only so eager to walk away and keep myself occupied with other doings. Once in a while I quickly steal a glance at him and see him signing. I wonder why. I did not understand that he was signing what the teacher was saying.

To further complicate things, there were several observers in class and I knew somehow they were there because the man in black was there too. I could not wait until the entourage and the oddly dressed tall man left my kindergarten class in its normal state. As a result of my behavior, the interpreter was taken out after two weeks, two weeks less than the agreed-upon timeline. The tension between my parents and the school district was heating up.

I can feel it, but not from my parents. I feel it at school.

It is not until years later I fully understand the matters that took place but I can piece together what I remember with what I learned later. I progressed into first grade and had Mrs. Globerman to lead me through the year. She was very different from my kindergarten teacher. She didn't teach me or make sure I was following everything. Since I was already a good reader, I recall always working on my basal worksheets. I can't remember ever doing anything else in her classroom, but I am sure I did. What I do remember is that there was a steady stream of visitors and I could clearly see the displeasure that all of the visitors had on Mrs. Globerman. It was almost as if she lost all control of her classroom and who felt the brunt of her frustration? Me. I had a teacher of the deaf, Sue Williams, and she was scheduled to pull me out of class to make sure I was able to follow along in class, and what I could not follow along with, she would teach me. I greatly resisted these meetings because it drew more attention to me and made me look like I was totally responsible for all the disruptions going on in Mrs. Globerman's class. As R.C. Smith writes in his book, *A Case about Amy*, he was able to take excerpts from Sue Williams's diary and it clearly showed my frustration. One such entry for February 16th, 1979 shows the dialogue that took place between Sue Williams and myself.

"Feb 16. Had a heart-to-heart with Amy, who acted as if she didn't want to come with me. I asked her how she was feeling.

"I feel bad," Amy said. "I don't want to come with you."

"What's wrong?"

"I don't know."

"Amy, what did you think of the man who visited yesterday?"

"I don't like those things."

"What do you mean by 'things'?"

"All of the people coming."

"How does your mother feel?"

"She thinks I need an interpreter because I don't understand anything."

"Amy, you seem to understand things, not everything, but most things."

"Yes."

"Do you understand Mrs. Globerman?"

"Yes, everything she says."

"Well, what don't you understand?"

"I don't understand library."

"You mean the stories? You don't understand them?"

"Yes."

"You want to understand what's happening right?"

"Right."

"What about movies?"

"I don't understand them much." (p. 32).

I remember so well that I always insisted I understood everything. This was a defense mechanism I employed in hopes of everyone leaving me alone and things would just return to normal. This is an interesting concept for me to think about at this point of my life because I have never fully been exposed to "a normal classroom environment" so why did I resist everything so much? I don't know for sure, but I suspect I was able to pick up on body language and emotions better than I was able to pick up spoken words and the emotions made a big impact on me when I could see others not being comfortable. One thing I do know is that I preferred to be with the other students all the time and not being constantly removed from class to meet with my deaf education teacher or going to speech class or leaving for testing. Sue Williams really picked up on this feeling and tried to keep me in my class and work with me in class so I would not have to be taken out. However, while this was an ideal situation for me, it was bothersome for Mrs. Globerman since I was no

longer paying attention to her but working with Sue Williams and that was very distracting for Mrs. Globerman (Smith, 1996). Additionally, parents were complaining to Mrs. Globerman because Sue Williams was using sign language in the classroom with me. I seemed to be the only one who wanted to stay in the classroom but no one would let me stay.

When I moved into second grade, many of the frustrations I experience did not quell. I reacted by continuing to resist and act out.

During second grade tensions are at their highest. I am very aware of things happening all around me. Before the principal, Joseph Zavarella would come to my class occasionally, but now he comes to my class every day. My parents have already won one hearing at the federal level and an appeal is under way. Every year my parents have an IEP meeting with the school and every year my parents refuse to sign it because there is nothing on it related to provision of interpreting services. But the rest of the stuff on the IEP is the school's defense for trying to provide me with the best possible service they think I need (without an interpreter, of course).

Topics on the IEP included me having speech to improve my ability to have others understand me. It didn't help me understand others though. Wasn't that the point? I was required to wear an FM system with the teacher wearing a microphone. What's very interesting to me is that the FM system certainly amplified everything I heard but I still understood nothing. I think it is difficult for hearing people to rationalize that hearing aids and FM systems are not the same as eyeglasses. I imagine the noises I heard everyday sounded like loud power tools to hearing people. They constantly bugged me and I was happy to turn them off. I recall many times I watched the teacher and noises in my head certainly did not help. I remember reading that the school contested I had a lot of residual hearing so they felt it was their obligation to make sure I was able to use it. That comment was like a light bulb moment for me; it showed me how much hearing people really don't understand what deaf people actually hear. Every deaf person has a different audiogram and every deaf person reacts differently to their environment. If two deaf people with a similar audiogram were compared based on their audiograms only, one would find a lot of similarities. But if one looks at both people and sees how they function and how they communicate, the audiogram is often not an accurate representation of who deaf people are.

I do remember being "busted" a few times when I left my FM system off intentionally. I would always see a face either from Miss McLaughlin, my 2nd grade teacher or Dr. Zavarella, my principal. A facial expression by itself is worth a thousand words and I certainly got much more from those displeased looks than I got from all the static and garble being incessantly blasted through my FM system. The use of the FM system was the school's way of saying we are providing Amy with the things her IEP says she needs to be successful. But with the FM system, it brought so much attention to me and I felt like I always had a thousand eyes looking at me the whole time I was using it. It did not help having constant observers in my classroom. It was usually the principal, or some other expert witness the school or my parents hired.

I was also going to speech class and it didn't bother me too much because I wasn't going alone. A few of my other classmates were going to speech with me so I didn't feel singled out like I did with the FM system. Eventually, the number of students going to speech decreased. When it was just two of us left, I made a comment to my speech teacher, Mrs. Pasierb about how I was excited to be "graduating" from speech soon as my other classmates had. I doubt it was her intention to riddle my dreams with a barrage of arrows like she had but I never felt so discouraged after she told me because I am deaf, I will always need speech forever. I still remember that today as one of my most painful moments in school. It was the first time I fully understood that I WAS THE PROBLEM, I

WAS THE REASON behind all of the fuss going on. From that moment on I hated speech classes. I knew it was not for my benefit but to simply say that “everything had been done” to help this poor child.

With second grade out of the way and on to a new start in third grade, the overall environment improved for me because for now the school and my parents stopped fighting. They never really did stop but it was no longer obvious anymore. There were fewer disruptions to my class and we settled into everyday routines easily. The school district lost the first case and the appeal. After they lost the appeal, the school district was required to provide an interpreter. Having an interpreter in class could be considered a “new distraction” but the interpreter quickly inserted herself into our everyday routine and soon enough myself and my classmates could not imagine our class without her. For the first time I really enjoyed school, I was able to follow along perfectly in classroom discussions, and my interpreter made sure to interpret everything including my classmate’s discussions. My interpreter, Fran Miller, had deaf parents herself so she grew up communicating in sign language. Not only was she fluent in signing, she was also a skilled interpreter and fully understood how to be a language mediator. She did just that, mediated language between the other students, the teacher and I. I felt friendships blossoming and I could communicate and follow group conversations. If anyone asks a hard of hearing person, or a deaf person who lipreads solely, it is very difficult to follow a conversation involving several people. Most people in this situation would rather conduct one-on-one conversations where they can control the flow of information to make sure they can understand what is being said. Since I was fluent in sign language, the interpreter opened up a new avenue of complete accessibility for me. I enjoyed school now and I looked forward to recess where the interpreter would follow me out and interpret for me and other children to figure out what we wanted to do. Before I had always followed other kids outside and usually kids wanted to play kickball but I was often not included. So I would go to the playground and play alone or with a few other kids. But now, other kids were discussing in a group (which I could now be a part of since the interpreter just went ahead and interpreted those conversations) what they wanted to do. I felt I had a voice because I could say I wanted to play kickball and they would make sure I was involved. Third grade was a really good year. The added bonus of having an interpreter in the classroom meant that when I got home from school I only had to do my homework and not relearn everything I was supposed to have learned in class that day. So I really had a lot more time to play and “just be a kid.”

While school seemed really good and life “seemed back to normal” that wasn’t the reality. Things were actively brewing in the background. My brother had transferred to a private school about 20 minutes away. It was too difficult for him to continue to be enrolled in Furnace Woods Elementary. Many of his classmates and their parents did not understand what was going on between my parents and the school district and there was a lot of hostility towards John, my brother. He is the only hearing person in my immediate family and he was able to clearly hear and understand the comments from people around him. I am sure my parents and myself had people making comments around us, but we were not as aware of it as my brother was. While RC Smith was researching the experiences of everyone involved with the proceedings, he was able to find notes of people who came to visit the school and witnessed such hostilities. One such note from Mary Sheie comments about how she wondered “how surprised she was at how much anger there was in the classroom and in the principal’s office and how calmly Nancy had taken it” (Ibid., p. 36). This was written in reference to a visit by one of the expert witnesses that my parents had used in their trial. Of course it was okay to have the school’s witnesses in the classroom but not my parent’s witnesses? During that same visit Mary Sheie visited Dr. Zavarella’s office with my mother, and Dr. Zavarella practically scolded my mother because the school had provided so many other things such as the TTY and the FM System and never once did my mother say thanks. There was so much anger going on because so much was being done but it was not the one thing my parents asked for.

John transferred to a new school and he found that his problems followed him there as well. While the problems were not exactly the same, they still existed. Students made fun of him and picked on him because his family was different, we were all odd. *Who else had a deaf family? Probably no one else.* Deaf families are a rarity in itself and having one hearing child and other deaf children are even more of a rarity. Most deaf people have several hearing children and those hearing siblings with deaf parents are able to support each other while John had no one. Even as siblings, we were worlds apart; we were fighting the same battle but separately, which was almost like we were not struggling against the same thing.

When my situation had improved, it was almost as if my parents finally had the time to address his situation. But in reality the damage was done and the resentment that the school district and the community had towards the Rowleys was there, probably forever. People who had direct interaction with my parents or me were very supportive but others who saw us on TV or read about us in the newspaper felt so strongly that we had no place in the school.

Early in the proceedings, the school felt clearly that I should have attended Fanwood so they would not have to be responsible for the costs of supportive services. However as the case progressed, the positions changed. One of my many observations and testings was from psychologists. The school hired their own psychologist for different kinds of testing including IQ tests. Their psychologist did not sign so my parents challenged the validity of their results and got their own psychologist who signed. The results of the tests were different and it was admitted into evidence that I was very smart and I was a high functioning child with a lot of potential. The school district could no longer support that I would be better off at Fanwood when I was on grade level and would be ahead of many deaf peers who did not learn anything until they entered school, even though Fanwood was considered to be a good school. A few years ago I was asked to be a part of a psychological study for a deaf woman's post-doctoral project. In this study I was asked to take an IQ test and it was eerie because I remembered many of the questions. I had taken the test so many times that it became too familiar for me. Someone told me once that a person's IQ never changes but the more the school and my parents argued about the validity of the test, the more often I was given it and my score improved every time. I was not becoming smarter obviously, but I was becoming a smarter test taker. I observed things in pictures and was able to remember them and then the next time I took the test I could look for other things since I had remembered other things from a previous test. When I was older, one person made a comment to me that one thing I noticed in one of the pictures was one thing that no one ever noticed and, of course, I remembered that. After that, I always watched for the reactions on the faces of the people who gave me the test. I'd like to believe they knew it was impossible for me to be that smart but I had outsmarted them and beat the test. I don't know if that's true or not, but I do know that these types of tests are not designed to be given every year or even twice a year which was often the case. These tests were a tool for the school district to try to show that I was not as "smart" as my parents claimed me to be so there was no reason to provide me with an interpreter since I was passing in classes with above average grade. But that backfired with each test score improving and with my parents being able to get better results with a signing psychologist. I don't know why the IQ tests continued, but the controversy between my parents and the school district was far from over.

I entered fourth grade and things were different yet again. I had an interpreter still because an appeal wasn't made yet. But Fran Miller was not my interpreter anymore. In fact I didn't have an interpreter, I really had a teacher of the deaf. The school argued that I still needed to be pulled out for some one-on-one time to make sure I am following everything so their rationale was that my teacher could "interpret" what was being said in the classroom. Beth Freed was very nice but I missed Fran Miller. Beth Freed was a teacher and only told me what the teacher said. I did not

know what my classmates were saying and I was left to fend for myself at recess. I went outside with my FM system, but of course, I hated the FM. I couldn't play with that big bulky thing wrapped all over my body. One time I was on the swings, but instead of swinging in the direction towards the playground, I decided to swing towards the fence towards the marsh behind the fence. I swung and swung as high as I could. My FM was loose anyway because I never wore it tightly against my body since it was already uncomfortable. The FM swung right off and pulled the earplugs right out of my ears. I laughed in delight when it went over the fence and landed in the cattails. Since I was quite a monkey back then, I could have scaled the fence easily and jumped in the water/mud combination and picked up my FM. But why would I ever want to do that? No one else knew how miserable that thing made me. I was perfectly happy with my hearing aids and even more happier with an interpreter, a real one. Now I didn't even have that anymore.

The school district had taken away Fran Miller because she had too many connections to the deaf community because of her deaf parents. She was a threat and was seen as being too close to my family. The school district had to cover their bases and make sure she wouldn't be testifying against them in court if an appeal was granted.

In March 1982, when I was still in fourth grade, the US Supreme Court heard the oral argument between Hendrick Hudson School District and my parents. My parents lawyer, Michael Chatoff who was deaf himself, was the first deaf person to ever make an argument before the Supreme Court. He became deaf during law school from tumors on his auditory nerves. The surgery cut his nerves and he became permanently deaf. He struggled with neurofibromatosis but it didn't stop him from becoming a lawyer. Through chance, he met my parents and decided to take on their case. He never charged my parents for any legal fees, which would have been exorbitant by the time the case finally came to an end. Since he became deaf as an adult, he preferred to talk instead of signing, since his first language was English. The Supreme Court arranged for him to have a transcriptionist have his words transferred to a computer so he could read everything that was going on in real time. This was the first time such a venture had been undertaken. It is now the norm in courts all over America.

During the summer between fourth grade and fifth grade, the US Supreme Court announced that the two previous decisions of the lower courting my parents favor were overturned. They sided with Hendrick Hudson School District in the case of Rowley because they found that the school did provide me with adequate services to make sure I was passing. FAPE did not mean I was allowed to be the gifted child that I was. It just meant if I was passing which I was, then I was doing fine.

My parents already made a decision to move to New Jersey. There was no reason to stay in Peekskill, NY because I would never have an interpreter. My father commuted between New York and New Jersey everyday for many years, so it seemed logical to live closer to where my father worked. Nearby there was a day school for the deaf where many deaf children were mainstreamed. But before we could move, I would have to stick it out one more year at Furnace Woods. I had a teacher with an Australian accent. Mr. Brett and I had a love/hate relationship. My desk was right next to his so I could talk to him anytime I wanted to. But there were times when he was so frustrated with me because I could not understand him. He had big teeth that didn't make lipreading easy. Plus with that accent of his, I couldn't figure out what he was saying half of the time! One time, I kept asking him again and again what he was saying and he kept repeating and repeating and I was begging to him to please write down what he was saying and I was near tears. To make matters worse, his frustration level was ready to explode and it did. He yanked my ponytail and my head snapped back and I was in shock. I could not believe what happened. No other teacher ever touched me. I hated him for that and I tried to avoid him as much as I could from then on. One time we were on a field trip and he knew I was not following along, so he picked up a

piece of bark from a white birch tree and wrote down what the presenter was talking about. He wrote down the two words deciduous and coniferous and explained what they meant. I held on to the bark and when I came home from the field trip my mother saw it and thought that this act alone really showed that I needed an interpreter and the teacher knew it.

After all the misery he put me through, I'm glad he finally realized what it takes to communicate with me. I'm still mad about the map thing too.

One day in class Mr. Brett made an announcement about a map. He wrote on the board "M-A-P." I asked him for more information, and he said, "World map." I was scared. I would have to make a world map at home over the weekend. I arrived home and told my parents I had to make a map for homework. This was not unusual since I had done maps before, but never the whole world! Plus he didn't hand out map paper, so my dad and I drove to the next town to buy poster paper. We found a nice picture of the world and dad helped me outline the continents, then I worked on the map all weekend. I worked on it Friday, Saturday and Sunday. I was very proud of it when I finished because I put a lot of detail into it. I didn't know how much detail Mr. Brett wanted from me since he didn't give me a list. Monday morning, my dad helped me roll up the map and put a rubber band around it and I took it to school. I held on to my map and wondered when we would hand it in. Mr. Brett looked at me and handed me a big sheet of paper with a world map already printed on it. All of the students got one. I was dismayed that I really didn't understand that the map wasn't for homework. It was what we were going to be working on after the weekend. Mr. Brett asked me what the poster was and I told him it was nothing. My father asked me why I brought the poster home and I told him exactly what happened, but there was nothing he could do except hug me. Hugs have gotten us through many tough times.

My parents put up their house for sale, but the school district found out that we were moving and they put a lien on their house. We moved anyway, but my parents were not able to sell their house and the lien did not make matters easier. One thing after another, the conflict between the school district and my parents became a dogfight. Living in New York was just bad for my family and it was worsening.

The move to New Jersey was truly the best thing that happened, I started attending school with other deaf kids and it was the first time I truly didn't feel alone. I had an interpreter in all my classes. My brother had many friends; they didn't care that his parents and sister were deaf. They saw deaf students everyday so it wasn't too foreign of a concept for them.

I remember more than I would like to remember about my experience at Furnace Woods. I believe that I am supposed to remember stories like these so I can share my story in hopes that other children do not have to experience the same things I did. A lot of my experience regulates the kind of decisions I make today as an adult. If a conflict arises, and I know that I will have to put someone in an uncomfortable situation, I am more likely to avoid it. Such an example happened when I was looking for a doctor. I called a doctor's office and asked if they were willing to provide an interpreter for an appointment. Legally, they are required to accommodate me. The preferred accommodation is an interpreter, but that can also be the most expensive accommodation too. When the doctor told me no, I did not follow through with the appointment, I found another doctor instead. It makes no sense to me to work with someone who doesn't want to provide necessary accommodations to communicate with me. I'd rather work with someone who wants to communicate with me and values me as a patient. However, I know it is not always that easy. In the case of the school district, it is not easy to move and find a new school district and I wish that both sides never went into litigation to begin with.

Children should be allowed to be children. Too often children are robbed of their right to grow up without the weight of the world on their shoulders. I know the weight of my world was squashing me down during elementary school.

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TECHNOLOGY USE

Putting the Pieces of Electronic and IT Accessibility Together: Building Partnerships to Meet the Challenge of 508

Kaye Ellis

Abstract

How do you make IT (information technology) accessible to students who are deaf and hard of hearing? You can't do it alone. Historically, disability support offices provided accommodations for students to access information. With the increased use of electronic information through the web, video, on-line courses, and audio podcasting the task of providing access is overwhelming. After a brief story of attempts to bring electronic and IT accessibility to the attention of one community college, this workshop provided a forum for participants to share their successes and barriers. Participants were encouraged to identify partners on their campuses to address the accessibility issues surrounding the growing electronic and IT environment.



Introduction

Electronic and IT accessibility solutions go beyond the responsibility of the disability support offices. Are the right people to address the issues even aware there are access barriers to overcome? Are they aware there are laws that impact purchasing and development? Electronic accessibility affects faculty, web designers, curriculum development, purchasing decisions, and many other areas of an institution. The presentation included an opportunity for participants to identify potential institutional partners to meet the challenges of electronic and IT accessibility, and identify strategies to influence institutional policies.

Background Information

I became the coordinator for the Resource Center for the Deaf and Hard of Hearing at Tulsa Community College in Tulsa, Oklahoma in 2003. Within a few weeks of being in the postsecondary setting, the issue of accessible electronic and information technology was on my desk. A CD accompanying a biology book was the problem. The next week I attended the Southeast Regional Institute on Deafness conference in Mobile, Alabama and thought I would find my answer there. I discovered inaccessible media was a growing problem and no one had the answer. Advances in technology provide many advantages but they can also present new barriers to accessing information. A few months later at the League Institute, a national conference for community colleges, I heard the numbers 5-0-8 for the first time. Section 508 of the Rehabilitation Act requires federal agencies to have accessible electronic and information technology. Some states' interpretations of Section 508 included colleges and universities, and they embraced theses

principles and implemented policies to support accessible media and web sites. Oklahoma interpreted Section 508 as applicable to federal agencies and not state agencies or postsecondary institutions. Legislative help was coming. Oklahoma ABLE Tech, the state assistive technology program, was actively pursuing state legislation to assure state compliance with Section 508. The Oklahoma Electronic and IT Accessibility Law was signed into law in April 2004. The Oklahoma law is a development and procurement law similar to Section 508, and it specifically mentions inclusion of postsecondary institutions. The two agencies named to implement the law and assure compliance were the Department of Central Services and the Office of State Finance. The law also established an advisory council, which worked to develop technical standards effective September 8, 2005.

Building Partnerships

Staff from Oklahoma ABLE Tech and a member of the State Regents for Higher Education shared the news of the Electronic and IT Accessibility law with attendees of the Oklahoma Association on Higher Education and Disabilities (OK-AHEAD) conference. Members of OK-AHEAD applauded the news. I was pleased the law placed the responsibility on development and purchasing and designed as a retrofit for individual students by disability support offices. I soon discovered this news was not reaching others in the postsecondary setting. At our community college, the disability support staff seemed to be the only people who knew about the law. At the next meeting of OK-AHEAD, I learned other colleges and universities were experiencing the same feeling of being the only people on campus aware of the law. Statewide attempts to bring awareness were not proving to be effective in the postsecondary setting. Early training focused on purchasing procedures and web design for state agencies. Our challenge was to reach the distance learning program, library, media, faculty, and other stakeholders at the college to build partnerships to address accessibility and compliance of the new state law.

It was naïve to think that the first department I approached would embrace its responsibility and take over the efforts to bring the college into compliance with the laws. After several dead ends, I received some advice from a vendor at another conference who discovered that the library/media staff seemed to understand. I contacted our dean for library/media services. I met with him, provided a copy of the Oklahoma law, and waited to see what would happen next. Two weeks later, he contacted me. He recognized the college needed to move toward compliance. I consider this my first successful partnership. He was instrumental in establishing a committee to explore what impact the law may have on the college. The focus of the committee was later absorbed into a newly formed IT council. I accepted the invitation to join the council to bring awareness of the electronic and IT accessibility issue to the members. One of the members contacted me for additional information. He was in charge of our television programming and streaming video for distance learning. He recognized his department had a major role in college compliance and took responsibility for finding solutions. This was my second successful partnership. He understood it was no longer the sole responsibility of the disability support offices to provide accessible media. He took ownership of the situation and started building his own partnerships with vendors to address captioning for on-line courses and television broadcasts.

Any opportunity to bring awareness of the need to eliminate the barriers to access is worthwhile. My earlier unsuccessful attempts to find collaborators may have set the stage for future partnerships. Some puzzle pieces may not fit on the first attempt. You may need to try again to get the right match for successful partnerships.

Participant Concerns and Successes

The concerns shared at the conference centered around on-line and hybrid classes, faculty involvement, and captioning. Some successes shared include new state accessibility laws,

partnerships with instructional designers, free training resources, college funding for development and training, and college policies in place ensuring all media and textbooks are ADA compliant.

Strategies

- Identify the issue as a college wide responsibility and not limited to any one department.
- Identify potential partners including media, IT, faculty advisory boards, and vendors.
- Prioritize; the whole picture can be overwhelming.
- Take advantage of opportunities to bring awareness of the barriers.
- Form advisory groups that include different departments and/or agencies.
- Have a copy of the laws and technical standards available.
- Include students in the process as well as other end users.
- Build relationships with faculty.
- Create a task force.
- Work with faculty to incorporate accessibility into computer course curriculum.
- Offer to team with other departments to help them create accessible materials.

Laws

Section 508 of the Rehabilitation Act), as amended by the Workforce Investment Act of 1998

August 7, 1998

Oklahoma State Law 2197, Electronic and Information Technology Accessibility Law, April 2004.

Resources

Section 508: The road to accessibility. <http://www.section508.gov/>

Oklahoma IT accessibility legislation and resources. <http://www.ok.gov/accessibility/>

Oklahoma ABLE Tech-IT access. http://www.ok.gov/abletech/IT_Access/index.html

More Bang for Your Buck

Cindy Camp, Amy Hebert, & Michelle Swaney

Abstract

In today's technologically fast-paced world of Deaf and Hard of Hearing services, we are constantly being asked to provide more with less. This presentation will focus on advances in technology that can help us provide quality training to our staff and resources to our consumers while saving money. Not all technology is economical or efficient. We will talk about the pros and cons of various systems and techniques that are being used in communication and service delivery.



Technology has become an essential part of doing business and daily living. Because advances in technology occur so quickly it is difficult to keep up with what resources are available. This paper will discuss four main areas in technology: communication, organization/administration, distance learning, and accommodations. The goal is to provide information that will help service providers and coordinators utilize the technology that will best help them serve their clients and increase their own productivity.

Communication Tools

Technology has made great advances in enhancing communication. There are many online services which allow users to make computer-to-computer calls free of charge. All that is needed is to download a simple program and to purchase a computer headset with microphone. Once the program is installed the user can then begin making calls to others who have the same program. Some of the programs which provide this service are: Skype, ooVoo, Gizmo, Ventrilo, PC-Telephone.com, Yahoo Voice, Mediarling Talk, and Google Talk. Computer-to-computer chats do not require a high speed Internet connection. Most of these programs will function well over a dial-up connection. However, they will not work over a satellite Internet connection due to the delayed ping rate. If calls are being made from a government office or university, then it is best to check with the IT department to be sure that the institution's firewall will allow the connection.

Most of the computer-to-computer voice chat programs include additional features such as video calls and computer-to-landline calls. These companies charge a fee to make calls from a computer to a landline or cell phone. The fee is usually much less than calls through a traditional phone company. Video calls can add a visual component to a chat. The user will need a webcam along with the headset. In addition the computer must have a high speed Internet connection since the video requires more bandwidth to transmit. The video quality can vary greatly depending on the amount of bandwidth available. However, the video is normally not high enough quality to conduct a conversation in sign language alone. Whether using a computer to chat, video chat, or call a

landline the technology can help reduce the cost of communicating with colleagues nationally or internationally.

Instant messaging (IM) is another mode of communication which has really taken off. In fact some people prefer to instant message instead of using email. The benefit of instant messaging is that it allows for immediate written communication if both parties are online. Many cell phones such as Blackberry and Sidekicks have become popular in the deaf community because they allow instant messaging as well as email. Some of the most popular IM programs are: AOL IM, MSN, ICQ, Yahoo, Google Talk, Bonjour, and Windows Live Messenger.

Two IM programs which offer some additional beneficial features are Trillian and Meebo. Trillian is a free downloadable program that allows the user to log into multiple IM programs simultaneously. This means one window is open to access multiple accounts instead of having various windows cluttering up the desktop. Meebo also offers the same service from a web application so there is nothing to download. This program can be helpful for anyone traveling since their IM accounts can be accessed from any computer.

Instant messaging is an inexpensive way to increase communication access. Students with a hearing loss can communicate with their instructors and support services office as easily as their hearing peers. It is also an effective way for colleagues to work collaboratively without incurring large phone bills.

Organization/Administration Tools

Organization is another important aspect of an efficient work environment. If used properly, technology can provide many tools to help increase organization. Learning any new technology or system takes time but once it is learned, it can become a time saver. One tool that can become a time-saver is having an online calendar. Online calendars can be accessed from any computer, which is helpful when traveling. They also can be set up to share calendars between multiple users. This means that each person in an office can upload his/her calendar and then the entire office has access to know when everyone will be in the office. This can save time when trying to schedule meetings or appointments. When working with students on organization, a case manager can ask the student to maintain an online calendar and thus help the student stay on schedule with tasks. Some popular online calendars are run by Google, Yahoo, and MSN.

In addition to sharing online calendars, colleagues may want to share files online when they are collaborating on projects. In the new age of technology, many professionals collaborate with others across the nation and may never actually meet face-to-face to work on projects. Online file sharing allows individuals to upload files to an Internet server and then access them from any computer. Many services offer a free amount of file storage and after that limit is reached, they begin to charge a fee. These services allow the user to password-protect the files and to decide who will have access to them. The following is a list of just a few companies which provide this service: xDrive, Flipdrive, 4shared.com, MediaMax, MyDataBus.

Online file storage can also benefit the professional on the go. Important files can be saved online so that they can be accessed when away from the office. This can ensure that there are backup copies as well.

Online file transfer is another beneficial service when working with very large files. It is no longer safe to assume that a file can be sent via email. Many email programs limit the size of a file that can be sent. Online file transfer companies allow the user to upload a file and then email the recipient(s) a URL where the file can be downloaded. This avoids having the file sent through

email. Some companies which provide this service are: sendspace.com, transferbigfiles.com, yousendit.com, [accellion](http://accellion.com), sendthisfile.com, and weboffice.com.

Another useful service is remote desktop. This simply means that the user can access a computer remotely. It can be used by IT professionals to troubleshoot problems for a user, or by a person who is traveling to access his/her computer back in the office. This is becoming more and more popular as people are away from their offices more. Many services charge a fee such as "Go To My PC" but others such as "LogMeIn" have fee-based and free versions. In addition Windows XP has this feature built in.

(<http://www.microsoft.com/windowsxp/using/mobility/getstarted/remotefintro.msp>)

Online collaboration is similar to the remote desktop feature. These programs allow multiple users to log on and view a single computer. In this way, remote training can occur. The trainer would be the "host" computer and all other users would view what is on his/her computer screen. In this way the trainer can show a PowerPoint or take users to various websites. Some of the programs have a built-in voice component while others use phone lines or other programs such as Skype to send the audio information. Some of the popular programs for online collaboration are: yugma, zoho, showmyPC, and webex.

Jott is an online service which uses voice recognition software to allow the user to send text messages via a voice message. The user will set up an account with Jott and create an address book. Then the user can use a voice phone to call the Jott number. The user will specify to whom the message will go and then speak a short message such as "meeting tomorrow at 9." Jott converts the message to text and can deliver it as a text message, and IM, or an email. This is a quick way to send reminders to oneself or others without actually typing it in.

Distance Learning Tools

Technology is also being used to increase opportunities for learning. Some of the programs previously discussed make individual and small group collaboration and learning possible. However, schools and universities are increasingly turning to forms of distance learning to meet the demands of the ever-increasing "non-traditional" student.

"The definition of distance education would be an educational situation in which the instructor and students are separated by time, location, or both. Education or training courses are delivered to remote locations via synchronous or asynchronous including written correspondence, text, graphics, audio, and videotape, CD-ROM, online learning, audio and video conferencing, interactive TV and fax. Distance education does not preclude the use of traditional classroom. The definition of distance education is broader than and entails the definition of eLearning. Distance education and distance learning are often used interchangeably." (ASTD, 2008)

Unfortunately, most distance learning is not accessible to deaf and hard of hearing individuals. Great strides have been made in technology and the arena of distance learning, but accessibility still seems to be lagging behind. Institutions are left trying to play catch-up and be creative in their provision of access and accommodations. While vendors adhere to ADA and 508 guidelines, there is not a standard approach for the inclusion of sign language interpreters and/or captioning. Another issue that arises with providing accommodations depends upon whether the course is being delivered through either synchronous or asynchronous means. Institutions utilizing content management systems such as BlackBoard, Wimba, or Elluminate Live should explore options for providing accommodations within the platform the institution is using. Can video be incorporated into the system so that an interpreter can be provided as an accommodation? What about

incorporating captions? Bloomsburg University has been providing distance education courses through Wimba and has provided a video for an interpreter and captions through the text chat area (<http://campustechnology.com/articles/56259/>). There are institutions that utilize Elluminate Live and are incorporating captions through the use of speech-to-text software. Content management systems are also beneficial to Disability Services in that service providers are also given access to course content which enables them to prepare for the course before each session.

Multimedia is defined by www.webopedia.com as the use of computers to present texts, graphics, video, animation and sound in an integrated way. Within the realm of multimedia are: webcasting, podcasting, and video/webconferencing. Definitions for these three formats can be found on www.webopedia.com as well. The main challenge with multimedia is ensuring that it is accessible.

Typically with webcasting, a pre-registration process is not established for individuals to request specific accommodations. Therefore, it is necessary to provide both an interpreter and captioning so that it is fully accessible. With video/webconferencing, it is also necessary to provide an interpreter in meetings, trainings, etc., where there is a mixed audience of deaf, hard of hearing, and hearing individuals. Video/webconferencing is becoming more popular with the effect of the economy and reduced travel funds for states and institutions. Both webcasting and video/webconferencing can prove to be very effective methods of delivery of multimedia when accommodations are thought through before the event occurs. An important step is working with the IT Department on campus and explaining the needs before the event occurs.

Webcasting and streaming video can be achieved through a number of software programs available such as QuickTime, RealMedia, windows Media encoder, Flash, Accordent Video Streaming, and MediaSite. Regarding accessibility, not all software programs at this point incorporate captioning as an accessibility feature. Currently, only Flash and QuickTime have this feature incorporated/built-into their software. RealMedia, Windows Media Encoder, Accordent Video Streaming, and MediaSite have not incorporated this feature. When an institution is utilizing a software program that does not have captioning built in, creativity may be required on the part of the Office of Disability Services and/or the institution providing the live webcast or streaming video.

Captioning online streaming and digital media is a two-part process: a) creation of the transcript and b) creation of the time-code file to synchronize the captions with the media file. MAGpie is one option for creating time-code files that quite a number of institutions are encouraging faculty/staff to utilize because it is a free download from NCAM. Hi-Caption is another option for creating those time-code files and the cost is between \$400 to \$500. The Hi-Caption product has more features than the MAGpie product. Regardless of the product utilized, it's important to remember that creating time-code files for captioning is not a quick or easy process. It takes time and users should adhere to guidelines from the Described and Captioned Media Program (DCMP).

There are a number of online video/webconferencing services now available. Some of those include ooVoo and e/pop. For a video/webconference to be effective, users will experience a higher level of satisfaction if they are on a high speed internet connection that is equal to or greater than broadband. There is not a perfect solution for video over IP (or the internet) and a video/webconference will only be as good as the amount of bandwidth as well as their connection speeds (upload and download).

Accommodations

Technology has helped to enhance access to services needed by individuals who are deaf and hard of hearing. In this section we will highlight some of the technologies available, as well as providers who offer the service.

Most institutions experience problems in finding sign language interpreters. The need for qualified interpreters is overwhelming, particularly in the rural areas. One possible solution to meet the communication needs of students is video remote interpreting (VRI). Video remote interpreting can be more cost-effective than hiring an interpreter, particularly in situations such as in a rural area where the interpreter is paid for mileage and drive time, when less than 24-hours notice is given, or for short meetings and classes. VRI is a service who is paid per minute; during a 50-minute class, the interpreter would only be paid for 50 minutes, and not a two-hour minimum. This option is perfect for a short meeting with the instructor or academic advising.

The technology needed to set up VRI services varies from company to company, but generally all require a high-speed Internet connection. There are several agencies which offer video remote interpreting; a few are listed below:

- Birnbaum Interpreting Services (BIS)
- SignOn VRI
- AccessAmerica VRI
- Sorenson VRI
- MEJ Personal Business Solutions, Inc.

Many universities face the issue of what to do when an interpreter calls in sick. The disability service office scrambles to find a replacement but often the student must go without services for that day. If the university already had services set up with one of these companies, it could easily still provide access using VRI.

Suppose there is a student in a graduate program who is taking some upper-level courses such as statistics. Interpreters who are not familiar with statistics would most likely have a difficult time interpreting this class. It may not be possible to find a local interpreter who has a background in the particular subject area. Statistics classes can be very difficult; it's not unusual for any student in the class to have a hard time understanding the concepts. Imagine trying to get it through an interpreter who is transliterating the information because she/he does not understand the concept trying to be conveyed. Many VRI companies will match an interpreter who has a background in the subject matter, as well as with the communication modality of the person. Educational packages are sometimes available that will give a fee based on an entire semester and the number of hours their service is used. This is something that would be would need to be discussed up front.

Does VRI answer every single limitation or barrier to providing services? No, but it can be an effective tool to use for accommodation purposes. Although VRI has been successful in many situations, it is not for every situation. There are some situations that require an on-site interpreter, so making a decision to provide VRI goes back to the individualized accommodations needs of student. For interactive and hands-on classes, an in-person interpreter would be preferable. Perhaps video remote interpreting could be used for two or three classes, and then a live interpreter for the one class that requires a lot more face-to-face interaction. For more information about VRI, visit <http://pepnet.org/training/train070522/>.

Another technology that could be used to provide accommodations is remote captioning (RC). The captionist is located at a remote location and then transmits to the captions to a screen where the program is taking place. In this scenario, the captioner listens to the presenter through a telephone

or microphone that is set-up in the room and captions the spoken language that is sent through the Internet using special software. There are several methods of delivery will contracting for RC services. Communications Access Realtime Translation (CART) is a service that uses a stenotype machine to translate spoken language into a word-for-word transcription. More information about CART can be found at <http://www.cartinfo.org/>. In addition to CART, there are remote C-Print and Typewell Services available. Both C-Print and Typewell provide a translation that is meaning-for-meaning.

The technology needed to set-up RC services varies from company to company, but generally all require a high-speed Internet connection. There are several agencies that offer remote captioning; a few are listed below:

- QuickCaption
- Communiqú Interactive Solutions
- Alternative Communication Solutions
- 20/20 Captioning & Reporting
- Caption First

Remote captioning can be a cost-effective alternative to providing communication accommodations. It is clear from population statistics that there are a lot more hard-of-hearing students than signing deaf students. These students could greatly benefit from having captioning services. Also, as universities begin to implement universal design, they will start to see the benefit of captioning for all students, whether or not they have a disability.

PEPNet hosted a teletraining on remote captioning in November of 2007. There is a lot of good information that may answer questions about remote captioning. The archived version of that training can be found on the PEPNet website at <http://pepnet.org/training/train071025/>.

Telecommunications technology is rapidly changing. Most people do not use TTYs any longer. Today one rarely thinks of the TTY when discussing relay services. Most popular today is Video Relay Services, Relay Conference Captioning, and Internet Relay.

Video Relay Service (VRS) is a telecommunication service that allows a deaf person to communicate with hearing individuals through the telephone. The FCC regulates VRS so there are federal guidelines that VRS companies must follow to maintain compliance with federal law. This service is provided through the use of a videophone and high speed Internet. Sorenson provides free videophones for deaf individuals, but other videophones such as D-Link i2eye videophone, the OJO videophone and coming soon is VideoSign 3.0 and VPad. Listed below are VRS providers that can be used to provide telecommunication access for your deaf consumers.

VRS Provider	Website	IP Address/Phone number for VP or others
AT&T, Inc.	http://www.attvrs.com/	attvrs.tv
Communication Access for the Deaf and Hard of Hearing, Inc.	http://www.cacvrs.org/	cacvrs.tv
CSDVRS, LLC	http://www.csdvrs.com/	csdvrs.tv
Hamilton Telecommunications, Inc.	http://www.hamiltonrelay.com/	hamiltonvrs.tv

Hands On Video Relay Service, Inc.	http://www.hovrs.com/	hovrs.tv
Hawk Relay, LLC	http://www.hawkrelay.com/	hawkrelay.tv
GoAmerica Communications, Corp. (i711.com)	http://www.i711.com/	i711vrs.tv
LifeLinks, LLC	http://www.lifelinksvrs.com	69.18.207.166
NXi Communications, Inc.	http://www.nxicom.com/	Go to http://www.nextalk.net to download video software
Snap Telecommunications, Inc.	http://www.snapvrs.com/	call.snapvrs.com
Sorenson Communications, Inc.	http://www.sorensoncommunications.com/	18663278877 (i2eye) or SVRS.tv (vp100 or vp200)
Sprint Nextel, Corp.	http://www.sprintvrs.com/	sprintvrs.tv
Viable, Inc.	http://www.viable.net/	viablevrs.tv

Relay Conference Captioning (RCC) provides real-time captioning and voice relay calls for conference calls and is a service offered by Sprint. In many states it's free! If training is being provided through a teleconference then individuals can access online captioning provided by RCC. All that is needed is a computer that has Internet access and an access code to log into the captioned site. RCC must be set-up with at least 48 hours in advance. PEPNet used it for several teleconferences it sponsored, and individuals were able to have access to the training through captions.

There are limitations to RCC, so using remote captioning may be a better option in some situations. For more information go to:
http://www.nextel.com/en/solutions/relay_services/relay_conference_captioning.shtml.

Internet relay is basically telecommunications access over the Internet. By having one of these Instant Messenger services on a computer, deaf consumers could use IP-relay to call hearing individuals. There are several ways to access IP relay, through instant messenger, from a downloadable videophone based software, and by using web CapTel. Listed below are several relay companies that use instant messenger to provide relay services.

- Sprint: "SprintIP" (AOL)
- HOVRS: "hovrsIM" (iChat & AOL)
- Hamilton: "ThatsHamilton" (AOL & Google)
- Sorenson: "siprelay" (AOL)
- Verizon: "myiprelay" (AOL or MSN)
- i711: "i711relay" (AOL)
- National Relay: "nrsiprelay" (MSN & AOL)

Another way to use IP Relay is by downloading videophone software to a computer. A webcam and high speed Internet connection are needed. The quality of the video will depend on the upload and download speed of the Internet connection. There are several companies that provide this service for PC users. MAC users are out of luck. Currently, there are not any software programs that are compatible with MAC. MAC users have the option of using XMeeting with Viable and HOVRS. Listed below are several companies that provide this service.

- Sprint: <http://www.sprintvrs.com/download.htm>
- HOVRS: <https://secure.hovrs.com/videosign/videosign.aspx>
- Sorenson: http://www.sorensonvrs.com/options/envision_info.php
- Viable: <http://www.viable.net/product/vv>
- i711: <http://www.i711.com/vrs/comparison.php>

Several companies also offer VRS through a web browser interface; a few of them are listed below. This is a viable option where firewalls may prevent the downloading of VRS software to a computer.

- Sprint: <https://www.sprintip.com/index.jsp>
- HOVRS: https://www.hovrs.com/VRS_SSL/hovrs.aspx
- Hamilton: <http://www.hamiltonrelay.com/inspirechat/index.htm>
- Verizon: <http://www.ip-vrs.com/index.jsp>

Web CapTel is a service that allows a person to have a voice to voice telephone over the internet that is captioned. This is the perfect option for individuals who prefer to speak for themselves but need captions to make sure communication is clear and understandable. To access this free service, log onto the websites listed below.

- Sprint: <https://www.sprintcaptel.com/index.asp>
- Hamilton: <https://web.hamiltoncaptel.com/>

Technology can greatly enhance productivity and services when used correctly. However, remember that all technologies require time to learn. It is important to allow oneself the time necessary to become familiar with technology so that it can become a time saver not a time trap.

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Meaning-for-Meaning in Speech-to-Text Services: A Better Understanding

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Abstract

Speech-to-text support services are growing rapidly in popularity and use. While it is easy for most people to envision what a verbatim class transcript includes, many people do not know or understand what a meaning-for-meaning transcript includes. A common misconception about meaning-for-meaning transcription is that it's a summary or "dumbing down" of the message. In reality, a meaning-for-meaning transcript contains a concise and thorough message, richly detailed, and in full English grammar. This presentation will describe the process and product of meaning-for-meaning speech-to-text services, as well as examine methods to quantitatively analyze the completeness, accuracy, and readability of a resulting transcript.



Speech-to-text services are common accommodations for individuals with a hearing loss. The service provider converts the spoken word into a written text document. These service providers can be divided into two general categories: verbatim and meaning-for-meaning. This paper will focus on providing a better understanding of meaning-for-meaning services. It will consider the human factor or the service provider not the specific system or technology. The technologies for the various systems are all very similar but it is the human factor that will decide the quality of the final document. Performance is the critical part of the equation.

It is important to begin with a definition of meaning-for-meaning. When asking a group of people to define meaning-for-meaning the answers would vary greatly. Words like "summarization" and "paraphrase" come to mind but neither gives a full picture of what meaning-for-meaning in speech-to-text services actually means. A general definition might be, "a concise and thorough translation, or paraphrase, of spoken English content." However, the best way to explain meaning-for-meaning is to consider the difference between spoken English and written English.

Spoken English and written English are in effect different languages. When people speak, even in a lecture format, they do not always use Standard English. They often change subjects in midsentence or speak in sentence fragments. If these spoken errors are written in as a verbatim transcript it can be confusing.

There are many benefits for the client in using meaning-for-meaning services. First the transcript is a model of written English. Even though the speaker may not use perfect grammar, the service provider will take that spoken passage and adapt it to an understandable written format.

The transcript is a succinct delivery of the spoken information. For example, information that is said multiple times would be emphasized through the use of formatting such as bold text instead of repeating the phrase multiple times. Extraneous words and vocal interferences such as “uh” and “you see” would be removed.

The transcript is a manageable length. For an hour-long class the transcript would average 8 to 10 pages, depending on the service provider. If the transcript were 20 pages for each hour of class the student might be overwhelmed with the amount of text.

Meaning-for-meaning text includes the pragmatics of spoken information. This means that not only the words are typed but also the meaning behind the words which are indicated by inflection and tone of voice. Environmental information also is included so that the client is aware of why and how comments pertain. For example if a cell phone rings in class, the student would need to know this in order to understand why the instructor is suddenly angry. The service provider would also include the tone of the message for example by putting the word sarcasm in parentheses to show that the speaker is not being serious.

And finally, the meaning-for-meaning transcript is visually accessible. The service providers use bold, italics, numbered lists, bulleted lists, and such to organize the information in a format that is visually organized. Service providers also learn to use white space efficiently to help alleviate eye strain for the client.

Students who are deaf and hard-of-hearing rely this service to understand the content of a class. This is not always easy when the linguistic meaning of the passage does not reflect the speaker’s meaning. An example would be in a question versus a statement such as: *Can you see (glimpse) Mary?* compared with: *Can you see (imagine) Mary?* Each of these sentences contains the exact same words but have very different meanings. Another example is with sincerity versus sarcasm: *The door is over there (direction).* compared with: *The door is over there (order to leave).* It is easy to see how misunderstanding can occur when the linguistic information found in the tone of voice and inflection is missing from a written translation of the spoken word.

After discussing what meaning-for-meaning is and how it can benefit the client, it is then important to look at the mental processes required by the service providers. By sitting in on any college class, it is easy to see that spoken English and written English can be like two different languages. When the instructor speaks extemporaneously, the word choice and flow of speech is very different from when the instructor reads a passage from a book. Once this difference is understood, then the need for meaning-for-meaning services becomes clear. Because the service providers are not simply typing everything that is heard they must use a complicated mental process to produce a clear and grammatically correct translation.

The following is a verbatim transcript of a presentation on the topic of deaf and hard-of-hearing students transitioning from high school to college:

In presenting a workshop out at Houston last year for their teachers for the deaf we looked at a number of different issues in bringing up three or four specific paradigms that you need to look at. Students who are deaf sometimes if they use sign language may not have parents that know how to communicate effectively. So

what do you do? Sometimes the teachers become the ones sometimes it is the voc rehab where you need to go. If you look back at the nuts and bolts that Jenny helped with there are some very basic facts. That students even know what their hearing loss is. What do they need for accommodations? If you send them off to college like here at Jacksonville do they know what their insurance is? Do they know health life car whatever? So looking at that.

A deaf individual reading this would probably gain very little understanding of the topic; whereas, a hearing individual would understand more from hearing this passage spoken than from seeing it in written form. The human brain processes information differently when it is received auditorially or visually. This is why it is important to translate the spoken word into a clear and understandable written format.

Traditionally it was thought that a verbatim transcript was the best service and that meaning-for-meaning was a substandard alternative. However, after seeing the example above it is easy to see that verbatim may not always provide an optimum transcript. It is important to remember that not “one size fits all” in service provision. In fact, one service may not fit even the same student in all situations. For years, the myth that “ASL was bad English” was perpetuated; however, ASL is now accepted as a distinct and separate language from English. In the same way, meaning-for-meaning is not bad verbatim. It is a distinct and different service, which may be preferable in some situations.

The mental processes a meaning-for-meaning service provider uses are very similar to that of an ASL interpreter. For this reason, looking at various interpreting models can help explain how a meaning-for-meaning transcript is produced and how service providers can improve their skills.

Verbatim service providers operate at the lexical level. They may need to process homophones such as “their,” “there,” and “they’re.” Otherwise there is little processing required since the words are spoken and then translated to text via a stenography machine.

Meaning-for-meaning service providers work at the phrasal and sentential level. The service provider must hear a complete thought or concept before mentally translating it into a written format. If the service provider processes at the word level, then the meaning may be lost.

Looking at some interpreting models can be useful at this point. The Colonomos Model of interpreting looks at taking the original or source language and changing it into the new or target language. In speech-to-text, the two languages are both English but the concept is the same since spoken and written language have distinct differences. The service provider must first listen to the spoken word, and then understand the meaning before creating the written transcript. If the service provider does not understand the message, she will not be able to adequately represent the message at the contextual level (Colonomos, 1989).

A second model of interpreting which is useful is the Gish Model. In this model the service provider is asked to look at the different levels of a message. The speaker’s goal is the overall purpose to consider. Below that is the theme of the message. On the third level are the objectives to convey the theme. The fourth level is the units of information used to communicate the objectives and finally the individual data and details. Often a service provider becomes stuck on the lower level of individual details. When this happens, the overall message can be lost because a series of individual details may not flow into a cohesive message. If a service provider cannot keep up with a speaker, then it is important to move up a level in order to include as much detail as possible while maintaining the overall message (Gish, 1995).

One example that demonstrates this is when a captionist went into a classroom only to learn that a video would be shown. The captionist knew she could not caption all the dialogue for the video. She asked the instructor what his goal was in showing the video. The instructor stated that he wanted the students to focus on the sound effects. This changed the approach the captionist took in captioning the video. The result was that the student was able to follow the subsequent discussion and participate fully. Had the captionist not had this overall goal to follow, she would have tried to summarize the plot and dialogue which would have left the student lost in the later discussion.

A final interpreting model to consider is the Cokely Model. This model provides a very detailed description of how interpreters process information. It can be helpful to show the Cokely chart to individuals who are not familiar with the complexity of meaning-for-meaning services in order to help increase understanding. The Cokely Model also explains various types of miscues that can occur: omissions, additions, substitutions, intrusions, and anomalies. Service providers can avoid these miscues by understand when and how they occur (Cokely, 1992).

Service providers can use these models to help them improve their skills and increase their understanding of the complex mental processes that meaning-for-meaning requires. In addition, service providers should have strong short-term memory, an expansive vocabulary, good comprehension of Standard English, knowledge of cultural and syntactical reference, a broad knowledge base, good summarization skills, and fast typing speed. Exercises to help service providers achieve these skills can be found in *Appendix A*.

A common question which administrators have is how can you analyze a meaning-for-meaning transcript. How can you really know if such transcripts are good, if they express clearly and accurately what the speaker said?

Many people say you can't analyze meaning-for-meaning transcripts because you can't match them word-for-word with what was said. But they can be analyzed, and there are many professions that use meaning-for-meaning translation of information. Those other professions do analyze meaning-for-meaning output regularly.

One of those professions is foreign language interpreting, such as someone translating from Spanish to English. There are idioms and other things to consider that make it so you cannot do a word-for-word translation between different languages. The goal is to take the meaning expressed in the first language, and express that same meaning in the second language, with different words and different grammar.

Work has been done by the National Center for Interpreter Testing, an organization within the University of Arizona, to develop standardized test procedures and to determine if specific meaning-for-meaning foreign language translations done by individuals are complete and accurate. The test, the Federal Court Interpreter Certification Exam, is used to measure the language output of foreign language interpreters, and to qualify them to work in the federal court system.

That meaning-for-meaning testing of foreign language interpreters has been found to be so valid that it is defensible in court. This is one example that shows that analysis of meaning-for-meaning output can be done, and done well. Change from one language to another can be measured.

Another profession that routinely measures the accuracy and completeness of meaning-for-meaning translation is Sign Language Interpreting. The Registry of Interpreters of the Deaf (RID) has developed standards and protocols to determine if the signed output message matches the

message that was spoken. Their certification tests are recognized as valid and reliable, showing again that meaning-for-meaning output can be analyzed and measured.

Another area in which meaning-for-meaning analysis is done in a valid and reliable way is discourse analysis. Researchers look at writers' output and instructors teaching classes to see if the information they are speaking is conveying the intended information accurately. That is a matching of the intended meaning with the actual meaning conveyed. Methods have been developed to reliably judge if the output matches the intended meaning, despite the fact that different words and grammar are used to convey the information from the original source.

Two other groups that have developed and used valid and reliable measurement protocols are the C-Print and Typewell organizations. Both have done quantitative analysis of meaning-for-meaning transcripts in their past certification evaluation programs. By comparing the information in the transcript with the verbatim audio of a lecture, the accuracy and completeness of the information conveyed can be reliably and validly measured.

All of the professions mentioned have in common that they routinely quantitatively analyze meaning-for-meaning output, such as transcripts and signing, to determine if it is "good," if it is faithful to the meaning originally spoken.

The way each of these professions measures the meaning-for-meaning output have several things in common. These include a similar type of source material, a specified unit of analysis, an objective scoring criteria, trained judges using objective criteria reliably, consensus scoring, and a final quantitative outcome measure which is valid and reliable.

In each of the professions' measurement of meaning-for-meaning output, the source material used is authentic and from a representative context. It includes the verbatim words AND context and pragmatics. Pragmatics means the speaker's tone, body language and attitude descriptors. Contextual, non-spoken information, such as interruptions, must also be noted.

By "specified unit of analysis" is meant that the testing protocol defines whether the judges look at the whole discourse level, at sentences, at phrases, at single words. The discourse level was an example mentioned with the Gish Model.

Each system has an objective scoring method. You need judges to do this quantitative analysis, to use the analysis protocol and scoring material and apply them reliably. It takes time to train judges to reach reliable scoring levels.

Each system uses consensus scoring. That was a new idea that came from the work at the University of Arizona, where they developed the method for analyzing the output of foreign language translators. Consensus scoring works like this: Two trained judges both look at a video tape of someone that is translating, or signing; or at a transcript. Each judge notes for each unit of analysis if the information is accurate and representative of what was spoken. For any items that the judges disagree on, they discuss that item and come to an agreement.

When two trained judges look at something they will usually agree on about 85% of it. That leaves about 15% that needs to be discussed, and a consensus reached about each item's acceptability as a meaning-for-meaning representation of what was spoken. The final outcome in each of the professions' measurement systems is a quantitative measure which is valid and reliable.

A lot of work goes into good quantitative analysis. Here are some examples of what must be done, and how long each step of the process takes. For an hour lecture, you are looking at 2-6 hours to prepare the source material. Then it takes over 20 hours of work to identify units of analysis and develop objective scoring criteria. There is a second person involved who is an expert in the same field, usually a professor. Lots of hours are needed, by a couple of people.

Training the judges to do the objective analysis, and then to do the actual analysis takes a long time, many hours. There are two people working and they have to discuss any points of disagreement. They have to refer back to the audio recording and go back and discuss items.

When you add up all the time, from preparing the source material through computing the final objective outcome measure, it can take 38-42 hours to get one hour of lecture analyzed. Some of this time gets spread over many people and the same prepared source material can be used to evaluate many different service providers. But still, the amount of time involved in the whole process can be really daunting.

It is too much time for a supervisor to do: either analyze the work of an already-employed service provider, or judge the work of a service provider one is considering hiring. Thus, the goal that we came up with for this presentation is a quick way to do a meaning-for-meaning analysis procedure.

First, let me give you a little background about kinds of testing. There are two different kinds of analysis: quantitative and qualitative.

Quantitative analysis is a numerical measurement and is expressed in mathematical terms. For example, how many sentences were accurately captured? How many words were spelled correctly? Qualitative analysis is based on generating a description of the qualities of the transcripts, and the "measurement" is expressed in natural language, such as: complete, accurate, easy to read. Are sentences clearly worded? Does the information flow smoothly?

And the transcript should be easy to read quickly. The students are reading in real-time. Things are moving quickly. Their eyes are getting tired. You want it to be easy to read so they can get that information quickly and easily.

Quantitative analysis is very time-consuming and hard to do well and do correctly. Qualitative analysis is easier.

A "quick" way to do a qualitative analysis is this: Get an unedited transcript. If you could sit in the class and listen to the lecture as it happens, that would be great. But for someone looking to hire a service provider, you can just use an unedited transcript from any class or meeting.

Then you need to just sit down and read the transcript deeply. We know the positive side of what we want. We want the information to be complete, factually accurate, and easy to read. Sit down and look for places these positive things are not there; look for problems in a transcript.

Look for any unclearly worded sections, gaps, or jumps in the information flow. You could be reading along and know there's something missing.

Look for fact errors. Some fact errors are just glaring, such as if they have reversed the logic order of something or put in a 'not' when the 'not' is not supposed to be there. You'd mark those sections as problems. Or you'd note sections that are hard to read. You have to get your glasses out. You'd mark those sections as problems.

So, I'll show you a couple of samples of possible problems. Read the examples and see if you can spot the problem.

Problem Sample #1

Advertising is everywhere. I flew to LA this weekend and I was basically on a 4 hour advertisement. The planes have ads painted on them. The flight attendants make announcements to buy the Delta credit card using the sandwiches.

A Fact Error is in the last sentence. Reading the transcript deeply, you'd catch that confused sentence as a fact error. These things happen when you are interpreting and transcribing, especially in a fast moving, dense class or meeting. Things can get mixed up. Often people transpose numbers in a phone number. So, if you are reading a transcript, you look for things like that and you circle them.

Problem Sample #2

The competition between cohesive forces and thermal energy determines if something is a solid, a liquid or a gas. If the thermal energy is a lot less than the cohesive forces, you have a There is only one class of liquid, but there are two classes of solids: crystalline and amorphous.

That segment has obvious gaps and missing information. These are easy to see. Lots of times, though, gaps aren't so obvious. But what happened? What caused those gaps and problems? There might have been noise next to the service provider or something happened and they lost the whole thought. It's just gone. It's not good, but it does happen.

Service providers can ask for repeats, but sometimes you just can't interrupt. However, in the two systems that I know best here, TypeWell and C-Print, the service providers are trained to ask for clarification.

Is this actually a poor transcript? The way I will answer that question is that this is an example of a non-ideal transcript. A service provider should have strategies to use when somebody coughs. I will approach this situation in this manner: we identified some problems, now what do we do with them? Should we kick out the cougher? The service provider might ask for a repeat of the missed comment; or she might move her chair away from the cougher.

Again, you are doing this "quick" qualitative analysis of a transcript. You mark things like this. Some are less obvious. Many of you probably have done observations of interpreters. You have probably seen it where they just lose it. They may look to their team and get filled in, but many times they just need to go on. So, there are very similar kinds of problems or events that cause this to happen in both kinds of services.

Problem Sample #3

Today we'll be working with sentences one more time. Let's look at the syllabus. Now we'll talk about periodic structure. Look at syllabus that words WIP come up again and again. Each day from now on, bring Works In Progress with you. Shift from works reading and interpretation and writes based on that to works generated by you.

The last sentence above is unclearly worded. What is that sentence suppose to mean??!! These kinds of wording errors do happen, and if you are doing an evaluation, as said before, some service

providers are really great and do wonderful jobs. And others, just like in every profession, are not so good.

So this happened to come from a service provider that had problems. What happens when a service provider loses the sense of what's going on? They might just do a "brain dump" and just put words out.

You will see a pattern like that as unclear wording. You don't want that, but if you see it you can help the service provider improve by looking at transcript and then working to improve problem areas.

Problem Sample #4

How many people here have TiVo or have DVR ? Not that many, you are college students on a budget, but a large percentage of people in the United States have this technology, and it will get worst for advertisers. They thought the same thing would happen when DVD came along, and VHS. That television would go away, but it does not, it just adapts and changes. The other thing, advertising is everywhere. I flew to Los Angeles this weekend, I was on a 4 hour commercial from the time I get to the airport. The planes now are painted with advertising, from teams to products. You get on the plane, the flight attendants make announcements, to buy the sandwiches that they do not give away anymore, with the delta credit card, sign up here. Another credit card. I put my tray table down and there is a Microsoft ad right there in my face.

That sample is hard to read quickly. There are no paragraphs for eye relief while reading, or for showing the topic organization. The service provider needs to work on better formatting.

Okay, so the main message for you from all this is that you can do a qualitative analysis of a meaning-for-meaning transcript by just reading it, and looking for unclear wording, gaps, fact errors, and reading ease.

But what if you are looking at a transcript for advanced architectural design class, for example, and you haven't sat in on the class yourself, and you don't know the subject area and you don't know what's a fact or not. Or maybe the information in the transcript seems to jump all over the place. Is it because of the service provider, or is it the class, or is it the instructor?

Here are some ways to solve those mysteries. Ask an "expert" in the topic and/or the class instructor. Instructors often are not available for this review of the notes, but we have had good luck with a top student in the class. You can ask the instructor to recommend someone in the class who really understands the class information and could help the Disability Support Supervisor evaluate the accuracy of the info in the transcript.

Notes from a class notetaker can also be used to see what information was given in the class, and what gaps there may have been. That's a way to see if the gaps are from the service provider or from the professor.

One strategy to see if gaps are due to the professor's style or the service provider's abilities is to get a transcript from that same service provider for a different course or different teacher.

Another way to solve that mystery is to look at the transcript for notations of silent activities. C-Print and TypeWell service providers are trained to note when there's silent activity going on, such

as the class working silently. If there are no notations of silent activity, it means either that the service provider did not note them (but should), or that the class was active, but the service provider missed information and had gaps in the flow.

Remember the “rule of thumb” that a meaning-for-meaning transcript is typically about 8-10 pages for an hour class. If a particular transcript is a lot less than that, or if a particular service provider often has much shorter transcripts from all her classes, you should probably be concerned.

It takes about an hour to do this kind of qualitative analysis, this deep reading and needed “mystery solving.” However, it is worth it because the process gives you so much information about individual service providers.

For each of the problems you note in a transcript, give the service provider some of the skill enhancement strategies given for the component skills of being a good service provider. Those will help you help a service provider overcome problems.

You may encounter situations where a service provider has a lot of fact errors, or the transcripts may be hard to read, or other problems noted in the analysis of the transcript. To address these issues, you can look at that analysis you just did, match up the problems with the desired skills, then match up those skills with the strategies suggested, and help the service provider get better.

Meaning-for-meaning is a service which provides students with full access to spoken communication. Understanding how the mental processes work for the service provider and how the transcripts can be analyzed, will help support service coordinators improve services for the students.

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Appendix A

Skill Building Exercises

Short-Term Memory Building

- Listen to a practice lecture. Do not begin typing until the third word is spoken. Then increase the lag time to the fifth word, then to the tenth word.
- Listen to a practice lecture tape. Allow it to play for 1 minute and then pause the audio. Type as much of what you hear as you can remember. Slowly increase the amount of time that you listen before pausing to type.

Vocabulary Building

- Subscribe to a *Word of the Day* email group. Each day you can learn a new word. Practice the words but making it a group activity with co-workers. See who can use the word of the day the most times correctly within that day.
<http://dictionary.reference.com/wordoftheday/list/>
- <http://grammar.ccc.commnet.edu/grammar/vocabulary.htm>
- <http://www.english-test.net/gre/vocabulary/meanings/180/gre-test.php>

English Comprehension Skills

- Read a book each month.
- Utilize online grammar exercises.
 - http://www2.actden.com/writ_Den/index.htm
 - http://owl.english.purdue.edu/handouts/general/gl_sentclar.html
 - http://www.collegeboard.com/student/testing/sat/prep_one/improv_sent/pracStart.html

Strong Knowledge of Cultural and Syntactical References from both Hearing and Deaf Culture

- Deaf culture
 - Attend deaf events.
 - Take a sign language class.
 - <http://www.deaf-culture-online.com/index.html>
 - <http://www.aslinfo.com/deafculture.cfm>
- Idioms
 - <http://www.usingenglish.com/reference/idioms/>
 - <http://humanities.byu.edu/elc/student/idioms/idiomsmain.html>
- Colloquialisms
 - http://www.usingenglish.com/links/Slang_and_Colloquialisms/index.html
 - <http://www.word2word.com/slangad.html>

Cultivate a Broad Knowledge Base

- Watch educational programs and keep up with current events.
- Borrow a text book to accompany classes you caption for.
- Discuss with instructors what their goals are for each class session.
- Listen to academic podcasts during your commute.

Strong Summarization Skills

- Record the nightly news or a program from the Discovery Channel or the History Channel. Listen to a short segment (5 minutes or less) and then pause the tape. Summarize the information in a single sentence. Then summarize the same information in 3 sentences and finally a short paragraph. Reword the summarizations until they accurately capture the information in varying degrees of detail.

Fast Typing Speed

- <http://www.typingtest.com>
- <http://www.learn2type.com/TypingTest>

Sources for Practice Lectures

- http://www.apple.com/education/itunesu_mobilelearning/itunesu.html
 - Download iTunes software (free).
 - Go to iTunes Store and choose
- <http://disability411.jinkle.com/>
 - Podcasts on disability related issues.
- http://www.oculture.com/2006/10/university_podc.html

Using Tablet PCs to Integrate Graphics with Text to Support Students Who Are Deaf and Hard of Hearing

Pamela Francis, Michael Stinson, & Lisa Elliot

Abstract

In recent years speech-to-text systems have provided support services to a growing number of deaf and hard of hearing (d/hh) students in mainstream classrooms. Science, technology, engineering, and math (STEM) courses provide some of the most serious challenges to providing appropriate support services to d/hh students. While there is evidence to confirm that speech-to-text systems have successfully supported access and learning for some d/hh students, a remaining challenge for support service providers is the inability to capture graphical information in conjunction with the text. Other support services are equally challenged to provide d/hh students with sufficient access to STEM material. This paper describes the use of Tablet PCs and the C-Print system to provide two support service options for students who are d/hh: real-time notetaking and speech-to-text with graphics. Included are: descriptions of the C-Print Tablet software with graphical input capabilities; information about research trials conducted using the Tablet options, and a discussion of how integration of graphics will affect the role of students and service providers.



In recent years, increasing numbers of deaf and hard-of-hearing (d/hh) students are being educated in classrooms alongside hearing students (National Center on Education Statistics, 1999; Gallaudet Research Institute, 2002). Students receive a variety of support services to accommodate their access and communication needs in these inclusive classrooms. As content material becomes more sophisticated and dense in secondary and postsecondary courses, the need for appropriate support services that match access needs with instructional methods becomes more crucial in order to foster d/hh student success.

A growing concern for educators and the science and technology community is the challenge to make science, technology, engineering, and math (STEM) courses more accessible to students with disabilities, including students with hearing loss (National Science Foundation, 2003). An instructional method common across many STEM disciplines is the use of graphical or non-text-based information including formulas, symbols, charts, graphs, drawings, and the like. Very often, the instructor will, for example, have a formula or illustration on the board or displayed on an overhead and will explain facets of the concept that is visually depicted. True comprehension of the subject material requires that the student looks at the drawing *and* attends to the explanation simultaneously. This requirement can be extremely challenging for d/hh students in mainstream classrooms.

In addition to the challenges imposed by teaching methodology in STEM courses, attributes of three common support service options contribute to these challenges for d/hh students for two reasons. First, d/hh students experience constraints related to the technology of the support services especially when used in STEM courses. Second, competing visual demands for the students occur when d/hh students receive speech-to-text services, or when they speech-read the instructor or watch an interpreter, or, when d/hh students use both an interpreter and notetaker. All add to the barriers faced by students in STEM classes.

Limitations of speech-to-text systems. A growing number of deaf and hard-of-hearing (d/hh) students receive speech-to-text support services in mainstream classrooms. These systems provide a word-for-word or meaning-based display of what is said in class, as well as options for saving the text after class for study. While there is evidence to confirm that speech-to-text systems have successfully supported access and learning for some d/hh students (Elliot, Stinson, McKee, Everhart, & Francis, 2001; Elliot, Coyne, & Stinson, 2006; Elliot, Stinson, Easton & Bourgeois, 2008), a remaining challenge for support service providers is the inability to capture graphical information in conjunction with the text. Research on the usability of speech-to-text systems consistently reports student frustration with speech-to-text systems due to their lack of graphics (Elliot, Stinson, McKee, Everhart, & Francis, 2001; Elliot, Stinson, & Coyne, 2006.)

The lack of graphical information in speech-to-text displays is keenly perceived when speech-to-text support is offered in STEM classes because these courses often include spoken (i.e., vocabulary, explanations, etc.) and graphical information (i.e., diagram, formulas, etc). Because speech-to-text systems are text-based, service providers are not able to capture the graphical information in real time. As a result, deaf/hh students may miss important information.

Limitations of speechreading and interpreters. While increasing numbers of d/hh students use speech-to-text support services, there are still many circumstances in which d/hh students either rely on speech reading the teacher or use an interpreter. In the situations in which a student relies on speech reading or the interpreter alone, there are many times when students may miss an the opportunity to connect the visual information with the spoken (interpreted) message because the instructor's face may be turned away from the student so the student only sees the visual information or because the interpreter is not in the same visual space as the illustration. In both these scenarios, students may miss key information necessary to comprehend the explanation (Marschark et al., 2005).

Limitations of notetakers. Still other students rely on the combination of an interpreter and notetaker for access in mainstream courses. It is common practice for notetakers to take notes by hand, on multipart, pressure sensitive paper, and for students to receive those notes at the end of the day (Hastings et al, 1997). The readability of the notes can be influenced by the legibility of the notetaker's handwriting as well as how well the notes come through the multiple layers of pressure-sensitive paper. Notetakers may also complete worksheets or need to do additional drawings that have to be integrated into the notes packet that the student receives, but explanations relating to those handouts might not be incorporated in the notes. Usually, students and notetakers interact very little, and students do not know what notes have been recorded until they receive them.

Therefore, each of these widely available support services for d/hh students, speech-to-text support, interpreter only, and interpreter with notetaker have limitations for students, especially when used in STEM classroom settings where instruction involves simultaneous, multiple presentation modes. These limitations create barriers for d/hh students that may inhibit student success in STEM courses.

Tablet PC options. A promising new generation of laptop technology, called the Tablet PC, is now available. Tablet PCs provide both typing and graphical—(handwriting and drawing) input. In addition to the standard input option (i.e., typing) of a traditional laptop, Tablet PCs allow the user to write and draw directly on the screen of the laptop, using a special pen, called a stylus.

The C-Print research and development team has adapted C-Print® software to work with the tablet. By expanding the capacity of C-Print software, we have created *two new options* for real-time support. First, by providing students and notetakers with wirelessly networked tablets, C-Print software can now support handwritten, real-time notetaking, which allows students access to their notes as they are being created; and, second, C-Print software can now incorporate graphical information with a real-time display of the spoken dialogue text. With both options, a student using a Tablet PC can add their own notations to the notes, graphics, or text that is being created by the service provider. Worksheets and other electronic media created by the teacher can be incorporated into the real-time display and notes as well.

Use of Tablet PCs will likely help improve service providers' ability to address the challenges of providing support services to d/hh students—especially when class include both spoken and graphical information—such as in most STEM classes. These are the types of classes in which traditional typing only C-Print has sometimes had limited effectiveness; the software modifications will increase the effectiveness of speech-to-text services, as well as creating new opportunities for more traditional, handwritten, notetaking services.

This presentation discusses the use of Tablet PCs and the C-Print system to provide two support service options for students who are d/hh. The first option provides speech-to-text support and graphical information in real-time. The second option provides notetaking support that is viewed in real time by students who are d/hh.

The presentation includes a demonstration of the C-Print Tablet software, featuring the graphical input capabilities. In addition, presenters will demonstrate how graphical information can be integrated into the real-time display, two-way communication, and notes distributed after class, and discuss how the integration of graphics affects the role of students and service providers. The presentation will include findings from a recent study that examines the benefits of using Tablet PCs to provide real-time notetaking and speech-to-text with graphics support services.

Recent research with C-Print Tablet software indicates that it increases academic performance, improves attentiveness in class, and increases student involvement. Presenters will share information about research trials, including: feedback from students, teachers, and service providers; academic performance data; and lessons learned from the research trials.

Methods

Materials

Networked tablets for notetaking. In using the C-Print Pro tablet software for notetaking, the support notetaker and student each have tablets with 10-12" displays that are compatible with Windows XP tablet version, such as the IBM X41 Tablet PC, for *hardware*. These computers have mobile or detachable keyboards, internally built wireless capabilities for networked communication, and a stylus with adjustable settings. To support notetaking, the C-Print Pro tablet *software* has a graphics pane that enables students to impose their own notes in real-time on a transparent overlay "on top" of the notetaker's information that is displayed on the student's tablet. Transfer of information between tablets occurs over a network through the Internet protocol

(TCP/IP) along with a proprietary protocol. Student and notetaker are able to access the different layers for writing and viewing, but the protocol regulates who can add input to a particular layer.

Software for real-time notetaking. The primary application that the project used for the work with networked tablets with notetaker support is Corel Grafigo 2 (Corel, 2005). A key reason for selecting this application is that it is desirable for students to be able to impose their own notes in real-time “on top” of the notetaker’s information that is displayed on the student’s tablet. Grafigo has an “onionskin” transparent overlay that enables students to add and save their own marks and notes as the support notetaker is writing notes. Text windows may be easily created for typed input, and a Library feature is available to organize saved documents. Once created, notes can be distributed in various formats (i.e., .html, .pdf, .doc). Figure 1 below shows a sample of real-time notes created with the software.

The project also used Microsoft’s Advanced Networking Pack for Windows XP to enable the peer-to-peer technology to support wireless communication with Grafigo. Grafigo has received favorable review as a simple graphics program that works well collaboratively (Brown, 2003).

During the notetaking trials, the C-Print Pro software application that supports real-time notetaking was developed to replace Grafigo in future research. However, during the research reported for this paper, real-time notetaking trials used the Grafigo software.

Software for captioning with graphics. C-Print Pro™ tablet software was used for these trials. The software allows a range of ways to produce information, from text to drawing. It differs from previous versions of C-Print Pro software and other speech-to-text services that produce only text. Once created, notes can be distributed in various formats (i.e., .html, .pdf, .doc). Figure 2 represents speech-to-text notes with graphics produced with the new C-Print software.

Figure 1. Real-time Notes Sample

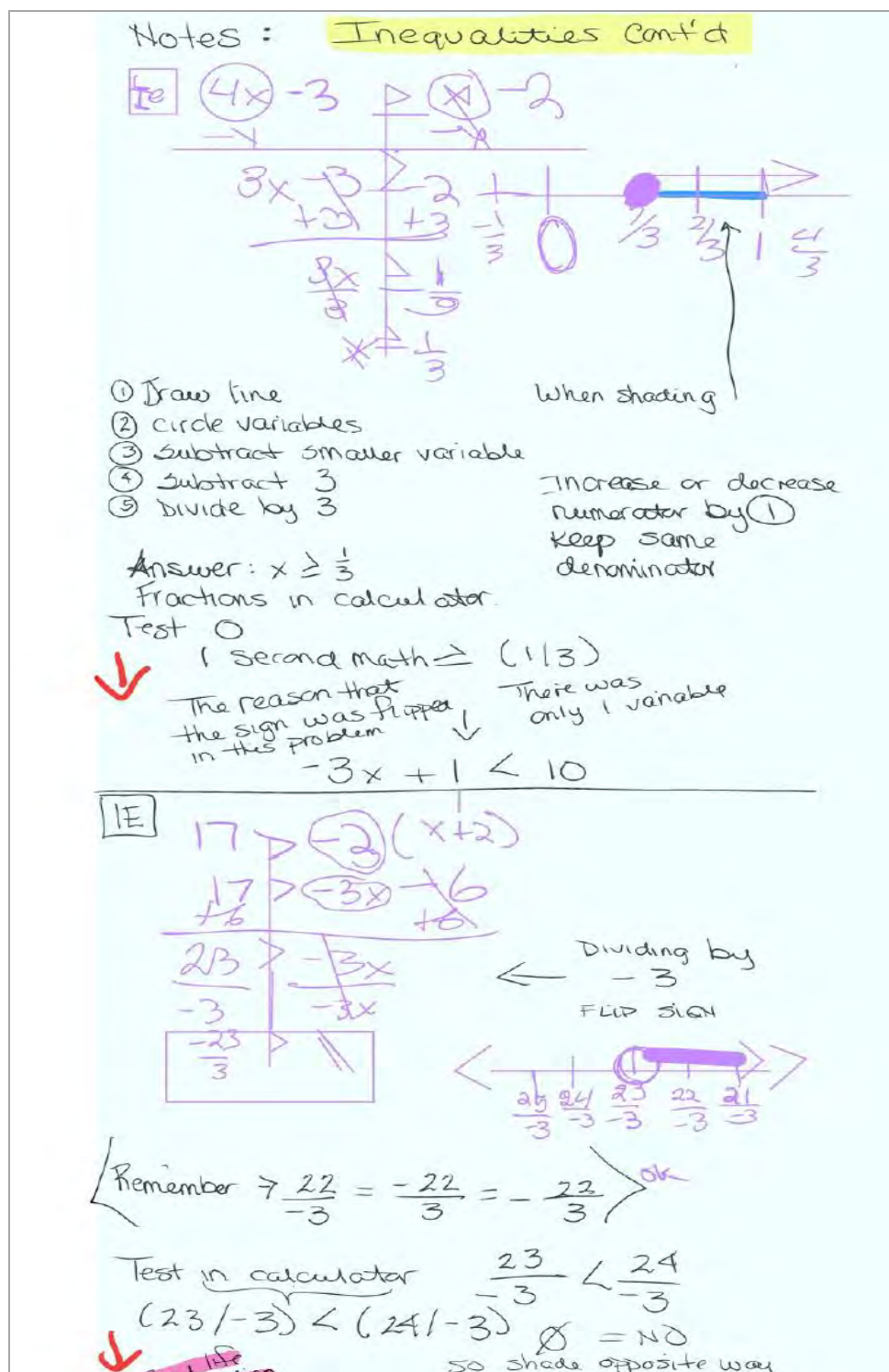


Figure 2. C-Print w/Graphics Notes Sample

November 8 , 2007

Algebra Mrs. Frank

Warm up

$$\frac{|t+1|}{9} = 3(9)$$

$$|t+1| = 27$$

$$t+1 = 27 \quad t+1 = -27$$

(2 of 11)

Homework Page 65 13-24
Test Tomorrow

Teacher: Okay. In order to solve the equation the idea is get the whole absolute value by itself. Multiply by 9 (each side). Remember you will end up with two answers when solving absolute value equations. You get two answers because see draw #3


If you were going to do a check...Check both

answers.

$$\frac{|t+1|}{9} = 3(9)$$

$$|t+1| = 27$$

$$t+1 = 27 \quad t+1 = -27$$



Cierra

(8 of 11)

116

$$\frac{36}{9} = \frac{|r|}{9}$$

$$4 = |r|$$

$$r = 4 \quad r = -4$$

(5 of 11)

Go over homework Page 63 #2 -22

This is one that where the absolute value has something near it.

11/8/2007

Participants

Middle and high school students, (grades 7-11) who are deaf or hard of hearing participated in this study, along with their classroom teachers, and itinerant teachers of the deaf (TODs). Fifteen students (8 females, 7 males) participated in total: 7 students in trials using tablets for real-time notetaking, and 8 students who used the tablet for speech-to-text (captioning) plus graphics. All the students were enrolled in math or science general education classrooms with hearing peers. The students had a pure-tone average hearing loss of 60.40 dB in the better ear ($SD=25.068$). Mean grade level reading ability was assessed at 11.58 (range grade 5-16.9, $SD=4.3676$) using the Mini-Battery of Achievement (Woodcock, McGrew, & Werder, 1994). Additional student characteristics are displayed in Tables 1 and 2 below.

Table 1. Student Characteristics for Students in Real-time Notetaking Trials

Sub #	Sex	Grade	Reading Grade Level	Better Ear HL	Course	Additional Support Services Received Prior To/During Trial			
						Interpret	Note taker	FM	C-Print
001	M	7	7.9	M→Sev	Science	√		√	
002	F	10	>16.9	Mod	Chemistry		√	√	
003	F	10	8.6	Mild	Geometry		√	√	
004	F	8	13.7	Mod	Math		√	√	
005	F	9	15.5	Mod	Math			√	
006	M	7	6.9	M→Sev	Math		√	√	
007	F	11	5.0	Sev	Algebra	√	√		

Table 2. Student Characteristics for Students in Captioning with Graphics Trials

Sub #	Sex	Grade	Reading Grade Level	Better Ear HL	Course	Additional Support Services Received Prior To/During Trial			
						Interp	Note taker	FM	C-Print
008	M	8	n/a	Sev	Math	√	√	√	
009	F	7	n/a	Prof	Science	√	√		
010	M	11	16.2	Mild	Math				√
011	M	11	>16.9	Mod	Pre-Calculus				√
012	M	7	13.3	Mod (CI)	Science	√	√		
013	F	11	>16.9	Mod	Pre-Calculus			√	√
014	F	10	7.1	Mod	Algebra				
015	M	11	6.9	Mild	Chemistry				

Procedure

Students were identified as potential participants by their TODs. Informed consent was obtained from parents or guardians by the TODs. Prior to the start of the in-class field trial, individual students, classroom teachers, TODs and other support staff, and parents or guardians met with two

members of the research team (notetaker or captionist and researcher). During this meeting, the technology was demonstrated and the research procedure was explained. The notetaker or captionist met with the student for an additional half hour before the classroom trial began for additional training.

Classroom trials lasted for 5 weeks. During the trial, students received either the tablet real-time notetaking service or the captioning with graphics service. Any other services that were stipulated in the student's IEP (such as an interpreter, FM, etc.) were also maintained during the 5-week trial. During the real-time notetaking trials, the notetaker took notes in class with tablet and the notes were communicated instantly to the student's tablet. This is different than normal notetaking in which students only see the notes after class. Students added their own notes as needed by adding marks on top of the notes produced by the service provider.

Similarly, during the captioning trials, captionists used the C-Print software to create speech-to-text notes with graphics and the text or graphics were communicated instantly on student's tablet. These notes differed from the usual speech-to-text notes because they included graphics as well as the text of the spoken dialogue. Students added their own notes as needed by adding marks on top of the text or illustrations produced by the captionist.

During the third or fourth week of the trial, the researcher attended one class session. Field notes were recorded. Following the end of the classroom trial, the researcher conducted individual, open-ended, face-to-face interviews with the student, the classroom teacher, and the TOD.

Data Collection

Hearing loss. Data on student hearing loss (unmasked air assessments at 500 hz, 1000 hz and 2000 hz) were gathered from school records.

Reading ability. Data on students' grade level reading ability was assessed with the Mini-Battery of Achievement (Woodcock et al., 1994). This three-section test includes tests identification, vocabulary, and comprehension and takes about 10 minutes to administer. The test was administered to the student by a project researcher.

Communication preference. Students completed a 20-item questionnaire regarding their communication preferences at school and at home, as well as their background and skill in sign language and their use of assistive devices, hearing aids, and cochlear implants.

Teacher rating of student performance. Teachers were asked to rate student performance in academic achievement, learning new vocabulary in the course, and class participation during the trial as compared to their previous performance. The ratings were based on a 1-5 Likert-type scale, with 1=much less than average progress, 5=much better than average progress.

Classroom use. Field notes were gathered during classroom observations. Observational data included topics such as the physical classroom setting; (classroom set-up including student seating arrangement, lighting, etc.) student interactions (student interaction with the technology, other students, and class participation) teacher-student interaction, teaching style, and use of audiovisual materials. Notetaker or captionist behavior was also observed, including interaction with students, teachers, and other supports staff, as well as notetaker or captionist practices. Information gathered during the observations was used during interviews (see below).

User experiences. Semi-structured, face-to-face interviews were conducted with students, classroom teachers, TODs, notetakers, and captionists. A research team member skilled in

ethnographic interviewing techniques conducted the interviews. The same individual also conducted the classroom observations. The interview protocols included a predetermined list of topics, but interviewers encouraged interviewees to pursue their own line of thinking. Interviews were also individualized based on information gathered during the classroom observations.

Interviews included the following topics: impact of the Tablet PC technology on understanding and class participation by deaf/hh students; interaction/comparison of Tablet PC with other accommodations and support services (notetaker, interpreter, FM system, etc.); reactions to electronic or paper text, and descriptions of whether/how/under what conditions it is used by students; advantages and limitations of Tablet PC to providing text and notetaking tools. Additionally, students were asked to describe specific ways in which they use the Tablet PC support services.

For each student who was interviewed, the student's TOD and classroom teacher and notetaker or captionist were also interviewed. Total number of interviews included: classroom teachers (n=15); TOD/Resource Room (n=12); notetakers (n=4); captionists (n=4). (Some numbers do not add up to 15 because some notetakers, captionists and TODs served multiple students.) To the extent possible, parallel questions were asked of the teachers and support staff.

For face-to-face interviews with students, an interpreter was present at the interviews, if necessary, to (a) facilitate communication as needed and (b) voice the signing of the interviewer and respondent onto an audiotape. Verbatim, typed transcripts were generated from the audiotapes and reviewed for accuracy by the interviewer.

Analysis

Descriptive statistics were used to analyze quantitative data due to the small number of participants. Qualitative data gathered in the field notes and interviews were analyzed using content analysis techniques described by Bogdan and Biklen (1998). The research team read all field notes and transcripts and, through discussion, developed a set of code categories based on major topics covered in the interviews. Investigators independently coded their field notes and interview transcripts, meeting regularly to discuss and resolve differences in coding decisions. Data analysis was facilitated by the use of HyperResearch software (Researchware, Inc., 2007). The software allowed researchers to generate reports in which interview data was sorted by code categories and themes. This tool allows researchers to prepare analyses of the data that are supported through extensive use of quotations from participants.

Results

Teacher ratings

Teachers rated student progress during the trial compared to their progress before they received the technology. Teachers rated academic achievement, vocabulary, and class participation. To summarize teacher ratings for the 15 students:

- Teachers rated students as progressing better than before, or the same as before: except for one rating for one student, all ratings were for average progress or better.
- About equal numbers of ratings were for better progress than previously and for the same progress as before.
- For two areas, academic achievement and class participation, there were more ratings of better than average progress than average progress.
- For one area, learning new vocabulary, there were more ratings of average progress than better than average progress.

There was no obvious difference in the pattern of ratings for the notetaking option and for the speech-to-text or captioning plus graphics option.

The complete chart for teacher ratings is shown in Table 3, below.

Table 3. Teacher Ratings of Student Performance During Tablet Trial As Compared to Student Performance Without Tablet

Sub #	Much less than average performance	Less than average performance	Average performance (no difference)	Better than average performance	Much better than average performance
001	A			V	P
002			AVP		
003					AVP
004			V	AP	
005			VP	A	
006			AVP		
007			AVP		
008			V	AP	
009			V	A	P
010				AVP	
011			AP	V	
012			A	VP	
013			AVP		
014			V	AP	
015			V	AP	

A= Academic Achievement

V= Learning New Vocabulary

P= Class Participation

The largest amount of data for the study was qualitative, including classroom observations and interviews with students, their classroom and support teachers, and service providers. Following are several excerpts from these interviews.

Student Feedback

Using tools to remember important information. The tablet software includes tools for marking the text, such as highlighting, and drawing. The following comment shows how the student used the tools to help remember information that is important.

Interviewer: Tell me about those kinds of notes. Did you write, or did you highlight, or did you draw, what did you do?

Student: If it's an important thing that's going to be on a test or something, like one time I was drawing a picture of an atom that I was doing for a project so I drew on the table to make sure I remembered and not forget anything that would be important. And other times I wrote down what was going to be on a test so I wrote it down so I could study.

Integration of electronic classroom materials into display and notes. Another feature of the software is the ability to integrate other electronic classroom materials such as worksheets or PowerPoint slides. The following comment reflects how the student said she benefited from seeing the classroom materials, and being able to see the captionist's notes on this sheet. The student also

describes her ability to add her own notes to the teacher notes which is referred to as sharing space with the service provider:

Student: I thought that was really cool! It was like a mini version, and I was writing on it and um, I like seeing C. (captionist) writing on the teacher's notes and then that way I can add to them myself, and also when I got the notes at home I could have my own notes but I could have C.'s notes too.

Teacher Feedback

Classroom teachers were also interviewed. Several of the teachers remarked that students increased their participation in class, not just in quantity, but also in quality. The following comment shows the qualitative difference—class participation changed from asking questions with the goal of obtaining an understanding to making comments that were based upon already having an understanding of the material being presented.

Teacher: Yeah, in terms of her participation, she is a very strong student to begin with and she obviously takes pride in her work. But it seemed like her participation now is less on, "I don't understand this" but more on, "I just want to repeat and want clarification." So her participation though, may not have improved in terms of how many times she was speaking out, but the information she was presenting to the class was more on target than before.

Service Provider Feedback

Communication between the service provider and the student is another topic that was discussed during interviews. Some providers who used the notetaking option had never communicated with the student during class; the tablet technology was the first time they had experienced this type of student interaction. In the following quote the notetaker explains how she was able to communicate to the student the right way to produce a drawing that the student had been making incorrectly.

Notetaker: "Now I see why, oh that really helped me." Things like that the students would say to me. You know, clockwise, counter clockwise drawing arrows, um, one example was I had a student who drawing in clockwise and counter clockwise, she drew it in backwards. So I drew it in the right way so she would know, and she was like, "Oh, thank you so much."

Lessons Learned

In conducting this small-scale study on adapting C-Print software for use with tablet PCs, many lessons were learned, in particular, from the experiences of notetakers, captionists, and students.

Notetaker perspectives. The biggest transitions experienced in this study were felt by the notetakers, because using a computer to deliver support was a marked difference from traditional service delivery. This change was smoother for notetakers who were more comfortable with technology.

A second, profound difference in notetaker experience related to the ways in which the notetaker interacted with the student. In traditional notetaking services, the notetaker may communicate very little with the student; in the real-time notetaking model, notetakers communicate and interact constantly with students. This new form of notetaking requires negotiation between the notetaker and the student as to how the two will share the space on the tablet "page" and also, who will be responsible for recording content (e.g. student writes down material from board, while notetaker adds commentary or explanation).

Other adjustments that notetakers were required to make included becoming comfortable carrying heavier equipment, taking the time to familiarize oneself with the technology, and adjusting one's schedule with regard to the editing and printing processes.

Captionist perspectives. While captionists have had more experience with C-Print software and laptop technology, changes were still necessary to transition to the tablet. For example, captionists needed to familiarize themselves with the new features of the software and the hardware. They also had to adjust their captioning strategies to decide when it was appropriate to caption or to use the stylus and add information by hand.

Similar to notetakers' experiences, captionists also learned how to negotiate with students about who would record certain information. In addition, in certain circumstances captionists worked more closely with classroom teachers to obtain worksheets and other electronic media before class that could be included on the real-time display.

Student perspectives. Students also experienced role changes associated with the tablet technology. For example, students learned to advocate for themselves in negotiating with notetakers and captionists about what material they (the students) would like to record. Also, students were given the autonomy to take notes or to add annotations for themselves. For some students, these new opportunities were welcome; for others, it was more of a puzzle because the students demonstrated poorer notetaking skills.

Additionally, students had to decide when and how long to look at the tablet. While students expressed a variety of strategies for looking at the tablet, none of the students found it difficult to read the tablet. Depending on the paperwork demands of the class, student wrote more—or less—on the tablet. (For example, in some classes, students were graded on the quality of their notebooks. In these situations, students wrote on the tablet less often.)

Discussion

A variety of support services are available to d/hh students who are educated alongside their hearing peers. In the case of STEM courses, these support services often fall short due to a combination of circumstances, including the nature of STEM educational methods and the unique characteristics of the support services themselves (Marschark et al., 2005; Stinson & Antia, 1999).

A pilot study was conducted involving d/hh middle and high school students who used tablet PCs for either real-time notetaking or speech-to-text with graphics support in STEM courses. Quantitative ratings of student performance by classroom teachers suggested that most students performed at least as well, if not better, using the tablet PC-based support services.

Interviews conducted with students and teachers also referenced positive attributes of tablet-based support services including increased autonomy and more focused class participation for students.

New technology posed new challenges for service providers and students alike. While the software was easy to use, notetakers had the most significant transition to make, moving from a manual system to one supported by a computer. Students and their service providers also encountered new relationships as they negotiated with content and shared notetaking space.

Continued research with these support services will explore the educational impact of tablet-based supports as well as implications of their implementation in STEM classes. It is anticipated that

these research findings will add to the improvement of support services for d/hh students and facilitate students' success in STEM.

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Math-to-Text: Tips and Tools

Sharon Allen & Steve Colwell

Abstract

It is challenging to provide speech-to-text services in math and science classes. Besides the often unfamiliar content of many math and science classes, there are the added challenges of quickly and clearly showing symbols and formulas. This paper will present a range of tools and techniques for meeting these challenges using the most popular types of speech-to-text software.



Special methods are needed to provide real-time speech-to-text services in math and science classes. Handwriting is too slow, and regular typing is unable to quickly produce the special symbols used in formulas and equations. In real-time communication access services, speed is critical. We will discuss ways of quickly typing math and science, especially when using the common speech-to-text software products.

Speech-to-text services in math and formula-intensive science classes often produce ambiguous or unreadable text. In text format, phrases such as “two pi r squared” or “x to the fifth plus two y to the third” may look like English, but in actuality math is indeed, as high school students have always known, a foreign language.

Furthermore, the language of math is a written language, and is “spoken” or translated into English according to agreed-upon conventions. We will use the term “mathlish” to refer to this spoken reading of written mathematics. When this spoken translation is then re-transliterated into printed text, the result can be confusing and may lack the meaning of the original math text.

Computer Math

Mathematicians and engineers have come up with conventions for typing math into scientific calculators and computers, which allow the user to key in common math symbols quickly, and which also increase the readability and decrease the ambiguity of the math. For example x^2 is used for x^2 .

This approach does work. However, these conventions must be learned and are therefore less useful to a deaf or hard-of-hearing student, who in addition to learning the math taught by the instructor would also be required to learn a writing system that her/his classmates would generally not have to learn.

Here are some computer math examples:

Written “mathlish”	Computer math	Written math
2 pi r squared x to the fifth + 2 y to the third x to the fifth + 2y to the third the square root of 9 3 times ten to the ninth H2O2 + 2HCl	2 pi r^2 x^5 + 2y^3 (x^5 + 2y)^3 root 9 3 * 10^9 H2 O2 + 2HCl	$2\pi r^2$ $x^5 + 2y^3$ $(x^5 + 2y)^3$ $\sqrt{9}$ 3×10^9 $\text{H}_2\text{O}_2 + 2\text{HCl}$

The second and third examples above show possible ambiguity that can be introduced when only the spoken “mathlish” is attended to by the service provider.

Better-looking Math

To type math quickly, one must learn how to do two things. First, one must learn to locate special symbols like π and add them to the dictionary of one's speech-to-text software as an easy-to-type abbreviation. Second, one must learn the special commands for adding superscripts and subscripts. We will now discuss specific techniques to do these things using existing speech-to-text software.

Math mode

TypeWell V5 provides an easy way to type math quickly using its special “math mode” feature: Just turn on math mode and type the formula. For instance, type “2pi r2” to get $2\pi r^2$. Type “x5 + 2y3” to get $x^5 + 2y^3$. Type “3x109” to get 3×10^9 . Type “H2O2 + 2HCL” to get $\text{H}_2\text{O}_2 + 2\text{HCl}$.

The most important tip for TypeWell users is to be sure to read through the built-in tutorial, especially the Fields section about different areas of math and science. Also, the techniques discussed below for other systems will work with TypeWell. Start with the Lucida Sans Unicode font in Character Map for use with TypeWell. This can be useful when typing a rare symbol that may not be in TypeWell's built-in math dictionary.

Character Map (for all systems)

In all the common speech-to-text systems (including, for instance, the CART system Eclipse, speech recognition systems like NaturallySpeaking, TypeWell, and the newest C-Print software), you can add special characters to your dictionary. The key is to use the Character Map program that is built into Windows to locate the special symbol needed. Character Map works well once one learns its oddities, discussed below.

Character Map is on the All Programs/Accessories submenu, and may sometimes be within the System Tools submenu of that.

To find the desired character in Character Map, first choose an appropriate font from the drop-down list. Different fonts have different selections of characters. The fonts with Unicode in their names are the most likely to have rare and unusual characters.

Then, locate the character within the font. You can search for the character by name using the “Search for” field. For instance, type “gamma” in the search field and click Search to locate upper and lower-case Greek gamma characters. An oddity of Character Map is that you must click Reset before doing a second search.

Once you've located the desired character in Character Map, click on the character from the grid display and then click Select to put it into the clipboard. Paste the character into the appropriate box in your software for adding a dictionary entry. Another oddity of Character Map is that it includes a New Paragraph code in the clipboard after the desired character. You may want to first paste into text, then select and copy just the desired character without the New Paragraph.

After pasting the character into the dictionary, set it up with an abbreviation of your choice. For instance, you might use the abbreviation *pisym* to type π .

Superscripts (for all systems)

Some software includes a special keystroke to enter superscripts or subscripts. For instance, in C-Print use the ctrl up-arrow and ctrl down-arrow. Look in the software manual for your product to locate the superscript and subscript keystrokes.

Some products may have no way to enter superscripts and subscripts. All is not lost. The most commonly needed superscripts are a raised 2 for squared, and a raised 3 for cubed. These can be typed in most systems, such as in the CART Eclipse software, by using the special symbol techniques of the above section. Use Character Map to locate the raised 2 and raised 3 symbols, and add them to the dictionary. One could for instance use the abbreviation *2** in Eclipse to produce the raised 2.

Although these methods allow one to type superscripts and subscripts reasonably quickly, one might prefer to type *x2* to get x^2 , rather than *x{ctrl-something}2{ctrl-something}*. Speed is of the essence in real-time speech-to-text. One can achieve this to a certain degree by entering the most common polynomial terms into the abbreviation dictionary. Using the special raised-2 and raised-3 symbols above for instance, one can make the abbreviation *x2* give x^2 .

Conclusion

To summarize, by using certain techniques one can type many of the formulas and equations of math and science in most speech-to-text systems.

Captioning and transcribing in math and math-intensive courses requires preparation and awareness of the content that is being taught. We would like to warn service providers not to overdo the use of math symbols, but rather to keep in mind that the students are learning math via English, and that the way math is spoken is an important part of that learning process. However, with an introduction of basic math symbols into one's work, the resultant text will be much more readable and accurate than a straight transliteration of the instructor's spoken translation of the mathematics.

For more information, see <<http://typewell.com/pepnet.htm>>.



Facebook 101



Jennifer Freer & Joan Naturale
Rochester Institute of
Technology
15 April 2008

Abstract

This poster describes how the RIT Librarians use Facebook to increase outreach to their colleges. "Friending" students and faculty on Facebook creates a network of people who can then find contact information (IM email or videophone) and be informed about library services. Promotion occurs by advertising events, offering access to the RIT Library Catalog, creating and joining groups and "friending" students & faculty who then receive status updates. All of this is an inexpensive marketing tool to increase visibility.

What is Facebook?

Facebook is a social networking tool that can be used to improve outreach and marketing efforts.



Facebook Today: Facts and Statistics

- Over 2,000 colleges and universities (85%) and more than 25,000 high schools
- More than 11 million college student accounts already exist and it is projected that 20,000 profiles are added each day
- 85% of college students have a profile
- 69 million active users world wide as of January 2008 with more than 250,000 registrations daily
- 5th most visited site; #1 for photo-sharing (ahead of Flickr)
- 20,057 members in the RIT network

Facts and Statistics

- Over 55,000 regional, work-related, collegiate and high school networks
- More than ½ FB users are outside of college
- Fastest growing demographic is those 25 years and older
- 45% of Facebook users log on everyday for 25 mins daily which adds up to about 2 hrs a week
- 85% log in once a week
- 65 billion page views per month

Terms of Use

- Facebook is a third party service provider and you should honor their terms of use
- They can change those Terms at any time. Do not make this your only means of communicating and promoting your services or getting to know your students.
- This service may change over time but get to know it now so you understand how high school and college students are communicating

Why Join?

People join Facebook because it is:

- used as a website
- a directory
- an online community
- an expression of self
- share interests and hobbies
- a social calendar
- tap into and create networks
- join and create groups

Organizations' Use

- Post info about events-track guest list, updates if place, date/time changes
- Join and create groups
- Make announcements and communicate with members
- Post discussion of topics
- Promote your organization
- Recruit new members

Marketing

- Reach campus community about upcoming programs and services on or off campus (boost event attendance)
- Inexpensive marketing tool
- Add to existing outreach efforts
- Create a group for your department with all or some members contributing
- Support learning communities
- Support professional development
- Post pictures and videos of events

Anatomy of Facebook

- ☐ Profiles
- ☐ Status Updates
- ☐ Groups
- ☐ Discussion Boards
- ☐ Events
- ☐ Photo Albums
- ☐ Applications aka APPS
- ☐ Poke

Status Updates

- Status Updates-See what everyone is up to as they update their STATUS. This is a key way to stay in student's minds.
- Can see if you are online, for IM
- Students will post personal items here about their lives. In using this tool for work post things about availability, job tasks, generalized updates.

Groups

- Organize a group of people with like interests
- Represent an entity or department on campus
- Group examples from the more than 500 at RIT:
 - "Orange and Brown Coalition"
 - "NTID Alumni"
 - "NTID Students"
 - "Interpreting Students Association"
 - "Asian Deaf Students"
 - "Ebony Club"
 - "Dove"

EVENTS

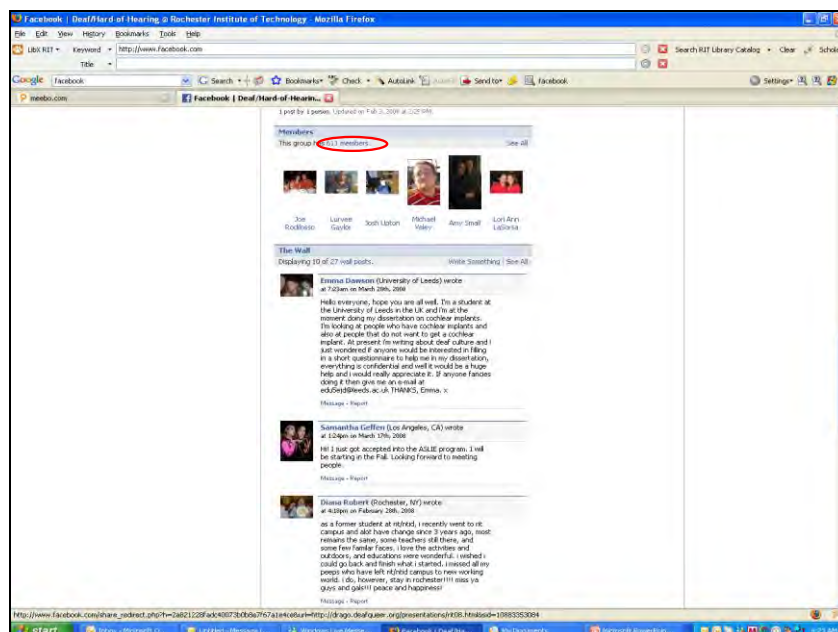
- Create EVENTS in Facebook. You can send invites to friends. If you keep the events “open” friends can invite friends. By doing this you know have some possibilities of “viral marketing” as friends tell friends to go
- You market the event and you see how many people are interested in attending.
- EVENTS get added to the RIT Facebook calendar for others to see when you leave it Open.

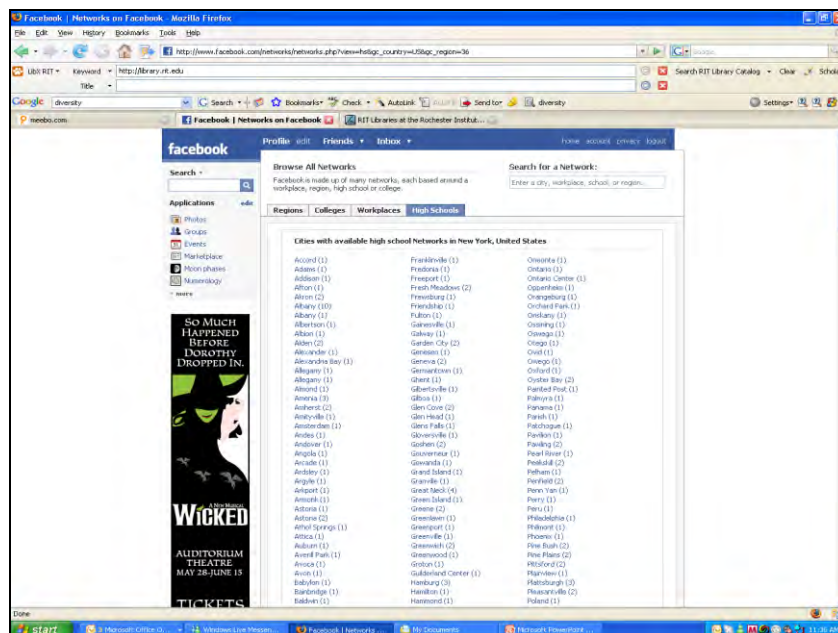
Real Life Examples

<http://rit.facebook.com/home.php?>

- Former students at Austine School in VT found me and are on my friends list
- Interpreter who is in England for the year found me and commented on library resources
- Students see I am online and can contact me via email or IM or videophone
- Keep up with campus events, ie NTID Alumni Reunion







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DIVERSE POPULATIONS

Teaching Your Colleagues and Community About Adults Who Are Deaf and Low Functioning*

Greg Long, Theresa Johnson, Nancy Carr, & Amy Hebert

Abstract

Individuals who are deaf and low functioning frequently receive inadequate attention and service delivery. This is particularly true in education, rehabilitation, and independent living settings. Typically, professionals lack knowledge, resources, and experience with this population. To begin to address these problems, this paper identifies current needs and barriers to service delivery and then provides strategies for successfully working with these individuals, family members, and the broader community. Three levels for potential change are highlighted. The first level includes individual professionals and related service providers who have little deafness background. The second level includes programs and agencies designed to serve individuals who have disabilities. The third level focuses on advocacy for systems change.

** The authors would like to note that terminology used to describe these individuals (i.e., “low functioning”) is unnecessarily negative. We use it, however, in deference to state and federal trends.*



Barriers to Appropriate Service Delivery

Individuals who are deaf and low functioning face a myriad of obstacles in their quest for appropriate service delivery. According to Long and Clark (1993), these individuals are characterized as having limited language and communication skills. These language deficits impact multiple area of life including social and interpersonal skills, decision-making, independence, and employment. The 25th Institute on Rehabilitation Issues (Dew, 1999) described the communication characteristic of persons who are deaf and low functioning as follows:

Presenting poor skills in interpersonal and social communication interactions, many of these individuals experience difficulty expressing themselves and understanding others, whether through sign language, speech and speech reading, or reading and writing (p. 2).

Frequently, supports and necessary accommodations are not available. Barriers to service delivery increase when children leave school and enter the world of adulthood. The “helping system” is complex, fragmented, and based on eligibility, rather than entitlement. There is typically no case manager or other professional to help the family navigate this system. In addition, many families

hesitate to seek employment services for their child, as they do not want to risk their child's Medicaid coverage or Social Security income if the child becomes employed.

Professionals face multiple barriers to providing appropriate services to individuals who are deaf and low functioning. For example, there are few training opportunities to learn about this population. Most graduate training programs in psychology, social work, counseling, and education do not mention the unique needs of these individuals. In addition, there is limited literature about this population. Research into "best practices" to use when working with these individuals is particularly absent. Overall, there is dearth of literature on assessment, intervention, and teaching strategies known to be effective with these individuals.

Finally, the needs of this population are not on the national radar in terms of special populations or funding priorities. Since the 1960s, there has been a sporadic pattern of federal funding, resulting in a history of fragmented and disjointed services, or no services at all. As of July 2008, no federal dollars were specifically directed toward this population. The only source of federally sponsored support for these individuals is Social Security Subsistence funding, such as SSI/SSDI.

Strategies for Service Delivery—Basic Information for Generalists

Training and Education DVD: Collaboration between Region 4 Education Service Center in Texas and PEPNet-West resulted in the creation of a DVD entitled *Unrealized Dreams...Stories of Deaf Individuals With Unique Needs*. This DVD addresses a number of issues related to services and program needs. A companion booklet provides a wealth of information and resources pertaining to communication, assessment, existing programs, internet resources, and more.

The DVD includes three versions of the story (8-, 18-, and 30-minutes long) and may be used in multiple ways. The short version provides a quick synopsis of the population, their needs, and suggested actions to address these needs. This version is helpful when meeting people who may be potential donors or others with a limited amount of time. It provides a concise summary of these individuals, the barriers they face, and related service delivery issues. The two other versions of the DVD provide more in-depth information. The longer versions can also be combined with ideas, topics, and discussion points included in the accompanying training booklet. It would seem particularly helpful to use this approach with professionals who do not have experience or knowledge regarding this population. Overall, the intent of the developers was to provide a product that is versatile in its use.

To obtain a copy of the DVD, contact PEPNet at www.pepnet.org or Region 4 Education Service Center at www.esc4.net.

Strategies for Service Delivery—Programs and Agencies

As noted earlier, providing appropriate and effective services to this population is a complex task. A coordinated and collaborative approach to service delivery is the best strategy. The authors identified three programs that currently provide excellent service delivery with individuals who are deaf and low functioning: Lexington Vocational Services Center, Jackson Heights; Community Outreach Program for the Deaf, Tucson, Arizona; and the Kentucky Office of Vocational Rehabilitation. Contact information for all three programs is included in Appendix A. In addition, the following states have programmatic efforts underway to serve individuals who are deaf and low functioning: Alabama, New York, Texas, and Pennsylvania.

The Lexington Vocational Service Center provides a variety of services and is well known for its job coaching program. A job coach or communication specialist is an important support to ensure barrier free communication. While job coaching can serve as the link to effective communication

there are few people trained to work in this capacity. In addition, almost no programs offer job coach training to work with this population. One notable exception is the San Antonio College Interpreter Training Program. It offers an Associate in Applied Science in American sign language/deaf support specialist.

As a state-wide program, the Kentucky model is an exciting new development. The Division of Deaf and Hard of Hearing Branch of the Kentucky Office of Vocational Rehabilitation designed the program. Staffing includes four state coordinators, as well as coordinators for interpreting services; hard of hearing, late-deafened services; deaf services; and deaf-blind/—~~deaf~~ at-risk” services. A special intake form has been designed for the deaf "at-risk" consumer which is global and attempts to identify community supports. The four state coordinators meet administratively to plan, develop resources, and identify future needs. In the future, a case manager will be hired to work with each RCD and the at-risk consumers. A combination of life skills, job clubs, and support services is being developed. Kentucky will become a model for a uniform, state-wide service system created and administered by a vocational rehabilitation agency.

Strategies for Service Delivery—Advocacy for Systems Change

In order to address the needs of persons considered deaf and low functioning, we must advocate for systematic change. One issue that should be addressed is effective service provision. Too often, gaps in service lead to poor vocational outcomes. When thinking about effective service provision several important concerns need to be considered: qualified service providers, barrier free communication, presence of secondary disabilities, effective transition planning, and individualized services.

Qualified Service Providers: The Committee on Deaf, Deaf Blind, Hard of Hearing, and Late Deafened under the Council of State Administrators of Vocational Rehabilitation (CSAVR) developed a model state plan. This plan includes a detailed explanation of what constitutes a qualified service provider. Although this document focused on the profession of vocational rehabilitation, the general principles have applicability to service provides in many other professions as well. A copy of the plan can be downloaded from CSAVR (http://www.rehabnetwork.org/committees/committee_deaf&deafblind.htm).

Barrier Free Communication: Inadequate communication skills are one of six key characteristics of persons who are LFD (Hurwitz, 1989; Long & Clark, 1993; Watson, 1997; Watson, 1998a, 1998b). Enhanced service provision with persons who are LFD requires an effective and appropriate communication assessment. Long and Alvares (1995) described an ecologically-based, functional communication assessment model for use with these individuals. This model emphasizes the person’s communicative competence in relationship to environmental demands and available supports. Building upon this work, Long (1996) developed an evaluation tool entitled, —Assessing workplace communication skills with traditionally underserved persons who are deaf.” This measure uses a four-step approach to (a) describe the individual and his/her communication skills, (b) evaluate the communicative demands of a particular work environment, (c) compare the individual’s skills to critical communication requirements in the work environment, and (d) identify and/or develop supports and interventions to make a better fit between consumers and their communication skills and environmental demands.

In 2005, Long collaborated with the Midwest Center for Postsecondary Outreach (now known as PEPNet-Midwest) to develop a website entitled *Communication Accommodations for Postsecondary Students Who Are Deaf or Hard of Hearing* (<http://pdccorder.pepnet.org/media/greglog/>). It targets Disabled Student Services (DSS) coordinators, students, families, and faculty. The website provides specific suggestions for

communication accommodations based on the type of environment (e.g., lectures, group discussions, labs) coupled with a consideration of the individual's hearing loss (i.e., deaf, late-deafened, hard of hearing), communication preference (i.e., oral, signing, cueing), and literacy skills (i.e., low literacy, literate). Because individuals who are deaf and low functioning have limited literacy skills, many of the accommodations suggested in the website would be appropriate for this population.

Presence of Secondary Disabilities: Many people identified as deaf and low functioning have secondary disabilities. One way to enhance service provision is to tap into alternative sources of funding. Developmental Disabilities Councils typically have funds to provide extended supported employment services for consumers with cognitive disabilities. Often there is a waiting list for these services. As such, consumers are encouraged to sign up for services several years before they are of employment age. People who are also legally blind may be able to receive additional services from the Services for the Blind. Additional resources and information for community rehabilitation programs who serve consumers who are deaf and low functioning can be found at: <http://www.pepnetnortheast.rit.edu/publication/tipsheet/commrehab.html>.

Effective Transition Planning: A key to career attainment is effective transition services that include family, social, environmental and academic support. Under federal law, secondary schools are required to develop transition plans with students and their parents, as well as a plan for employment after graduation. Although the concept of developing a plan of transition is good in theory, it often does not lead to job attainment.

Effective transition planning should include participation in career development programs. Unfortunately, career development programs designed for people who are deaf or hard of hearing are scarce. Furthermore, career development programs for persons who are deaf and low functioning are non-existent. PEPNet's new *iTransition* (<http://pepnet.org/itransition.asp>) program offers a comprehensive approach to career planning that could serve as a model for developing similar career development tools for persons who are LFD. Another PEPNet product that provides career stories of individuals who are deaf and hard of hearing is the series *Achieving Goals* (<http://www.netac.rit.edu/goals/menu.html>). *Achieving Goals* has a video series component as well as online videos of deaf professionals who can serve as career mentors.

Individualized Services: A strategy for implementing a program of individualized services is person-centered planning (PCP). Person-centered planning requires multi-agency coordination and collaboration. It also provides consumers with equal opportunity and access to services. In addition, it also creates an optimal system of social and environmental supports. Implementing PCP ensures non-duplication of resources and services. This model of service is consumer directed, person-centered and emphasizes consumer choice. The National Association of the Deaf proposed implementing PCP into the creation of their plan, *A Model for a National Collaborative Service Delivery System Serving Individuals who are Low Functioning Deaf* (National Association of the Deaf, 2004).

Conclusion

The primary goal for this document was to share resources that could be used to teach about the issues faced by the people who are deaf and low functioning. These issues are not new. The problems and barriers faced by this population remain the same. In fact, the same group of people has been advocating for systematic change for many years. As already stated, our field has had many advocates who have pushed for funding, resources, and ongoing programs and services for this population. We have created many position papers, written many articles in journals, and presented on the needs of persons who are deaf and low functioning at numerous conferences.

Effective and appropriate service delivery should lead to a true and positive impact on successful outcomes. To achieve this goal requires continued funding. In addition, multidisciplinary research should be supported to develop, assess, and implement proven assessment strategies, interventions, and accommodations.

At this point and time, the hope of federal support has diminished along with support for many other community services. It is incumbent upon each of us to find creative ways to seek funding and support, either on a local or state level. One avenue to find like-minded professionals is to attend a conference. For the past several years, Theresa Johnson has coordinated a conference in Houston, Texas on the needs of students who are deaf and low functioning. This year's conference is scheduled November 20-22, 2008. We plan to use this conference (and others) to continue our dialog about this population. Help us share information and resources. Use the links provided in the article to learn more. For additional information, please check the PEPNet website (www.PEPNet.org). Also, feel free to contact any of the authors directly via e-mail. Your interest in service provision for this population is critical. We invite you to help us build an interdisciplinary cadre of professionals committed to appropriate and effective service delivery for individuals who are deaf and low functioning. Please let us know if you have additional information or links you feel may be helpful. We look forward to ongoing collaboration with you.

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Appendix A

Lexington Vocational Services Center
30th Ave. and 75th St.
Jackson Heights, NY 11370
www.lex.nyc.com

Community Outreach Program for the Deaf
268 West Adams St.
Tucson, Arizona 85705
<http://www.angelfire.com/az2/valleyctrofdeaf/copd.html>

Kentucky Office of Vocational Rehabilitation
Deaf and Hard of Hearing Services Branch
209 St. Clair
Frankfort, Kentucky 40601
Contact: Janis Friend
More information about the Kentucky Model State Program can be found at:
www.dvr.ky.gov/programs_services/publications/Merged%20Monograph%20of%20LFD%20Presentation1.pdf.

College Students who are Hard of Hearing: A National Task Force Publication on Addressing Service Models of an Underserved Population

Debra Brenner, Douglas Watson, & Cheryl Davis

Abstract

Students who are hard of hearing are often forgotten in the classroom, misunderstood in terms of service provision, and overlooked by social service agencies as they transition from secondary education to postsecondary education and training. Many students do not receive accommodations that would be appropriate for their needs. Professionals who are experienced in providing services to students who are deaf frequently do not understand the very distinct and unique communication differences faced by students who are hard of hearing. To address these issues, a national collaborative project developed a publication designed to help state offices of vocational rehabilitation and postsecondary education institutions to better identify and provide more effective services to this population.



It is not uncommon for students who are hard of hearing *not* to request services until after classes have already started. Many students do not fully understand how different a postsecondary education program will be from what they experienced in high school; in that sense, hard of hearing students may be just like any other student. The pace of each class may be much quicker than those in high school. The classes may have many more students, and the professor's expectations may be different. In addition, accessing support services may be a new and different experience for an incoming student who is hard of hearing; the responsibility for requesting services shifts from the school to the student. Some students may decide to ~~make~~ "make it on their own" while others realize that the available services are tools to help them compete with parity.

Experienced service providers realize that students who are hard of hearing face very real access issues. It's not as simple as just wearing a hearing aid to make everything clear. With the advances in technology, students have many more choices than ever but individual differences still play an important role in how well the student understands the information presented. An accommodation that works well for a lecture may not be effective in a laboratory. Flexibility and creativity are essential components to providing an accessible environment.

During the 1990s surveys of campus officials led to estimates that between 20,000 and 25,000 deaf and hard of hearing students were attending the nation's 5,000 colleges and universities. By contrast, self-report disability items on federal surveys of students in college on financial aid lead to estimates of between 258,000 and 346,000 college students with hearing loss in 1986 and 1990.

Schroedel and Watson estimate this number to now be over 400,000. Reasons for the significant difference in the numbers can be attributed several factors: a) many hard of hearing students were not disclosing their hearing loss and not requesting Disability Support Services (DSS) assistance; b) some students may not have thought that communication technology or academic support services would be helpful; c) some do not fully appreciate the effects of their hearing impairment upon communication and social interaction; and d) some may have been unaware of services and equipment and did not know how to request them. Both Vocational Rehabilitation (VR) and DSS service professionals need accurate information about the numbers of persons their programs are to serve. Knowing the true numbers of deaf and hard of hearing students on campus can greatly aid a program coordinator to advocate for more resources, enhance support services, and train program staff.

In a collaborative effort, the Postsecondary Education Program Network (PEPNet) and the University of Arkansas Rehabilitation Research and Training Center for Persons who are Deaf or Hard of Hearing (RT-31) supported a project to identify and clarify the special needs and issues of students in postsecondary settings who are hard of hearing. Task force members were Heidi Adams (IL), Sam Atcherson (SD), Tim Beatty (CA), Debra Brenner (GA), Randy Collins (AZ), Patty Conway (KY), Cheryl Davis (OR), Carol Kelley (MS), Louise Montoya (PA), Marcie Sacks-Botto (IL), John Schroedel (AR), Larry Sivertson (CA), Pat Tomlinson (NJ), Jim DeCaro (NY), Denise Kavin (NY), Doug Watson (AR), and Marcia Kolvitz (TN). This project provides national leadership to developing recommended guidelines to help postsecondary institutions better identify and serve this population, and complements work that will be done by the Council of State Administrators of Vocational Rehabilitation (CSAVR) later this year.

It is with great pleasure that we offer this publication, *Hard of Hearing Students in Postsecondary Settings: A Guide for Service Providers*. Its purpose is to provide up-to-date information and resources about those factors that affect students who are hard of hearing as they plan for or participate in postsecondary education and training. Chapter 1 provides insight into who the population of students is and what it's like to experience hearing loss. Chapter 2 presents demographic information and the implications for service delivery. Preparing for the transition from secondary to postsecondary education is discussed in Chapter 3. The overview of vocational rehabilitation services in Chapter 4 provides other service providers, consumers, and parents with a better understanding of the services available to eligible consumers; in addition, it features several state agencies with specialized services for individuals who are hard of hearing. Chapter 5 offer the service providers a model with specific information about the kinds of services and support that can be offered by a postsecondary education or training program. Because students don't spend all of their time in the classroom, Chapter 6 emphasizes how access in other campus settings can be provided. Finally, Chapters 7 and 8 address technology that can play a significant role in communication access for students who are hard of hearing; these chapters discuss hearing loss and the use of hearing aids and assistive listening devices, and also describe other types of technology that can be used effectively in a variety of settings.

We hope that the use of this guide will not be limited to services providers at the postsecondary level. Information and resources included in it may be very helpful to students and parents as they discuss future plans. Teachers, transition specialists, and other related staff from secondary programs also may use this as a tool when working with students as they transition from secondary to postsecondary education and training programs.

We view transition as a collaborative effort among several groups of people who can provide resources and support. Students and their families may find it helpful to work closely with high school faculty and staff, transition specialists, vocational rehabilitation counselors, educational

audiologists, and other related professionals. We strongly encourage students to visit colleges, universities, and vocational training programs to see where the best “fit” is for them. Meeting with students or consumers at these institutions can provide additional information that can be valuable when making decisions about the future. Other online resources—many of which are included in this publication—can be very helpful throughout the process.

Free downloadable pdf files are available through the PEPNet Dissemination Center. Go to <http://pdcorder.pepent.org> and search for product 1219. Printed, bound copies of this publication are also available at cost through Lulu. Readers can go to <http://stores.lulu.com/pepnet> to view PEPNet resources available through this source.

For those who are interested only in the technology chapters, this information is available as a stand-alone document from the PEPNet Dissemination Center at <http://pdcorder.pepnet.org/media/1221Demystifying.pdf>.

Serving Hard-of-Hearing Students: Interpreting Documentation, Understanding Functional Impact, and Providing Appropriate Accommodations

Samuel R. Atcherson & Cheryl D. Davis

Abstract

Service providers face a number of challenges in evaluating the needs of hard of hearing students who rely on auditory/oral and/or print means of communication. While documentation for some students clearly justifies specific accommodations, for others it does not. Many service providers are faced with the difficult task of justifying to administrators why the services are necessary. This session provided participants an understanding of the functional limitations created by hearing loss and the access options available, arming them with knowledge and confidence to advocate for students' access needs. Participants had the opportunity to talk with an audiologist who is himself a cochlear implant user to have their hearing loss and documentation questions answered. Hearing assistance technologies also was available to explore.



The impetus for having this all-day workshop was the awareness and concern that there was a poor transfer of information between service providers and audiologists for students with hearing loss in the post-secondary education setting. When clear information is not adequately transferred, it may be difficult to develop and justify reasonable and appropriate recommendations for students. Whatever information is gathered significantly impacts documentation that can either benefit or harm a student's educational access and process. The reasons for any poor transfer of information may be related to the assumptions of knowledge that both audiologists and service providers have about each other. For example, audiologists may assume that services providers who work with students with hearing loss know precisely what the student needs. Meanwhile, service providers may assume that audiologists will provide complete, detailed evaluations and recommendations that will work with the school's available technology and resources, and ultimately meet the needs of the student. Alternatively, it may be that both parties are unclear about what questions need to be answered, and what information to provide.

Our approach to resolving some of these concerns is to educate service providers about certain audiology-related topics in order that they may be empowered to ask of audiologists specific information or documentation they need to best serve their students. Additionally, having a solid understanding of various issues involving assistive listening devices (ALDs) is considered of great importance. Due to the constraints of space, we will highlight some of the major points from our presentation. More detailed information and relevant references can be obtained in other

publications, both of which are free and accessible on-line (Davis, Atcherson, & Johnson, 2007; Atcherson, Davis, & Johnson, 2007).

Overview of Anatomy and Physiology of Hearing

Basic understanding of the anatomy and physiology of the hearing is essential for understanding how hearing loss leads to various functional difficulties (below), which will then help us develop appropriate expectations of what hearing assistance technology can and cannot do for students. Minimally, the peripheral auditory system involves the pinna, ear canal, ear drum, middle ear space (and structures), cochlea, and the hearing nerve. The purpose of the pinna and ear canal are to naturally provide a boost of high frequency information, particularly those of speech sounds. The middle ear begins with the ear drum whose physical movement via the ossicles (three tiny bones) becomes pressure waves in the fluid-filled cochlea. Within the cochlea, the pressure waves vibrate resonating membranes that neurally activate the sensory hair cells within the cochlea. There are two different types of hair cells that have fundamentally important roles. Outer hair cells are motile, whereby they contract to help amplify soft sounds entering the auditory system. However, it is the inner hair cell that actually relays sound information to the brain. When sounds are sufficiently loud, the inner hair cells are automatically activated. However, the processing of sound does not stop here. Sound processing enters the central nervous system where it is processed by the brainstem and auditory cortex (bottom-up processing) and is mediated by higher-level factors such as attention, cognition, and previous experience with sound (top-down processing). Thus, the auditory brainstem and brain are highly influenced by maturation, the environment, and any alterations anywhere along the auditory pathway (from the hearing loss in the cochlea to brain injuries). Specifically, the auditory brain is “plastic” and any change in the brain can either be beneficial or harmful thus having important implications for people with hearing loss. A final important consideration about the auditory system is that it is a binaural system and it works optimally when there is a clear, unaltered signal in both ears!

Hearing Loss is More Than Just Loss of Audibility

Most people seem to appreciate that people with hearing loss need sound to be louder. If damage to the cochlea is restricted to the outer hair cells or if something is blocking sounds from reaching the cochlea, then most hearing aids are perfectly sufficient to restore loudness. However, hearing is much more complex than we realize which can lead to a number of other functional difficulties. When the inner hair cells are damaged, in addition to outer hair cell damage, hearing difficulties are compounded. When inner hair cells are damaged, the neural signals to the hearing nerve and to the brain become progressively distorted as the severity of hearing loss gets worse. Specifically, people with inner hair cell damage experience a loss of clarity (or crispness) of speech sounds. Behaviorally, they may complain that sounds are muffled. They may miss subtle differences between similar words, they may not hear consonants, they may be unable to separate speech from background noise, they may be unable to tell where a sound is coming, and so forth. These difficulties are often related to poorer frequency discrimination, poorer temporal (time) discrimination, and the loss of any binaural advantages (i.e., input to both ears). The most obvious benefits to hearing with both ears is 1) two ears produces a perceptual “doubling” of loudness compared to one ear, 2) the brain relies on input from both ears to localize sounds, and 3) hearing in noise is much better with two ears due to spatial separation cues (since the speaker and background noise are often in different locations). Secondary to hearing loss caused by a damaged auditory system are the issues of increased likelihood of listening fatigue, possible tinnitus (ringing in the ears), and balance issues (another inner ear structure). These secondary issues may also need to be taken into account when planning recommendations for students with hearing loss.

Understanding the Audiogram (and its Limitations)

Terms such as sensorineural hearing loss, conductive hearing loss, and mild and profound hearing losses are often familiar to service providers who work with students with hearing loss. Less familiar to service providers are how to adequately interpret an audiogram and how to use associated information such as speech recognition thresholds (SRT), word recognition (WR) scores, tympanometry, and acoustic reflexes (AR). Information that could be gleaned only from an audiogram is explained here in this section, but other tests and their results will be discussed in section —Familiarization with Audiology Services”.

The audiogram is a graph used to plot the softest level of sounds across a range of pitches (Figure 1). The stimuli used are typically pure tones or modulating tones produced by an audiometer. From the top of the graph to the bottom, intensity levels (loudness) increase from about -10 dB HL to about 110 dB HL. From the left of the graph to the right, frequencies (or pitch) increases from 125 Hz to 8000 Hz, more or less representative of the range of sounds associated with speech. For adults, normal hearing is defined as any threshold that is 25 dB HL or softer at all tested frequencies on the audiogram. Young adults with normal hearing are expected have on average a threshold of 0 dB HL across frequencies. When thresholds exceed 25 dB HL (i.e., indication of hearing loss), it is common practice to take the air-conduction pure tone average (PTA) of the thresholds at 500, 1000, and 2000 Hz to determine the degree (or severity) of hearing loss. The ranges for different degrees of hearing loss are as follows: Mild for PTAs between 26 and 40 dB HL; moderate between 41 and 55 dB HL; moderately-severe between 56 and 70 dB HL; severe between 71 and 90 dB HL; and profound 91 dB HL and greater. Additionally, it is also helpful to note the shape (or configuration) of the thresholds for more telling information. In particular, you might see that hearing is better in the lower frequencies compared to the higher frequencies (a common configuration of hearing loss).

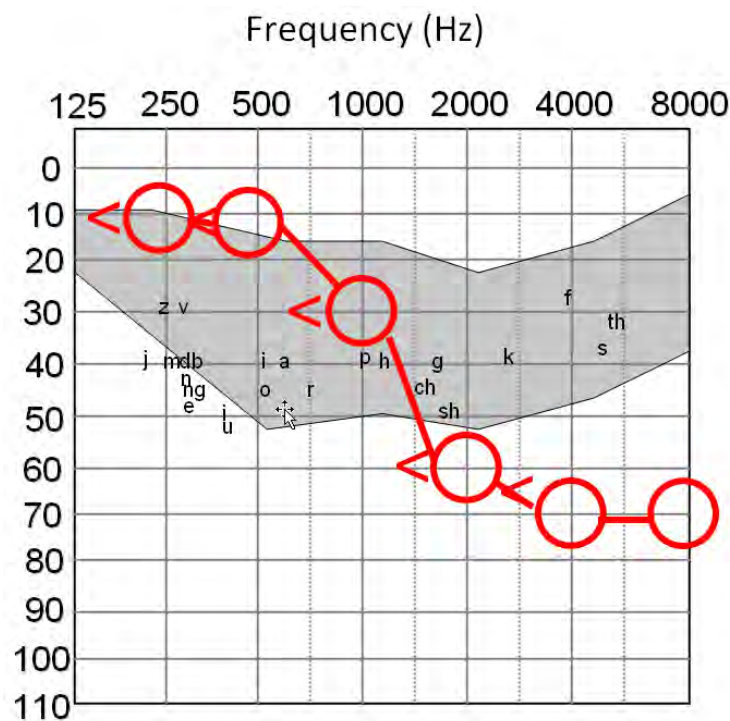


Figure 1. Threshold audiogram with speech sounds (shaded area showing average conversational speech range)

Right and left ear air-conduction thresholds are plotted as “O” and “X”, respectively. Air-conduction testing occurs through the use of headphones or earphones. Right and left bone-conduction thresholds are plotted using “<” and “>” or “+” and “-”, respectively. Bone-conduction testing occurs through a bone vibrator placed on the skull behind the ear, and the vibration bypasses the ear canal and middle ear and directly stimulates the cochlea. In cases where there are large air-conduction threshold differences between ears, you will see the “+” and “-” symbols used to denote that a masking noise was put into the “better ear” while testing the “poorer ear”. Based on this information, a sensorineural hearing loss (SNHL) is determined when both air- and bone-conduction thresholds overlap each other on the audiogram; a conductive hearing loss (CHL) is when air-conduction thresholds are greater than 25 dB HL at any frequency while the corresponding bone-conduction threshold is at least 10 dB better (called an air-bone gap) and within the normal range; and finally, a mixed hearing loss is one when both a SNHL and CHL occurs, the thresholds of which both are greater than 25 dB HL. The configuration of thresholds for a right ear, high-frequency SNHL is shown in Figure 1.

When interpreting the results of an audiogram, it is often helpful to visualize what parts of speech or everyday sounds are too soft or inaudible (see Figure 1 for example). When using audiograms, the reader should be aware of at least three things: 1) speech sounds actually vary quite widely in intensity and have energy at more than just the one frequency depicted; 2) audiograms do not indicate which hearing functions are likely to be affected; and 3) audiograms should be used only as one aspect in the interpretation of what a student with hearing loss may need. It is at this juncture that we alert the reader that there is more to be gathered than just the audiogram alone!

Hearing Instruments: Not Just Hearing Aids

Analog and Digital Hearing Aids

There has been a boom of hearing instrument technology in just the last decade. Not only are we dealing with hearing aids and cochlear implants, but there are also lesser known technologies that remain on the market for specific types of hearing loss. One of the biggest changes in hearing instrument technology has been the shift from analog hearing aids with turn-screws for changing the gain and tone to highly sophisticated digital hearing aids that are programmed by computer with various “listening” programs that are mathematically manipulated by the hearing aid’s internal computer chip. Some of the features worth mentioning in digital hearing aids include directional microphones, noise reduction, and feedback management. Directional microphones involve the use of two microphones (one in the front and the other in the back) and anything that is “common” between the two is cancelled out (though never entirely). Anything that is not “common” is amplified. This may be especially helpful when listening to an instructor at the front of a room in a noisy classroom. Noise reduction is a strategy of the hearing aid to reduce background noise (which tends to be lower in frequency) while amplifying speech sounds (particularly higher frequency sounds). Although research does not show an improvement in speech understanding with noise reduction, it does improve listening comfort. Finally, feedback management involves suppressing any “squealing” or “hearing aid feedback” coming from the hearing aid. In the past, when a hearing aid was squealing, we would turn the volume control down. However, this reduces the audibility of sounds and makes it more difficult to understand. With digital feedback management, the hearing aid suppresses the feedback on its own while minimally adjusting the volume. Another big change is that older hearing aids (analog or digitally-programmable analog) had manual switches (Off, Microphone, or Telephone) and now we may see hearing aids with buttons to change between listening programs, including the use of a telephone. Despite all of these innovative developments, no hearing aid is perfect because of some technological constraints, and because the digitally-amplified and manipulated signal still has to travel through a damaged cochlea (recalls outer and inner hair cells).

Frequency Transposition and Bone-Conduction Hearing Aids

Two less common, but beneficial hearing aids worth discussing are frequency transposition hearing aids and bone-conduction hearing aids. Frequency transposition hearing aids were designed for people with residual low frequency hearing and unaidable mid to high frequency hearing (due to dead hair cell regions). These hearing losses tend to be called “rapidly-sloping” or “precipitous” due to their steep audiogram configurations. Functionally, these people may be unable to detect high frequency sounds even with regular hearing aids (see Figure 2A). A frequency transposition hearing aid not only amplifies sounds, but it also “transposes” high frequency sounds to a lower frequency region where the better hearing is. The result is that any high frequency sound that is transposed will have the quality that it is lower in frequency, but is now detected! One participant used a terrific analogy by saying, “Robin’s chirp now sounds like Raven’s caw”). Although the transposed sound will be, in some cases, unnatural, wearers of this technology remark at how they can now hear high frequency speech sounds and birds chirping; however, research does not currently indicate that it provides significant speech understanding improvement. Bone-conduction hearing aids, as the name suggests, are for people who have chronic, medically-unresolved conductive hearing losses. Either of these two lesser-known hearing aids can be used with assistive listening devices as would be expected for most other hearing aids.

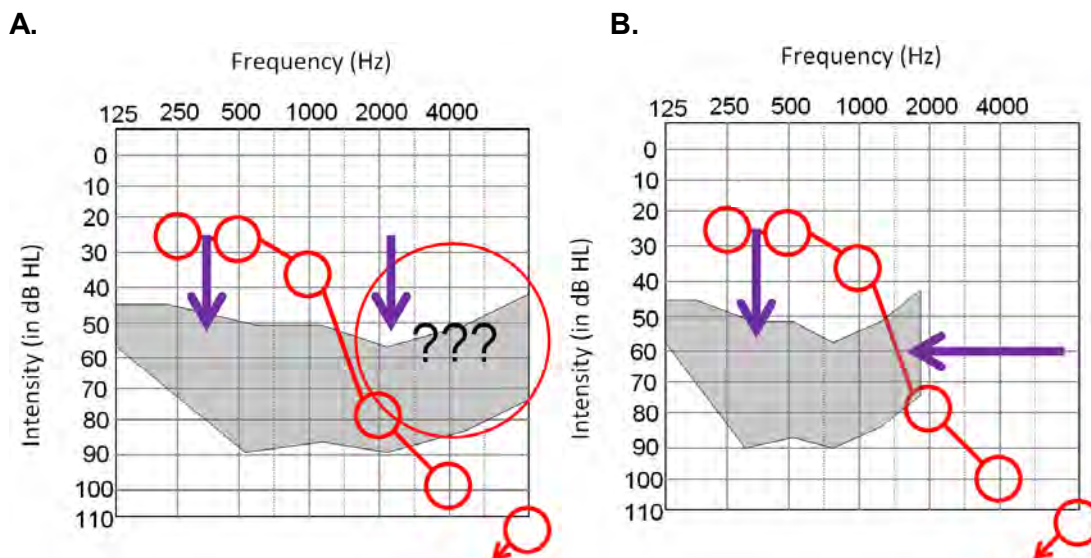


Figure 2. A. Precipitous hearing loss showing the amplified (arrows) conversational speech range (compare to Figure 1). Notice that high frequency sounds are completely missed even when speech is amplified. B. The conversational speech range is not only amplified (arrow), but also transposed (arrows) where the person’s residual hearing is.

Implantable Hearing Devices

Cochlear implants have clearly penetrated mainstream culture and it has been said that there are over 100,000 people worldwide with this amazing technology. Fundamentally, cochlear implants are used when people with hearing loss have little to no residual hearing remaining, and both speech understanding and/or environmental awareness is not satisfied with even the most powerful hearing aids. In contrast to hearing aids, cochlear implants do not amplify sounds, but rather provide direct electrical stimulation to the hearing nerve. Although cochlear implants have the ability to improve thresholds for many users, the functional outcomes between users varies significantly, which are due to history of hearing loss, age at onset, prior hearing aid use, prior communication abilities, and status of entire auditory system, to name a few. Therefore, we should avoid the assumption that all cochlear implant users will have the same benefit. While cochlear

implants have been around for several decades, there are some recent trends that have been developing that are worth discussing. More and more we are seeing people with two cochlear implants and several research studies have shown benefit of two over one. Hybrid cochlear implants—part cochlear implant for high frequencies and part hearing aid for low frequencies—are also being studied. Finally, there seems to be some benefit for cochlear implant users who take a bimodal approach by continuing to use their hearing aid in their non-implant ear. The bimodal approach may not be acceptable if the extent of the damage in the non-implant ear is so severe that there is simply too much distortion.

Sound and Setting

The above information helps to clarify how the hearing mechanism functions with or without technology, but it does not explain human behavior. There is a great deal of variability in how individuals respond to hearing loss. They may be able to communicate well in some situations but experience a great deal of difficulty in others. Lacking other information, service providers may hold a number of misconceptions or beliefs: (1) the label “hard of hearing” indicates the individual does not have a serious impairment, (2) people who can hear well enough to make a phone call would not qualify for an accommodation, (3) a classroom accommodation would not be necessary if one is not needed in the intake or application interview, (4) clear speech indicates that the person does not have a severe hearing loss, (5) people who speechread do not need additional assistance, and 6) hearing aids provide satisfactory access. Let’s look more closely at some of the other factors involved in successful communication.

First, what type of communication is taking place? Does it involve an informal conversation with a known individual, group participation, or lecture? In an intake interview, for example, the counselor is usually using his or her best listening skills and maintaining eye contact. This gives the listener full access to the speaker’s face. Facial expressions and body language greatly facilitate understanding. In a lecture in school or a training or meeting at work, there is usually much less give and take in the conversation. There is limited eye contact and minimal opportunity for response or feedback; it is less likely to occur in an optimal listening environment; and at the same time, the listener is held completely responsible for the information presented.

A major listening challenge for individuals with hearing loss, though, is group discussion. It is important to appraise the variety of information a person with normal hearing picks up auditorially to understand why this is a challenge. In a large group of people, we are able to locate the direction a sound is coming from, whether the speaker is male or female, and identify whether the speaker is a child or adult. We might even recognize the voice so we know who we are looking for. These differentiations will be blurred for the individual with a hearing loss. With normal hearing, we also glean other information that may help us socially. The person may have an accent that we could comment on, may speak passionately about the topic, or may come across as insecure or even condescending. We also hear grammatical information and cues about when to interrupt or ask a question. Without these cues we can easily make a social misstep which others might misattribute as rude or socially inept behavior.

With few exceptions, there is little argument that in academic, employment, and social settings, hearing and understanding speech is vital to our functioning. So how much speech does one need to hear in order to have access to the entire message or to succeed? Hearing 75 or 80% sounds like a lot...but is it enough?

As an example, hearing loss in the higher frequencies is the most common type of loss. In looking at a mapping of common speech sounds by frequency or pitch and decibel (dB) or loudness, it can be seen that even a mild high frequency loss means the individual loses the sounds s, f, t, h, p, k, th,

sh, ch. These are extremely common sounds and provide pluralization and tense information. When these key sounds are missing, the message becomes ambiguous.

In looking at a mapping of common speech sounds by frequency or intensity and decibel (dB) or loudness, it can be seen that even a mild high frequency loss can mean the individual loses the sound

The above sentence is the second sentence in the previous paragraph. Only the high frequency sounds listed above have been removed. Even though the reader is reading and not listening, it is easy to see that the individual is not missing a word here or there, but missing sounds in many words. Not counting the list of sounds at the end, 74% of the letters of the original sentence could be heard, but only 37% of the words are left intact. Being able to hear 75% of a message may seem adequate, but functionally it is devastating, especially in a classroom environment.

The final piece to understanding the bigger picture of the challenge of hearing is the issue of background noise. Both hearing aids and cochlear implants use a microphone to collect sound, and neither discriminates perfectly between speech and background noise. In research conducted by Blair (1990), students with normal hearing understood clearly as long as the speech was 6 dB louder than the background noise. Students with hearing loss, though, required speech to be 15-25 dB louder than the background noise. This concept is known as the signal-to-noise ratio.

In addition to a strong signal-to-noise ratio, two other properties of sound impact the listener's ability to receive sound—distance and reverberation. Distance from the sound source also has a dramatic impact on the ability to hear. Consider that the average speech is about 65dB at 3 feet. At about 4 feet (for example, the first row in a classroom), the intensity drops to about 53dB, and at 16 feet (about the fourth row), the intensity is only 41dB. With or without a hearing aid, it would be beneficial to sit closer to the sound source.

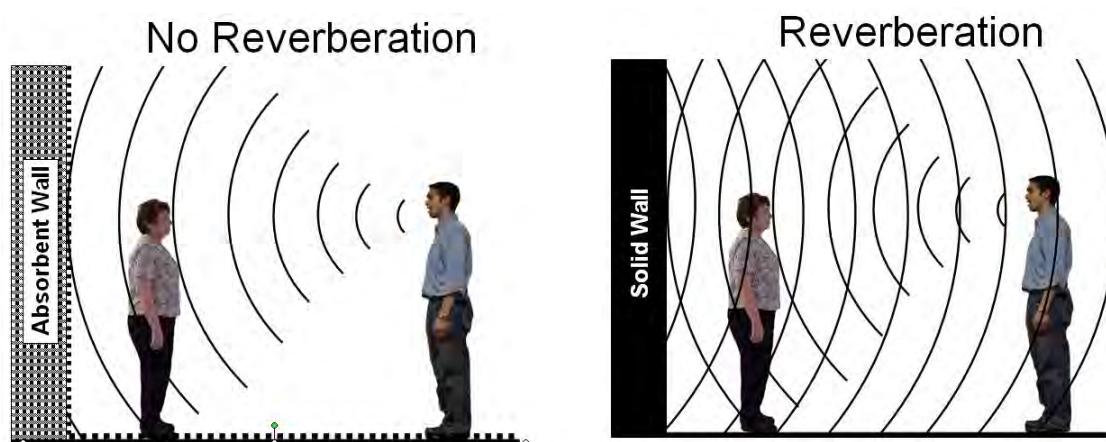


Figure 3. Visual representation of reverberation.

Reverberation is the third characteristic of sound that hearing aids and cochlear implants cannot overcome. Reverberation is the time required for the intensity of a sound to drop 60 dB once it has stopped being produced. The longer the time, the more of an echo, and the muddier sound becomes (see Figure 3). Assistive listening technology can help overcome these problems.

Assistive Listening Devices

Assistive listening devices (ALDs) consist of a microphone, a transmitter and receiver system, and a coupling device, such as headphones. The speaker talks into the microphone. The microphone is

attached to a transmitter, which sends the signal across a limited distance to the user's receiver. The only sounds being transmitted are those coming through the microphone. The user's receiver picks up the signal and sends it to the coupling device, such as headphones. There is a volume control on the receiver, so that the user can turn it up or down as needed.

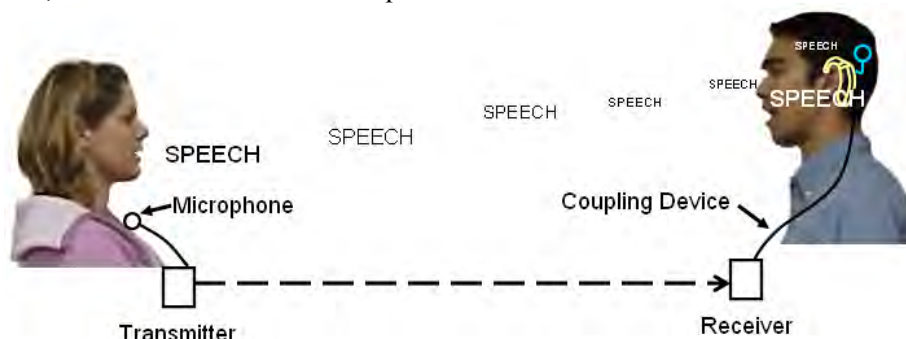


Figure 4. Assistive listening devices transmit sound without losing intensity.

The beauty of ALDs is that they improve the signal-to-noise ratio and eliminate or minimize the effects of distance and reverberation (see Figures 4 and 5).

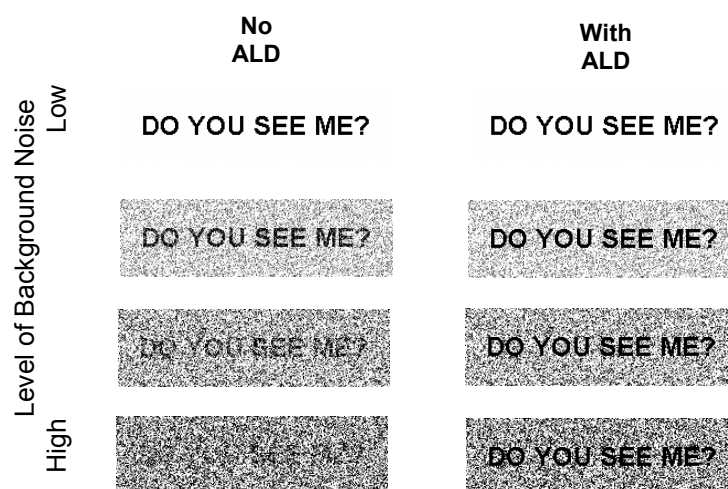


Figure 5. Visual representation of the impact of background noise with and without ALDs.

There are three major transmission systems related to ALDs: FM, infrared, and induction. The personal FM transmitter is about the size of a pager, and has an on-off switch and a jack for a microphone. The instructor plugs in the microphone and clips it close to his or her mouth, turns the transmitter on, and begins speaking. The FM receiver looks very similar and, like other receivers, includes an on-off, volume control, and a jack for headphones or another coupling device. The user wears the receiver to intercept the signals and plugs in headphones or another coupling device to relay the sound from the receiver to the ear (see Figure 6). FM uses radio waves to transmit the signal across the distance, like tuning into a radio station.



Figure 6. Comtek AT-216 Personal FM System.

Infrared (IR) systems use infrared light to transmit the signals, similar to remote controls for televisions. IR transmitters must be plugged into a power source. Most of them collect sound from an existing public announcement system, although there are home versions that are used with television sets.



Figure 7. Directear 810 Infrared TV System with stethoscope type receiver.

The electromagnetic induction loop is the only system that is properly referred to as a “loop.” The system consists of a loop of wire that is powered by an amplifier and a microphone (see Figure 8). The amplifier must be plugged into a power source. The wire loop transmits electromagnetic waves that carry the signal. An area as small as a table or as large as a room can be looped.



Figure 8. Oval Window Microloop.

If the consumer's hearing aid has a built-in telecoil, no external receiver is needed. The user would enter the looped area and change his or her hearing aid setting to telecoil mode to pick up sound signals. Unfortunately, hearing aids sold in America are not always fitted with telecoils, and only recently have they been built in to cochlear implants. In order for those without hearing aids (or those without telecoils) to use the system, an induction receiver must be used. These receivers, actually a telecoil in a box, look like the FM receivers described above and headphones can be plugged into them to transmit the sound to the ear.



Figure 9. Oval Window (left) and Univox (right) induction listening systems. Coupling Devices

Headphones and earbuds are the most commonly used devices to transmit sound from the receiver to the ear. If the individual does not have hearing aids or if the hearing aids do not have telecoils, the user is limited to acoustic methods such as headphones or earbuds. Some users remove their hearing aids to use headphones. This may be because of comfort or because of a problem with feedback (squealing) when covering the hearing aid microphone. This means the consumer loses the benefit of his or her hearing instrument.

If the hearing aids have telecoils, there are two other listening options (see Figure 10) that use induction. One is the neckloop (on the right): A neckloop is a loop of wire that plugs into the receiver in the headphone jack and is worn around the neck. The neckloop gives off a signal (a magnetic field) that is picked up by the telecoil. The neckloop can even be worn under clothing, depending on the strength of telecoil, the thickness of the neckloops, and the severity of the hearing loss. As with the induction loop system, using the neckloop requires that the hearing aid be set to the telecoil mode.

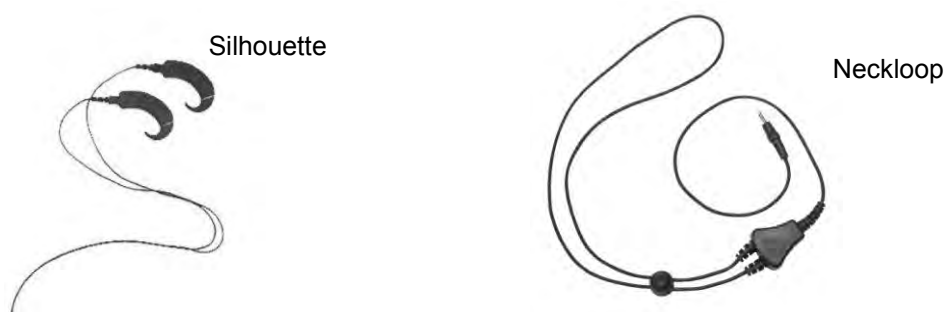


Figure 10. Silhouette and neckloop coupling devices.

Silhouettes look like flattened, behind-the-ear (BTE) hearing aids and they hook behind the ear just like a BTE hearing aid. They will work with either BTE or in-the-ear hearing aids that are fitted with telecoils. Because they are closer to the hearing aid than a neckloop, they provide a stronger signal for more severe losses. Using the telecoil further reduces room noise because the hearing aid microphone can be turned off when the hearing aid telecoil is activated. Now the only sound being

picked up is what is coming across the system's microphone. With the hearing aid microphone off, it cannot receive room noise or anything that is not said into the ALD microphone.

Direct audio input (DAI) is an option on some models of behind-the-ear (BTE) hearing aids that allows an external audio source to be plugged directly into the aid (see Figure 11) via a patch cord. It is also how external microphones and assistive listening devices are coupled to both behind-the-ear cochlear implants and older models with body worn processors.

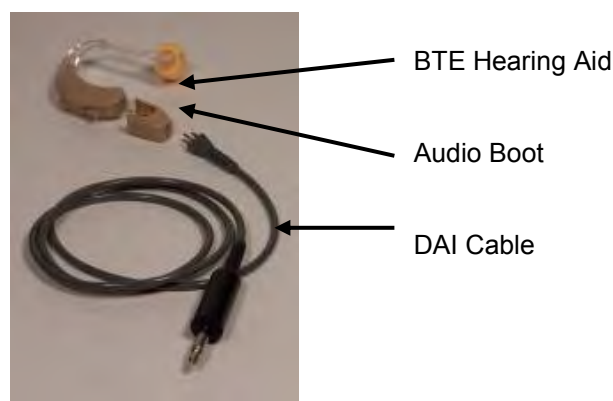


Figure 11. Direct Audio Input components.

This brief overview cannot include all of the options available. New options, such as Bluetooth compatible neckloops, have become available since this workshop was presented. For more detailed information, see the full publication *Demystifying Hearing Assistance Technology*.

Familiarization with Audiology Services

Audiologists are state-licensed professionals (most states require licensure) with Masters- or doctoral-level degrees. The scope of audiology practice is broad, which, in addition to testing all aspects of hearing and fitting hearing devices, also includes balance function assessment, counseling, tinnitus and hyperacusis testing and therapy, and intra-operative monitoring alongside surgeons. For the purposes of this discussion, we will focus on audiology services common to students in post-secondary settings.

Comprehensive Hearing Evaluation

The typical comprehensive hearing evaluation involves the taking of a case history, otoscopic inspection, pure tone threshold testing, speech recognition threshold testing, and word recognition testing. As needed, audiologists may conduct tympanometry, acoustic reflex testing, otoacoustic emission testing, or evoked potential testing. It is important that we understand that the tests that make up an audiologist's test battery should be driven by complaints, inconsistencies, and any potential "red flags". Audiologists, as well as third party payers, are discouraged from using a test battery approach that includes the same tests on every patient. Table 1 shows a description for each procedure or test included in a hearing evaluation.

Once the comprehensive hearing evaluation is completed, the audiologist will often summarize the case history, interpret the results of the evaluation, and make formal recommendations based on the reported hearing complaints. The recommendations may include, for example:

- A referral to see a physician for any medically suspicious findings for the cause of hearing loss, or any sudden, unexpected changes in hearing loss (possible follow-up hearing evaluation may be required)

- A return visit to talk about new or updated hearing devices (both of which may require multiple visits for selection, fitting, and fine-tuning adjustments)
- A referral to see another specialist for related issues (speech-language therapy, psychological adjustment counseling, balance function assessment, etc)
- Educationally- or vocationally-appropriate suggestions or resources to assist the student

Table 1.

Procedure or Test	Description
case history	Detailed report of hearing complaints, past and current medical history, and familial history of hearing loss.
otoscopic inspection	Visual inspection of the outer ear and behind outer ear, and otoscopic inspection in the ear canal and ear drum.
pure tone threshold	Air- and bone-conduction testing seeking the softest sound that can be detected across a broad frequency range. Pure tone average (PTA) can be calculated from air-conduction results at 500, 1000, and 2000 Hz. The PTA should closely match the SRT. The lower the PTA, the better the hearing.
speech recognition threshold (SRT)	Bisyllable words are presented seeking the softest level at which words can still be understood. The SRT should closely match the PTA. The lower the SRT, the better the hearing.
word recognition (WR)	A fixed list of monosyllable words presented and the WR score is the total number correct in percent. The higher the WR score, the better the hearing.*
tympanometry	Assesses the function/health of the ear drum and middle ear through sound pressure. Helps to confirm conduction hearing losses. No behavioral response required from the patient.
acoustic reflexes	Assesses the function/health of the hearing nerve, lower brainstem, facial nerve, and the Stapedius muscle in the middle ear. Helps to rule out neurologic lesions. No behavioral response is required.
otoacoustic emissions (OAEs)	Assesses the function/health of the outer hair cells in the cochlea. Outer hair cells should naturally amplify sound sounds. Lack of OAEs suggests outer hair cell damage at least a moderate hearing loss or conductive hearing loss. No behavioral response is required.
evoked potentials	Assesses the neural function/health of the cochlea, hearing nerve, and most auditory brainstem structures non-invasively using electrodes placed on the skin. Helps to rule out auditory neuropathy/dys-synchrony and tumors on the hearing nerve or brainstem, or helps to confirm severer hearing losses. No behavioral response is required.

* It is not appropriate to subtract the WR score from 100% to estimate the amount of hearing loss (e.g., If the WR score is 74%, is not appropriate to say that one has a 26% hearing loss.)

Some Audiology Service Caveats

Most audiologists are involved in the practice of providing comprehensive hearing evaluations and providing hearing aid services, but they may not be routinely involved in the distribution of assistive technology, particularly assistive listening devices. There seems to be an assumption on the part of both audiologists and their patients that assistive technology may not be needed above and beyond a set of hearing aids, a loud television, or a loud telephone. While some assistive technology can be cumbersome and cost-prohibitive, the reality is that people with hearing loss are often unaware of such technology. For that reason alone, it is imperative that audiologists discuss these additional and often beneficial technologies. In keeping with this important role, audiologists also need to anticipate the circumstances in their patient's educational, professional, or personal lives where hearing aids may simply not be enough. By not keeping assistive technology in mind, audiologists may fail to come up with creative solutions for attaching hearing aids to amplified stethoscopes, listening headsets offered at movie theaters or shows, or even personal music devices (CD and digital mp3 players).

Documentation Issues

It is common for audiologists to provide updated hearing evaluation reports that only include the results of most necessary tests, such as a otoscopy, air-conduction pure tone threshold check, and speech recognition threshold check. The reason for this is that some audiologists have had the luxury of working with the same patients over several years. When patients do not report any significant changes, fewer tests may be conducted than might otherwise be considered for a new patient. Echoing an earlier statement, we must be specific about what we need from the audiologist.

When the audiologist does not (or is not able to) provide some thoughts about functional impact of hearing loss with and/or without hearing technologies, there are some practical and informal ways to assess this using available scales of communication function. These include the Client Oriented Scale of Improvement (COSI; Dillion, James, & Ginis, 1997), and the Hearing Handicap Inventory for Adults (HHIA; Newman, Weinstein, Jacobson, & Hug, 1991).

The previous sections have hinted at the need for a greater level of understanding of the functional impact of hearing loss caused by various anatomical and/or physiologic pathologies of the auditory system, strengths and limitations of the audiogram (the graph only), the various benefits and caveats of hearing technology, considerations involved in assistive listening technology, and the role of audiologists. Simply put, this is a lot of information one has to have a good grasp of. Rather than burdening any one professional with the collective task of figuring out what a single student with hearing loss needs, perhaps we need to open the lines of communication by being more specific about what we need from each other. With appropriate signed release for information for example, if we ask for an "audiogram" from an audiologist to document hearing loss, it is possible that the audiologist may send or fax a single piece of paper that contains the name of the student, the name of the audiologist who conducted the test, the date of testing, and all the results of the comprehensive hearing evaluation with a bunch of symbols, letters, and numbers. Unfortunately, the service provider working with the student will then have to decipher the information from that one piece of paper in order to formulate some goals and needs. Rather than taking this approach, service providers could be more specific about what they need. We suggest that service providers ask not only for the results of the comprehensive hearing evaluation, but to also request a brief case summary, a lay interpretation of the hearing evaluation, some conclusions about the functional impact of hearing loss, and make formal recommendations. Even more important is the need for the audiologist to make some judgments about any technologies the student is currently using. This will help to determine if new or updated hearing technologies are necessary, and it will help determine if current or future technologies are compatible with a service provider's existing resources.

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REHABILITATION ISSUES

From 0 to 99: Creating Services for Individuals with Hearing Loss Around a Core Program at the Community Level

Heidi Adams

Abstract

Outreach to individuals who are hard of hearing can be a real challenge! The opening of a hearing clinic in our community based rehabilitation agency created an opportunity to develop a framework of services to attract and serve these individuals. This session described how this process unfolded at the Center for Sight & Hearing, a community rehabilitation program in Rockford, Illinois, which serves individuals with hearing loss and vision loss. Stumbling blocks, funding, surprises, and lessons learned were discussed in this interactive session.



Outreach to individuals who are hard of hearing can be a real challenge! In 2006 the Center for Sight & Hearing met that challenge when we opened a hearing clinic in our community based rehabilitation agency. This is an account of our dreaming, planning, and the stumbling blocks we encountered during that process.

The Center for Sight & Hearing is a community based rehabilitation program, or CRP. CRPs provide direct services (e.g. assessment, training, counseling, placement, case management) to consumers with disabilities. They may serve individuals with a variety of disabilities, or specialize in one area such as vision or hearing loss. The Center for Sight & Hearing is a PEPNet-Midwest Outreach Site. PEPNet, the Postsecondary Education Program Network, is a national consortium that provides resources, information, in-service training, and expertise to enhance educational opportunities for individuals who are deaf or hard of hearing and their families through four regional centers.

Let's begin with a brief history of the Center. In 1956 the Winnebago County Assoc- Lions' sale of bouquets of roses, an annual event that continues to this day. The facility contained a bowling alley and Olympic-sized swimming pool. Eventually members of the Deaf community began to frequent the center and programs and services were expanded to meet their needs. A Low Vision Clinic opened in 1970 due to the initiative of a retired ophthalmologist who volunteered his services to make it a reality. In 1985 the name was changed to the Center for Sight & Hearing Impaired; the word "Impaired" was dropped from the name in 1998. After a rehabilitation counselor was hired in 1991, further evolution brought new programs in employment, and independent living skills.

Through her resourcefulness, an assistive technology demonstration and sales center called Simple Solutions was created. With all of these changes, the original facility no longer met the needs of customers or staff, so in 2003 a new “house that roses built” was completed. The new facility included an area designated for a hearing clinic and a soundproof evaluation booth.

Today the Center for Sight & Hearing, a 501(c) 3 not-for-profit agency, provides comprehensive services for individuals with hearing loss, vision loss, or both. Our mission is “To help individuals with a vision and /or hearing loss live independently.” We strive to provide one-stop shopping, including provision of assistive technology, training in its use, and follow up services. In late 2004, our existing services included a well-established low vision clinic, strong relationships with the health care community, and a basic referral, scheduling, and billing process. We had strong ties to the Deaf community, including the Deaf Senior Citizens. We were providing employment services, and sign language and speechreading instruction. Communication Services included on-site interpreter services while C-print captioning and remote services were in development. In the new facility, Simple Solutions, our assistive technology resource center, occupied a larger space and served individuals seen in the low vision clinic as well as those with hearing loss referred by professionals in the community.

Our vision for the future included providing comprehensive hearing services to our community, thus fulfilling the promise made by our name. We envisioned a hearing clinic and support services that were affordable for everyone, including Medicaid and Medicare recipients. To do that we needed testing equipment, an audiologist, and funding for start-up costs. In 2005 we submitted a grant request to the Lions Clubs International Foundation for \$75,000. The number of natural disasters throughout the world during that period had a negative impact on funding, but we received \$54,750 for testing equipment and hearing aids. Moreover, the grant was contingent on our receipt of matching funds from Lions District 1-D, monies that we used for part of the audiologist’s salary. We were ready to go! Our next step was to form a Hearing Clinic Committee composed of staff members, consumers, stakeholders, and audiological consultants to assist with planning and provide feedback. Consistent with the Center’s efforts to improve our business practices, we developed a business plan, making it easier to secure funding and business partnerships. We opened the clinic doors in August, 2006, with the audiologist scheduled 1½ days a week.

Before the year was out, the audiologist was scheduled four days a week. We expected to primarily serve adults receiving Medicaid and Medicare. However, today we are serving both adults and children and expect the number of children to continue to increase. In FY 2006-2007 we provided:

- 189 audiological exams
- 236 hearing aid evaluations
- 85 hearing aids for first time users
- 47 hearing aids for experienced users
- 202 hearing aid checks
- 7 persons had cerumen (wax) removed from their ear canals.

We are drawing customers from far outside our local service area because of our affordability and follow up services. Our audiologist also does consulting work for third-party payers.

By all accounts, this new program with its supporting services was very successful. It has not been perfectly smooth sailing, however. There were several things that we should have done:

- We should have thought “bigger.” Although we knew the need for affordable services was great, we were surprised by the number of people who came to our doors.
- We should have planned from the outset to serve children. Children and adolescents are the

fastest growing sector of our customers, and that trend is expected to continue. In fiscal year 2006-2007, services for children increased from 1% to 18%.

- We should have had a more sophisticated and better organized system for referrals, scheduling, and billing. Software to help us manage those tasks is in the planning stages now.
- We should have been aware of the intricacies in seeking public funding. Remember that name change from Center for Sight & Hearing *Impaired* to Center for Sight & Hearing? Unfortunately, the change had never been registered with the state or the IRS. Issues with the state were resolved very quickly, but it took the IRS seven months to complete the process. After finally getting Medicaid approval, we realized that the audiologist needed to change his code from that of his previous workplace. In the meantime, Medicaid ran out of money!
- We should have been more aware of the length of time between service provision and reimbursement. We received our first checks just prior to this presentation.
- We should have paid better attention to the design of the clinic space: there were no phone lines or network connections in the hearing clinic area.

There were also some things that we should not have done:

- We should not have limited our audiologist to 1½ hours a week. Within a year he was working 4 days a week.
- We planned to limit our services to adults and, as noted earlier, children are the fastest growing demographic for our hearing services. The equipment we chose was geared for adults and does not allow us to test very young infants.

What principles can we draw from this experience that we can apply in general to the process of developing new services in an already established program? The most important concept is thoughtful planning, a process very similar to the one that businesses use to place themselves strategically in a competitive market. The first step is to look critically at your strengths, weaknesses, opportunities available, and the threats, or barriers that you will have to contend with. This is often called SWOT.

In the case of the Center for Sight & Hearing, our strengths included our well-established presence in the community; our positive working relationships with professionals, further strengthened by their involvement in our planning process; our role as a Selection Center for free telecommunications equipment; our assistive technology retail store; and our strong support from the Lions' Clubs. On the other hand, as we embarked on this project, we had a minimal amount of "up front" money, a rudimentary referral, scheduling, and billing system, limited experience working with Medicare and Medicaid, a very basic web site, and very few AT items for people to try.

Opportunities abounded for us. There was a huge need for affordable hearing services, a market not met with current services. Our new audiologist had strong ties with local agencies that were delighted to be working with him. Our staff was knowledgeable about hearing loss and the issues that surrounded it. A hearing clinic would complement our existing services. One threat, or perhaps challenge is a more appropriate description, was the concern of local audiologists, who felt threatened by the prospect of an agency offering "affordable" services. A key part of our plan was to sell assistive technology for hearing loss, but there was another AT retail operation with an excellent web site in our service area. Although, we planned to focus on individuals covered by Medicaid and Medicare, we hoped to attract individuals who would self-pay as well to help offset some of our costs. We had not marketed our services to that sector.

As you scan the landscape to complete your SWOT analysis, do so with a critical eye: be very honest. Seek input from your staff members, board members, customers, and stakeholders in the community. A major oversight at this level may create problems later on.

Funding. How do you find it? How much do you need? Where do you find it? Assume that you are going to have to scramble to find adequate funding; there is no pot of gold at the end of the rainbow. Look for grants. Seek out partnerships or collaborative arrangements. One thing that is extremely important is that business plan. More and more funding sources are requiring that not for profits function like businesses. Develop a budget that is adequate for the costs you anticipate, and then add more. A significant number of businesses fail because they are underfunded at the beginning. You need a cushion for situations like delays in reimbursement and unforeseen equipment and software needs.

So, how do you get started when you have little or no experience with business practices? There are a number of excellent resources out there. Your local college or community college is a great place to start. Look for special programs for not for profits where you can improve your grant writing, strategic planning, marketing or public relations skills. Small Business Administration programs can help you develop a business plan and budget. Many community colleges have programs for people who are retired where you can learn from seniors who have “been there.” They are also great sources for finding volunteers. SCORE, the Service Corps of Retired Executives, is another excellent resource as are Chambers of Commerce.

Professional organizations such as the American Academy of Audiologists can help you identify consultants to help with a wide variety of things from identifying equipment to helping you network with local practitioners. Equipment vendors are often willing to collaborate to make your programs successful. Don’t forget PEPNet, where resources include a handbook on how to use the Commission on Accreditation of Rehabilitation Facilities (CARF) certification standards to strengthen the quality and accessibility of your program. They also offer online classes for staff development.

Opening our hearing clinic has allowed us to fulfill our promise of comprehensive vision and hearing services. It was not always easy, but the lessons we learned will serve us well in future planning. Good luck as you grow your own array of services. Please contact me at heidi.adams@pepnet.org if you have any questions.

Community Rehabilitation Practitioner (CRP) Online Training

April Pierson

Abstract

PEPNet-Midwest and the University of Wisconsin-Stout Vocational Rehabilitation Institute collaborated to create two online courses with the goal of increasing vocational rehabilitation professionals' abilities to provide services to individuals who are D/deaf or hard of hearing. The first course "Working with Individuals who are Deaf or Hard of Hearing" includes units on Deaf Culture and Language, Working with Sign Language Interpreters, and Assistive Listening Devices. "Vocational Services for Individuals who are Deaf or Hard of Hearing" is a more advanced course focused toward rehabilitation professionals. Units include Employment Services, Psychometric Testing, and Vocational Evaluation. Participant feedback has been overwhelmingly positive and the courses will continue to be offered at least biannually.



PEPNet-Midwest and the University of Wisconsin-Stout Vocational Rehabilitation Institute collaborated to create two online courses with the goal of increasing vocational rehabilitation professionals' abilities to provide services to individuals who are deaf or hard of hearing. The first course "Working with Individuals who are Deaf or Hard of Hearing" is introductory and focuses on communication and culture aspects. "Vocational Services for Individuals who are Deaf or Hard of Hearing" is a more advanced course recommended for participants who have some background in psychometric testing. Each course consists of three units which are based on content presented in videos by subject matter experts.

Working with Individuals who are Deaf or Hard of Hearing

The three units in this course include Deaf Culture and Language, Working with Sign Language Interpreters, and Assistive Listening Devices.

Deaf Culture and Language is presented in ASL by Doug Bahl, who is an Interpreter Training Instructor at St. Paul College. Specific topics include salient characteristics of Deaf culture, individual differences among people who are Deaf, and the various communication methods -ASL, contact sign, English, the Rochester Method, Total Communication, Manually Coded English, and Cued Speech.

Working with Sign Language Interpreters is presented by Diane Currie Richardson, who has been working with individuals who are deaf or hard of hearing for the past 35 years as a teacher,

interpreter, interpreter trainer, social worker, and an occupational communication specialist. Topics discussed include terminology, why interpreters are needed, the interpreter's code of conduct, why good signers are not a replacement for an interpreter, how to hire an interpreter, and tips on working with an interpreter.

Assistive Listening Devices is presented by Cheryl Davis, who is the Director of the Regional Resource Center on Deafness at Western Oregon University. Dr. Davis discusses the impact of hearing loss on access to oral/aural communication, hearing aids and cochlear implants, transmitter and receiver systems (personal amplifiers, FM, induction, infrared), listening options (headphones, neck loops, etc.), and ALD peripherals.

Vocational Services for Individuals who are Deaf or Hard of Hearing

This course includes three units focused on providing vocational rehabilitation or assessment services to individuals who are d/Deaf or hard of hearing: Employment Services, Psychometric Testing, and Vocational Evaluation.

Employment Services is presented in ASL by Elise Knopf, the director of PEPNet-Midwest. Previously, she served as program coordinator for the Minnesota Employment Center for people who are deaf and hard of hearing in St. Paul. Specific topics include job seeking skills, employment training, vocational placement, occupational communication specialists, supported employment, accessibility, and common acronyms/vocabulary.

Psychometric Testing is presented by Kathleen Deery, who is an Associate Professor in the Department of Rehabilitation and Counseling at the University of Wisconsin-Stout. Dr. Deery received her master's degree from Gallaudet University, conducted research at a NIDRR funded Research and Training Center on Traditionally Underserved Persons who are Deaf, performed psychological and neuropsychological assessments of individuals with disabilities, and served as a state vocational rehabilitation counselor specializing in services to people who are deaf and deaf-blind. Topics include testing basics; pre-test preparation (with participant and interpreter); concerns during the testing process, including use of interpreters; tests commonly used with people who are Deaf or hard of hearing; and what occurs after testing is completed.

Vocational Evaluation is presented by Michelle Hamilton, who is an Associate Professor and the Graduate Program Director of the Department of Rehabilitation and Counseling at the University of Wisconsin-Stout. Dr. Hamilton is also the Vocational Evaluation and Career Assessment Professionals (VECAP) standards coordinator and representative to the Commission on Certification of Work Adjustment and Vocational Assessment Professionals (CCWAVES). Topics in this presentation include background on vocational evaluation, lab-based vs. situational vs. community assessments for people who are Deaf or hard of hearing, interest assessment, and specific tips for evaluating this population.

Who Should Take the Courses?

The courses are primarily aimed toward vocational rehabilitation professionals, but individuals from many other fields may be interested, particularly in the first course "Working with Individuals who are Deaf or Hard of Hearing." There have been many interpreters who took the first course and have found it beneficial. Assistive/rehabilitation technologists would particularly benefit from the course since a focus is on assistive listening devices. Medical professionals such as occupational and physical therapists as well as nurses would benefit from additional knowledge on Deaf culture and nearly anyone who works with individuals who use interpreters would benefit from the specific unit on that topic. In addition, regular and special educators and university disability services advisors would find the course content relevant.

The course "Vocational Services for Individuals who are Deaf or Hard of Hearing" is most applicable to vocational rehabilitation practitioners such as public and private rehabilitation counselors and vocational evaluators. This course could also be helpful for interpreters, particularly those employed in rehabilitation agencies. Parent-advocates may find it beneficial to learn about the range of services available to their children who are deaf or hard of hearing. Activities in the courses can be tailored to individual situations to result in relevancy for learners from different backgrounds.

What is Involved?

The courses are offered entirely online through the Desire to Learn (D2L) course management system. Each unit consists of a pre-test; an introduction; the content, which is presented in video format; a post-test; and activities. Many of the activities involve researching different topics and reporting on them or applying material learned in the content to their job or a case study. Responses to assignments are often posted on a discussion board, which allows participants to read and respond to each others' messages. This interaction is actually a requirement of the course to allow participants to learn from each other.

All activities and content are "asynchronous" so participants can work on the course whenever it is convenient for them, as long as they complete by the due dates. The first unit is due two weeks after the course starts with one unit due weekly after that. Having due dates helps keep participants on track since time management can be a problem with online learning. Some flexibility is allowed when necessary. Each course is offered over a five-week period of time. They have typically been offered sequentially with a week in between, each spring and fall. The courses will likely continue to be offered biannually until registration starts to decrease.

The courses are professional development and offered for continuing education units (CEUs). They are pre-approved for Certified Rehabilitation Counselors (CRC) and RID/NAD certificants can receive pre-approval for them through PINRA. Each course takes participants approximately 10 hours to complete. Participants receive 10 clock hours CEU. Two of the 10 hours are pre-approved for CRC ethics credits.

What Kind of Support is Available?

These courses feature a course facilitator who facilitates the process of learning online. The role of the facilitator is to monitor this process and intervene as necessary to provide encouragement, clarity, or redirection. Currently Heidi Adams from PEPNet-Midwest is our primary facilitator.

In addition to the facilitator, participants will get to know the training coordinator at UWStout, April Pierson. The training coordinator is the first person of contact and ensures that participants are able to access the course adequately. The facilitator is the primary contact person during the course, but the training coordinator monitors the course, adds comments and feedback occasionally, and incorporates feedback from each offering of the course to improve it for the next time.

Feedback

Feedback on the courses has been very positive. Following are comments from participants who have taken these courses:

Participant 1: This was a great course. When I signed up for it, I was wondering if I should be... because I work with the Deaf and Hard of Hearing every day and have for many

years. I was hoping I would learn some new things and wow did I ever! I really enjoyed all of the sections.

Participant 2: I so empathize with everyone who expressed a concern about an 'on-line' course. I am technologically challenged, but found it fairly easy to navigate.

Participant 3: This has been an interesting and workable method of learning, and the discussion comments changed the online option to a more social one. Yes, very good information and presented in a nice variety. I'd definitely recommend it, and already have three other interpreters who are interested in the course.

Participant 4: Coming into the course I thought I had a fairly good understanding of working with individuals who are Deaf or hard of hearing. I must say, I really did learn a lot. I enjoyed the video presentations.

Participant 5: I enjoyed this course very much. I learned a lot of information that I believe will assist me in more effectively serving my customers who are Deaf and/or Hard of Hearing. I feel much more organized in information that I can present as available options.

Participant 6: I have absolutely enjoyed this course. I found the information and activities very beneficial. I would recommend this class to anyone who works with Deaf/HOH at any capacity. I found the PowerPoint very useful and the transcripts as reinforcement for each lesson. I would be very interested in any other courses available through this medium.

Model State Plan for Vocational Rehabilitation Services to Persons who are Deaf, Deaf-Blind, Hard of Hearing, or Late Deafened

Douglas Watson, Tammy Adams, Terrye Fish, Rubin Latz, & Steve Boone

Abstract

Since the early 70's, the field of deafness rehabilitation has benefited from a series of five editions of a "Model State Plan for Services to Persons who are Deaf or Hard of Hearing." These documents have laid the foundation for quality service delivery across the United States by presenting guidelines on how to initiate and provide services to deaf and hard of hearing persons. Unfortunately, the last Model State Plan was developed over ten years ago. Since that time, there have been many changes in the nation's rehabilitation services legislation, models of service delivery, and the needs of persons who are deaf or hard of hearing. In light of these changes, there is urgent need to develop a new Model State Plan Document to Guide Rehabilitation Services for Persons with Hearing Loss (MSP). This need has been endorsed by the Council of State Administrators of Vocational Rehabilitation (CSAVR) Subcommittee on Deafness as a key goal, leading to a fifth edition of the MSP which will be available for dissemination in 2008.



Douglas Watson: Welcome to our panel program. We will be talking about the new Model State Plan (MSP) for improving services for people who are deaf, deaf-blind, hard of hearing or late deafened. We have a panel of five of the 14 co-authors who will talk about ways you can use the guidelines presented by this new publication that just came out April 1, 2008.

This is not an April fool's joke! It is the real thing! We will talk about how you can get a free copy of the publication. You can download a free copy or purchase a print copy at a nominal cost from Lulu at <http://www.lulu.com/content/2289052>.

I am Douglas Watson from the University of Arkansas Rehabilitation Research & Training Center for Persons who are Deaf or Hard of Hearing. I have served as director of the Center since 1982.

We have a team of people who will talk about the MSP. Steve Boone is also with the University of Arkansas. We have three other panelists who serve as State Coordinators for Vocational Rehabilitation (VR) Services for Deaf and Hard of Hearing People in their states. These include Tammy Adams, SCD from Alabama, Terrye Fish, SCD from North Carolina, and Rubin Latz, SCD from Minnesota. We are representing a team of 14 professionals who helped develop and write the publication we are talking about.

Our agenda today is not to simply read a document that you can read for yourself. It is to share with you the significance of the document and how you can apply it to your home state, particularly in working with the state VR agency and postsecondary educational programs in your home state. This book has a lot of relevance for collaborative planning and implementation of training and higher education in the states.

We want to present an overview of ways and means that higher education and state VR agencies can utilize the guidelines presented by the MSP to collaboratively conduct strategic planning and program development for students who are deaf or hard of hearing. We need each other as partners in order to better plan and provide the best career education and training possible.

After receiving my doctorate in 1972, I was fortunate that my first job was at the New York University (NYU) Deafness Center. The first three editions of the Model State Plan were published by our team at NYU in 1973, 1978, and 1980. The University of Arkansas later did an update of the MSP in 1990. This 2008 edition by the University of Arkansas represents the fifth edition of the MSP publication.

Take a moment to reflect back on some major changes that took place in the United States during 1973. Those of you in the fields of deaf education and rehabilitation know that year is when the Rehabilitation Act of 1973 was adopted by this country. This milestone legislation had a profound impact on the nature and direction of deafness rehabilitation in the United States. New York University, in collaboration with key Deaf community and state vocational rehabilitation leaders of that time, worked with the Council of State Administrators of Vocational Rehabilitation (CSAVR) to create the first Model State Plan (Schein, 1973). The MSP presented a set of recommended guidelines for ways and means that state VR programs might improve their ability to effectively serve persons who were deaf or hard of hearing. The MSP didn't issue mandates, but instead encourages and recommends ways of achieving the goal of better serving people who are deaf.

Two more revisions followed in 1978 and 1980. Then, the enactment of the Americans with Disabilities Act (ADA) in 1990 further changed the way we did business.

Additional developments over the years have led to calls for updates and revisions to the Model State Plan. The 2008 edition of the MSP is the most recent effort to update the guidelines and keep them current to the issues and needs of 2008.

In addition, the University of Arkansas also sponsored two editions of a parallel set of MSP guidelines for serving the deaf-blind population. Over the years, after starting in 1973 with the focus on serving “Deaf consumers,” the MSP has added hard of hearing, deaf-blind, and now late deafened consumers to the core target population. We encourage state VR agencies to recognize and address the specific needs of all four of these groups.

For the 2008 edition of the MSP, our goal was to revise and update the publication to include contemporary issues and challenges. Our target audience is broadly defined as all persons who have significant hearing loss. It is addressed to any program that is providing direct services to people who are deaf or hard of hearing.

The MSP does not go into great depth regarding related education and mental health issues. That is not our focus. Instead, the document focuses on talking to state VR agencies and their partners. State VR agencies, in turn, are responsible for articulating their agency goals to partner programs within the state.

The writing teams represented people from several states [on overhead]. It is a mixed group of university personnel and representatives from key state VR programs and tasks forces within the national VR community.

The 2008 edition of the MSP was released April 1. Next week, the MSP team will present the revised edition at a national conference of all state VR directors. We will release this report at the CSAVR spring conference to officially present this report to the federal/state VR program.

I would like to ask Dr. Boone to come up and we will begin the overview of the 2008 MSP.

Steve Boone: This is the second Model State Plan program I have helped with. It is an exciting document to work on because of the leadership of people involved in it. The list of co-authors took the lead on developing each chapter and, as needed, requested information and support from other knowledgeable professionals. This writing process is parallel to the one that was previously used.

The current MSP has nine chapters. We will go briefly overview these chapters in today's presentation. The document starts with a number of guiding principles that were used to guide the development of the MSP.

Today I was asked to describe the information that is included in the initial chapter that focuses on the demography of hearing loss. The initial section presents an overview of the population of people with hearing loss. This population includes with persons with diverse needs who use different communication styles and preferences. They vary in terms of additional problems they have in getting rehabilitation services. Demography of the population is based upon three key facts.

- More than one in every ten Americans has a hearing loss (30.6 million among 300 million).
- About 18 million of these persons are of working age (16 to 64 years old).
- About 414,300 are in postsecondary education.

The second section of this chapter talks about VR's response to serving these persons. Vocational Rehabilitation identifies seven different groups of people with hearing loss.

- 03 Deafness, Primary Communication Visual
- 04 Deafness, Primary Communication Auditory
- 05 Hearing Loss, Primary Communication Visual
- 06 Hearing Loss, Primary Communication Auditory
- 07 Other Hearing Impairments (Tinnitus, Meniere's Disease, Hyperacusis, etc)
- 08 Deaf-Blind
- 09 Communicative Impairments (expressive/receptive)

The goal of VR is to help people get employment. If you look at all persons served and cases served in 2006, there were around 600,000 cases closed. Of those people, there were 38,000 with hearing loss. This is the largest category of people served in the U.S. Those numbers would go up if we coded them with a secondary disability and some type of hearing loss.

The success of VR meeting employment goals for those served is evident. Over 63 percent of those with hearing loss achieved a successful employment outcome, as compared to 31.4 percent of persons with all other impairments.

Since we are at a postsecondary conference, I thought it would be helpful to talk about the number of students that have some sort of hearing loss. These are based on 2004 numbers and may be an underestimate. There are almost 400,000—and we think nearly 500,000—people are in educational

settings with all kinds of hearing loss.

The final section of this chapter describes future population issues that may impact people who are served by VR as well as those that end up postsecondary settings as a function of getting served through VR. The last census was around 300 million people. Approximately one in every 10 people has a slight hearing loss. This is also probably an underestimate.

As the US population ages, the number of persons with hearing loss will increase. At this point in time, the Baby Boom generation is getting older. As you begin to age, you experience some hearing loss. You may have experienced that yourself. So the number of people with hearing loss is going up at this time. That means people who end up VR's case load will likely be a slightly older population, statistically. There will also be more people who consider themselves late deafened.

We also know persons from racial-ethnic minority groups have increased by about one-third in the US population. We can expect VR and postsecondary institutions to be serving more of these people.

Most recent estimates of deaf-blindness find that population is growing. This is especially evident if you consider those who are losing their vision or hearing because of aging. In 2007, it was said that roughly 250,000 people can be considered deaf-blind. I suspect that is, again, an underestimate. We will see more people with multiple problems.

There have been many workshops regarding needs of persons who are deaf and lower functioning or at risk. That population is also growing. Another group that you will see being served in larger numbers in VR in education will be people with more significant disabilities. Finally, another group that has a policy change in the way people walk into our agencies is related to early identification. We have laws that mandate children are screened at birth. Theoretically, they have some sort of treatment plan in place if they are detected with a hearing loss. Hopefully we will see kids get some form of communication intervention early on. That may be a function of getting amplification or some other medical intervention, such as a cochlear implant. It could include getting sign language stimulation or being placed in an oral program. We hope they have better communication than they have at this time because of early identification.

Tammy Adams: When talking about the vocational rehabilitation process, it is important to know that there are 80 VR agencies in the country. Some states have a general VR program and a blind VR program, while other states have a combined agency program. Alabama has a combined agency, and North Carolina is an example of a state with both a general VR program and a blind program. Some states have order of selection, but other states are not in order of selection. Because of the law, there are things we all have to do the same way; however, there are a lot of variations in how states provide VR services.

The VR process is a process by which the counselor, through a series of decisions and actions, moves the consumer toward a successful employment outcome. The counselor is the person who ultimately is responsible for the direction of the program.

The definition of eligibility is an applicant must have a physical or mental impairment that is a substantial impediment to employment, requires VR services to become employed, and can benefit from these VR services in terms of an employment outcome. No matter where you are or what state you are in, employment is the goal of VR.

The individualized plan for employment (IPE) is mandated for each consumer. Services are

outlined in each IPE. It is individualized and based on that consumer's needs. The consumer and counselor are to agree on employment outcome. VR is about employment. In some cases, postsecondary training may be necessary to achieve the employment goal. We often have to remind consumers and counselors that postsecondary training is not the goal, but a means to the ultimate goal of employment.

That has to be outlined in the IPE. That process is very important to communicate with the counselor and the consumer. You, as postsecondary representative in the process, need to understand what the IPE says, and what the consumer and counselor have agreed upon.

This chapter also addresses how to understand how diverse our consumers are. Their needs, communication preferences, and backgrounds are discussed. We try to identify and understand their needs and their functional issues. It outlines the services VR can provide to address the barriers to employment.

Vocational rehabilitation agencies provide core services and support services. Core services include things like counseling and guidance; assistive technology such as hearing aids; and job placement and follow up. Support services may include interpreter services, tutoring, and tuition. How these services are provided is different in each state. I would love to stand before you and say that all VR programs follow the same procedures, but I can't.

It's difficult to explain in a few minutes this whole chapter on the VR process. It's so detailed and so different for each agency. If you get this document and read it, it will give you a strong framework of what VR is and what the process is supposed to be for all agencies.

Moving on, Chapter 3 addresses personnel development standards. This chapter outlines recommendations to VR agencies and administration as to what staff we believe each state agency should have to provide strong leadership and quality services for D/HOH, late deafened, and deaf-blind in their state. We recommend each state start with an administrative position as coordinator for D/HOH services. Who has a SCD in their state? How many were unaware of an SCD in your state?

If you have a state coordinator for the deaf in your state and you have a strong relationship with them, they can be your best advocate. That is true in states where there is a strong relationship with VR and postsecondary institutions.

This chapter also outlines the knowledge, skills and abilities for VR personnel serving this population. It describes what their skills are and how you can work better with them.

Terrye Fish: I will talk about Chapter 4: Transition Services. That is a passion for me.

Providing transition services involves working with high school students who are deaf, deaf-blind, or hard of hearing. This is secondary education. We have two laws: the Individuals with Disabilities Education Act (IDEA), and the 1990 Amendments of the Rehabilitation Act which emphasizes collaboration and working together to serve students in high school with a disability.

Because of these laws, we recognize several keys to success—one is to make sure that parents and teachers are knowledgeable about adult services, and that they understand that secondary education is an entitlement program; most adult program have eligibility guidelines. This is very different for parents and teachers. Because of these two laws, we do joint planning. The ITP is the Individualized Transition Plan. The IEP is the Individualized Education Plan. The IPE is the

Individualized Plan for Employment.

So you may want to know the different plans so you are not duplicating services. When we work as a team, the student receives great services and tends to be more successful. It is good to have parents involved when you have transition team meetings. The team meetings should include all personnel working with the student at school and in the community. It is important to stress the importance of having both the student and the parent at the table.

This is a definition of transition services. [on overhead].

In the first paragraph, it talks about employment. That is why VR is at the table. Vocational rehabilitation makes sure to provide services for students while they are in high school, if it is related to employment. Everything VR does must be related to employment. I will repeat that. Tammy talked about this earlier because so many people associate VR only with postsecondary training.

Our goal is employment. We get calls about VR paying for training. Is it related to a goal? Is it something you need to go to work? If you are employed and it is professional development, VR may not be able to sponsor the training.

Next are the student's preferences and interests, and what they need to reach a vocational goal. This is outlined on the IPE.

Audience Member: Kids in high school often don't know their goals for the future. When they get to college, they know more. How do you deal with that?

Terrye Fish: In IPE, the first letter stands for "individualized." The plan can be amended if the student changes his/her mind. We serve a lot of students who attend college. Most students enter college with one major in mind, then the student may or may not change his/her mind. Then students call their counselors and tell them they have changed their mind. We amend the individualized plan for employment. It is important to note that the postsecondary training must be related to the vocational goal on the IPE.

We understand students will change their minds. It is normal. The key thing is communication. The consumer needs to communicate with their counselor, letting them know that they have changed their mind and why. The counselor then makes sure the change meets their skill level.

Some things postsecondary institutions can do to foster collaboration with the high schools may be information sessions about VR services, in-service training with the high schools teachers, and transition fairs.

It would be good if colleges could go to the high schools with a high population of students with hearing loss so they can talk about their services and how to get ready for transitioning to college. It would also be helpful to have information meetings with parents and teachers.

Yesterday, we talked about how itinerant teachers who work with students with hearing loss need training. In the summer, it would be great to have in-service trainings for teachers who work with students who are deaf and hard of hearing to educate them on financial aid (that form is unbelievable!). So training with the teachers can help the students.

In North Carolina, we have students attending public schools and taking college courses while in

high school. If the postsecondary staff could be involved in the IEP meetings, they could assist the teachers and parents to help the students with the transition from high school to college.

One of the goals for being present on the high school campus will help students recognize the value of postsecondary education and lifelong learning. When they see people, especially deaf people (if you can bring deaf people to the high school) who have graduated from your institution and have them talk about their experiences, it will make a big difference.

This is just a short summary of Transition Services. Now I will go into Chapter 5 which talks about communication access. This section is powerful in that under the law; it states that VR must provide communication access in the person's preferred mode of communication.

When a consumer contacts VR, the counselor has to quickly determine what the preferred mode of communication is by asking the consumer. When the consumer goes for a psychological evaluation, to on-the-job training, or to orientation, VR has to provide that mode of communication. It could be an American Sign Language interpreter, a computer-assisted notetaker, or an assistive listening device. For example, if a deaf student wants sign language interpreting, then the interpreter is hired by VR. When the consumer has an interview, VR provides an interpreter.

If VR contracts with a provider outside of their agency, it is important to make sure they can provide the appropriate mode of communication for that consumer. Some states operate differently than others. Rubin will give you examples of how we do things differently from state to state when he talks about the Memorandum of Agreements.

We have a lot of service providers that we work with in North Carolina. We provide them with a list of interpreters, cued speech transliterators, and captionists.. We don't share the rates with them because service providers can negotiate a different rate with other private companies.

The last chapter I will summarize is Chapter 6 which talks about technology and accommodation. This section provides a list of assistive technology and accommodations for people who have hearing loss. It gives you a whole list of different kinds of accommodations that are available.

One thing to remember is "One size doesn't fit all!" In the college system, it's easy to get used to providing interpreting services so some people think those services should be provided for every student that comes through the door. I get phone calls from different colleges who have hard of hearing students who don't know sign language. I encourage them to ask the student what accommodation is most appropriate. This chapter also provides information about other possibilities or options.

Technology is a wonderful thing. If you are trying to decide on the best technology for a consumer, VR has resources. Most states have assistive technology programs at no cost for the consultation. Vocational rehabilitation may also have rehabilitation engineers who can assess the situation and make recommendations or provide ideas; the college or university or company would have to pay to have the equipment installed.

I am now going to turn it over to Rubin. We will have time for questions at the end.

Rubin Latz: We have a lot of ground to cover still. My assignment is to talk about Chapter 7 and Chapter 9. I need to introduce myself as "Mr. Compare and Contrast." Minnesota operates differently than Alabama and differently than North Carolina. I will touch on some things that have

already been talked about.

It is interesting timing. This discussion is about state rights, within a federal program. In Minnesota we operate on about 80% federal dollars and 20% state dollars. I'm reading a historical novel called *Scandal Monger* by William Safire. It is a fascinating story about the early presidents, and about federalism, states' rights, and federal government rights.

Minnesota Vocational Rehabilitation spending is heavy on education and light on medical restoration. Minnesota VR wouldn't touch providing interpreting services at a medical appointment. We have another agency that does that. We spend approximately \$3.5 million each year on postsecondary training. Postsecondary is the "meat" of what I will talk to you about in Chapter 7. We are similar to Oklahoma in that we as an agency leave financial responsibility for auxiliary aids and services for effective communication with the postsecondary institutions

Terrye mentioned the involvement of parents in planning. In Minnesota, we have transition services handled by a staff colleague who is a statewide transition specialist. I will get back to that if there is time!

When you get to the Model State Plan document, you will see there it is approximately 130 pages. You can come up and look at it later if you want. We will hang around for questions and answers.

The interagency agreements come in many shapes and forms. In Minnesota, we have Memoranda of Understanding (MOU). We have operating agreements with community rehabilitation providers that spell out expectations for access for things like communication, etc. The Commission on Accreditation of Rehabilitation Facilities (CARF) standards are applied in these agreements on behalf of consumers.

We have memoranda of understanding with the Department of Human Services. We have an MOU with the Minnesota Association of Financial Aid Administrators. We have all kinds of agreements that we operate with that serve different purposes.

I want to talk about survival because of the way we are funded. Many states have seen flat funding for VR. As populations [indistinguishable] and demand for services grow, federal funding has remained flat. Flat funding is an issue. In many states, we can't continue to operate without additional funding. If you are new to VR, the funding formula set by Congress is tied to population, size, and state income.

Minnesota has done well in terms of individual income. Various factors, including labor market changes, housing issues, etc., can impact funding. Order of selection was mentioned. We had about 6,000 people waiting for services at one point. That is no longer the case. But what you see in your state, the quality of services, and relationship with VR staff can be influenced by things we don't think of and things that are out of our control.

Survival and agreements go hand in hand. Without the agreements, we are out there doing our own thing. Sometimes offices and institutions don't talk to each other. So establishing connections and relationships, and revisiting your interagency agreements with institutions of higher education is critical to survival.

Financial and other items are out of our control, and that impacts how well we perform in collaboration. In an effort to enhance services, we like to think collaboration means we do better. How many of you have regular communication with a VR counselor in your state or the state

coordinator? Maybe some of you are not aware of the points of connection or who these people are. Ideally, we know each other. We know the services. On the item of services, Minnesota would not purchase and provide equipment to DSS staff. We may fund a person (a VR consumer) in your school or we may provide hearing aids and/or other assistive listening devices, but funding the equipment onsite instead of the school providing reasonable accommodations on campus is another thing.

I will touch on one of these—spelling out partners' roles, responsibilities, and functions. We will talk about the interagency agreement with postsecondary institutions. Minnesota's agreement is 8-9 pages long. The Rehabilitation Amendment of 1998 mandated this. In Minnesota, we are separate from blind services. We don't do deaf-blind. We have a separate agency with that responsibility, Minnesota State Services for the Blind (SSB).

We had a representative from the Minnesota State College and University System on our interagency agreement work group, along with the University of Minnesota, the private colleges, and State Services for the Blind. There are more than 30 technical and community colleges. We put the operation under one umbrella. It's different in other states.

Male Speaker: For example, California has 108 community colleges, 19 state universities, and 12 California state system colleges.

Rubin Latz: So the point is with the agreement, we know who does what. Dispute resolution is a big emphasis. Each agreement must have and identify the dispute resolution mechanism. So we have an identified mechanism to get together and talk about it when there is a dispute. There is collaboration. The point of protection is the important item for you, the VR agency, and the consumers we serve.

Another thing you are probably acquainted with is the Americans with Disabilities Act (ADA) and responsibilities for postsecondary institutions serving students who are deaf and hard of hearing.

Former RSA commissioner Fred Schroeder made a contribution to this document. How we came to the agreement and how it is supposed to work.

One final point about Minnesota's interagency agreement is that there are private colleges and universities who were not co-signers. They were part of the process, but they chose not to sign the document. It is a sore spot. We don't send as many students to private colleges. It is about money, planning, and keeping the agency alive. Yet we value postsecondary training. We spend about \$3 million each year on postsecondary education.

I need to jump ahead to Chapter 9. This is the closing chapter. This is where we talk about future directions. Where do we want to be and how do we get there? It is about taking a look at what we have, what we do, and how to do it better. The basis for Chapter 9 is that each state is responsible for reviewing and assessing what its services look like.

Four or five years ago, California Vocational Rehabilitation made an investment to do a large scale assessment VR services for people who are D/HOH. Minnesota Vocational Rehabilitation is now undertaking our effort. We look at geographic patterns and money spent, staffing, etc.

In Minnesota we have 18 rehabilitation counselors for the deaf. Of that group 6 are competent signers and 2 are deaf. Our assessment is to identify the weaknesses. We will make recommendations for improvement for the 2009 legislative session. Recommendations hopefully

will result in additional legislative funding.

Douglas Watson: This will be presented to the full membership of the national vocational rehabilitation meeting in Maryland. The executive committee for CSAVR has endorsed this plan. It will become approved next week.

I would like to emphasize here that state agencies will receive this publication and determine where they stand and what they want to do; people who advocate for individuals who are deaf and hard of hearing need to be aware that they are important players. Be aware that your state agencies will be thinking about what they will do with the revised Model State Plan and how each state will respond. How will they take on different chapters about what they will do?

Postsecondary education/training and representatives from all of these consumer groups need to be heard. The opportunity is here. States are not mandated to adopt this unless the public and the consumers say they want to see the state's response to this. What is your state plan and how does it apply to postsecondary education and training?

I will open the floor to questions. I invite you to comment or ask questions.

Male Speaker: I am deaf and as a consumer, I would say I am a grassroots consumer. I was on an advisory council for assistive technology. I was surprised at what I learned. They said there was an increase in the number of people that had autism. That was a surprise to me. I was surprised because I knew it related to people with a hearing loss but there was a rise with those with autism. I wonder how we in VR would face those types.

Rubin Latz: Thanks for the question. Minnesota doesn't have an autism specialist but we do have specialists for consumers who are deaf or hard of hearing, those with traumatic brain injury, and those with mental health issues. I and others do not have the expertise in autism. I know that transition is an emphasis with federal government. In Minnesota we focus around that in general.

Another emerging population we will see is returning combat veterans. In addition to orthopedic injuries, frequent blast injuries also causing hearing loss. It's estimated that over 60% of combat veterans are coming home with a hearing loss. We have a lot to do in VR, and you in postsecondary will have an increased workload. Our jobs will be different with that population and we need to prepare for that.

Terrye Fish: Doug, I want to respond to that question. In North Carolina, we have been serving people who have autism for many, many, many, many years. In Chapel Hill, we have a Division TEACCH (Treatment and Education of Autistic and related Communication-handicapped Children) at the University of North Carolina in Chapel Hill. They have a huge program for children and adults who have autism.

If a counselor for the deaf has somebody that has been diagnosed with autism, they collaborate with Division TEACCH. "TEACCH is an evidence-based service, training, and research program for individuals of all ages and skill levels with autism spectrum disorders. TEACCH provides clinical services such as diagnostic evaluations, parent training, and parent support groups, social play and recreation groups, individual counseling for higher-functioning clients, and supported employment" (Division TEACCH website, 2006). They also provide consultation to parents and professionals across the country. If you have somebody with autism, you can contact them. <http://www.teacch.com/> It's a wonderful resource.

Female Speaker: I'm from Hawaii, so aloha! I have two brief questions. I am fascinated with the interagency agreements. I don't know if we have any in Hawaii, but I wonder if we can get samples of existing interagency agreements that we can take a look at.

Douglas Watson: Yes, in the book there are samples.

Rubin Latz: You can also find a white paper on www.csavt.org that was done by our colleagues in Wisconsin Vocational Rehabilitation. There are some samples in that.

Female Speaker: I have another quick question. It is not related but somebody mentioned about fees for interpreters. In Hawaii we have published VR rates for interpreters. I wonder if that is standard or if it is a Hawaii thing that we publish their rates.


Terrye Fish: The rates are not set by the interpreters but they are set by the VR agency. We were told that we could only share within our agency and department but not outside state government. The interpreters are entitled to set their own rates when working with private companies.

In North Carolina, we are different from Minnesota in that the agreement specifically states that VR will help pay for interpreting services based on the interpreter's certification or license to the colleges and universities. The authorization for services is issued to the college or university and not to the interpreters. It is the college or university's responsibility to hire the interpreter, arrange the class schedule, and pay the interpreter. Vocational Rehabilitations will reimburse the college or university for some of the cost of interpreting services at the end of the semester or quarter.

Male Speaker: I have one last question. I am from California and my name is Rodney Nunn. I'm the acting program manager in California for Deaf/Hard of Hearing services. I want to thank all of you on this committee that have developed this and given it to us for free.

Douglas Watson: You are welcome; please do encourage others to contact www.Lulu.com to download a free copy.

Thank you. I'm sorry time expired. Go back home and advocate.



The Model State Plan for Improving VR Services to Persons with Hearing Loss


Douglas Watson - AR
Steven Boone - AR
Rubin Latz - MN
Tammy Adams - AL
Terrye Fish - NC

PEPNET National Conference
April, 2008
Columbus, OH

MODEL STATE PLAN: Legal Basis

Title I, Part A, Section 101(a)(1) of the Rehabilitation Act of 1973 states:

To be able to participate in programs under this title, a State shall submit to the Commissioner a State Plan for vocational rehabilitation services.



Model State Plan For VR Services to Deaf

CSAVR & NYU	1973, 1977, 1980
UA & D-B Task Force	1983
CSAVR & UA	1990
UA & D-B Task Force	1993

2006: CSAVR & UA

Goal:
To revise and update a published resource to address contemporary issues related to federal-state VR service provisions to individuals who are deaf, deaf-blind, hard of hearing or late deafened

Audience:
State VR administrators and direct service staff, community based rehabilitation program and related human service personnel, K-12 and postsecondary education personnel, and individuals with hearing loss and their families

MSP Team Members

CSAVR and University of Arkansas

Tammy Adams-AL	Glenn Anderson-AR
Timothy Beatty-CA	Steven Boone-AR
Patty Conway-KY	Angela Felner-TX
Terrye Fish-NC	Thomas Jennings-NJ
Susan Lascek-GA	Rubin Latz-MN
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Model State Plan for Vocational Rehabilitation Services to Persons who are Deaf, Deaf-Blind, Hard of Hearing, or Late Deafened
2008

Edited by:
Douglas Watson, Steven Boone, Angela Felner, Thomas Jennings, Linda Stauffer, and Terrye Fish

Today's Agenda

Overview the 2008 MSP and VR Issues for this population

Encourage collaboration with your state VR agency and other key players to assure that your state plan is:

- current and
- utilizes "best practices" in planning and delivery of postsecondary training and education for individuals with hearing loss

2008 Table of Contents

Preface	
Guiding Principles	
Acronyms	
Chapter 1:	People with Hearing Loss
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Chapter 7:	Partnerships and Interagency Agreements
Chapter 8:	Independent Living Skills
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References	

Chapter 1: People with Hearing Loss

- Overview of the size and distribution of the US population of persons with hearing loss
- Needs of six key population groups are described:
 - * Persons who are Deaf
 - * Persons who are Deaf-Blind
 - * Persons who are Hard of Hearing
 - * Persons with Adult Onset of Hearing Loss (Late-Deafened)
 - * Persons who are Members of Racial or Ethnic Minority Groups
 - * Persons who are Labeled as "Low Functioning or At-Risk"
- Statistics regarding successful federal-state VR outcomes for individuals with hearing loss from 1990 to 2008

Some Demography

- The Population
- Those served (and closed) by VR
- Those who need and benefit from Postsecondary Education & Training

The Population

- More than one in every ten Americans have a hearing loss. (30.6 million among 300 million)
- About 18 million of these persons are of working age (16 to 64 years old)
- About 414,300 are in postsecondary education or training programs

Seven Groups Served by VR

- 03 Deafness, Primary Communication Visual
- 04 Deafness, Primary Communication Auditory
- 05 Hearing Loss, Primary Communication Visual
- 06 Hearing Loss, Primary Communication Auditory
- 07 Other Hearing Impairments (Tinnitus, Meniere's Disease, Hyperacusis, etc)
- 08 Deaf-Blind
- 09 Communicative Impairments (expressive/receptive)

Those served by VR

FY 2006	All Other Impairments	All Hearing Loss
All Closures	579,145	38,004
Employment Outcome	181,703	24,088
Percent with Successful Outcome	31.4%	63.4%

FY 2006



Students with Hearing Loss, 2004

Age	Number
18-19	108,700
20-21	71,200
22-24	59,900
25-29	45,000
30-34	30,000
35+	99,500
Total	414,300

Emerging Population Issues

250,000 Deaf-Blind people in USA

New demographic studies report that, including individuals 55 and over who are experiencing age related vision and hearing loss, there are more than 250,000 people in the US who would be considered deaf-blind and eligible for HRVNC's services (May, 2007)

U.S. minority population tops 100 million

The number of people in the United States from ethnic or racial minorities has risen to more than 100 million, or around one third of the population, according to a U.S. Census Bureau report on msnbc (May 18, 2007)

Value Added to Household Income by Hearing Aids: \$23,000 - \$10,000

Untreated hearing loss shown to negatively affect household income, on average, by nearly \$23,000 per year depending on the degree of hearing loss. But the use of hearing aids mitigated the effects of hearing loss on income by about \$5,000. Loss, 2,000 with hearing aids, and nearly 40,000 with normal hearing. (Better Hearing Institute press release, 540, 668, 7065)

Chapter 2: The Vocational Rehabilitation Process

Definition:

A process by which the Counselor and consumer, through a series of decisions and actions moves the consumer toward a successful employment outcome.

Eligibility:

An applicant must have a physical or mental impairment that is a substantial impediment to employment, requires VR services to become employed and can benefit from these VR services in terms of an employment outcome.

Chapter 2: The Vocational Rehabilitation Process

Topics addressed:

Referral development activities
Assessment for determining eligibility & service needs
Individual Plan for Employment (IPE)
Interagency collaboration to facilitate access to a broad range of services that help lead to successful employment outcomes
Placement, closure and follow-up
Post-employment services
Administrative policy issues

Individualized Plan for Employment

- Consistent for each state VR program is the requirement to develop an IPE for each consumer served.
- Services provided are to be outlined in the IPE and are to be based on the diverse needs of the individual with the goal of employment.

Postsecondary Training

If the consumer and the counselor agree that the employment goal requires postsecondary training then it will be included as a service in the IPE.

The goal of postsecondary training is not to get the consumer to graduate but rather to achieve the employment goal outlined in the IPE.

VR Consumers who are Deaf or Hard of Hearing are diverse in their needs, such as their communication preferences, cultural differences, and functional issues.

Each state VR agency varies in their policies on the way they support and address consumers who are Deaf or Hard of Hearing in a postsecondary institution.

SERVICES AUTHORIZED

- Interpreter services
- Tutoring
- Tuition
- Books
- Fees
- Technology
- Transportation
- Housing

Chapter 3: Personnel Development and Standards

Personnel Need Special Knowledge, Skills and Abilities

- Appropriate Professional Discipline
- Communication Competency
- Training and Experience in serving individuals with hearing loss

State VR agency should provide systematic in-service training to upgrade or maintain KSA of personnel working with consumers who have a hearing loss

PERSONNEL

- Structure of Vocational Rehabilitation agencies varies from state to state
- MSP recommends to each state have an administrative position responsible for coordination of deaf and hard of hearing services (SCD)

Resources for Postsecondary

SCD

- Provide Information on state VR structure
 - Information on VR personnel
 - Collaborative efforts on behalf of consumers
 - Training opportunities for staff

RCDs:

- Responsible for Rehabilitation Process

Chapter 4: Transition Services

IDEA and 1998 Amendments of Rehab Act of 1973: encourage joint development of an Individualized Education Program (IEP) and an Individualized Plan for Employment (IPE) prior to the student exiting high school

Keys to Success

- Education of parents & teachers about adult services
- Joint planning of ITP, IEP, and IPE
- Parental involvement
- Inclusion of other service providers in planning & conduct
- Team meetings with students & parents involved

Transition services

A coordinated set of activities

- designed within an outcome-oriented process that promotes movement from school to post-school activities, including post secondary education, vocational training, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation.
- The coordinated set of services shall be based upon the individual student's needs, taking into account the student's preferences and interests, and shall include instruction, community experiences, the development of employment and other post school adult living objectives, and when appropriate, acquisition of daily living skills and functional evaluation.

Promote Students' Self-Determination and Self-Advocacy

- Provide opportunities for decision-making and encourage students to express their preferences and make informed choices throughout college life.
- Support students' development and use of self-advocacy skills, and teach students to develop an internal locus of control.

Ensure Access to Postsecondary Education

- Use universal design to make classrooms, curricula, and assessments more accessible for students with disabilities.
- Use instructional approaches shown to promote positive outcomes for students who are deaf, deaf-blind, hard of hearing, and late-deafened.
- Actively participate on the Transition Team.

Promote the value of preparation for and participation in postsecondary education

- Collaborate with secondary schools to provide informational sessions and in-service training to secondary school staff, students, parents, and community agency personnel.
- Provide informational meetings and on-campus experiences for parents, students with disabilities, community-based agencies, and high school staff to inform them of the programs, services, and expectations.

Promote the value of preparation for and participation in postsecondary education

- Participate in the development of the IEP when high school students with disabilities are attending the college as part of their high school program.
- Provide input and information to the IEP committee for those students who are exploring going to college.
- Assist in locating financial aid resources for eligible students.

Promote the value of preparation for and participation in postsecondary education

- Encourage all parties involved to recognize the value of postsecondary education and lifelong learning in securing, maintaining, and advancing in employment.
- Collaborate with secondary schools to provide informational sessions and in-service training to secondary school staff, students, parents, and community agency personnel.
- Provide informational meetings and on-campus experiences for parents, students with disabilities, community-based agencies, and high school staff to inform them of the programs, services, and expectations.
- Participate in the development of the IEP when high school students with disabilities are attending the college as part of their high school program.

Promote the value of preparation for and participation in postsecondary education

- Provide input and information to the IEP committee for those students who are exploring going to college.
- Assist in locating financial aid resources for eligible students.
- Encourage all parties involved to recognize the value of postsecondary education and lifelong learning in securing, maintaining, and advancing in employment.

Promote collaborative employer's partnerships with classroom instruction

- Obtain information from the Department of Labor and/or Employment Office about companies moving into the community and their training needs.
- Encourage employers to present in the classroom and participate in career fairs.
- Collaborate with vocational rehabilitation to establish on the job training sites in the community.

Improve collaboration and systems linkages at all levels

- Work to reduce the confusion and frustration experience by parents and families by coordinating services and streamlining access to information and programs.
- Work with community organizations serving culturally and racially diverse populations to assure that programs and services meet the needs of all students, parents, and families.
- Participate in career fairs, job fairs, transitions fairs, etc to provide information to students who are deaf, deaf-blind, hard of hearing, and late-deafened and their families.

Improve collaboration and systems linkages at all levels

- Promote collaboration between secondary schools, postsecondary educational institutions, and vocational rehabilitation through the establishment of jointly funded positions.
- Promote access to a wider array of community services by mapping community assets and developing interagency agreements that promote and support the sharing of information and engagement in joint planning.
- Promote collaborative staff development programs.

Chapter 5: Communication Access

Recognize the diversity of language and communication preferences of persons with hearing loss

Agencies must ensure providers directly communicate in the consumers choice

Providers must be:

- Knowledgeable of variety of communication alternatives

- Proficient in American Sign Language

- Have a sign language development plan

Agencies and their vendors must use competent interpreters, and be aware of alternative options such as Video Relay Services, Video Remote Interpreting and Certified Deaf Interpreters

Chapter 6: Technology and Accommodations

One size does not fit all..... accommodations must be tailored to the individual and the situations he/she faces

Best practices in identifying accommodations

Categories of Accommodations

- Personal Listening Devices

- Assistive Listening Devices

- Telephone Access

- Workplace, Group & Classroom Accommodation

- Alerting Systems

- One on one interactions

- Formal business situations

Funding of accommodations

Chapter 7: Partnerships and Interagency Agreements

Interagency Agreements serve as critical linchpins for success as programs and services have become more interdependent

Rehabilitation Act of 1973, as revised in 1998, mandated that state VR programs work in collaboration with institutions of Higher Education (IHEs) to ensure access to postsecondary training and education would not devolve into a succession of turf battles

34 out of 50 states have formal Interagency Agreements between VR and IHEs – with a great deal of variability from state to state

State VR agencies are encouraged to develop similar Interagency Agreements with other key programs and services toward goal of improving service delivery to persons with hearing loss

Interagency Agreements (IAs) and Memoranda of Understanding (MOUs)

- Critical to success
- Demonstrate collaboration
- Necessary for survival
- Mechanism to thrive

Benefits of IAs & MOUs

- Enhance services
- Increase shared understanding
- Eliminate duplication
- Identify service gaps

Benefits of IAs & MOUs

- Maximize efforts to achieve successful rehabilitation outcomes
- Spell out respective partner roles, responsibilities & functions
- Protect partners AND consumers

IAs with Institutions of Higher Education (IHEs)

- Agreement with VR mandated by Workforce Investment Act ('98 amendment to The Rehabilitation Act of 1973)
- Sec. 101(a)(8)(B): "...ensure that an interagency agreement... takes effect..."
- "...shall specify agency financial responsibility; conditions, terms, and procedures of reimbursement...for resolving interagency disputes...coordination of service..."

Minnesota's IA with IHEs

- Along with Oklahoma's, became lightning rod
- Works well for our state agencies, institutions and students / consumers
- Opened channels of communication, agencies now work with greater trust

MN VR, Blind Agreement with State Colleges & Universities, U of M

- Eighteen months, representative & collegial process
- Buy-in widespread, but not complete – private colleges & universities did not sign on

U of M

- Federal Fiscal Year 2007 costs for auxiliary aids & services
 - Interpreting service hours 19,350
 - Captioning service hours 2345

Suggestions

- Find / know your state Interagency Agreement with Institutions of Higher Education
- Update key contacts / allies information
- Work your process

Chapter 8: Independent Living Skills

Independent living

- well-organized movement among people with disabilities
- to enhance self-esteem and self-determination, as well as the socio-economic resources available to choose and maintain individual, independent lifestyles.

Life skills, in addition to essential literacy and numeracy skills, could encompass the ability to build sound, harmonious relationships with self, others and the environment; the ability to act responsibly and safely; the ability to survive under a variety of conditions; and the ability to solve problems.

Chapter 8: Independent Living

- Actively participate on the transition team to provide information on assistive technology for students who are deaf, deaf – blind, hard of hearing, and late-deafened.
- Promote independent living philosophy throughout all planned activities.
- Develop independent living skills classes or experiences for students who are deaf, deaf – blind, hard of hearing, and late-deafened.

Chapter 8: Independent Living

- Provide support groups to discuss how to deal with grief (lost of a family member), progressive hearing loss, and/or assistive technology needed in the home for students who are deaf, deaf – blind, hard of hearing, and late-deafened.
- Attend IEP meetings, as invited by the student or parent/guardian, for the purpose of advocating for requested accommodations, assisting the family and student in understanding their rights and responsibilities during the IEP process, providing information on possible services and resources available, and providing any other information or assistance needed.

Chapter 8: Independent Living

- Provide up-to-date information to the Transition Team regarding the Americans with Disabilities Act and potential changes in legislation affecting people who are deaf, deaf – blind, hard of hearing, and late-deafened of any age.
- Provide assistance to all students who are deaf, deaf – blind, hard of hearing, and late-deafened and/or parents/guardians referred for independent living services by participating schools and agencies.

Chapter 9: Future Directions

- A. Assess where are we in our State?
- Analysis of RSA-911 Data
 - Analysis of current counselor assignments
 - Analysis of counselor accessibility
 - Analysis of office accessibility
 - Analysis of individual cases (targeted case reviews)
 - Analysis of policy, interpretation and practice in VR sponsorship of Postsecondary training & Education
 - Individual and group interviews and focus groups

Chapter 9: Future Directions: Where do we want to be?

B. Present Assessment Findings to Senior Management Team and Gain Feedback: Where do we want to be?


- Submit State-of-the-State Report
- Provide recommendations for program modification and follow-up
 - Discuss findings and recommendations
 - Get feedback and direction for future program and staffing structure and activities in postsecondary training & education
 - Be certain of management's commitment to the activities and structures they recommend for the follow-up strategic plan

Chapter 9: Future Directions: How do we get there?

C. Develop the Strategic Plan: How do we get there?

- Staffing Structure (or restructuring)
- Human Resource Development
- Policy, Practices, Fees, Forms
- Accessibility (communication & technology access)
- Programs to be Piloted in Postsecondary Training & Education
- Strategic Plan must be a living document
- Evaluate regularly, revise as needed, document progress, problems and NEXT STEPS

Want a copy of the MSP?



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Purchase Print Book for \$7.13
plus shipping and handling

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Patchwork to Seamless

PEPNet Products for Professionals in Community Based Rehabilitation Programs

Heidi Adams



Abstract

Professionals in community based rehabilitation programs which deal with a wide range of disabilities may not be familiar with the communication access needs of individuals who are Deaf or hard of hearing, or with the characteristics of either population. PEPNet has excellent resources for this beleaguered group of professionals: the online handbook Communication Accommodations for Postsecondary Students Who Are Deaf or Hard of Hearing, and two online continuing education classes offered through the University of Wisconsin/Stout, Working with Individuals who are Deaf or Hard of Hearing, and Vocational Services for People who are Deaf or Hard of Hearing. This session offered participants the opportunity to take a virtual tour, learning how to navigate through the sites and how what they learn is directly applicable to service provision.



What we will cover

- Who are Deaf, late deafened, and HOH people?
- Two PEPNet online resources
 - Communication Accommodation for Students who are Deaf and Hard of Hearing
 - PEPNet online continuing education classes through University of Wisconsin/Stout
- Other resources on PEPNet web site



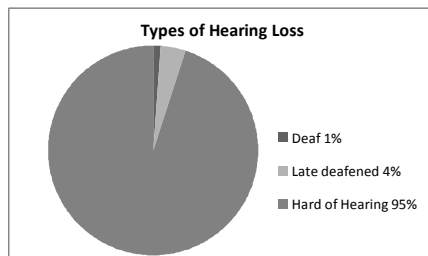
People who are Deaf, late deafened, or hard of hearing

WHO ARE WE TALKING ABOUT?

By the numbers

- 1 in 10 Americans
- About 30,000,000 people in the US
- Numbers will increase with baby boomers & ambient noise

Percentages



Of all individuals with some type of hearing loss, 1% are culturally Deaf, “Big D Deaf” as opposed to those who are audiologically deaf, but not members of the Deaf Culture. Late deafened individuals, or those who lost their hearing as adolescents or young adults, make up 4% of the total population of people with hearing loss. The remaining 95% of this total population are hard of hearing.

Deaf

- Own culture, primary language ASL
- Deafness a difference, not a disability
- English is a second language
- Prefer sign language interpreters for communication

Those who are Deaf have their own culture and their primary language is ASL, or American Sign Language. Members of Deaf Culture see their deafness as a difference from the hearing culture, not a disability. They are proud to be Deaf. For members of this group, English is a second language and they may struggle with reading and writing skills. Sign language is the preferred communication mode for this group.

Late deafened

- Audiologically deaf, but part of hearing culture
- Primary language is English
- Use hearing aids, CIs
- Prefer captions, but some use sign language
- May be grieving loss

Late deafened individuals are audiotically deaf, but remain part of the hearing culture. Their primary language is English. They use hearing aids and cochlear implants. Some learn to sign fluently, but generally they prefer captions for communication access. Late deafened individuals often go through a grieving process not only for their hearing, but other things they lose as a result, including music, relationships, respect or recognition in the workplace, and loss of status even in their own families. for this group.



Hard of hearing

- Very, very heterogeneous population
- See themselves as part of hearing culture
- Use hearing aids, CIs, ALDs
- Use residual hearing
- May be grieving loss

The group of individuals with hearing loss characterized as hard of hearing is very heterogeneous. They see themselves as part of the hearing culture; English is their primary language. They focus on using their residual hearing, so they use a variety of types and sizes of hearing aids, and cochlear implants, as well as assistive listening devices. For larger venues and media they prefer captions. This group of individuals may also go through a grieving process. Denial is very common. The average time between diagnosis of hearing loss and buying a hearing aid is 7 years.



Dispelling some myths



Myth #1

- The milder the hearing loss, the less impact it has on the individual.
- Truth: Research shows children with mild hearing loss have significantly more academic & behavior problems than their hearing peers.

(Bess, Dodd-Murphy, & Parker, 1998)

Children with mild or unilateral hearing loss often do not get the support they need because it is assumed that the loss is negligible.



Myth #2

- Hearing aids fix everything.
- Truth: Hearing aids do not return one's hearing to normal.

(Beck, n.d.)

One of the barriers to successful hearing aid use is unrealistic expectations. Aural rehabilitation refers to the array of services that professionals provide to help maximize hearing aid success. It can include listening practice, speechreading instruction, and learning strategies for hearing in difficult situations. Unfortunately, few professionals provide aural rehab and it is not covered by third party payers.



Myth #3

- All people with hearing loss can speechread.
- Truth: Even the best speechreaders understand only about 30% of what is seen on the face.

(Ross, 2004)

Speechreading is an excellent strategy, but does not allow full communication access. Researchers have never been able to identify specific attributes that make some individuals better speechreaders than others; there are individual differences. However, almost everyone can improve their speechreading skills with practice.



Some PEPNet resources

PULLING IT ALL TOGETHER

The following slides describe two PEPNet products that can help disability service coordinators, program directors in community based rehab agencies, secondary teachers, individuals and their families, and other service providers learn more about hearing loss and the types of accommodations that work for each individual in a variety of environments.



Developed by Dr. Greg Long, PhD
Department of Communicative Disorders
Northern Illinois University
DeKalb, IL 60115

Communication Accommodations was developed during a sabbatical Dr. Long took from Northern Illinois University in 2004. The target audience was disability service providers in postsecondary education institutions many of whom are unfamiliar with hearing loss, the challenges it presents for students in a variety of campus settings, and the types of accommodations that are available and appropriate for individual students.

Characteristics

- Web-based - easy to update
- Extensive internal & external links
- Basic step-by-step
- Versatile - multiple applications
 - Special Ed. teachers in secondary schools
 - VR counselors
 - Families

This tool is a web-based handbook which means it is easy to update. The Center for Sight & Hearing is responsible for checking the links, removing outdated information, and adding new links. It is extensively linked internally and externally, a one-stop resource; users can access as much or little information as they need. Utilizing a step-by-step approach, individuals can create an individual student profile, learn what accommodations are available, and create an access plan for students.




Let's take a tour

- [PEPNet web site](#)
- Click on Resources
- Click on Products and Dissemination
- Click on Downloads
- Scroll down to "Communication Accommodation . . ."
- Click on Web icon




Go ahead! Browse . . .

This tour will highlight how this resource is structured, the breadth of material it covers, how it is linked internally and externally, and the variety and quality of those links.



The home page asks, "What would you like to do?"


- Identify accommodations
- Review a recommended approach for determining appropriate accommodations
- Develop an individual communication profile
- Match a profile with an accommodation plan



Click on dot point #1: Identify potential accommodations available

Scroll to General Recommendations
Click on "preferential seating"
Close window
Click on "Visual alerting systems"
Click on "product catalog"
Click on "adcohearing"
Close window and return to home page


This slide leads you through the resources of the site using two accommodations as examples.



[Click](#) on dot point #2: Review a recommended approach for determining --

[Click](#) on "Step Two"
[Click](#) on "Communicative Environments"
[Click](#) on "Science labs"
[Close](#) window and return to home page

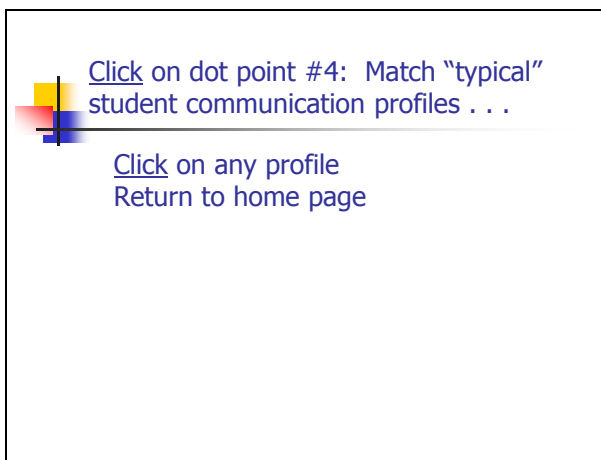
In this part of the tour, you learn how communication accommodations can differ for the same individual in different campus environments.



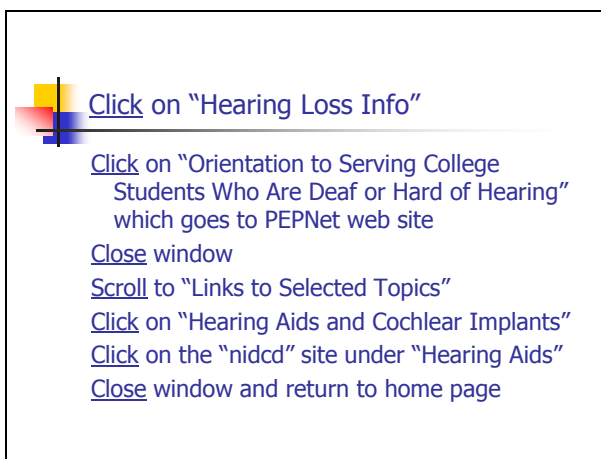
[Click](#) on dot point #3: Develop an individualized student communication profile

[Scroll](#) through the profile.
[Click](#) on "Submit"
[Click](#) on "home"


The profile is an excellent tool for matching communication accommodations to the individual and a specific environment, especially for a professional new to the field of hearing loss. Take some time to look at the drop down menus.



This shows you how the process all comes together.



So far in the tour, you have taken the steps to provide basic communications access for a student. The resources on this site don't stop there. The steps on this slide give you just a sampling of general information when you click on the Hearing Loss Info section.



Click on "Legal Mandates"

- Click on the "netac" site under "Overview"
- Close window
- Click on "Washington" site
- Close window and return to home page


Information here provides in depth information about the legal aspect of equal access to communication.



Click on "Resource Websites"


- Scroll down for a quick overview and return to home page

This is a comprehensive list of resources for further information. It also includes resources for assistive technology.



Click on “Feedback” at bottom
of home page

Here is your chance to provide input and
the end of your tour!



Keeping up

Continuing Education through
online learning

When you're a busy working professional, keeping up with certification requirements can be a scheduling and financial challenge. One solution is online continuing education classes like those offered by PEPNet through the University of Wisconsin/Stout.



PEPNet online learning

- Two online continuing education classes
- A PEPNet-University of Wisconsin/Stout collaboration
- Target audience is rehab professionals working in community based rehab programs

Two classes are offered: “Working with Individuals who are Deaf or Hard of Hearing” and “Vocational Services for People who are Deaf or Hard of Hearing.” These classes are a collaborative effort between UW/Stout and PEPNet. While they were developed with rehab professionals working in community rehab programs (CRPs) in mind, these classes have proven valuable for a wide variety of professionals including: Public & private VR counselors, assistive technology providers, disability service coordinators, sign language interpreters, special education and secondary teachers, and workers in medical or rehabilitation settings (nurses, OTs, PTs).



About these classes

- Two levels
 - Basic: Working with Individuals who are Deaf or Hard of Hearing
 - Advanced: Vocational Services for People who are Deaf or Hard of Hearing
- Each module has
 - A video presented by an expert
 - A PowerPoint
 - A transcript

The first class is designed for professionals who have little or no experience working with individuals who are D/deaf or hard of hearing. The second is more advanced for those with some experience in working with individuals with hearing loss who want more in-depth information. Each class has three units, or modules, made up of a video, a slide presentation, and a transcript. This flexible approach considers the differences in individual learning styles. Each unit also has an activity so participants can apply what they have learned. Pre-tests and post-tests provide feedback to participants on their level of mastery.



More . . .

- Natural breaking points in each video
- Each class has facilitator & coordinator from UW/Stout
- Classes are 5 weeks in length

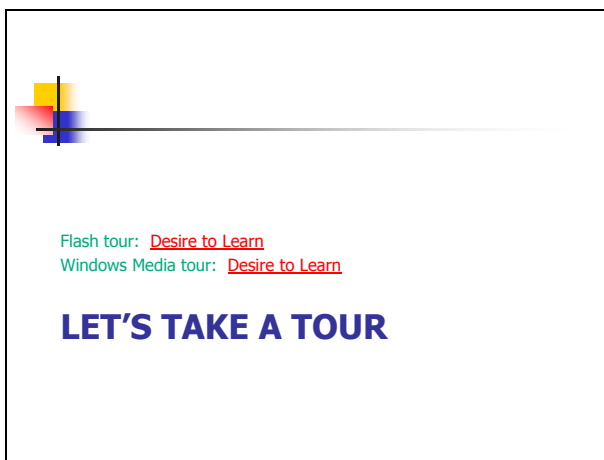
Each video has several natural breaking points so participants are not obligated to watch the entire video in one sitting. The class facilitator and distance learning coordinator are readily available to answer and questions and troubleshoot technology glitches. The classes are five weeks in length. Participants receive a complete or incomplete; there are no grades.



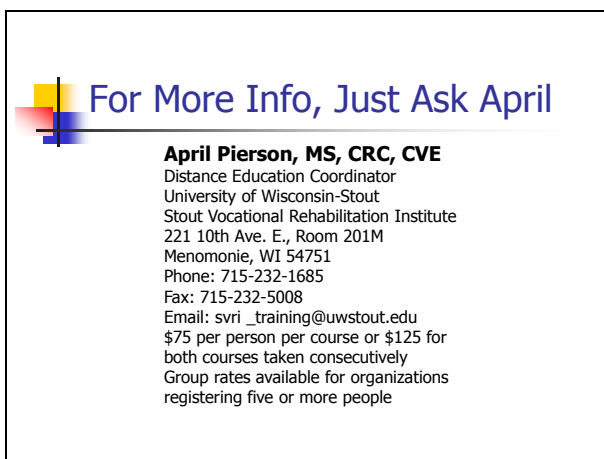
What you really want to know

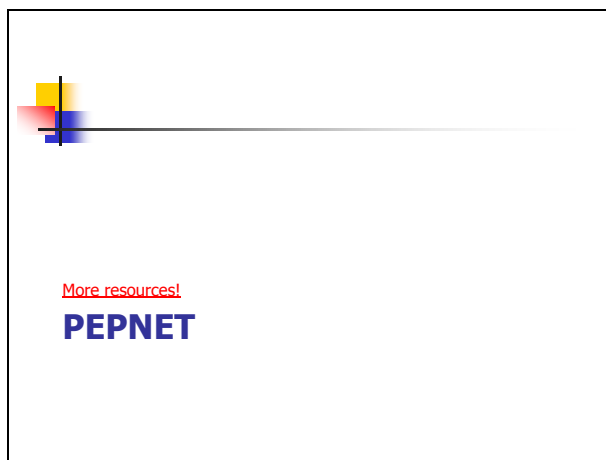
- Each course earns 10 credit hours or 1 ceu
- 2 hours are ethics credits
- Cost: \$75/class; both classes consecutively \$125
- Group rates available
- Classes start at different times throughout the year

These classes are a very flexible, efficient, and cost-effective way stay abreast of new information and earn CEUs.



To view a video, play slide show by clicking on the screen icon at the lower right of the screen or click on the Slide Show tab at the top, then click From Current Slide. Click on one of the tours above. Give it a few minutes to load. To return to the slides with notes, close the video and click on the PowerPoint title at the bottom of the screen.





Of course, PEPNet has a lot more resources, so check out our web site for more products and training. To go to the web site, play slide show by clicking on the screen icon at the lower right of the screen, or click on the Slide Show tab at the top, then click From Current Slide. Click on More resources above. To return to the slides with notes, close the web site and click on the PowerPoint title at the bottom of the screen.



The Center for Sight & Hearing is an Outreach Site for PEPNet-Midwest. It is one of only two Outreach Sites in a community based rehabilitation program. Community rehab programs are often abbreviated CRP. CRPs provide direct services (e.g., assessment, training, counseling, placement, case management) to consumers with disabilities. The Center for Sight & Hearing has comprehensive programs for those with vision and/or hearing loss.



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Communication Accommodations For Postsecondary Students who Are Deaf or Hard of Hearing

Developed by
Dr. Greg Long, Ph.D.
Department of Communicative Disorders
Northern Illinois University
DeKalb, IL 60115

<http://www.mcpo.org/greg/index.htm>

Go ahead! Browse . . .

Here is a suggested tour:

The home page asks, “What would you like to do?”

1. Identify accommodations
2. Determine what accommodations are appropriate for an individual
3. Develop an individual communication profile
4. Match a profile with an accommodation plan

This tour will highlight how this resource is structured, the breadth of material it covers, how it is linked internally and externally, and the variety and quality of those links. Of course, you are free to design your own tour.

Click on dot point #3: Develop an individualized student communication profile

Scroll through the profile.

Click on “Submit”

Click on “home”

Click on dot point #1: Identify potential accommodations available . . .

Scroll to General Recommendations

Click on “preferential seating”

Close window

Click on “Visual alerting systems”

Click on “product catalog”

Click on “adcohearing”

Close window and return to home page

Click on dot point #2: Review a recommended approach for determining . .

Click on “Step Two”

Click on “Communicative Environments”

Click on “Science labs”

Close window and return to home page

Click on dot point #4: Match “typical” student communication profiles . . .

Click on any profile

Return to home page

Click on “Hearing Loss Info”

Click on “Orientation to Serving College Students Who Are Deaf or Hard of Hearing” which goes to PEPNet web site

Close window

Scroll to “Links to Selected Topics”

Click on “Hearing Aids and Cochlear Implants”

Click on the “nidcd” site under “Hearing Aids”

Close window and return to home page

Click on “Legal Mandates”

Click on the “netac” site under “Overview”

Close window

Click on “Washington” site

Close window and return to home page

Click on “Resource Websites”

Scroll down for a quick overview and return to home page

Click on “Feedback” at bottom of home page

Here is your chance to provide input and the end of your tour!

ACADEMIC ISSUES

Our Piece of the Puzzle: A Comprehensive Cooperative Program Helps Students Put it All Together

Leslie Garber

Abstract

This paper summarizes the information presented in a poster session highlighting the Cooperative Program for the Deaf and the Blind at Spartanburg Community College in Spartanburg, SC. The Cooperative Program was instituted as the result of a partnership formed between the college and the South Carolina School for the Deaf and the Blind in order to serve deaf, hard of hearing, blind, and low-vision students in South Carolina.



In 1986, the South Carolina School for the Deaf and the Blind and Spartanburg Community College (formerly Spartanburg Technical College) formed an alliance to extend postsecondary educational opportunities to deaf, hard of hearing, blind, and low-vision students from across the state of South Carolina. The program, known as the Cooperative Program for the Deaf and the Blind, offers a variety of support services including sign language interpreters, note-takers, reader/writers, and tutors.

Since it was established, the Cooperative Program has served hundreds of students on the campus of Spartanburg Community College in Spartanburg, SC. During the 2007-2008 academic year, the Cooperative Program served 25 deaf and hard of hearing students. Students pursued several majors at the college which include:

- Associate in Arts/Associate in Science (University Transfer).
- Automotive Technology.
- Commercial Graphics.
- Computer Technology.
- Electronics Engineering Technology.
- Interpreter Training.
- Early Childhood Development.
- Office Systems Technology.
- Pharmacy Technician.
- Pre-Nursing.
- Pre-Physical Therapy Assistant.

The most popular majors pursued by students enrolled in the Cooperative Program were University Transfer (AA./A.S.), Computer Technology, Early Childhood Development, and Automotive Technology.

Interpreters for the Cooperative Program are employed through the South Carolina School for the Deaf and the Blind. The minimum hiring requirements for those interpreters include:

- Certification from RID, NAD, or NIC; or
- Graduation from an Interpreter Training Program plus one year interpreting experience; or
- Three years interpreting experience, preferably in the postsecondary educational arena. (Spartanburg Community College, n.d., p. 4)

Several interpreters currently employed by the program exceed these requirements; several interpreters hold or are nearing completion master's degrees, and others hold or are nearing completion of bachelor's degrees in education or a related field.

The Cooperative Program offers one-on-one and group tutoring for students. The tutoring program, which is designed to meet the linguistic and cultural needs of students, is offered in American Sign Language or the language and communication mode preferred by the student. Students can also request an interpreter to accompany them to the college's Tutorial Learning Center for additional tutoring services.

Students have the option to reside in two-bedroom, furnished apartments near the South Carolina School for the Deaf and Blind (SCSDB) campus. The apartments, which are managed by the Spartanburg Housing Authority, are allocated for the use of SCSDB adult and postsecondary students. The Cooperative Program's residential component provides students the use of SCSDB's dining and recreational facilities, transportation to and from the college, and additional afternoon and evening support personnel. Structured student activities, an up-to-date computer lab, and field trips are also available to all participants.

Many students entering Spartanburg Community College were placed into developmental level courses in English and reading. Many of these students were repeatedly failing these basic courses. The Transitional Studies department head agreed to offer a class in which deaf and hard of hearing students could choose to take Developmental English taught by an instructor using American Sign Language. These courses were approached from a perspective that addressed the unique challenges of English usage that students with a hearing loss experience. The first two English courses were very successful. Student feedback has been positive, and both the instructor and Cooperative Program staff observed increased levels of participation compared with other English courses in which these students had been enrolled.

As a result of this successful class, the college Transitional Studies department head has agreed to form a learning cohort if there are enough students. This cohort would take their first level of developmental studies classes together. The cohort will include classes in English, reading, and a college skills class in which critical thinking and study skills are taught. The college skills class will also address other transition issues that cause barriers for these students. It is hoped that this program can boost students' academic successes early in their college career, provide remediation as a bridge to college level academics, and lower the rate of failure for this group of students.

Conclusion

As this paper demonstrates, the Cooperative Program for the Deaf and Blind at Spartanburg Community College offers a variety of services, activities, and resources. The program's success is

due to the cooperation between two agencies: two pieces of the puzzle that complement each other and help students put it all together.

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Academic ASL: It Looks Like English, But It Isn't

Linda L. Ross & Marla C. Berkowitz

Abstract

Sign language interpretation is a primary accommodation provided to deaf students in postsecondary settings. In order to best accommodate the linguistic needs of deaf students in the classroom, an understanding of how American Sign Language (ASL) is used in this setting is needed. The authors have noted there is neither a consistent nor a clear understanding of what ASL used in an academic setting looks like. Interpreters often assume students are using signed form of English when this is not the case. This paper reports on preliminary research, both anecdotal and original, undertaken by the authors to begin to differentiate Academic ASL and signed forms of English used in the classroom.



Introduction

Our linguistic and sociolinguistic knowledge of American Sign Language (ASL) has grown considerably since the earliest studies of the language (Stokoe, 1965; Lucas 1989; Cokely and Baker, 1999). Nonetheless, much remains to be explored. As instructors of American Sign Language (ASL) and interpreting (ASL/English), as well as working interpreters, the authors have noted that such a gap exists in discussing visual language usage in academic settings, particularly post-secondary settings. We frequently hear from interpreting colleagues, “That deaf instructor (or student) signs English,” when what we are seeing is, in our opinion, ASL and not a signed form of English. This led us to begin talking about and exploring what we have come to refer to as Academic ASL. This paper will report our current understanding of the characteristics of Academic ASL based on anecdotal evidence, review of the literature, and preliminary original research. It will also provide an explanation of why this register of ASL is often considered to be a signed form of English by interpreters.

Background

Particularly in academic circles, one hears talk of Academic English. A version of formal register English (Joos, 1961), Academic English is used both inside and outside of the classroom for oral presentations, discussion and written communication to establish oneself as learned. According to Scarcella (2003), “This variety of English entails the multiple, complex features of English required for „long-term success in public schools, completion of higher education, and employment with opportunity for professional advancement and financial rewards“ (Rumberger & Scarcella, 2000, p. 1).” The literature on Academic English focuses largely on the written form and its relationship to literacy (see for example, Scarcella 2003; Elbow 1991; Bizzell 1992). This literature also provides us with an identification of linguistic and sociolinguistic features of Academic English. These include distinct stress patterns in pronunciation; the use of technical vocabulary

(also referred to as jargon) and the intentional avoidance of “popular” terms; more marked grammatical structures including conditionals, complex clauses, embedded and subordinate clauses, parallel clauses, passive constructions, double negatives, etc.; an increased number of genres; unique transition and organizational signals; and the voice of authority. (Scarcella 2003; Elbow 1991). This description of Academic English does not stray far from Joos’ (1961) descriptions of formal English where “the defining features of formal style are two: (1) detachment; (2) cohesion” (p. 38) with “pronunciation [that] is explicit...grammar [that] tolerates no ellipsis and cultivates elaborateness, the semantics is fussy...complex sentences” (p. 37) and explicit organization clearly making Academic English a version of formal register English.

With the founding of Gallaudet College in 1864, the more recent post-ADA (Americans with Disabilities Act, 1990), influx of deaf students attending public colleges and universities, along with an ever increasing number of deaf individuals receiving advanced degrees and joining the faculty of colleges and universities across the country, ASL has moved into academic arenas. It follows logically, then, there should be an Academic register of ASL. A review of the literature, however, resulted in no evidence of such a register.

Preliminary Research

Anecdotal

Informal discussions with native English speakers and PEPNet 2008 conference participants, indicate a common understanding of Academic English which supports what is found in the literature. When asked to differentiate social and Academic English, native speakers identified (using lay language) linguistic and discourse features such as technical terms, more “formal” terms as opposed to slang, complete sentences, proper pronunciation, and more clearly structured content relationships. The authors were also told that Academic English required more thought and attention than social English, which the literature identifies as the cognitive need to predict, infer, question, identify assumptions and synthesize meaning in the creation of knowledge (Scarcella, 2003).

Despite the lack of research into Academic ASL, native speakers and interpreters are similarly able to distinguish Academic ASL from social ASL. The author, Berkowitz, distinguishes Academic ASL from social ASL on the basis of the same literacy function that Academic English serves. She states that, as a student, Academic ASL provides the “scaffolding” for literacy in both ASL and written English as well as comprehension of academic content and “building” of academic knowledge. Interpreters and deaf individuals with academic experience identified (again, using lay language) linguistic and discourse features for the authors such as increased fingerspelling for technical vocabulary, the requirement for more thought (cognitive processing), more clearly produced (pronounced) signs, larger use of space in general, use of space to mimic visual aids, concept expansion, and a clear structure that begins with the point. Sociolinguistic features for Academic ASL identified by interpreters and deaf individuals with academic experience included limited turn taking which is characteristic of a formal register (Joos, 1961) and speaking only from the front of the room.

Given the authors posit that academic language use is a version of formal language register, it was not surprising to find the literature on Academic English and the lay understanding of both Academic English and Academic ASL largely reflecting general language features to indicate a more formal register. This led the authors to tentatively propose that Academic ASL include the following linguistic and sociolinguistic features: use of citation forms of signs, that is proper articulation; a restricted lexicon of more “proper” signs; enlarged signing space whether for phonologic, morphologic, or syntactic purposes; and use of unmarked grammatical structure, that is

use of S-V-O structure. (Valli, Lucas and Mulrooney, 2005; Zimmer 1989). Zimmer (1989) also noted the increased use of a marked grammatical structure, the rhetorical question, in formal ASL. The authors had expected that all marked grammatical structures using small movements of the eyebrows or mouth would be reduced or eliminated from formal ASL. In addition to the general features of a formal register, an academic version of the register required a specialized vocabulary and increased cognitive demands for comprehension. Thus the authors would propose that these, too, will be seen in Academic ASL in the form of increased use of fingerspelling and initialized signs for the specification of technical terms (Kelly, 2008).

Original

Preliminary research was completed by the authors with the above conception of the features of Academic ASL in mind in an attempt to clarify our understandings and move them beyond merely anecdotal evidence and inference from the literature. The research utilized commercially available recorded samples of deaf individuals discussing academic material. One recording was taken from the University of Minnesota publication on interpreting in postsecondary settings entitled *Charting the Way: Sign-to-Voice Presentations* (2003). The authors reviewed the presentations on the DVD and identified the deaf presenter Cara Barnett, who most clearly demonstrated what they had been labeling, on instinct, Academic ASL when presenting a history of deaf education. A second recording produced by the CATIE Center at the College of St. Catherine (2002), *Mirrored Math* with Steven Fuerst presenting a geometry lesson, was also used. Finally, a lecture on the use of classifiers in ASL presented by Carol and Andy Lazorisak (Signs of Development, 2003) was reviewed. As a comparison case, Teika Pakalns whose presentation title was “Ireland: Reality or Illusion” which the authors perceived as a model of a signed form of English, was also reviewed. Also, as a means of comparison, the authors reviewed several examples of language use that they considered to be a more social use of ASL including one presented by Debbie Peterson of Ely’s Wildlife (Digiterp Communications, 2004).

The research was conducted as an informal pilot test rather than as formal linguistic research. The authors reviewed each recording noting and discussing the features that lead them to consider the presentation to be one of Academic ASL or a signed form of English. They then identified key features that were used in common by the presenters using Academic ASL and not used by the presenter in a signed form of English.

Several linguistic and sociolinguistic features were found as predicted. First, the authors noted, among the presenters studied, a deliberate use of an overall discourse structure that introduced a subject, provided details and/or examples around the subject, and then provided closure by returning to the main point (sometimes referred to as a diamond structure). The social use of ASL, however, had greater variation in the structure. Beginnings may have identified a genre (telling of a story), established a time frame, or identified a subject. Closings may or may not return to the beginning.

We also found several of the anticipated linguistic aspects of a formal register: citation (proper) formation of signs, reduced use of non-manual markers, and the use of an unmarked grammatical structure (S-V-O). The sample which the authors viewed as an English form of signing shared these linguistic characteristics of formal register ASL. In contrast, the social ASL samples used generally casual registers including reduced sign productions, heavy use of non-manual markers particularly adjectival and adverbial, and both marked (O-S-V, sometimes referred to as topic-comment; relative clauses) and unmarked grammatical structures.

The use of space found in the examples of Academic ASL was different than anticipated. The authors anticipated that space would be enlarged as the literature suggested. However, this was not

the case. Space appeared to be no larger or smaller for the academic samples than the social samples. Perhaps a larger use of space was not found because the samples were videotaped in a studio and not in front of an audience. Likewise, the use of space to mimic visual aids was not noted since no visual aids were utilized in the samples. Nonetheless, Academic ASL seemed to use space in what might be considered a more unmarked morphological fashion by re-labeling it more frequently for reference than social ASL uses where, once labeled, the space is assumed to be known for referential purposes. Space was not used in this way in the sample of a signed form of English. In fact, space was used for linguistic function in a very limited fashion in the signed form of English.

The samples also revealed, as anticipated, fingerspelling and initialized signs were used more frequently in Academic ASL than in social ASL, for the specification of technical terms. In the Academic ASL samples, fingerspelling was primarily utilized in discourse structures designed to support literacy; that is, in accompaniment of a sign being tagged for technical use, along with an explanation of the meaning of the term, along with examples of the meaning of the term, or in conjunction with classifiers that clarify the meaning of the term being presented (Schlepper, 2000). The signed form of English also utilized fingerspelling for literacy purposes. However, classifiers were not used for meaning clarification of the fingerspelling in the signed form of English. In the social ASL samples, fingerspelling was used primarily to label proper nouns and far less frequently to tag specific meanings on multiple meaning signs.

A feature not anticipated from the literature review and anecdotal evidence was the use of pausing. In analysis of the presentations, pausing was noticed to be elongated and more deliberately used to mark transitions and utterance boundaries in Academic ASL (Roy, 1989). A second feature not anticipated was the more moderate overall pacing of the utterances in Academic ASL.

Discussion

Our findings demonstrate that there is justification in considering the existence of an Academic ASL register. Academic ASL can be described with the linguistic and sociolinguistic features identified above. In fact, the features of Academic ASL are quite similar to those of Academic English though structurally appropriate to the visual language. For example, where Academic English uses more marked structures, Academic ASL, because of its visual nature, uses fewer marked structures.

Our findings also seem to imply that the overwhelming reason why Academic ASL is perceived as a signed form of English by interpreters may be the predominant use of unmarked grammatical structures. Academic ASL is a version of formal register ASL and is most often utilized in front of large audiences, therefore, grammatical structures common in social ASL such as rhetorical questions and O-S-V constructions that are marked as unique by small movements of the eyebrows can not be used effectively. Likewise, mouth morphemes for the marking of adjectives and adverbs can not be used. Rather, grammatical information is conveyed by word order alone, S-V-O word order, along with the addition of lexical units for description. The majority of sign language interpreters have learned ASL as a second language. The popular curricula that are available for teaching ASL are based on an informal or, at best, consultative register (Smith, Lentz, and Mikos 1988; Zinza 2006). These curricula emphasize the O-S-V grammatical structure are more common in social registers. As a result, sign language presented in S-V-O order, the predominant word order of English grammar, becomes assumptive labeled as a signed form of “English.”

A secondary reason that Academic ASL may be frequently perceived as a signed form of English is the use of initialized signs. It has been long held that ASL did not initialize signs, signed forms of English did. However, upon closer examination, there are multiple accepted signs in the ASL

lexicon that would be considered initialized (eg. family, group, team – all based on a sign with semantics of multiple individuals with a common bond). Again, recent understanding of how ASL expands its lexicon allows for initialization of a common semantic base (Kelly 2008). This is a productive means for ASL to introduce technical vocabulary. Given social forms of ASL have less need for technical vocabulary and these are the registers most familiar to most interpreters, it is not surprising the Academic ASL's inclusion of initialized signs is seen as signed English.

Future Research

While this preliminary research seems quite promising, additional research is called for as this study is limited. First, and foremost among the limitations, is the sample size and make up. Samples for future research must be taken in a variety of academic settings (K-12 through postsecondary) rather than in a studio. This will not only increase the validity of the findings but will also resolve the questions that remain on the use of space (for example, size of space and mimicry of visual aids).

The present study is also limited by the depth of inquiry and comparison samples. Future research must be done more systematically and rigorously than this pilot. Future research must also employ formal ASL in non-academic settings as a comparison to determine if this is really a unique version of the formal register or if it is nothing more than the formal register.

Conclusion

Pursuing additional research on this topic will be highly beneficial. A clear and consistent understanding of Academic ASL, will allow for improved ASL instruction and interpreter training. In turn, more effective accommodation of deaf students in postsecondary settings will be achieved.

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PROGRAM MANAGEMENT

Finding the Right Pieces with Service Agencies: Redefining the Relationship

Naomi Sheneman

Abstract

With the increasing need of service providers to provide classroom accommodations, more institutions are finding themselves outsourcing to service agencies. Outsourcing is a costly option, yet necessary. The San Diego Community College District (SDCCD), with the support of the Purchasing department, redefined the relationships with agencies to ensure accountability, quality assurance and justify the costs.



Why Outsource?

The San Diego Community College District's Interpreting Services Office provides accommodations in three college campuses and six Continuing Education units. We found that with the size of our deaf/ hard-of-hearing student population, our in-house contract and hourly interpreters could not cover all the classes. This is aligned with our legal obligations (ADA, Section 504 & 508). Fortunately, our District allows outsourcing to service the remaining uncovered classes.

SDCCD's Journey with Service Agencies

Previously, this process involved an informal procedure of agreeing on a price between DSPS and agencies. The primary focus at that time was just the price. The District would sign an agreement form from the agencies and then we would get services. The relationship at this time was that we were following what the agencies were telling us what we had to do to get services.

In 2006, the rising cost of interpreting services became a concern for us. We decided to consult the Purchasing department for their help in the process of establishing agreements. The Purchasing department is experienced with the process of identifying qualified vendors, communicating District's expectations, negotiations and monitoring the vendors' ongoing performance with the District. With the Purchasing department's expertise, we were able to:

- Manage the rising cost of outsourcing,
- Define and monitor quality customer service,
- Formalize the existing relationships with service agencies with clear expectations in writing, and
- Set our own terms and conditions.

We learned some lessons from the first fiscal year after trying this approach.

- Lesson #1: “The lower price, the better it is,” is not always true. The focus should be on finding the best package deal. If the overall service quality is excellent with a slightly higher rate, then perhaps this would be the better deal.
- Lesson #2: Clarity is the key. If we are not meticulous with details, then there would be room for confusion and loopholes. We were able to fine-tune the terms and conditions in our contracts to ensure the agencies understood what we wanted from them.
- Lesson #3: One interpreting agency is not enough for a District of our size. We were able to secure approval from the upper management to have a back-up or secondary agency to fill all of our needs.

After two years of navigating through the process with agencies, the District was able to establish a District-wide bid for interpreting agencies which would result in the same agreement for all departments within the District. Previously, DSPS/ Interpreting Services Office had the best rates, terms and conditions. We were able to help other departments that coordinate their own service requests that would benefit from the same rates, terms and conditions, such as Human Resources and ASL/ITP department. The bigger client you are, the more room for negotiation.

Considerations

In the journey with service agencies, we realized that there are several important considerations when selecting agencies. Those are addressed in the discovery process.

- Availability of service providers: Essentially, how large is their pool? Are their service providers available to cover our classes? We have classes from 7 AM to 10 PM daily.
- Agency's office hours: We discovered that it does make scheduling easier if the agencies had similar office hours to ours. This is especially helpful in early mornings when we need substitute coverage for morning classes.
- Office coverage for evenings/ weekends: Do they have an answering service or an alternate system that would enable them to help cover classes at the last-minute in the evenings and weekends?
- Availability of office staff: Do they have staff that is readily available to address our needs?
- Length of business experience: How long has the agency been in business? We ask for references from other educational institutions.
- Communication methods: What is the agency's best communication method? E-mail is the quickest way for our office to do scheduling and we like agencies that can meet us halfway on that.

Examples of Our Terms and Conditions

This is a general overview of our terms and conditions. Agencies were able to meet those terms and conditions.

- Specific rates are identified for day (7:00 AM-5:00 PM), evening and weekends.
- Specific qualifications of service providers that we expect are outlined in our contracts (i.e. no non-certified interpreters, no student interpreters).
- 24-hour cancellation notice
- Billing minimum and increments are clearly spelled out.
- No last-minute/travel fees
- Reassignments are allowed and their service providers are expected to comply accordingly.
- We will identify and specify our needs. They will follow them accordingly and not make decisions on our behalf (i.e. assigning a second interpreter for a 3-hour lab class when we asked for just one).

- Their service providers are expected to comply with the District policies and procedures. We give them a quick reference sheet outlining some important points from our service provider handbooks including the following:
 - Wear a name tag for first-time assignments.
 - Wear business casual attire unless otherwise stated.
 - Compliance of RID's Code of Professional Conduct & NCRA's Provider and Consumer Bill of Rights
 - Report student no-shows *immediately* after the 20-minute waiting period and wait for reassignment information.
 - Work only during their scheduled time.
 - Communicate any changes to assignment information: classroom changes, schedule changes, teacher changes, and any additional deaf/ hard-of-hearing students.
- We agree on an invoicing frequency in writing (monthly or weekly) and delivery method (to who and how—e-mail PDF attachments are best!).

Conclusion

By being clear on all parts of the service provisions, our existing relationships with agencies had taken a positive turn and we have obtained better service. Based on the District's experience in this process, it is highly recommended that other educational institutions work with their Purchasing department to redefine their relationship with service agencies.

Interpreting and Speech-to-Text Services in English Courses for International Students

Kim Thiessen, Brian Buma, Pam Molina Toledo, & Mary Ann Higgins

Abstract

International students who are Deaf / Hard of Hearing are appearing on U.S. campuses eager to learn American Sign Language (ASL) or improve their English skills. There are practical methods that campus disability services staff can use to interpret or provide speech-to-text services for international students with minimal skills in the target languages. Staff can assess these students and advise them on navigating new technologies, providing needed documentation, and adapting to U.S. culture.



Introduction

A Deaf/ Hard of Hearing student walks into your disability services office and needs services. Suppose that student is from Chile and she knows limited Chilean Sign Language because in her home country signing has historically been forbidden, professional interpreters are rare, and only recently has signing been allowed in classroom settings. Her English reading skills are at a moderate level. What will you do to communicate about what services she needs?

In situations like this, campus disability services staff quickly realize that communication requires adjusting to the international student's language skill level, encouraging universal teaching strategies, and trying out new services. Disability service providers who work with Deaf students can start by assessing the student's communication style, English/ASL skill level, and goals for being in the United States in order to provide appropriate services.

Aside from the details of language lessons, there are the broader adjustment issues that international students may face in entering a new culture. The process for acquiring accommodations, the differences in technology access and cultural perspectives, and the budgetary concerns and solutions are important to consider. Also, Deaf/Hard of Hearing services staff can use some of the resources that are available related to intensive English language learning for Deaf and Hard of Hearing students.

Background

If an international student is enrolled on a U.S. university or college campus; if she has a student ID card for campus; if the program, no matter what it is, is physically located on the campus; and if the student is paying any kind of fees for the dorm or meal plans, etc., then that U.S. university or college is liable for paying for any needed disability services for that student. With ten percent of U.S. postsecondary students who are Deaf or Hard of Hearing being international students

(National Survey on Student Engagement, 2006), this requires a combination of advance consideration and quick planning.

Language Assessments

“Now, for me I flew here, and upon my arrival it was a huge culture shock because American culture is so different from South American culture. And when I got to the University, I went to the disability office, but they weren’t sure how to work with me as I was their first signing international student.”

There are several recommended steps to take when international students who are Deaf and need services arrive on campus. An English language assessment should be done, if it was not done in the home countries. Some students work to improve their English skills before they arrive, but still may need some assistance/support to improve in that area. If they completed a Test of English as a Foreign Language (TOEFL) evaluation, those scores should be available to the disability services staff through the program the students are entering on campus.

Next, staff can look at what kind of signing skills the student has, whether he is skilled in American Sign Language (ASL) already; whether he uses a Pidgin Sign English (PSE) or Signed Exact English (SEE); or whether he doesn’t have any kind of sign language skills. Also, staff can assess if the student knows his home country sign language, or if he has any speech-reading skills for his home country language or English.

And then staff can find out what kind of general communication skills the student has. Staff can informally evaluate how the student communicates. Maybe the international student doesn’t have any speech-reading skills or any signing skills, per se, or any English, but staff can assess how the student communicates when sitting down one on one. Lip-reading skills are an option, but for some international Deaf students, it can be difficult to lip-read English if English is not their native language. Sometimes staff can use gestures to get the point across.

“Now, how did my Deaf friends learn English in the USA? This is what they shared with me. If you can imagine a triangle and a circle and a square with colors – the triangle would be the subject, you would have the circle as the object, and would you have the square as the verb. And so there was a lot of manipulation of these three components of English, and because they were in color I could see the shapes as well as the color, and that helped me to understand the language better and then be able to put it in ASL. And, again, that helped them in learning the language and helped them to improve their English.”

Services

Next, staff can think about appropriate services for the student. Consider if the student could use an ASL interpreter, a Certified Deaf Interpreter (CDI), a note taker, speech-to-text services in the foreign language or English, or other services. Based on the Deaf international student’s language skills, staff can determine what might be the best services for a particular student. If the student is Hard of Hearing rather than Deaf, and she came to the U.S. to learn English, staff can consider speech-to-text services because she wants English; she doesn’t want ASL initially.

“They offered me speech-to-text services, and that was okay, but when the teacher wanted to ask me a question directly, they didn’t know what to do. So, I didn’t have equal access to my classmates. We used paper, which was a very lengthy process, and I had to say that it was not an equal access environment, and I was very frustrated with it. And so, they brought somebody in to translate from Spanish to

English for me. But I still didn't have the English skills to communicate what I knew. It was a very slow process. I knew English, and so there would be speech-to-text, but if there were a lot of conversation going on in the classroom, I would miss the information."

Some international Deaf students come to the U.S. to learn ASL. Staff can usually get that out of an informal individual assessment. Sometimes an international Deaf student might want other services but he might not know about them initially. Staff can go through and show him all of the different services that are offered on the campus that he might never have seen before in his home country.

On an individual basis, staff can also consider the cultural considerations so the student can receive the best services possible from the disability services office and in the classroom setting. Staff can review the student applications and encourage students who contact them to fill out additional information to help avoid misunderstandings and find out more about the country they are coming from. Details requested could include the kind of communication a student uses at home; if the student is part of the Deaf community or the hearing community there; if she grew up in a hearing family; if her family signed; the type of school she attended; if the student has family in U.S.; how long she has been in the U.S.; if she is familiar with American culture, etc.

"I recommend that campus interpreting services has available Certified Deaf interpreters. It's an important service to provide for the Deaf international students, particularly when they first arrive on campus and they don't know ASL. That would give them the opportunity to learn the language."

The disability services staff can also include the campus international student office. Staff can contact them to ask about cultural information, find other students from the same country, or gather other information that is helpful to determine appropriate services.

The Classroom Setting

Staff next can think about the kind of academic program the student is entering. Is it going to be a general university class, or some kind of an intensive English program? These are very different. Staff can consider content and what kind of students are going to be in that class.

Intensive English programs are full of international students. Maybe the student will feel more comfortable in this environment with other international students. General university classes are very different. And then there is the style of instruction. Is the course instructor going to be a regular university professor who talks quickly and makes it difficult for the student to understand anything? Or is going to be an English language teacher who is used to adjusting his lessons to the language level of the students?

Disability services staff can meet with the faculty or the intensive English instructors. Staff can find out if the faculty or instructors have any previous experience with Deaf and Hard of Hearing students, if they know anything about the culture, if they have any resources, or if they have worked with interpreters or speech-to-text providers before. Staff can explain the services that will be provided in the classroom so the instructors understand what to expect.

Later, disability services staff can inform the student of any additional resources on campus and in the community, such as clubs on campus, local host family programs, Deaf community programs and meetings.

“They helped me to know where to find other deaf people. They helped me connect. And that really gave me a sense of peace, and I didn't know their Signs, and they didn't know my Signs, but we were still able to bond.”

Community Connections

It can be a pivotal and positive shift for international students when the campus disability staff offers community resources to Deaf international students to help them make contacts in the community outside the campus. Staff can give them information about local Deaf organizations so they can connect with peers and learn about U.S. Deaf culture, especially if there are not many Deaf students on campus. Staff can also provide ASL course information if the campus does not offer that course and it is needed.

“I went to learn ASL with a Deaf teacher. I was doing this simultaneous to taking the course with the speech-to-text provider and everything else. And my level of frustration was just incredible. But within a year, I had learned to communicate with the Deaf community in Chicago. My communication skills improved drastically, so then the university was able to provide me an ASL interpreter and I was able to actually participate in the lectures to give responses and to share my opinions.”

If the students don't make other social/peer contacts, they can become isolated. Staff reported that students often take a lot of classes, and study continuously so they don't have to go out and make friends because of their concern about their limited English and communication skills.

Isolation can affect administrators and service providers because students may feel that those individuals are the only people who really understand and the only people who can really communicate with them. It can lead to an unhealthy attachment to usually the interpreters or the speech-to-text providers, or the disability service office.

The National Clearinghouse on Disability and Exchange (NCDE), administered by Mobility International USA, is one community resource available for Deaf international students as well as campus disability staff. The NCDE is sponsored by the U.S. Department of State to serve as a comprehensive one-stop resource for disability providers, international exchange staff, and people with disabilities or who are Deaf and Hard of Hearing related to making arrangements for people with disabilities to participate in study, work, intern, volunteer, research, or teach abroad programs. This includes international students and English language students with disabilities who come to the United States from other countries. From online tip sheets and success stories to one-on-one information and referral services, the NCDE provides free assistance when reached through their website at: <http://www.miusa.org/ncde>.

“I finished my graduate degree courses, and am actually in the process of writing my thesis analyzing Deaf Chilean students. I am advocating working in the University as a graduate student, particularly through the office of disability services in providing communication access and counseling. It's been a very good experience for me.”

Conclusion

Having international students who are Deaf on a U.S. university campus brings diversity enrichment to the campus. Services can be expensive if you are providing a lot of services, but it is wonderfully enriching for the hearing students, the Deaf students, and everybody on campus. Staff can work with the student to provide the best possible academic accommodation services, but also

seek out help and assistance from other community resources such as the NCDE and local Deaf community organizations to assist with cultural and social issues.

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Shift Happens: Reframing Disability and Reconsidering Paradigms

Sharon Downs, Melanie Thornton, & Amy Hebert

Abstract

This paper will discuss a current paradigm shift in how we frame disability. We'll demonstrate how business as usual is not an option and that accessibility should be seen not as a matter of compliance but as a matter of social justice. We will explore what's wrong with the status quo, where our field is headed, and how you can bring your colleagues and your institution with you on this exciting journey. We will present a case study in making the paradigm shift, providing the reader with tangible changes that were made, including office name, mission statement, and tag line. Other changes, such as office structure, documentation guidelines and job descriptions are on our website, which will be provided. All of these are changes the readers could replicate in their own institutions and environments.



Introduction

Get ready to take a few steps back and reconsider assumptions you've worked under for years. The way you and your colleagues frame disability may be in need of an overhaul! There is a paradigm shift happening that is changing how many of us do our jobs. A simple way of conceptualizing a paradigm shift is to think of looking at the world through different lenses. There is such a paradigm shift happening in the area of disability. The way things have always been done is just not good enough any more. This paper will explore what's wrong with the status quo, where our field is headed, and how you can bring your colleagues and your institution with you on this exciting journey.

Historically, society has viewed disability in a negative light. In this view, the disability is a "problem" that exists within the person and the goal is to "fix" the person. This paradigm is often referred to as the medical model of disability. A newer paradigm is referred to as the social model of disability. In this paradigm, disability is viewed as "the systemic mismatch between physical and mental attributes of individuals and the present (but not the potential) ability of social institutions to accommodate these attributes" (Schriner & Scotch, 2001). As institutions of higher education begin to make the shift from the older paradigm to the new, we will see changes in policy and practice that reflect this new perspective. Business as usual is not an option and accessibility is seen not as a matter of compliance but as a matter of social justice. It becomes clear that good design means, among other things, that a product, process, or environment is, to the greatest extent possible, usable by everyone.

The Disability Resource Center at the University of Arkansas at Little Rock is a case study in making this paradigm shift. The DRC underwent some radical changes beginning in 2007, moving from medical model to social model. Those changes, including mission statement, office structure, documentation guidelines and job descriptions, will be shared in this paper. In addition, we will share our vision for our whole university in regard to the social model, and will explore what changes you can make in your own institutions and environments.

So let's take a step back and consider why we do what we do. Why is accessibility important? The old rationale was that we were concerned about accessibility in order to be compliant with the law and avoid an OCR complaint. The new rationale is that we are concerned with following not just the letter of the law, but the spirit of the law. The ADA is civil rights legislation! Accessibility is a social justice issue, not just a compliance issue.

Messages We Send

The manner in which we conduct business sends messages to students and to the whole campus. What messages do we want to send? We'd like to send the message that we value all students. We welcome input from everyone. Collaboration is the way to get things done. Students are the experts on their own disability. And barriers in the environment are what we should be working to reduce – that is where our efforts are needed.

But we may unintentionally be sending messages that don't reflect our values. For example, when we place so much emphasis on documentation, we send the message that we are closed to input from students about their own disability. When we use language like *'specialist'* to describe ourselves, and *'impaired'* to describe the student, we are providing subtle commentary on the hierarchy of the involved parties. When 100% of our efforts are focused on individual accommodations, rather than working to make the environment more usable, we are sending a very medical model message that the problem resides within the individual.

The Social Model of Disability leads us into thinking about how we do what we do. The focus becomes more on universal design, and less on individual accommodations. Universal design is a concept that emerged from the architectural field that is now being applied in other arenas. There is a growing national trend to develop and apply this concept in educational settings. One of the pioneers of this effort is Frank Bowe (2000, p. 45), author of *Universal Design in Education*. He defines universal design as it applies to the educational setting as *"the preparation of curriculum, materials and environments so that they may be used appropriately and with ease, by a wide variety of people."* Many educators have embraced the concept of universal design because its application enhances instruction for all students. When environments are designed based on the principles of universal design, everyone benefits, and individual accommodations become much less necessary.

But what does that look like? Here are two examples.

Example 1:

A university establishes an emergency notification system for faculty, staff and students, and it consists of voice messages calling land lines and cell phones.

This system fails to take into consideration the wide range of needs reflected in a diverse college community. It requires that work-arounds be established to meet the needs of students, faculty, staff, and administrators for whom a voice message is ineffective.

Here is the same situation, but rethought considering the principles of universal design:

A university establishes an emergency alert system that includes voice calls as well as text messaging.

Who is now included that wasn't included in the original scenario?

- Deaf and hard of hearing students
- Younger students for whom texting is part of their culture
- Everyone! This is not simply a disability issue. It is a design issue. This new system is much better designed because it considers the needs of **all** users. The authors of this paper pose that we would never answer a voice call during a class or a meeting, but we would surreptitiously check a text message. And if there is a shooter on campus, we want to know right away, not when the class is over. That is universal design. The system is designed with everyone in mind.

Example 2:

A student with a learning disability needs a notetaker in her classes, and provides a flyer from the Disability Resource Center requesting a volunteer from the class to step forward.

This is a very common scenario that is used at universities and colleges all across the country. However, it is an accommodation that must be worked out each and every time this student begins a semester. It is a work-around for this student, because the way the class is set up is not accessible to her.

Here is the same situation, but rethought considering the principles of universal design:

Faculty post their lecture notes to the web prior to each class, or ask students to each in turn take notes for the entire class that are then posted.

Who is now included that wasn't included in the original scenario?

- Non-traditional students
- Students for whom English is a second language
- Students with a learning style that differs from that of his or her instructor's teaching style
- Students with disabilities
- Any academically at-risk groups

And a wonderful side benefit of this universal design approach is that students with disabilities don't have to go through the whole 'separate but equal' experience of requesting an accommodation. The course is designed with all the diverse possibilities in mind, and everyone benefits. In this scenario, the Disability Resource Center isn't even involved, because the course was designed so well from the outset. And the instructor doesn't have to take up valuable class time to arrange for the accommodation of a volunteer notetaker. It's truly a win/win situation!

How We Express Our Values

You may not realize everything you put 'out there' that tells others about what you value. Many people think only of their mission statement when asked about what their department values. But really, how long has it been since most of us have even read our mission statement? How many years has it been since it was revised?

Case Study: The Disability Resource Center at the University of Arkansas at Little Rock

In 2007, the DRC at UALR began the process of evaluating what we do, how we represent ourselves, and how we live out our values. During this process, we looked at all of the following items and determined if they fit into our current way of thinking. We assessed how well they represented the Social Model of Disability, and if they utilized the principles of universal design.

- Office name
- Mission statement
- Office tag line
- Position titles and descriptions
- Office Structure
- Syllabus statement
- Letter to professors
- Documentation guidelines
- Terminology such as “~~nitake~~” or “~~ase~~ notes”
- How we represent ourselves on the web
- All policies and procedures

At the end of this evaluation process, we realized we had many dramatic changes to make. Here are a few of the changes:

Office Name

Old	Disability Support Services
Problems	The terms “ support ” and “ services ” are more medical model terms. They imply that students with disabilities need “ support ” and they keep the focus on the student as the problem rather than placing the focus on the environmental barriers.
New	Disability Resource Center
Reasons for Change	<p>We want to create an image that is consistent with the other shifts we have made over the years. We are a resource to students and to the campus community and provide services to both.</p> <p>Often, in fact, our role is to assist the campus community in creating more usable and inclusive environments. When this is accomplished access for students with disabilities is seamless.</p> <p>The name “Disability Resource Center” indicates that we are a resource to students as well as other members of the campus community. Through the years we have taken on the role of providing resources and technical assistance even beyond the campus community, in both a routine and very regular way when our colleagues from other institutions call us for assistance and advice, and through programs such as PACE and PEPNet-South/Arkansas SOTAC.</p> <p>Some offices are choosing names that place the focus more directly on the environment—such as Center for Educational Access or similar names. We acknowledge that these names do indeed reflect social model in that they place the responsibility for access less on the student and more on the environment. However, some proponents of name changes that remove the term “disability” argue</p>

that students steer away from their office because of that term. This is a reflection of the problems of our society and the lack of acceptance of diversity. We want to change the way people think about disability rather than shrink away from the reactions that people have to that term. We hope that through our work, our campus community will begin to see the power that goes along with that term and will embrace the rich history of the disability rights movement. We hope that they will come to see disability as an aspect of diversity that is integral to our society and to our campus community.

Mission Statement

Old

The mission of DSS is to eliminate physical and academic barriers and to fulfill the Division of Educational and Student Services concept of assisting students in achieving their educational, career, and personal goals through the full range of institutional and community resources. In addition, the office was established to insure that students with special needs receive support services and accommodations to allow them equal access to all UALR programs, and that they have the opportunity to realize their potential.

Problems

This mission statement was written several years ago and the language reflects more medical model thinking. Words like ~~—assisting,~~ “insure,” ~~—support services,~~ and ~~—allow~~ emphasize the DS professional as being the expert who is helping the student achieve access and success.

The phrase ~~—students with special needs~~” is considered patronizing by many people with disabilities. It also places the focus on the student rather than the environment.

New

Providing access to a diverse student population is embedded in the philosophy of the University of Arkansas at Little Rock.¹ We recognize disability as an aspect of diversity that is integral to society and to the campus community. To this end, the Disability Resource Center collaborates with students, faculty, staff, and community members to create usable, equitable, inclusive and sustainable learning environments.² We promote and facilitate awareness and access through training, partnerships, innovative programs and accommodations.³

1-Adapted from Educational Student Services Mission Statement.

2-Adapted from AHEAD ~~—UDLI-~~endorsed” mission statement.

3-Adapted from University of Arizona’s mission statement.

Reasons for Change

The new mission statement is more consistent with new thinking about disability and with the current focus of the office. It emphasizes the collaborative role of the staff and the emphasis on changing the environment rather than simply responding to each student’s access request.

When we collaborate with students we are recognizing their own expertise in resolving access issues.

Words like ~~—usable,~~ ~~—equitable,~~ ~~—inclusive,~~ and ~~—sustainable~~” are

central to the concept of universal design.

Office Tag Line

Old	The Education You Want, The Services You Need
Problems	The focus is on the student's needs, not on the need for changes in the environment. It communicates that the student needs professional services to get an education
New	Creative Solutions. Together.
Reasons for Change	This can include either environmental changes or accommodations, but it has a more positive feel and emphasizes collaboration.

For a more complete list of changes we've implemented over the last year or two, please go to this website: <http://ualr.edu/pace/index.php/shift>

Where We Go From Here

We are still working toward the social model of disability in our office, and working toward universal design. We aren't done. It will always be a work in progress. But we've also expanded our focus to include the entire university. We realize that in order for universal design to be a reality at UALR, we had to involve the whole campus. We wrote a paper entitled, *A Campus Commitment to Universal Design*, that can be found at ualr.edu/pace/index.php/commitment/. It was primarily authored by Melanie Thornton, with help from Susan Queller and Sharon Downs. It states what we see as necessary steps for us all to take to achieve our vision. We have done several presentations across campus, including to the Chancellor's Leadership Group, the Deans Council, the Academy for Teaching and Learning Excellence, Staff Senate, and Faculty Senate. Our Chancellor has fully supported our efforts, which is a big step in getting us where we want to be. However, we recognize that change comes from below and not from above, and so we will continue our efforts to educate faculty, staff and administrators on universal design and the Social Model of Disability, to help these concepts become part of our campus culture. We are utilizing faculty who are very familiar with these concepts and who support what we're doing to make presentations to their colleagues. We've tied our efforts to the university mission statement and the new strategic plan.

An important part of this commitment paper is the recommendations we provide. Here is that section in its entirety.

Recommendations

The authors of this paper recommend that the University of Arkansas at Little Rock adopt the social model of disability and universal design through the following actions:

1. Adopt a formal campus-wide commitment to universal design and publish a summary statement on key web pages and in undergraduate and graduate catalogs.
Sample statement: *The University of Arkansas at Little Rock values people with disabilities as an integral part of our diverse campus community. We are committed to the creation of usable, equitable, inclusive and sustainable learning environments based on the principles of universal design.*
2. Infuse universal design concepts in faculty and staff training—especially training that relates to course design, Web design, information delivery, and service delivery.

3. Implement a campus diversity initiative and include disability as an aspect of the diversity that is an integral part of our campus community.
4. Revisit campus policies and adapt them to reflect this paradigm shift.
5. As staff and faculty orientation materials are developed, incorporate messages that promote this philosophy as a part of our campus culture.
6. Use the principles of universal design to guide construction/development of all aspects of the campus environment: the built environment, classrooms and labs, the IT environment, instruction, programs, and services. Engage faculty, staff and administrators in identifying disabling environments and reconstructing them based on these principles.
7. Hire architects who are trained in universal design principles and involve the Chancellor's Committee on the ADA in the early planning stages for new buildings and remodeling projects.
8. When we have to retrofit a process, product, or environment or provide an accommodation, consider this a signpost pointing toward the need for redesign.
9. Promote inclusive, equitable design with our vendors or potential vendors by communicating the need for products that are usable, to the greatest extent possible, by all of our students, faculty, staff, visitors, and alumni and purchasing products that meet our standard.
10. Utilize the following as guiding principles as we move forward toward this vision of a more equitable, sustainable and usable campus environment:
 - Disability is an aspect of diversity that is an integral part of society.
 - Disability is a social construct resulting from the present inability of social institutions and designed environments to accommodate individual differences. (Schriner & Scotch)
 - Access is a matter of social justice.
 - Good design means, among other things, that a product, process, or environment is, to the greatest extent possible, usable by everyone.
 - Creating and advocating for usable, sustainable, and inclusive learning environments is a shared responsibility.

Many positive changes are already occurring on our campus. The shift has already begun to take place as DRC representatives are invited to the table in the planning stages of Web development, software purchases, and other decision-making processes. It is our hope that by taking a formal position on this important issue, we can work together to create a tipping point that make this paradigm the primary lens of our campus community and will make our vision become our reality.

In Conclusion

Shift happens – we're proof! But it doesn't happen without commitment, a vision, and a plan. It is our hope that you are now dissatisfied with the status quo, and are ready to take a step in the direction of reframing disability and embracing universal design and the social model, both for your department and for your campus.

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From Idea to Implementation - Universal Design in Action

Arlene C. Stewart & Tara Seyller

Abstract

The presenters demonstrated how one relatively small public university has managed to employ universal design concepts in certain settings across campus. Presenters will share their experiences in providing open captioning for commencement exercises as an example of how collaborative efforts can pay off in increasing access to all types of university programming.



Introduction

Sometimes you find yourself in situations that confound you. Dealing with those issues gives you an opportunity to not only meet the specific challenge but also to go beyond your known resources and skills and to achieve something that was originally quite idealistic. At Clemson University, we have been discussing for a long time how to implement Universal Design (UD) concepts on campus in a way that would make UD real, and manageable, and attractive to administration, faculty and staff members. Such an opportunity came to us a few years ago and although it took us a while to implement UD as a response to the challenge, we now have a real, manageable, and attractive response.

Clemson University is a small, top-30 public institution, in the rural Upstate area of South Carolina. We have about 14,000 students on campus. Students are required to come with a laptop and have many requirements for electronic data submission and development while they are at Clemson, including the development of an e-portfolio and the use of podcasts, clickers and other means of electronic communication.

Student Disability Services typically serves close to 700 students per year, providing the wide gamut of services from screen-reader services, to extended testing time, to interpreting to notetaking and other in-class and out-of-class accommodations for students with all types of disabilities. Like most disability service providers in higher education, we typically respond to student needs in as efficient and effective a manner as possible. We work hard to make sure that our students have access to services both in the classroom and out, and we try to help the students learn how to advocate for themselves.

Paradigms for Service Delivery

Some time back, we realized, however, that we were using the old medical model for services – that is, we were functioning in such a way that presumed that the student had a problem that was theirs and theirs alone and that we would try to “fix” that problem when the student asked for help.

The way in which “fixing” the problem worked often jeopardized the student’s confidentiality and sometimes was slow in being implemented.

As a program, we decided to try an approach that would use the concepts inherent in Universal Design and that would encompass a more interactive model of service delivery. The interactive model is much more student-centered and expects that the student be proactive, putting services in place before there is a specific need. The model also expects students to be engaged, involved participants in the services process, dealing directly with professors and advocating for themselves in a manner that is non-threatening to faculty but also clear and direct in specifying appropriate accommodations in the classroom. The approach incorporates the idea that the need is not for a “special accommodation” but rather for something that will allow the student to perform at optimal levels despite the identified disability. The interactive model, as we interpret it, is very effective and appropriate, and incorporates another model... Universal Design.

Universal Design

The concept of Universal Design comes from the work of Ron Mace at North Carolina State University in the early 1990s (The Center for Universal Design, 2008). Mace, an architecture and design professor and the person who coined the term Universal Design, saw that in his field and in others, it would be a better idea to plan for the needs of people in general rather than fix the problems for individuals with disabilities when they arise. The design of products and environments to be usable by all people, to the greatest extent possible, without adaptation or specialized design is his definition of the term.

Some of the basic understandings about Universal Design, especially in higher education, are as follows:

- Focuses on usability, not accessibility
- Is minimally concerned with code/legal requirements
- Is sustainable, stable, and equitable
- Involves entire community/institution
- Based on a user-centered approach
- Idea is to change the environment, not the student
- Removes barriers
- Anticipates rather than reacts
- Is largely invisible

In working to make Clemson’s services more interactive and more in keeping with the Universal Design concept, we adopted a goal of using Universal Design concepts not only in revamping our service delivery but also of educating people in administrative, staff, and faculty positions what that means and how to implement it. We’ve distributed literature to faculty, spoken at meetings, and discussed the UD concept at every opportunity. A few issues about interpreting at graduation led us to a perfect way of not only talking about UD but also of demonstrating it.

Graduation

As on other campuses, graduation—especially the big May/June graduation ceremony—is an opportunity for the University to show thousands of graduates, relatives, and others what a wonderful campus we have and how well we do things. In the Student Disability Services office, however, we had some concerns as related to access for students, and family and friends who are deaf or have hearing disabilities.

If we had a request for interpreter service for graduation, because of the design of our coliseum where the ceremonies are held, the only place an interpreter could stand was on the dais with all the

dignitaries. This proved to be far from ideal in that it was difficult to position the person who requested interpreter service in an appropriate place to have uninterrupted visual access between the interpreter and the person who requested services. It also presented a problem on the dais... where to put the interpreter so that members of the stage party were not looking at the back of the interpreter? One year we tried ~~the~~ "the interpreter on a box" method. We put a wooden box behind the dignitaries for the interpreter to stand on. It worked, but it put the interpreter at a greater distance from the persons who requested the service, making it more difficult for the signs to be seen clearly.

Enter Universal Design. As we discussed the issues with interpreting, it became clear that many people who come to graduation ceremonies could use help in understanding the speeches and directions given from the podium but that most would not know to request services, assume that services may not be available, or just not want to request services and make their needs known. Grandparents with hearing issues, English as a second language speakers, those who have noisy children next to them, and those who were just not paying real close attention, in addition to those with hearing problems, could all benefit from open captioning.

We realize that we could have hired someone to come in, bring all the equipment, and do the captioning. We also know that that is an expensive proposition and that our budget could not handle an outside captionist so we decided to do it ourselves. Other than about \$5,000 for a one-time expense for equipment, the costs are minimal; we now have the equipment to use not only at graduation but at other events and in other venues.

Before we did graduation captioning, we had an opportunity to experiment in other areas and with other equipment. Our Alumni Office had requested help with hearing amplification for two of their spring activities which are heavily attended by older alumni who are likely to have hearing issues. We explained the Universal Design concept and asked them if they were willing to let us try the captioning at their events rather than provide amplification systems for a limited number of attendees. Those brave souls were willing, and we captioned three of their events in the year or so before we captioned graduation. Captioning at Alumni Association events was very well received and gave us the confidence we needed to do it in a bigger venue with a much larger audience.

Our coliseum, like many is also our basketball venue... with a lovely, large screen that is used for the scoreboard. The screen sits in the middle of the coliseum, moves up and down, and can be seen from every seat in the building. We set about finding out how to gain access to using that screen so that we could do captioning during the ceremonies in a way that could be easily accessed by the audience and yet was virtually invisible.

Collaboration

The need for collaboration became very clear as we began to work our way through all the questions that came up. It was interesting to us to learn how many different units on campus would be impacted by our efforts and how many would impact our activities.

The Graduation Planning Committee had many questions about how it could work, about the reliability of the system, and about the expense involved. Their questions were quite legitimate and took a while to work through.

The coliseum staff was most helpful in working with us to figure out how we could use our captioning equipment to plug into their system. There were two pieces of equipment missing: an encoder/decoder and a video switcher. Our campus computing department agreed to buy the video switcher since they could see the need for that equipment in the future in some of their activities.

The Dean of Undergraduate Studies was able to fund the encoder/decoder. The cost of a captionist for both ceremonies was approximately the same as the cost of two interpreters for the one ceremony.

Clemson Video Production Services always films graduation ceremonies, so there was no problem having cameras on site. The only difference was getting them to give us a live feed during the ceremony. At one point, a technician had to make a cable with an appropriate plug, but he was very willing to do that. In fact, he checked in with us frequently on the day of the first captioned graduation ceremonies to make sure it was working as it should. Since then we've been able to buy a cable (for less than \$40.00) to replace the homemade one.

Others became involved in the collaboration. The President's Office provided scripts for the ceremonies and for speeches by honorees. The Registrar's Office gave us a list of graduates by college and degree. The Director of the choral group gave us the words for the music. The Student Affairs Office gave us the script for the devotionals to be delivered by students. And the Communication Studies Department gave us a copy of the award-winning speech to be delivered by the student speaker. All this information was pre-loaded into the captioning program so we could follow along during the ceremonies to make sure we were showing the right information. We also had the option of switching to live captioning if one of the speakers chose to *ad lib*.

On graduation day, the coliseum staff provided an operator for the video switcher and Disability Services provided a person to help with logistics, should there be any problems. The logistics person also stayed in touch with members of the graduation committee to make sure there were no changes to the prepared script. Other staff needed to implement the process included the captionist and a reader to make sure that what is showing on the screen is what should be there.

Equipment Resources for Graduation Captioning

The following equipment is what we use. Note that we chose to use the 600 version of the CPC Caption Maker software. We have found this equipment to be both affordable and dependable.

Component	Source	Price	Purpose	Notes
Laptop computer with speed typing or voice recognition software	Various	Already in-house	Support captioning software; live captioning input	Check with CPC for compatibility of speed typing or voice recognition software with Caption Maker software
CPC Caption Maker software	Computer Prompting and Captioning Company www.cpcweb.com	CPC500 \$1995.00 CPC600 \$2995.00	Interfaces with encoder/decoder to place captions over video feed and send to display	CPC 500 handles live captioning ONLY; CPC 600 allows prepared scripts to be sent to screen as they are spoken

Encoder/Decoder Link PCE-845D	Link Electronics www.linkelectronics.com/home.htm	~ \$1200.00	Mixes captioning from laptop with video feed for output to screen	
RS 232 Cardbus PC Card (Koutech Systems Inc)	www.newegg.com	\$34.99	Connects laptop to encoder	The enclosed cable is short and may need an extender cable
Video feed	Video camera(s)		To mix with captions at the encoder	
Display screen			For display of mixed video and captions	Size and type depends on audience

Note: Costs indicated reflect the authors' experience when initiating this activity and may change over time.

Benefits of Graduation Captioning

We are pleased to report that Clemson University now considers captioning at graduation a service that is to be provided whether there are requests for interpreters or not. The comments from audience members-at-large have been very positive. Attendees with hearing issues are pleased that they no longer are singled out to receive services and that they have the option of sitting anywhere they would like in the coliseum, just like every other attendee.

A side benefit that parents appreciate is the opportunity to see their graduate's face on the large screen as they enter the coliseum. They also then get a good view of their graduate as they receive their degree from the university president.

Conclusion

Open captioning for large-scale events such as graduation is a very appropriate and helpful accommodation for individuals with hearing issues. In addition, it is a very appropriate and helpful service for all attendees, regardless of disability issues. We at Clemson encourage you to try it. You and everyone else will like it.

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Anticipating Diversity: Weaving Universal Design into your Campus Tapestry and Beyond

Sharon Downs & Melanie Thornton

Abstract

Implementing universal design concepts on a college campus requires involving the whole campus. To undertake such an effort, those involved must be openly committed to the values of inclusion and the social model of disability. This paper explores the strategic planning process as a tool for moving your campus forward – for opening minds and changing the culture at your school. We review the values that drive current practice, explore the tenets of organizational change, and discuss the social model of disability as a way to reframe disability and move your campus forward toward the vision of universal design.



Introduction

Most of us recognize the need for change toward a more universally designed, inclusive environment. We value, or even embrace, the concepts of universal design and inclusion. Many of us even try to put the principles into practice in our sphere of influence and incorporate them into our professional development activities. At the same time, many of us feel powerless to initiate change on a higher level in the institutions where we work. We are left with more questions than answers. What is the current organizational culture? How does change happen on an organizational level? How can we play a role in making it happen?

Our challenge is not a new one. Corporations have faced this challenge for many years—the challenge of getting people moving in a new direction, the challenge of obtaining support for new ideas. The problem, then, is not that it cannot be done, but that those of us who are most interested in seeing these changes happen do not have all of the information we need. We can step outside of our discipline and benefit from the knowledge base of organizational change strategists who have worked to change corporations for years. There are many and varied strategic approaches that we can adopt as models.

Organizational change can seem like a daunting task, and there are many books and models out there that can feel overwhelming to process. However, most of them can be whittled down to the following seven ideas:

- Creating a shared vision
- Communicating that vision to others

- Finding allies
- Increasing driving forces
- Decreasing resisting forces
- Celebrating wins—big and small
- Recognizing the importance of the individual

Strategic planning can be an effective tool to accomplish the task of organizational change. It is often helpful to have an objective ‘outsider’ to facilitate discussions about where we are and where we want to be.

The strategic planning process is really quite simple. It involves beginning with the end in mind. It involves considering the following questions:

Who are we? What is our mission? What is our vision? What do we value? What makes us unique?

Where are we now? What are our strengths? What are our weaknesses? What opportunities exist? What threats exist for us?

Where are we going? Do we need to change? Does where we are now and what we are doing match who we are?

How will we get there? What are our goals? Objectives? What activities will take us toward those goals? Who will be responsible for what?

How will we know when we are there? What template do we hold up as the vision? How will we measure and evaluate our progress? What will our stakeholders be saying? Doing?

The Importance of Vision

The need to have a clear picture of where we are headed seems to be hardwired into us. In fact, many examples of this basic biological phenomenon can be seen in nature. One illustration of this can be seen in the butterfly, *Pieris virginiensis*. A group of ecologists were studying how this species of butterfly identifies its host plant. They did two experiments. In the first, they placed a leaf of the host plant on one end of a box and a leaf of another plant on the other end. The larvae of this butterfly were released in the box. They traveled randomly about half ending up at the host plant and the other half at the other plant. Eventually they all ended up at the host plant. In the second experiment, they placed the leaf of the host plant flat in the box and the other leaf upright on a stick. This time all of the larvae traveled toward the non-host plant first. It was apparent from the experiment that the larvae are in search of —uprightness.” They are genetically wired to do so. We, too, need to have a vision or template to guide us in our work. We propose the principles of universal design and culturally affirmative environments as a template to guide our work. Therefore, one of the goals of this discussion is to establish a clearer vision—to think about what it will look like if we are successful in our work. We’ll begin with an effort to establish some shared language.

Pathological vs. Cultural View of Deafness

Professionals who work with the Deaf community will be very familiar with the comparison between the pathological view of deafness as compared to the cultural view. Those who view deafness through a pathological perspective see deafness as a deficiency. They are likely to think of it as a problem to be ‘fixed.’ Those who view deafness from the cultural perspective are likely to see being deaf as a difference, as an aspect of diversity. They are likely to understand Deaf pride

and to see American Sign Language as equal to any spoken language. They are likely to recognize the Deaf Community as having its own culture and rich history.

Medical Model vs. Social Model of Disability

Similarly, there are views of disability that frame it in different ways. These frames are sometimes referred to as the Medical Model of Disability and the Social Model of Disability. In the Medical Model, being disabled is seen as negative. Disability resides in the individual. Remedy or cure is the normalization of the individual. The agent of remedy is the professional who affects the arrangements between the individual and society.

By contrast, the Social Model frames disability as a difference—an aspect of a person's diversity, just like race or sexual orientation. It's just a part of who you are, with no value judgments attached. Being disabled, in itself, is neutral. In the Social Model, disability does not reside in the individual at all. Disability comes from the barriers in our environment. The remedy in the social model is a change in the interaction between the individual and society. The remedy is designing environments to be accessible for everyone. The agent of remedy can be the individual, an advocate, or anyone who affects the arrangements between the individual and society.

This has enormous implications for how we approach what we do. Rather than us being the gatekeepers for individual accommodations and services for students with disabilities, our focus must shift to changing our campus environments for the better. And anyone can be involved in that process.

Accommodations versus Universal Design

Many campuses are beginning to provide resources and training on universal design. In most instances, disability resource professionals are looking across the campus at instruction and information technology environments and considering how universal design might be implemented. More recently, many of us are realizing that we need to take a closer look at our own practices. When we respond to an environmental barrier with an accommodation, we need to consider the implications of that response.

Accommodations are needed when environments are not universally designed. In the accommodations model, access is a problem for the individual with a disability, and should be addressed by that person and disability services. Access requires that accommodations are made, or existing requirements are retrofitted. Access is retroactive in nature. Access is often provided in a separate location or through special treatment. And finally, access must be reconsidered each time a new individual uses the system.

By making the paradigm shift to universal design, we see that access issues stem from inaccessible or poorly designed environments and should be addressed by the designer. All systems and environments should be designed, to the greatest extent possible, to be usable by all. Access is proactive in nature, and is inclusive. Access, as part of the environmental design, is sustainable.

So if we all stop and think about what we do, especially those of us that work on college campuses, we can see that we are at times a part of the problem. The typical scenario is that the student comes in because they are registered in classes that present barriers and we respond by focusing on what they need to gain access to the material or activity. Whatever the barrier might be, we brainstorm and fix it or find a work-around. That is the accommodation model. By looking through our new lens, we realize that we should see accommodation requests as signposts that something in the environment needs to be changed—that there is something in the design of the environment that is problematic. Once that change takes place, students will not have to ask for that individual

accommodation again. We can work proactively rather than reactively. When we fail to change the environment to be more accessible, we are creating the need for accommodations in the student. We are part of the problem, and not part of the solution.

What is Universal Design?

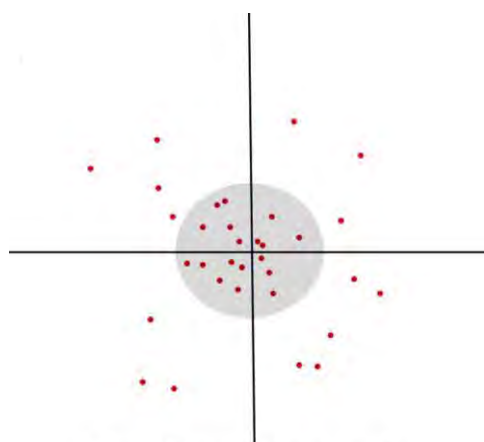
Universal design is a conceptual framework for designing and developing inclusive environments. It stems from the attitude that environments are disabling to individuals and that they could be designed in ways that are usable by a majority of people with a variety of personal differences. Universal design reframes the concept of accessibility from “special features for a few” to “good design for many.”

Ron Mace, who coined the term ‘Universal Design,’ said: Universal design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

Universal Design utilizes the following principles:

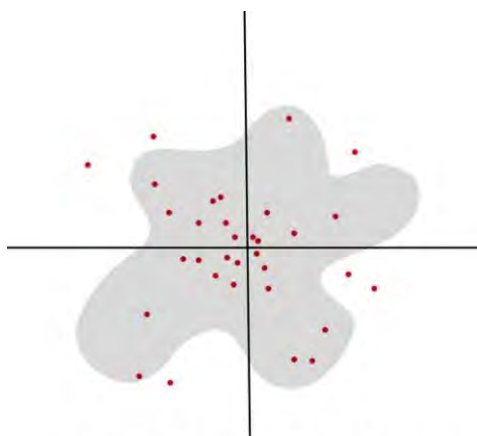
- Equitable use
- Flexibility in use
- Simple and intuitive use
- Perceptible information
- Tolerance for error
- Low physical effort
- Size and space for approach and use

The philosophy challenges us to think in new ways—to anticipate the variety of settings and conditions in which people perform a task or use an object...



Traditional Approach

... and then to design the process, course, or object with those diverse possibilities in mind.



Universal Design Approach

These illustrations might represent the instructor's teaching style (the grey shape), and the various learning styles of students in her class (the red dots). When information is presented in one way, for instance, lecturing, it is not effective for many students in the class. When the professor anticipates diversity in her students and therefore designs her class to meet all the needs she might encounter, then more students will benefit. Rather than only lecturing, she could also encourage small group activities, incorporate interactive projects, and use teaching methods that benefit auditory learners and kinesthetic learners. By designing her class in this way, with the goal of making it effective for the greatest number of students, she creates an environment in the class that is inclusive and affirming. In addition, she eliminates the need for many accommodations.

As an example, consider, consider the issue of notetaking. Most universities have a process for recruiting notetakers. It often involves the student, perhaps a deaf or hard of hearing student, bringing a flyer from the Disabilities Office to the professor. The professor announces that a student with a disability is in need of a notetaker, and works to facilitate that process. This is a process that is repeated each and every time this student takes a class.

A way to approach this using the principles of universal design would be for the professor to post her notes to the online course shell for all students to use. Another approach would be for students in the class to take turns as notetaker for the entire class, and for those notes to be posted every day. This would eliminate the need for the deaf or hard of hearing student to request the accommodation. And doing so makes the class more universally designed. Those posted notes will benefit not only the student with a disability, but also international students in the class, students from academically at-risk groups, and students whose learning style differs from the teaching style of the instructor. This also keeps the disabled student from experiencing the whole 'separate but equal' situation. Everyone benefits from this approach, and a separate process doesn't have to be utilized for the deaf student. It's truly win/win for everyone involved.

Envisioning Change: The AnyTown Model

The authors have developed an approach for creating a shared vision that has been effective with audiences that represent various institutions. Since creative brainstorming and dialogue is often inhibited by the differences between campus environments, the authors invite participants to engage in an envisioning process that suspends that reality for a time. Participants are asked to become members of the AnyTown University campus community. They adopt a new identity by taking a nametag that identifies them as a member of this community with a fictional name.

This activity follows an in-depth discussion of the social model of disability and universal design. The prompt that participants are given initially is worded as follows: —You are invited to spend some time at AnyTown University where you can leave your own institution for a while and work together toward a common goal. Participants who are committed to the values of inclusion and universal design are invited to share ideas and begin the work of opening minds and changing the culture here at AnyTown U. and in our community.”

Typically, without prompting, participants also take on the role of a stakeholder on their campus—a faculty member, a dean, a student. This approach seems to effectively enable participants to step out of the confines of their institutions, and their perceptions that change will be difficult or impossible, and to immerse themselves in the possibilities, rather than the limitations.

To set the tone for this more interactive portion of the session, facilitators show a series of slides with quotes related to social justice and change. Those quotes are provided in *Appendix A*.

Facilitators then open the discussion by explaining their roles as facilitators as if they are members of the AnyTown campus community as well. The strategic planning process is driven by a series of questions:

- How will AnyTown University be different when we achieve our vision of universal design?
 - How will we think about —disability?”
 - What will the experience be like for students with disabilities?
 - What will attitudes be like?
 - How will students/staff with disabilities be viewed?
 - Who will be responsible for access?
 - How might the role of the DS office change?
- What are the barriers to change? What might our resisters be saying? How might we respond?

The facilitators then introduce some values for consideration and discuss whether or not these reflect the values of our profession:

- Disability is an aspect of diversity that is an integral part of society.
- Being disabled is, in and of itself, neutral (Gill).
- Disability is a social construct resulting from the present inability of social institutions and designed environments to accommodate individual differences (Schriner & Scotch).
- Access is a matter of social justice.
- Good design means, among other things, that a product, process, or environment is, to the greatest extent possible, usable by everyone.
- An approach requiring retroactive adjustments to be made on an individual, case-by-case basis is not sustainable.
- Creating and advocating for usable, sustainable, and inclusive learning environments is a shared responsibility.
- When a product, process, or environment is not usable, the designer of that process becomes our client—not the person with a disability.
- Group identification is a healthy response to disability.

Typically, participants are able to agree with these values with only minor alterations. Facilitators then move into another level of questioning:

- Are our current practices supporting our vision? Are they consistent with our values?
- What messages do our current practices send to others?
- How can we ensure that our approach and departmental procedures reflect current thinking about disability to affect organizational change?

- What changes can we implement right away?
- What should we do more of? What should we do less of?

Participants often identify several practices as being out of sync with the stated values. Language is often one of the many problem areas identified. Several activities might follow this discussion. One example is to look together at a sample mission statement and consider the language that is problematic. Here is an example of a mission statement that reflects old thinking about disability:

The mission of the Office of Special Student Services is to eliminate physical and academic barriers and to fulfill the concept of assisting students in achieving their educational, career, and personal goals through the full range of institutional and community resources. In addition, the office was established to insure that students with special needs receive support services and accommodations to allow them equal access to all AnyTown University programs, and with our assistance they have the opportunity to realize their potential and succeed in their academic pursuits.

Taking the discussion from the abstract to the tangible seems to be helpful to participants and provides a good transition into the activities that follow. Facilitators end the AnyTown activity and debrief participants about that process, asking what about it was helpful and what about it was frustrating or limiting.

Taking the Vision Home

The authors find it important to provide an opportunity for participants to spend some time beginning to apply the principles and paradigm discussed in an even more tangible way. Depending upon the time available, participants may be asked to work on their own mission statements, syllabus statements, or letters to faculty. At times, facilitators instead provide samples for participants that need to be changed to reflect new thinking about disability. Finally, participants are encouraged to commit to making at least three changes once they return to their own campus.

Conclusion and Recommendations

As stated in the opening remarks, many disability resource providers see the value in the concept of universal design and social model of disability but are uncertain about how to make change happen at their university. The message that the authors want to send is that when professionals focus on implementing changes in their immediate area of influence, those changes send a powerful message across the campus. At the University of Arkansas at Little Rock, initial attempts to implement universal design began with a focus on faculty. We found that approach alone is not sustainable. A more systemic approach was needed. The focus on making changes in the way the Disability Resource Center approaches its work, has provided opportunities to move the campus toward a model of universal design through everyday interactions with faculty, staff and administrators, rather than just an occasional opportunity to engage a small number of faculty in professional development activities.

Finally, we suggest that the AnyTown activity provides a model that can be emulated on individual campuses. This particular activity was developed to bring people together who represent a variety of campuses. One might adapt this activity in order to begin a creative process of dialogue within one's department or among allies on a given campus. When the authors have worked with staff from the same institution or agency, they have instead suggested that staff take on roles of other stakeholders or people who are impacted by what they do. Staff in a Disability Resource office might, for example, take on the perspective of faculty, administrators or students as they consider re-envisioning and reinventing the office culture and structure. Regardless of the approach taken,

the authors challenge professionals in the field to take the time to set aside “business as usual” and consider their language, office culture, structure and practices through the lens of social model of disability and universal design. (For information on how the University of Arkansas at Little Rock has approached this task, see the proceedings from the PEPNet 2008 Conference entitled *Shift Happens*.)

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Appendix A

Freedom doesn't come with a piece of paper. A piece of paper doesn't end a long history of intentional and purposeful discrimination. Ignorance is our greatest enemy... excluding someone from society simply because of disability is WRONG.

~ Bill Clinton

A law cannot guarantee what a culture will not give.

~ Mary Johnson, Editor of *Ragged Edge Online*

Injustice anywhere is a threat to justice everywhere.

~ Dr. Martin Luther King Jr.

Now is the time for all of us to take our power back and become, each of us, Extreme Leaders in our own right. We have to set a new example of what's right ...to be audacious enough to follow the examples we respect and challenge the ones we don't.

~ Steve Farber, *The Radical Leap*

Three different responses to change:

- *Those who let it happen*
- *Those who make it happen*
- *Those who wonder what happened?!*

~ Anonymous

We can do anything we want to if we stick to it long enough.

~ Helen Keller

We must not, in trying to think about how we can make a big difference, ignore the small daily differences we can make.

~ Marian Wright Edelman

If you ever think we are too small to make a difference, try spending the night cooped up with a mosquito.

~ Swahili proverb

There is a simple way to package information that, under the right circumstances, can make it irresistible. All you have to do is find it.

~ Malcolm Gladwell *The Tipping Point*

... the channel with the greatest influence in America is neither the traditional media of tv, radio, or print advertising nor the new medium of the World Wide Web but the "human" channel of individual, person-to-person, word-of-mouth.

~ Ed Keller and Jon Berry, *The Influentials*

Nothing great was ever achieved without enthusiasm.

~ Ralph Waldo Emerson

If the shoe doesn't fit, must we change the foot?

~ Gloria Steinem

Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has.

~ Margaret Mead

Be the change you want to see in the world.

~ Mahatma Ghandi

If we are to achieve a richer culture, rich in contrasting values, we must recognize the whole gamut of human potentialities, and so weave a less arbitrary social fabric, one in which each diverse human gift will find a fitting place.

~ Margaret Mead

Education is the most powerful weapon which you can use to change the world.

~ Nelson Mandela

LEADERSHIP

Creating a Mentoring Program for Speech-to-Text Services

Kim Thiessen & Brian Buma

Abstract

Mentoring is, in effect, an effort to decrease the learning curve for pre-professionals (speech-to-text providers with little or no experience), putting more qualified service providers into classrooms in a shorter period of time, and ultimately to give clients the best service possible. Pre-professionals have a difficult time in what many consider to be a very intense situation, with extensive responsibilities, a fast flow of information, and a physical skill requirement which may, or may not, be attained prior to going into an actual classroom. To counter that pressure, and to ensure better services for the clients, a mentor (professional transcriber with training in mentoring techniques) can serve as a one-on-one educative resource for the pre-professional, answering questions, sharing tips and techniques, providing moral support, and functioning as a liaison between the pre-professional and the site administrator if necessary. This article attempts to illustrate what one program, at Western Washington University, has developed in an attempt to create an optimal mentoring system for new hires. Not everything in the following material will apply to all programs, and some programs will undoubtedly need additional preparation and plans. While there will be differences between programs and locations based on different site policies and the particular service being provided, a mentoring program will greatly ease the transition from “pre-professional” into “professional service provider,” and ultimately improve quality of service. At the end, a sample order of mentoring priorities is presented.



Introduction

Mentoring, in the sense that will be used throughout the article, is an attempt to create a productive learning relationship between new speech-to-text providers (the pre-professional) and experienced professional service providers. The goal of the relationship is fostering better service faster, turning the pre-professional into an experienced service provider in a timelier manner. Ultimately, this means a higher standard of service to the students. While it is possible that these relationships will occur naturally, the mentoring program described here is an attempt to formalize and standardize the methods of mentoring at one university, extending the benefits to every new service provider. Mentoring is explicitly *not* teaching; professionals are not meant to didactically impart knowledge in this system. Mentoring is more of a guided process of self-exploration and analysis, with the professionals' main role found in probing questions and critical analysis. At times, the mentoring

relationship might lean more towards the teaching arena, especially with physical skills, tips, and techniques, but the central role of mentoring is guiding, not direct instruction.

It is extremely important to realize that good mentors are made, not born. It is not sufficient to simply be an experienced, capable service provider; training in good mentoring techniques is a prerequisite to good mentoring. We do not simply send physics professors into a high school classroom, nor should we. Teaching requires a specific skill set which is quite independent of the subject material. This is why even competent mathematicians must learn to communicate to a classroom to be an effective teacher. Many people have experienced a brilliant professor with little to no ~~people~~ skills,” and the experience is rarely positive. Often, those teachers leave their students in a muddle because they are unable to articulate what, at this point in their careers, comes naturally. To the student, the result is either overwhelming or incomprehensible.

At Western Washington University (WWU), we learned these lessons first-hand. Our early attempts at a mentoring program met with scattered success. Those professionals with teaching experience often reported good gains, and the pre-professionals grew faster than they would otherwise. Unfortunately, we also had professionals functioning as mentors who were very talented at service provision but lacking any formal teaching experience. The pre-professionals working with these individuals were often frustrated or bewildered, wondering what they were supposed to be getting out of the mentoring experience. While working with these ~~non-trained~~ professionals certainly didn’t hurt their development, the experience did not result in any gains, and did take valuable time.

Mentoring the Mentors

We find it vital to engage in a pre-mentoring ~~—professional training~~” program for the future mentors. We emphasize the importance of learning to mentor, thinking of mentoring as a technique, not a job shadow or passive experience. Administrators bear the brunt of this particular responsibility. Each professional has a different skill set (and skill deficits), which should and must be addressed prior to setting up a mentoring situation with a pre-professional.

Western Washington University uses its own testing system to first determine, objectively, the skill level of the professional. Only those that reach the highest level of ability qualify. This can exclude some otherwise excellent mentor candidates, but also ensures that each mentor will also model excellent service provision, not just adequate service provision. After this initial screen, the administrator must provide instruction in ~~the art of mentoring~~.” Undoubtedly different site administrators will approach this in different ways, and each professional will have her own personal style of mentoring. This is to be expected and is perfectly acceptable. In fact, one of the major strengths of mentoring is the individualized attention each new hire gets to aid her professional growth. In the end, the professional should feel equipped to adequately guide the pre-professional in his journey towards becoming a professional service provider by whatever path necessary. More on the responsibilities of the mentor are found in the following sections, as well as some techniques for new mentors to use.

The site administrator needs to assign professionals and pre-professionals together, on the basis of both personality compatibility (to the extent that is possible) and available times. In our experience, mentoring is most effective if done immediately following a class in which both the professional and the pre-professional are working (i.e. class from 10:00 to 11:00 AM, mentoring from 11:00 to 12:00). Mentoring done later in the day or week is still of value, but the benefits of immediate feedback are lost. This means two service providers in the same classroom, ~~—claiming~~” the class. While more expensive in terms of man-hours, we’ve found that mentoring when the mentor and the pre-professional do not share a class is of little value.

Mentoring as a Process

Mentoring, in this program, is not an evaluative program in the traditional sense; there is no benchmark the pre-professional needs to achieve before “passing” (although there is certainly some informal, formative evaluation ongoing throughout the process). WWU uses a more relational approach, preferring to let the pre-professional guide the conversation. If there are any ethical concerns, procedural issues, or new techniques to learn, the pre-professional should ask. In our experience, most of the questions come from situations arising in class: “What should I have done there,” or “Would it have been better to...” Sometimes, however, the pre-professional isn’t even equipped to ask the right question. During the mentor training, the professional is taught to use leading questions, evoking thoughtful responses from the pre-professional and hopefully causing some self-exploration. While we prefer the mentoring relationship to be learner-guided, there are some general pathways and skill progressions that we have found common across all new hires, and therefore we have developed a “curriculum” for mentors to use if needed, listed at the end of this article.

The professional must be aware of several things if he is to provide a good service to the pre-professional. First, the professional needs to remember the stresses of being a new service provider—some will, some won’t. Often times a mentoring session might be nothing but a 50-minute encouragement seminar. That ties in with the second vital piece of mentoring – direct praise and criticism. Untrained professionals tend to notice only the negatives when evaluating somebody, because the good things are assumed (“Well, of course you did that right, that’s your job!”). To a new service provider, however, those good things must be pointed out specifically. Likewise, the mentor should focus on only one or two things which need improvement, and use precise vocabulary when describing those behaviors. A simple “That was good” and “That was bad” is not sufficient for the pre-professional to learn. Overwhelming a pre-professional is of little value, and likely to cause more burnout than progress. The mentor needs to be open and transparent about his own short-comings as well, modeling appropriate behaviors in the classroom. This means assessing what could have been done better, even if (especially if) the professional was responsible.

The underlying goal of a mentor’s action is creating a meta-awareness inside the pre-professional; the new service provider needs the skill of *self-analysis*, knowing what she did and how to improve. Self-criticism, but not self-abuse, is a difficult skill to learn; the mentoring relationship should model that behavior. Once the pre-professional can take on responsibility for her own growth and skill development, and the resultant independence, she will be ready to go out on her own. By no means is she ready to be a mentor herself, of course. Rather, the professional slowly fades out of the picture as the pre-professional assumes more and more of the responsibilities for good service provision, including self-critique, assessment, and problem solving.

The Pre-Professional

The role of the pre-professional must not be lost in all the preparation of the mentor; indeed, a willing learner is required for any progress to be made. The new hire needs to be comfortable asking questions, probing for better methods, asking “Is there a better way to do that?” and thinking about his own performance in critical ways. Not only that, the pre-professional must be willing to stretch himself and avoid fostering dependency on the mentor for support or encouragement. The site administrator must make this clear at the outset, so all expectations are clear. Mentoring exists for the pre-professional (and ultimately for the person receiving services), and should be treated as professional development by everyone concerned.

Sample Mentoring Program

While mentoring exists primarily as a pre-professional, learner-centered program, the mentor will also have the opportunity to guide the conversations and focus areas. If the pre-professional has no

immediate concerns, or does not know how to articulate any questions or skill related issues, the professional will need to take the lead as a ~~teacher~~.” While the traditional role of a teacher is explicitly not identified with the mentoring program, sometimes teaching techniques are useful. At WWU, we have tried several different approaches (and sequences) to teaching the various skills required for excellent speech-to-text service provision, and have created the following standard curriculum based on the needs we see most commonly in new employees. While it is designed around meaning-for-meaning speech-to-text services (Typewell specifically), the general layout and order of priorities are potentially transferable to other services. It is also vital to remember that mentoring is individualized (indeed, that is the main strength) and therefore realities of mentoring, on a person-to-person basis, may differ. This list describes how and why we teach specific skills in the particular order we do. Everything is, as always, designed with the best possible service provision to the student in mind, and presumes that the mentor and pre-professional are working together, in real service, at least a few times a week.

Sample Curriculum

Order of Priorities:

- Professionalism
- Readability – spelling/proper expansion
- Readability – grammar
- Chunking
- Completeness
- Readability – phrasing
- Editing
- Professionalism/Dealing with teachers
- Equipment Issues

Justification of Each

Professionalism: Service providers frequently come across unplanned and new situations for which there has been no specific training. Dealing with those situations requires a student-centered mindset, confidence and assertiveness, and knowledge of the general guidelines and policies of the site. These need to be practiced, if possible, even before the pre-professional gets into the classroom because even in a mentoring situation unexpected situations might occur where the pre-professional may need to take on full service provider responsibilities on her own.

A second vital skill associated with professionalism, and which could potentially need to be addressed at this stage, is self-analysis. Professionals constantly need to evaluate their performance in order to improve, and this is equally true, if not more so, for pre-professionals. Generating an awareness of both their internal thought processes and outputs will be necessary for pre-professionals to succeed in both the training and the job.

Readability – Spelling/Proper Expansion: The largest barrier towards an understandable transcript is spelling. Pre-professionals need to be near-perfect in properly spelling the correct word, and by extension, not spelling the wrong word (via mis-expansion). This skill will vary between incoming hires, some will be excellent spellers, some will not. These issues need to be addressed in class, by the team (preferably the hire acting as the mentor) for two reasons: First, the student needs to receive accurate information in class. Second, immediate correction of mistakes is more effective at preventing future mistakes than delayed feedback. If the pre-professional needs extra training, drills can be conducted for spelling, vocabulary words, or other issues.

Readability – Grammar: Commas, colons, dashes, and proper capitalization (among others) greatly increase readability and flow of ideas, even in poorly worded sentences. Once the pre-professional

is properly spelling words, he needs to arrange them in a grammatical fashion. Again, this issue should be addressed in class, immediately, for the same reasons as listed before; poor pronoun use, for example, is the second most common complaint from consumers. Grammar drills can also be conducted if necessary.

Chunking: Chunking is the true essence of “~~mean~~ing-for-meaning” service provision, and a difficult step for pre-professionals to make. However, it is vital to address proper chunking relatively early in a training program, because reliance on speed (and therefore more word-for-word transcription) will only develop bad habits. Proper chunking decreases the necessary word count and allows for the inclusion of more ideas in the same length of time. A good chunking technique is vital for readability as well, because written language is far different from the spoken language; to provide equal communication access, professionals must translate between the two. This requires mental effort, not just good typing technique, and therefore takes time. Proper chunking will be addressed outside of class, with questions such as “How could you have typed this differently?” or “How do you think this reads to a Deaf individual?”

Completeness: Only at this point in the training does the pre-professional have the necessary skills to obtain 100% of the main points in a lecture. Prior to this, the team/mentor is most likely taking notes for inclusion later (during editing), which while necessary, is not preferable. At this point, the mentor should be able to move to in-class prompting, via whatever means the team finds most agreeable. This skill is vital for good teaming, and the pre-professional should be able to perform the same service for the mentor (if necessary).

Readability (phrasing): This skill is vital to a professional-looking transcription, and while difficult, is a distinguishing characteristic between a good hire and an excellent, certification-level hire. Awkward phrases and sentences need to be eliminated so the student need not spent time interpreting the transcript. Sentences should be transparent and quickly readable in class. This skill will be worked on outside of class so ample time is available for discussion of mental processing and techniques to ensure the best possible phrasing.

Editing (if applicable): Once the hire is performing adequately in class, editing can be discussed. Prior to this point, the mentor is performing all the editing duties (with or without the pre-professional’s help). At this stage, the pre-professional has the tools necessary to properly edit a transcript, and the mentor can aid the pre-professional with tips and techniques on the specifics of editing (proper order of editing priorities, site-specific policies, etc).

Professionalism (dealing with teachers): Throughout the training, issues with instructors will likely have come up, and so the pre-professional will have seen the mentor deal appropriately with those situations. Ideally, the pre-professional has taken the lead in various situations in the classroom with the mentor serving as a backup/support role. As the mentoring period comes to an end, however, the pre-professional needs to be able to deal independently with those situations, and so time must be spent dealing with specific questions, site-specific policies, and whatever else is necessary to properly equip a pre-professional to deal with instructors on her own.

Equipment: In the same vein as the previous section, the pre-professional needs to be confident in his ability to handle equipment malfunctions, problems, and situations, such as linking issues. Since this requires some technical experience, not all hires will be immediately comfortable with the instruction; however it is vital for any hire who will be working independently. Depending on site policies and service-specific equipment, the pre-professional should be given the tools required to deal with unforeseen situations as they arise.

Specific Techniques for Mentoring

Professionalism: Role-playing situations are excellent ways to get pre-professionals into the proper mindset, and while they can't simulate a classroom exactly, stimulating questions like, —A professor addresses you in class, asking you not to transcribe some vulgar joke he is about to make, what do you do?" can get pre-professionals at least considering the variety of situations they will experience in the classroom.

Readability – Spelling/Proper Expansion: While most training programs will ideally cover proper spelling, expansion, or any other skills specific to the type of service being provided, it is highly likely that pre-professionals will be deficient in some areas, and therefore intensive practice should be provided on an individual needs basis. Drills, practice transcripts, and video practice are all useful. If the anticipated content in a future class appears to be a difficulty, attending a similar class, finding documentaries on the same subject, or reading a preparatory book on the content would also be useful in mastering the vocabulary which will likely be a problem.

Readability – Grammar: Grammar is a skill which, depending on the pre-professional's background, may require practice. Worksheets, drills, and intensive analysis of the pre-professionals work are all valuable in both seeing what improper grammar looks like and developing a sense of the best way to word a given statement according to grammatical rules. Books like *Eats Shoots and Leaves* by Lynne Truss and the online Purdue writing center (<http://owl.english.purdue.edu/>) could be useful as well.

Chunking: Most universities have a video library with collections of videotape or DVD lectures available to students and staff. Using these actual lectures simulates a classroom situation far better than typing a documentary or other television show, and allows the pre-professional the freedom to pause, rewind, and otherwise self-analyze her work for the best modes and options for chunking available.

Completeness: There is little substitute for completeness training beyond practice, practice, and more practice. Videos of lectures and in-class time are the most important contributors to the pre-professionals success in this area.

Readability (phrasing): Sets of sentences to reword for practice are very useful from a meta-analysis standpoint. An intensive, critical look at the pre-professionals work will be helpful in getting the pre-professional to look at his work in the light of —When the student reads this, how will she understand it?"

Editing: Many editing policies (if there is any editing of the transcript at all) are site specific, and therefore training techniques will necessarily be individualized to the specific location. Some general ideas, however, include using simulated transcripts with single-error types of mistakes (only grammar errors, only spelling errors, only formatting errors, etc) to focus on a particular kind of correction, examples of real transcripts (before/after), and intensive focus on small sections of the transcript with a —How would the student read this passage?" mentality.

Professionalism (dealing with teachers): In terms of direct instruction, the pre-professional can practice hypothetical situations as set up in either a discussion or a role-playing situation by the mentor. In the classroom, the mentor can place responsibility on the pre-professional by saying, —If something comes up, you handle it." Even if nothing happens, there is some benefit to putting the pre-professional in that mindset – she will anticipate possible responses while in class, a valuable practice.

Equipment: Obviously equipment issues are related specifically to the type of service and the institutional policies. Instructions for setting up linking, repairing linking problems, perhaps a checklist of things to look at when computers fail to link, and other instructions can be useful reference material. In addition, the mentor could purposely “break” the equipment so the pre-professional has a chance to attempt a fix in a controlled environment.

Conclusion

The mentoring program should provide a faster route to an experienced service provider than a new hire could achieve on her or his own. Rather than learning all lessons the hard way, a mentor can encourage, guide, and aid the pre-professional through the process. Often, in places without a formal mentoring program, this role is filled (sometimes consciously, sometimes not) by the site administrator. The professional mentor allows for direct instruction and advice, in the classroom, in real time – a convenience that a site administrator, with all her other duties, simply cannot match. A professional mentor can also identify directly with the pre-professional, and aid his growth in an individualized manner. It must be remembered, however, that experience is no substitute for training when it comes to effective mentoring. Mentoring is an art, and basic teaching techniques must be learned. When creating a mentoring program, the site administrator must first train the mentors.

While a basic curricula has been presented, the strength of mentoring lies in its learner-centered approach. If there are questions or concerns raised by the pre-professional, those should be addressed; an atmosphere of constructive self-criticism must be encouraged. The “teaching” aspect of mentoring should only be used in absence of any pre-professional questions or concerns. When implementing a mentoring program, everyone must treat it as professional development, a tool to create better service providers in a timelier manner. Given enthusiasm from all participants, a willing attitude to learn (from both the professional and the pre-professional), and a site administrator committed to the mentoring idea, better service provision should result.

Continuing Education for Speech-to-Text Providers: A Fundamental Piece of the Puzzle

Jennie Bourgeois & Judy Colwell

Abstract

One of the most important pieces of the "high-quality speech-to-text service puzzle" is on-going skill development, for both service providers and supervisors overseeing service delivery programs. The Speech-to-Text Services Network (STSN) has made the on-going skill development of those in the speech-to-text community one of its primary missions. This presentation provided details about the STSN Continuing Education Project, including the Professional Development Recognition Program. It also demonstrated several of the "remote" learning tools developed by STSN. These include an on-line tool for service provider skill enhancement, which includes audio practice materials, self-journaling/feedback forms, and progress tracking forms. Audience participants had the opportunity to work with one of these continuing education tools.



Providing Continuing Education Opportunities

Continuing education for speech to text providers is a primary focus of STSN, the Speech to Text Services Network. So, why is continuing education good? For one thing, it helps individuals to grow, and it helps to grow our profession. Who of you who have background or familiarity with the Registry of Interpreters for the Deaf (RID)? Almost everybody in here. Continuing education is one of the foundations of RID—to help interpreters to grow, develop, and mature in their profession and to help move the profession forward. That's the same model that we're trying to move forward with STSN: we in the speech-to text-field need much more than just the initial training, whether it be for CART, C-Print, or TypeWell.

Continuing education is also important for motivation. Whenever we participate in training and come to presentations like this, it's motivating. For those of you who are service providers, when you go to conferences like this, we hope you go away recharged or more integrated. We also hope that you use the new technologies or ideas you picked up from workshops and networking with others. Continuing education motivates us to move forward.

Continuing education gives recognition to the profession. Whenever we start advertising upcoming workshops, people start questioning, "What is this about exactly?" It gives recognition to us as professionals; it shows that we are interested in the profession and the STSN organization, as well as ourselves as individuals.

In general, when you think about training, you think about conferences and workshops. However, although we emphasize participating in conferences and workshops, there also are other avenues to get continuing education.

There were many speech-to-text presentations at the PEPNet conference. For those people unable to attend those sessions, the conference proceedings will be available online later this year.

Other workshops are happening, too. In June 2008, the National Center on Deafness will have several speech-to-text sessions at their Summer Institute in Northridge, California. There will be an Advanced TypeWell training in Fall 2008 in the New York City area. The Western Network of Communication Access Providers (WNCAP) will have a conference in Spring of 2009; for more information, go to the wncap.net website.

Some workshops cover skills in specific types of services, such as TypeWell, C-Print, and CART. Within STSN, we strongly promote workshops that are applicable to all service providers, regardless of what mode of speech-to-text services they use. Some of the issues covered include time management and business ethics; however, addressing technology training may or may not be specific to the type of service provided. C-Print and TypeWell service providers use laptop computers, and both of groups need to know general technology, networking, and related issues. Other important areas include writing skills, English grammar, syntax, and proper punctuation.

Working on a “Grassroots” Level

Within STSN, we also promote "grassroots" continuing education activities, in response to the difficulty many people currently have traveling to conferences. One problem people face is money issues. Another issue is that flying these days is awful. Therefore, one way for people to get continuing education is to offer it in their local areas.

One example of this is a conference that happened recently in Knoxville. The University of Tennessee, Knoxville (UTK) hosted a cognitive processing workshop for both interpreters and speech-to-text service providers. It was presented by a local Knoxville woman. It was a great example of reaching out to experts in a local area. It's not just the content from the podium that's presented—it's the opportunity to network with colleagues.

Another example is the Western Network of Communication Access Providers (WNCAP) model. It was established by staff at five colleges in the Oregon and Washington area who offered speech-to-text services. They understood that those people needed and wanted continuing education, and they created opportunities to get together. Portland Community College donated or provided the space for the conferences in 2005, 2006 and 2007. There will be another WNCAP conference in Spring 2009.

Planning an Activity

How can you plan and host a grassroots conference? What is offered at a conference like this besides a keynote address? People who are already instructors and used to teaching gave presentations on various topics. There were sessions on ethics and ergonomics, as well as skill-building opportunities for both C-Print and TypeWell service providers. Service providers also can give presentations, because service providers who are experienced at doing this job are a rich resource.

Another interesting session is to provide a consumer panel. At a past conference, we had three people on the panel—each consumer used a different type of service and each had his/her preferred service provided as access during the panel discussion.

In the series of WNCAP workshops, we felt it was important to demonstrate the idea of not having competition among the types of services. That's not what this profession and these grassroots events are all about. It's about the consumers. Different services for different people. But we all need to know about each other, and we can learn from each other.

WNCAP conferences have included sessions relevant to all service types. For example, there was a CART writer who presented on different theories of CART writing. C-Print and TypeWell professionals went to that session because everybody wants to know what the other guy's doing. We also had a demonstration by three people: one providing TypeWell, one providing C-Print, another one providing CART. Conference participants could walk around and see the different services. That was a very well-liked opportunity for conference attendees.

We encourage you to set up your own "grassroots" workshop, using either the UTK "one presenter" model, or the WNCAP "multiple presenters" model. To help you do that, there is a handout that can be downloaded from the Continuing Education link of the STSN website. This file provides a timeline of things that you have to do to plan and put on a grassroots workshop.

What are some possible funding resources? Consider contacting your PEPNet regional representative. Because ongoing professional development is an important service provided by PEPNet, there may be some interest in working together to address training needs. Although PEPNet funds may not cover the entire cost of the activity, it may help to get this started. A nominal registration fee might be charged to cover other costs.

In addition to PEPNet, STSN is another group that is working to set up regional workshops, with the goal of having regional workshops available in different areas. Shannon Aylesworth is the current STSN president. Within the next two years, STSN would like to support two to four workshops. Although STSN might not be able to provide much financial support, it is an excellent resource for helping to organize an activity.

In planning a continuing education activity, think about where and when it will occur. To decide *where*, think about how many people you want. One strategy is to limit the initial event to a specific number of people. Make sure that the venue selected can handle that many. Locating a site for 30-40 people is much easier than locating a site for a conference as large as the PEPNet conference!

Next is deciding when the event will occur. Remember that service providers need to be in the classroom and their supervisors need to be at work. Weekend workshops often work well; however, if people are traveling long distances, consider the impact on their schedule. It's difficult to travel for only one day, and it's also important to return home early enough on Sunday night to be ready for work the next day.

The next issue is to plan for the *what* and the *who* of the presentations. Let the needs of the audience guide the planning process. For WNCAP, we asked the service providers in the area, "What do you want to know about?" Along with the *what* is the *who*. Consider whether or not you will pay the presenters. Some presenters—really great presenters you'd want to invite—will require travel and other fees. It may be necessary to look into other funding sources.

You also need to plan for *how* to do the event. It may be necessary to get an event bank account and decide who's going to receive the checks. If you're working with an educational institution, such as UTK's workshop, the school might be willing to receive the checks and process payments.

But if you are a true grassroots group and not supported by a school, somebody needs to function as the business manager, set up the bank account, write checks, and handle other issues related to money.

Planning for interpreters and speech-to-text service providers and paying them is another important component. Advertising can be done by using the listservs, your institution's website, and other resources like that. It's important to reach out to as many people as you can to generate interest in the activity.

What should happen on the day of the event? One big thing people forget is good signage to tell people how to get from the parking lot to the meeting room. A registration table that's staffed all the time is necessary because people show up and want to register late. Plan for snacks and/or beverages during breaks; if it's an all-day event, consider what lunch options might be. Finally, prepare conference feedback forms for people to complete, and designate a place for them to be collected. Prepare attendance certificates, and schedule a time and place for those to be distributed.

Within a week after the activity, send thank you notes to people, the panel, the interpreters, and service providers. Appoint someone from the planning group to summarize and analyze the feedback sheets. By analyzing the feedback, you will learn what to do differently the next year.

There is a planning timeline that can be downloaded from the STSN website. In addition, STSN is creating an online repository to store presentations and workshops being done all over the country.

Professional Development Units

Because STSN values continuing education, we have established Professional Development Units (PDUs). It's a concept that is similar to Continuing Education Units (CEUs). These PDUs have been designed specifically for speech-to-text providers.

Why are we using the term "Professional Development Unit" instead of "Continuing Education Unit?" There are several reasons. The main reason is that STSN as an organization is not ready yet for CEUs. We don't have an organizational certification structure. Not all of the speech-to-text systems have their own certification available. We cannot make CEUs a requirement for members because there's not an instrument by which we can do so. More information about the Professional Development Project and related application forms can be access from the continuing education link of the STSN website.

How does someone accumulate PDUs? Currently, getting PDUs is voluntary, but they are only offered to STSN members. Send in the PDU form and supporting documentation to the Continuing Education chairperson for approval. As indicated in the previous paragraph, the form is online at STSN.org , under "Continuing Education." Prior approval is not needed, and recipients have up to six months after an activity to submit paperwork.

It's important to note that the activities do not have to be specific to speech-to-text services for a participant to accumulate PDUs. As discussed in other professional organizations, there often are other topics and issues that will benefit a speech-to-text provider. For example, workshops at the PEPNet conference on topics other than speech-to-text services are available for STSN PDUs.

Although attending a workshop in person is one way to accumulate PDUs, STSN also offers two self-study options. The first self-study option currently available is at the website <http://textcaptioning.com>. It is not necessary to be a member of STSN to use this online resource. This site is open to anyone.

There are many online resources that offer audio files that can be used for practice. However, not all audio files are presented at a good rate or offer good content for current speech-to-text providers to use as practice. Some have a lot of “dead air” that can be frustrating when trying to use it to increase speed or improve accuracy. To address this, we organized some audio files from a variety of sources. Using technical support, the files were run through an audio program so the speed was increased to a fast rate without distorting the sound. The “dead time” was removed so the files are just constant...and fast and difficult. These are not for your newbie trainees. They are for providers who are in the classroom, captioning/transcribing on a regular basis. These files are for people who need and want to challenge themselves and their skills. Your skills will not improve until you’re in more challenging situations.

The second option is an online PowerPoint that includes a question-and-answer activity. We took a presentation by Joyce Dworsky, Sharon Downs and Cindy Camp from the PEPNet 2006 conference and made it available online. Each presenter addressed a different topic. We included a companion piece with a list of questions. If you've done online self-study activities before, you're probably familiar with this kind of approach. Basically, information is presented in a specific format, such as a PowerPoint presentation; the materials include a list of questions that reflect the important points offered by the presenter. The questions are in multiple-choice format. In this particular activity, there are 20 questions. To receive PDUs for this activity, a completed response form and the PDU application must be sent to the STSN Continuing Education chairperson.

In addition to the two options described above, there also may be other opportunities. It's possible that several topics offered by Signs of Development would be very applicable for the self-study option within STSN. Additional activities for PDUs will be considered on a case-by-case basis.

In summary, STSN is striving to make continuing education available all over the country – in cities and rural areas alike. It encourages personal growth, motivation, and improvement of skills. Go out there and help make this happen.

What Prisms Can Teach Us about Professionalism: Ethical Reflection and Refraction

Linda K. Stauffer & Amy Hebert

Abstract

Have you ever been faced with an ethical dilemma while interpreting and wondered how to go about making the best possible decision? The goal is to enhance interpreters' understanding of professional responsibility and increase their knowledge of models of professional ethical decision-making. Interpreters well versed in the Code of Professional Conduct and experienced in ethical decision-making can benefit from immediate, quick decision-making models. These models are not meant to replace sound ethical education, but rather, offer additional support for interpreters faced with unexpected ethical dilemmas. Addressed here are models including an abbreviated Humphrey-Alcorn Decision Making Model, the NAD-RID Code of Professional Conduct's "reasonable interpreter" standard, and other approaches such as: *What would my mentor say?* *What does my prior experience tell me?* and *Is my decision publicly defensible?*



Introduction

"What we see depends mainly on what we look for." ~ John Lubbock

Have you ever been faced with an ethical dilemma while interpreting and wondered how to go about making the best possible decision? Perhaps you mentally review the tenets of the Code of Professional Conduct (CPC). Maybe you remember a prior experience that was similar. Possibly you fervently wish you could remember what was discussed in your Interpreter Education program!

Ethics in the interpreting field reflect the field's values and provide a professional guide for behavior. The foundation for ethical behavior is respect. Dr. Sara Lawrence-Lightfoot of Harvard University, in a lecture on "respect" at the University of Arkansas at Little Rock, proposed that true respect has six dimensions: 1) it is empowering, 2) it is healing and leads to wholeness of the person, 3) it invites authentic communication and listening, 4) it comes from a true sense of curiosity; a genuine interest in what another thinks, feels and fears, 5) it requires self respect (which is gained by daily private vigilance), and 6) it requires one's attention to be "in the moment" (Lawrence-Lightfoot, S, 2000; Stauffer, 2001). Reflecting on the most highly ethical interpreters, it is clear these interpreters demonstrate a true respect for all individuals, but especially the consumers for whom they interpret.

Ethics, like prisms, can be viewed from different perspectives. Each perspective gives one a different view of the same thing. Ethical dilemmas can be viewed from various perspectives with decision outcomes influenced by the “lens” in which the dilemmas is viewed—much like prisms that both reflect (*to direct back*) and refract (*to bend and deflect*) light. Both new and seasoned interpreters need readily usable ways to apply the CPC tenets to ethical decision-making that consider self-reflection and application of decision-making models.

Ethical decision-making is something that has to be approached purposefully and exercised like any other skill. —Having a method for ethical decision-making is absolutely essential. When practiced regularly, the method becomes so familiar that we work through it automatically without consulting the specific steps” (Velasquez, Moberg, Meyer, Shanks, McLean, DeCosse, André, & Hanson, 1988, para. 14).

There are many resources and models for ethical decision-making and individuals are encouraged to explore these resources (Stewart & Witter-Merithew, 2006; Humphrey, 1999; Kidder, 1996). Unfortunately, an interpreter rarely has the luxury of stopping an assignment to check reference books, phone a friend, or otherwise consider how to make an ethical decision. If interpreters exercise their ethical “muscles” then it is easier to make sound, immediate professional ethical decisions.

All ethical models reflect the values underlying the professions’ values code. Interpreters must understand the underlying principle of the NAD-RID Code of Professional Conduct that states:

It is the obligation of every interpreter to exercise judgment, employ critical thinking, apply the benefits of practical experience, and reflect on past actions in the practice of their profession. The driving force behind the guiding principles is the notion that the *interpreter will do no harm*. (RID, 2005)

This requires each interpreter to bring critical analysis skills to each ethical decision. These skills are learned in the classroom, on the job, and through experience.

With that as a foundation, there are a few short models shared below that assist interpreters to view a situation from different perspectives. These models supports interpreters when ethical decision-making to arrive at an immediate, yet sound, decision. Why are these models necessary if interpreters consider themselves ethical people and are familiar with the field’s Code of Conduct? When faced with an ethical decision, people’s first thought to action typically comes from their personal value system and experience. Often these same individuals’ final decision for action will change drastically when a decision-making model is applied. Using one or more models for decision-making removes personal bias and places the field’s values and stated behavioral requirements squarely in front of the interpreter. This is how it should be. This provides quality decision-making and consistency across interpreters assuring consumers that practitioners are adhering to the field’s stated professional standards.

NAD-RID Code of Professional Conduct (CPC)

“Ethics set boundaries for professionals working in the field and provide guidelines between that which is allowable and that which is not.” ~ Esther de los Santos Rodriguez and Angel Reuguera Guerrero, Spain

When interpreters apply the CPC principles to their professional conduct, they must —. remember that their choices are governed by the *reasonable interpreter* standard. This standard represents the

hypothetical interpreter who is appropriately educated, informed, capable, aware of professional standards, and fair-minded” (RID, 2005).

A “reasonable” interpreter is one who has completed an interpreter education program, and is well versed in the profession’s standards. This interpreter has the knowledge, experience and sufficient skills to interpret in a variety of situations and for diverse consumers. This interpreter has a broad range of general knowledge including an understanding of current local, national and world events. The hypothetical “reasonable” interpreter understands basic ethical decision-making and has completed ethical studies. He or she is fair-minded; can objectively view situations from a variety of perspectives; can evaluate behavioral options, their outcomes and the impact on the consumers involved; and can discern the best course of ethical action.

Note that the description of a “reasonable” interpreter does not include the concept *unbiased*. It is said that interpreters are required to be “unbiased” when working professionally. Does this mean an interpreter *has no biases...* or... *is aware of their biases and can minimize the effects*? No one is without biases; however, if one is aware of their biases and the situations where personal bias may unduly and negatively influence the interpreted event, then the interpreter can make better decisions about accepting certain assignments and then monitor the influence of biases while working.

Personal moral values are also biases. Many people base the foundation of their lives on religious moral values. Is there a place in interpreters’ ethical decision-making process for personal or moral values? The short answer is “no.” If personal beliefs were the foundation for ethical decision-making, then there would be no need for a code of professional conduct. The Code is needed precisely because personal and moral beliefs differ and do not always reflect the field’s behavioral expectations. Without an expected standard for ALL interpreters to follow, there is no protection for consumers, interpreters, or the profession assuring each exactly what is expected without variation from interpreter to interpreter. Putting aside personal values (not getting rid of them) also allows interpreters to provide services to consumers in situations that vary from their own personal beliefs, such as a person of Christian faith interpreting a Jewish ceremony, or a straight interpreter providing services at a gay/lesbian event. One must remember that the interpreted event belongs to the consumers, not the interpreter. The interpreter’s personal values have no place here. In summary, interpreters are expected to suspend their personal beliefs and do what the profession requires.

With this understanding in mind, interpreters can ask themselves, “*What would a reasonable interpreter do in this situation?*” as a way to evaluate their options and arrive at an ethical and fair decision.

Humphrey-Alcorn Decision-Making Model (modified)

“It is not our abilities that show who we truly are, it is our choices.” ~ Albus Dumbledore

There are many models of ethical decision making readily available to interpreters via books and the internet. Within the field of interpreting, Humphrey (1999) reviewed several models or approaches to ethical decision-making. One such model is the 10-step Humphrey/Alcorn Decision-Making Model. This model can be modified to provide a guide for ethical decision-making on the job. With practice, these steps can become so familiar as to be almost automatic. Additionally, by using an ethical decision-making process, an interpreter can defend his/her decision should the need arise. Five abbreviated steps include:

1. *What facts/information do I have? Do I need more information before I am able to move ahead?*

Interpreters should evaluate the situation for what they know. Is there known history to this event or these consumers? What is the political or social context? Interpreters should also evaluate the need for additional information. Is there an unknown that would more clearly define the best decision?

2. What are the key ethical issues in the situation?

Is this an issue of confidentiality? Consumer respect? What exactly is the underlying ethical issue? It is much easier to evaluate alternative options and make ethical decisions if the ethical dilemma can be labeled.

3. What are the applicable meta-ethical principles? (Prioritize them if possible)

Meta-ethical principles are “large, over-riding principles ...encompassing an extensive range of behavior, morality, valued rights, and responsibilities” (Humphrey, 1999, p. 10). These principles include such concepts as *do no harm, autonomy, imbalance of power/oppression, respect, informed consent, safety, reputation, and justice*. Considering meta-ethical principles is examining the “larger picture” and situating the dilemma within a larger context. Interpreters must consider their behavioral options and the consequences within the context of applicable meta-ethical principles.

4. What options for action can you think of and what outcomes can you predict for each?

Once the ethical dilemma has been identified and the meta-ethical principles prioritized, then the interpreter can generate options for action and predict outcomes for each action.

5. Identify your choice of action with a rationale.

At this point interpreters must make the best decision possible, based on an understanding of the ethical dilemma, the meta-ethical principles in play, a review of all possible actions and their consequences, and then take responsibility for their decision. The decision should be explainable and defensible. All actions should be reviewed and analyzed.

Mentor Model

“The object of education is to prepare the young to educate themselves throughout their lives.” ~ Robert M. Hutchins

Interpreting is a life-long learning process. Those in the field understand that graduation from an interpreter education program is the beginning of the learning process, not the end. Graduates are prepared to enter the field and begin the process of self-directed learning. This can happen on the job, through in-service workshops, graduate course work, and in mentoring relationships.

Mentorship is a jointly agreed upon professional relationship between interpreters formed for the purpose of skills development. All interpreters should have mentors throughout their professional lives. If interpreters know their mentors well, they can predict what they might say even when they are not present. When faced with an ethical dilemma needing an immediate decision for action, interpreters can ask themselves, “*What would my mentor say?*” In this way, an interpreter can have an imagined conversation with one or more mentors seeking “advice” to inform the current decision before them. Of course, later, the decision can be discussed with a mentor for further analysis and learning.

Public Defensibility Model

“Adhering to the letter of the law is not enough—we must accept responsibility for our action or inaction.” ~ Josephson Institute of Ethics

While no interpreter likes to think about the possibility of having his or her actions grieved against through the RID Ethical Practices System (EPS), it behooves all interpreters to approach their work as if this were a possibility. This is not meant to encourage interpreters to work from a place of fear, but rather to encourage interpreters to make decisions responsibly and in a way that could be publicly defended. The EPS gives consumers and interpreters power for action against unethical actions.

When faced with an ethical decision, interpreters can imagine themselves standing in front of a group of their peers and answering questions such as: *Can I defend my decision clearly to the satisfaction of my peers? Can I explain clearly the process I used to arrive at my decision? Was my decision made in a defensible manner? Does my decision abide by the Code of Professional Conduct?* Another analogy is for the interpreter to imagine reading his or her decision and supporting reasons on the front page of the morning newspaper or viewed on TV on the evening news. Would the interpreter feel good about his/her decision? Would he/she be able to defend the decision without embarrassment? If the answer to any of these questions is “no” then the decision should be reviewed and other options considered.

Experiential Model

“Those who cannot learn from history are doomed to repeat it.” ~ George Santayana

Experience is a great teacher. Any parent knows that, sometimes, young people learn best from direct experience rather than from other sources. The same is true for all, including interpreters. The more interpreters work and experience life, the more vast the experiences and knowledge they bring to their work.

When making an ethical decision, interpreters can ask themselves: *What have I learned from past experiences? Have I had similar experiences that I can apply to this decision? Have I discussed a similar situation previously in my IEP classes, with my mentor, in a workshop?* Past actions can serve as a resource of information to inform current decisions. While different interpreters may arrive at different solutions to ethical dilemmas, the most one can ask of an interpreter is that he or she have a deliberate process of solid reason and approach to ethical decision-making that adheres to professional standards.

Comparison Model

“In pursuit of this profession [of interpreting] in a democratic society it is recognized that through the medium of interpreters, deaf persons can be granted equality with hearing persons in the matter of their right of communication.” ~ Preamble, 1965 RID Code of Ethics

The last model presented encourages interpreters to ask, *What if this person were a hearing person? What would happen? Should the same thing happen here?* One of the difficulties of interpreting, at times, is to let deaf consumers experience the consequences of their actions. This is particularly difficult when interpreters perceive these consequences as negatively affecting these individuals.

Assuming that the situation is not due to a lack of cultural understanding or oppression, but rather arises from informed actions of the consumer, the most respectful stance an interpreter can take is to interpret accurately and neutrally, allowing the consumer to have control over his or her own actions and the outcomes. Consumers who are deaf have the same right to make excellent decisions, or mistakes and bad choices as hearing people. The NAD-RID Code of Professional Conduct asserts that, “Members of the American Deaf community have the right to informed choice and the highest quality interpreting services” (RID, 2005, p. 1). Clearly interpreters’

professional role does not include interfering in the consumer's right to make his or her own decisions; however, it does reflect that, through quality interpreting services, consumers have the right to ~~in~~"informed" choice. Anything less violates the field's own values and tenets of behavior, and reflects back on former paternalistic models of interpreting. Comparing the consequences to what would happen if the consumer were a hearing person without an interpreter is one perspective for approaching ethical decision-making.

Additional Participant Suggested Models

"To think ethically means to steer your thoughts toward compliance with the rules, contributions you can make and harmful consequences to avoid." ~ author unknown

There is no ~~on~~"one size fits all" when it comes to ethical decision-making. Similarly there is no one path to the ~~eor~~correct ethical decision" for any given dilemma. Janice Humphrey (1999) describes this clearly:

As Sign Language professionals, we face moral, ethical and legal dilemmas in the course of our daily work...The real challenge comes when there are several options, more than one of which is valid...Making decisions in these cases is no simple matter. Yet we are expected to make difficulty or challenging decisions within seconds while engaged in our work. Because of this complexity, it is important to consider several approaches when making ethical decisions. Eventually, you will need to shape the ideas of various decision-making models into a personalized integrated model that makes sense to you (p. 17-18).

An approach suggested by one workshop participant is application of Dean and Pollard's demand-control theory to sign language interpreting. Ethical dilemmas arise from demands of the interpreter's work other than linguistic such as environmental, interpersonal and intrapersonal. These demands can range from low to high. Interpreters have varying degrees of control (decision latitude) from low to high. According to Dean and Pollard (2001), ~~ontrol~~control refers to the degree to which the individual has the power to act upon the demands presented by the job, perhaps by making decisions, bringing skills or resources to bear on the task, or altering the environment or other aspect of the task demand" (p. 2). The restrictive nature of the interpreter's role, especially the restrictions created by the profession's code of conduct, can create stress leading to burnout (Dean & Pollard. 2001). Understanding the demands that interpreters face and determining what control (decision latitude) one might have in a particular situation may be one way to approach ethical decision-making by reducing the stress involved with such decisions.

Conclusion

Not every interpreter, when faced with an ethical dilemma, will arrive at the same conclusion regarding the most appropriate ethical course of action. The field sets guidelines for not only interpreter behavior, but also ethical decision-making. These guidelines should insure consistency across interpreters' actions, not create identical behaviors among interpreters. Ethical action is still an individual choice made each time an interpreter goes on assignment. No one can make an interpreter ethical; however, ethics are learned through teaching, modeling, and teaching people how to think ethically.

A word of caution: Do not choose a model that will best ~~et~~ get you to the decision you wanted in the first place." These ethical models are not meant to support a particular decision; rather, the models provide a process to clarify the options available and inform a sound decision.

It is hoped that the approaches presented here will encourage interpreters to consider ethical decision from differing perspectives. The goal is to give interpreters a way to approach ethical

dilemmas that require immediate decision-making in order to arrive at a course of action that is ethically sound, legally defensible, equitable, respectful, and supports all consumers' right to make informed choices. We owe it to our consumers to do no less.

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Leadership: It's In You!

Melanie Thornton, Sharon Downs, & Amy Hebert

Abstract

Do you want to make a difference in your world? Do you desire more passion in your work and life? Would you like to feel more capable of initiating change in your work? Many of us have misconceptions about leadership—thinking of leaders only as gregarious extroverts. But leadership takes many forms. In fact, many leaders of our time have made a difference through quiet courage. Each of us can find ways to engage others and enact change. The purpose of this session/paper is to provide strategies to help participants:

- Firm up your vision
- Find your leadership niche
- Decide to take action
- Build alliances

Take the first step...walk through the door and into this session and we will all begin this journey together.



Introduction

Over the past several years, the focus of the work of Project PACE has been on creating systems change on the University of Arkansas at Little Rock campus and identifying approaches to assisting disability resource professionals on other campuses to do the same. During presentations on this topic, participants often voice concerns that while they are aware that change needs to happen, they feel powerless to make it happen on their campus. Dialogues with disability resource providers have lead us to the conclusion there are many misconceptions about what a leader is and what effective leadership looks like.

The focus of this session is not knowledge, but heart—not information, but inspiration. We asked ourselves as we conceptualized this session, “What impact do we want to have? When participants walk out the door, what do we want them to take with them?” Here is how we answered these questions. We want participants to walk out the door at the end of the session taking the following things along with them:

- A clearer vision of what they want to accomplish in their work and personal lives
- A better understanding of their own leadership style
- A plan for action
- A new way of thinking about allies

As for impact, we want to awaken the leader within each person, to revitalize, energize and remind participants of the importance of finding ways to love what they do and to bring passion back to their work. In fact, the original title of this presentation was —Finding the Leader Within: Amplify Your Life and Change Your World.” Ultimately, we want to empower participants to make a difference. And now we turn to you, the reader of these proceedings, with the same objectives. We approach this tall task by looking together at the qualities of a leader and emphasizing that the primary ingredients—a clear vision, passion, and courage to take a stand—can be possessed by anyone. We will provide examples of courage and leadership that highlight various leadership styles. We will lead participants through a series of interactive processes aimed at achieving our goals.

What is Leadership?

The premise of this paper and session is that anyone can be a leader. Ultimately, being a leader is about deciding you want to change the world. Initially, that sounds like a hard task, but in Steve Farber’s book, *The Radical Leap*, he encourages us to define “our world” in whatever way we choose. Your “world” might be creating a captioning policy on your campus, or changing the philosophy or culture of your office. Your “world” can be anything that is within your circle of influence. Steve Farber (2004) defines leadership in this way:

Real leaders take us to places we’ve never been, turn nothing into something, transform good into great, help us grow as human beings and change the pieces of the world that they touch for the better.

This is the definition that we ask you to keep in mind as you move forward. We suggest that true leaders have a clear vision of what they want the future to look like, the passion to communicate that vision to others, and the courage to see it through to the end. Vision, passion, and courage are attainable to all of us.

Vision

When we think about getting a clear “vision,” the driving question we want to ask ourselves is: —When I achieve my vision, what will be different? What will that look like?” Too often, we think about what we want to achieve only in words, but we do not take the time get a clear picture of what it will look like when we reach those goals.

You may wonder why this step of the process is so important. Getting a clear picture of what we want to achieve is important for several reasons. First, when we define our goals only in words, our work is mostly a mental task. But when we take the time to create a vision of what we want to accomplish, we ignite passion. And when we are passionate about a task, we are more likely to stick to it even when we face barriers. That passion gives us the courage to keep going when the going gets tough.

Second, having a clear picture of what we want to achieve is a way to engage our full mind in the task. This is a tool used by hypnotists everyday. One way to conceptualize the subconscious mind is that it operates differently than the conscious mind. We theorize that the subconscious mind understands images much better than words. How much more powerful would it be for a baseball player to visualize the ball going over the fence and the crowd applauding wildly than simply saying the words —I want to hit the ball over the fence and to get a standing ovation?” The ballplayer who takes the time to engage her senses – to get a feel of the bat hitting the ball, to visualize the ball going over the fence, to see the crowd coming to their feet – is more likely to hit that homerun. The image of that event sinks down on a much deeper level than the description of

the same event. The subconscious mind takes hold of that image and becomes an ally to that ballplayer when she steps up to the plate to hit the ball.

If you are uncertain about the power of the subconscious mind, think about what happens when you drive to work. Have you ever gotten in the car and suddenly arrived at work having no memory of how you arrived? Maybe on a conscious level you were considering how you would discuss an issue with your boss, or singing with songs on the radio. But you didn't get lost or have an accident. You didn't have any problems arriving safely at work because another part of your mind was engaged in the task. The next time you get dressed, will you have to think about each detail of that process? No. You will probably be thinking about something else as you go through the all-too-familiar motions of that task.

You may be thinking, —Yesbut driving to work and getting dressed and playing baseball are all very different from changing a policy or practice on our campus.” All of these tasks are different, yet the same principles operate. In the work that we do, we often are required to make split-second decisions. When our vision is clear, it is like having a strong rudder in place. Our subconscious acts as an ally – helping us to make decisions that take us closer to that vision. Stop for a moment and take some time to answer these questions:

- 1) What are your top three values related to your work?
- 2) What are your passions, the things you really love to do, or the kind of results you love to see?
- 3) If you could make one change in your world, what would that be? What legacy would you like to leave at your place of employment?
- 4) What will be different when you achieve that change? What will that look like?

If you are having difficulty developing a vision, refer to this example. This is taken from a session in which participants were developing a vision of the campus where the social model of disability and universal design are fully embraced.

- There will be no difference between how students with disabilities are perceived and how other students are perceived.
- The campus will be barrier-free.
- Students will feel like they are a part of the process, more connected to the whole college experience, and campus community.
- Faculty/staff will reflect the diversity that exists among our students.
- Disability will be seen as an aspect of diversity.
- People will see what Interpreters do **not** as a service to deaf students but as a service to the campus.
- Students will get the message ~~we~~ “we want you here” throughout the campus.
- Disability services will change. The role will change to one that is more of an _environmental consultant_ office and might have IT experts, curriculum development experts who assist the campus community in creating more inclusive, usable learning environments.
- The whole campus community will feel a responsibility for access.

Another way to think about the creation of your vision is to use a technique that counselors and life coaches call ~~treasure~~ “treasure mapping.” Again, this calls for getting a very clear and specific idea of what

you want to accomplish. Some even suggest creating a collage of images that represent the different parts of the goal.

Finding Your Leadership Niche

Once you have established a clear vision, the next step is to find your leadership niche. The word niche is chosen here very intentionally. In ecology, a niche is the way in which an organism relates to its environment and the other organisms within that environment. You might think of finding a niche as a way to thrive in the situation you are in and to relate to that environment and your colleagues in a way that maximizes the productivity of your efforts. Your leadership niche does relate to your style, but it is more than just a style. We suggest that there is no one correct leadership style. When you “google” leadership styles, most of the hits that come up refer to Kurt Lewin’s three styles of leadership: authoritarian or autocratic, participative or democratic, delegative or laissez-faire. We propose that those are actually management styles, rather than leadership styles. Managers and leaders are vastly different. If people do what someone says because that person is their boss, that is management. If people do what you say because they are inspired to do so, that is leadership. Some managers are leaders. Others are simply managers.

A leader, simply put, is one who influences others. Leadership has many faces. It doesn’t require you to be the most outgoing and gregarious, or to be in a position of power or authority. Consider your own strengths and how those strengths fit in to the environment where you work or any environment where you want to effect change. Find your niche. For inspiration we can look to many leaders throughout history who took a stand and changed the world for the better. Sometimes being a leader just requires us to sit still. Who knew that a simple act of Rosa Parks not giving up a seat on a bus would have such a far-reaching impact? What we do, how we respond to the world around us, is indeed important.

Take a minute to consider the following questions and jot down your ideas.

- 1) What are your top three strengths?
- 2) What are some tools you have to influence those in your environment?

As you work to find your niche, you may want to consider other leaders in history who have made a difference. Lao Tzu describes a leadership style that differs greatly from the traditional western views of leadership: “A leader is best when people barely know he exists. When his work is done, they will say: We did it ourselves.” Perhaps you can see your own style reflected in this quotation.

Taking Action

As we have considered vision and niche, we have focused on contemplation and planning. When we move into action, then the requirement for courage comes into play. You have already begun to take action. If you attended this session in Columbus, you took action by walking through this door. If you are reading this manuscript, you are taking action as well. What are the other doors that you need to walk through to achieve your vision? We can expect that there will be challenges, but no one said changing the world was easy work.

Taking action does not require that we are fearless. It does require us to face our fears. The title of Susan Jeffers (2006) book offers sage advice: *Feel the Fear ...and Do It Anyway!* If you talk to people about what keeps them from taking action, some of the fears they will voice are: letting others down, losing face, getting fired, being found out as a fraud, or failure. As you look at those fears more closely, they all can translate to a fear of failure. Yet, if we do not take action, we will definitely fail.

Now take a minute to think about your vision and consider ways that you can take action to make that vision a reality:

- 1) What do I want to do more of?
- 2) What do I want to do less of?
- 3) What can I do right away?

Some doors are harder to walk through than others. Fifty years ago, nine young people walked through the doors of Central High School in Little Rock, Arkansas, and the world was never the same. Maybe you can think of other examples in history of people who had courage to walk through doors and changed the world with those few steps.

Redefining Your Allies

Books and articles written on systemic change recommend, without fail, that we seek out allies for our cause. This is an important step in the process of creating your leadership niche and in creating lasting change. We propose a bit of a twist here and suggest that in addition to those people on your campus or in your circle of influence that you see as allies, there are other less visible allies that you can call upon in those times when you are called upon to walk through those doors.

Your fear as an ally. Fear can stop us from walking through a door, but if we push past it, it can be a source of energy. It creates adrenaline and that adrenaline can be channeled and can heighten our experiences. Sometimes fear is a good indicator that we are exactly where we need to be, pushing the limits that need to be pushed.

Your subconscious as an ally. As we saw before, our subconscious mind also acts as an ally. As you firm up your vision, you will find that your subconscious becomes a compass for you, guiding your decision-making and moving you ever closer to that vision of the future.

The group in your pocket. Carol Gill, in an interview with New Mobility (Byzek, 2004), gives us a powerful image. She says that when she is in a situation where something she says is devalued because of disability prejudice, it might initially deflate her, but she says "Then I think about the group in my pocket, and that fortifies me." She is referring to other disabled people who share her experience and who are advocating for change in their corner of the world. When we are working to create more inclusive equitable environments, to create a more socially just world, we are not alone in that work. We have allies throughout the world. The network of friends and colleagues that are connected through PEPNet can be considered the ~~group~~ in [our] pocket[s]."

Conclusion

This paper is just the beginning of the process of finding the leader within. The authors challenge you to think about leadership in new ways, to find passion in your work, to amplify your life and to change your world for the better. We offer ourselves as your allies as well and invite you to contact us with questions, to discuss your challenges, and to share your success stories. We challenge you to become, in the words of Steve Farber (2004), ~~bold~~ and audacious," to be ~~extreme~~ leaders," and to turn your vision into your reality.

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PEN-International's Summer Leadership Institute for Postsecondary Deaf and Hard of Hearing Students

Denise Kavin

Abstract

The Nippon Foundation of Japan has provided funding to the National Technical Institute for the Deaf at the Rochester Institute of Technology in Rochester, NY, to establish PEN-International, an international university network to serve postsecondary deaf and hard of hearing students. This project works to technologically link universities around the world serving such students, primarily in developing countries, through state-of-the-art instructional technologies, improving and updating curriculums, and updating instructional computer hardware and software. This paper describes PEN-International's one-of-a-kind Summer Leadership Institute, a multinational week-long program for postsecondary students. The first Institute took place August 2006 at Herstmonceux Castle in East Sussex, England. The goals of the Institute are to promote development of leadership skills, focus on advocacy skills pertaining to general access, support services and employment, and to engage in learning about Deaf Culture and awareness. A second Institute will occur in August 2008, also at Herstmonceux Castle.



Summer Leadership Institute

The Nippon Foundation of Japan has partnered with the National Technical Institute for the Deaf (NTID) at the Rochester Institute of Technology (RIT) in Rochester, New York, U.S.A. to establish PEN-International to serve deaf and hard of hearing students in postsecondary educational settings worldwide. This multi-year project, founded in 2001, works to technologically link universities around the world, primarily in the Pacific Rim and developing countries, through establishing state-of-the-art instructional technologies, improving and updating technical curriculums, and updating computer hardware and software for instruction.

The National Technical Institute for the Deaf, home base for PEN-International has a 40-year history of serving postsecondary deaf and hard of hearing students and is led by Dr. T. Alan Hurwitz who holds the title of President of NTID/Vice President and Dean of RIT for NTID. With NTID's emphasis on the use of state-of-the-art technologies to promote instruction and learning for deaf and hard of hearing students, it is utilized as a model program for PEN-International's work.

The Rochester Institute of Technology, where NTID is housed, was established in 1829 and has evolved into a major international technological university. NTID, as one of the eight colleges of

RIT, serves approximately 1,250 deaf and hard-of-hearing students who study, share residence halls, and enjoy social life together with more than 15,000 hearing students. In addition, over 560 faculty and staff members are employed at NTID. Approximately 45% of deaf and hard of hearing NTID students are fully matriculated in one of the seven other colleges of RIT, receiving access and support services through NTID. The other 55% of deaf and hard of hearing students study within NTID for sub-baccalaureate degrees.

Since 2001, PEN-International has received more than \$9 million in grants from the Nippon Foundation of Japan to support its activities. The Nippon Foundation is a grant-making foundation based in Japan that provides financial assistance to help improve the quality of life for people around the world. They address the areas of: health care, agriculture, education and disability. The goals of PEN-International are to improve teaching, learning and curriculum development; increase the application of technology to teaching and learning; and to expand career education opportunities for deaf and hard of hearing people around the world. PEN-International accomplishes this through providing professional development activities to teachers of deaf and hard of hearing students, facilitating the use of innovative instructional technologies, furnishing its partners with state-of-the-art computer labs, developing online and World Wide Web resources, evaluation and research, and dissemination. The PEN-International website can be found at: <http://www.pen.ntid.rit.edu>.

The vision for PEN-International is to develop an international network to enhance local capability and global networking at each participant institution utilizing the Importer-Self-Sufficiency-Exporter model, in which institutions are moved from importers of ‘know-how’ through PEN-International activities, to self-sufficiency, and then ultimately to exporters of new information and skills within their countries, creating a ripple effect.

The PEN-International network currently consists of sixteen-plus colleges and universities in Japan, China, the Philippines, Thailand, Russia, Vietnam, the Czech Republic, Hong Kong, Korea and the United States. A comprehensive list of participants can be found at the PEN website.

An important project that addresses PEN-International’s work with deaf and hard of hearing postsecondary students is its innovative, one-of-a-kind Summer Leadership Institute for international postsecondary deaf and hard of hearing students. The first multinational week-long program took place 5-12 August, 2006, at Herstmonceux Castle in East Sussex, England, 100 km. south of London. A second one will occur from 9-16 August, 2008, also at Herstmonceux Castle. The purpose of this Leadership Institute is to promote development of advocacy skills in the areas of support services in postsecondary education, general access, and employment. Leadership, empowerment and deaf culture awareness is also covered. This is accomplished through presentations, discussions, demonstrations, cultural activities, and other hands-on activities provided by deaf faculty and professionals.

While this Summer Leadership Institute is primarily supported by PEN-International, additional generous funding has been received from the Bader family of Milwaukee, Wisconsin. Mr. Alfred Bader and his wife donated Herstmonceux Castle to Queens University in Canada, and the Castle is the home for Queens University’s International Study Center. More information on the history of the Castle and the International Study Center can be found at: <http://www.queensu.ca/isc>. PEN-International covers all related expenses such as transportation, room and board for the Summer Leadership Institute participants including presenters, students, faculty chaperone, sign language interpreters and spoken language translators.

Students and faculty sponsors from NTID and the University of Wisconsin-Milwaukee and each of

PEN-International's major partner programs in Japan, China, Russia, and the Philippines will participate in the August 2008 Institute, making a total of 26 students and five faculty delegation leaders. All students go through an application, interview and selection process, established by each participating institution. Sixteen sign language interpreters and voice language translators, four from each country, support communication access. Further, all materials are translated from English into Chinese, Japanese and Russian. The participating institutions, along with NTID and the University of Wisconsin-Milwaukee, are: Tsukuba University of Technology, Ehime University, and University of Hiroshima, Japan; Tianjin University of Technology, Changchun University and Beijing Union University, China; Bauman Moscow State Technical University, and PEN-Russia, Russia; and De la Salle College of St. Benilde, Manila, Philippines.

The goals of the Institute are to:

- Promote development of leadership skills among postsecondary student ambassadors.
 - Focus on advocacy skills in the areas of general access, support services and employment.
 - Engage in learning about Deaf Culture and multi-cultural awareness.
- This is accomplished through ice breaker activities, presentations and discussions, group exercises, cultural performances and demonstrations, and social activities and field trips.

The Summer Institute faculty members, most of whom are deaf or hard of hearing, are prominent leaders within NTID, the greater Rochester deaf community, and the international deaf community. They are: Dr. T. Alan Hurwitz, President and Vice President/ Dean, NTID at RIT; Mrs. Vicki T. Hurwitz, consultant and former director of the Rochester School for the Deaf Outreach Center, Rochester, NY; Ms. Patricia Mudgett-DeCaro, Consultant, Rochester, NY; Mr. Scot Atkins, Director of Human Resources, Interpretek Agency, Rochester, NY; Mr. Alim Chandani of NTID's Student Life Team; Ms. Cassie Franklin, Counselor, University of Wisconsin-Milwaukee; Dr. Mayumi Shirasawa, PEPNet-Japan; Dr. James DeCaro, Director, PEN-International; and Dr. Denise Kavin, Senior Project Associate and Summer Leadership Institute Director, PEN-International.

Various workshops presented throughout the week are designed to address topics such as: leadership styles, self-determination and advocacy, developing effective communication and persuasion skills, forming alliances, cultural diversity, deaf culture, empowerment, achieving goals, employment and work-based learning, and access and accommodations.

During the Institute, students are expected to fully participate in all activities, give group presentations on leadership, conduct cultural activities and exchanges, and keep daily written or video journals of their experiences. All photos and written and video journals will be posted on the PEN-International website. As a follow-up after the Institute, students are expected to give group presentations about their experiences at the weeklong Institute at their postsecondary institutions, and complete projects that influence policy and/or make a substantial contribution to their educational institution and/or surrounding community. Finally, students and their faculty sponsors are expected to submit final reports, all within a 12-month period under faculty supervision. In all, as a result of participating in the Institute, students need to demonstrate the following: Enhanced leadership, advocacy and communication skills; increased understanding of the goal-setting and decision-making process; increased knowledge regarding accommodations and support services for access; increased knowledge regarding employment and work-based learning for deaf and hard of hearing individuals; and increased understanding of deaf culture in participant countries.

PEN-International has developed a website dedicated to this Summer Leadership Institute. All PowerPoint presentations and related materials will be available in English, Japanese, Chinese and Russian and posted to the website for public viewing and downloading. The URL address is:
<http://www.pen.ntid.rit.edu/summer-institute.php>.

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Teaching for Success: Literacy, Diversity, and Technology

Proceedings of the English Think Tank V



Gallaudet University

June 14 - 15, 2007

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Teaching for Success: Literacy, Diversity, and Technology

PROCEEDINGS OF THE ENGLISH THINK TANK V

Gallaudet University June 14-15, 2007

Editor's Comments

The 2007 meeting of the English Think Tank was a first-class success because of you. My deep thanks to those who participated in and presented at the conference, and my thanks to those who worked conscientiously all year behind the scenes to make the conference possible. In this latter regard, I particularly want to thank members of the English Departments at Gallaudet and NTID, Earl Parks, Shannon Augustine, Jacqueline Lally and all of the eLearning specialists from Gallaudet Academic Technology, and Marcia Kolvitz, director of Postsecondary Education Programs Network (PEPNet) - South. Dr. Kolvitz and her staff supported the Think Tank and are providing additional support for these proceedings. Additional thanks go to Becky Church, Admissions Counselor and Administrative Assistant, and Martina Smidova, the Administrative Assistant for the Department of English, who went above and beyond the call of duty to make sure that the Think Tank was successful. Tracey Kempton, Coordinator of Enrichment Programs, and Rebecca Hogan, Director of Special Projects, Summer and Enrichment Programs also helped immensely with this project. Thanks also to Gallaudet University President Robert Davila for delivering an inspiring Keynote Address in which he discussed how assessment, diversity, literacy, and technology will play important roles in the future of education. Last, but not least, many thanks to Marcia Bordman for helping me edit all of these interesting manuscripts. These people pitched in, gave their time generously, got jobs done before they were asked, noticed other jobs that needed doing and did them—all to make Think Tank V proceed smoothly and be the learning community that it was.

The Proceedings published here represent a sample of the English Think Tank V presentations. In reading these papers one is struck by the imagination and expertise possessed by so many members in the field. We *are* good teachers, innovators, and researchers. One can scan these proceedings for sound classroom tips and for ideas to stimulate discussion, argument, and more research. The papers focus on the practical—what works and where we must do better.

The paper topics fall roughly into four categories—assessment, diversity, literacy, and technology. All of us—individual teachers and our institutions—are responding to assessment pressures and new requirements. A number of presentations focused on how to

respond to these pressures and how our responses, in turn, shape what we teach. Troubling questions regarding appropriate accommodations for deaf and hard of hearing students in high stakes testing have not gone away—nor have questions regarding the validity of what we assess. Are we better at predicting success (perseverance to graduation) based on standardized tests or institution-developed reading and writing tests? So far alas, the answer is not “yes.” What’s the next step?

Diversity, perhaps, has become one of those too easy all-purpose buzzwords in education; nevertheless, it’s clear that teachers of deaf and hard of hearing students are quite serious about exposing their students to multicultural perspectives, helping them to chart their own identities and relish the identities of others. It’s also clear that teachers want their students to be bilingual, literate in English and fluent in ASL.

No matter our different approaches, we are united in the hunt for practices enabling students to become more thoughtful learners, better readers, and more careful writers. It’s not surprising then that most of the papers published here focus on techniques—techniques which are in turn informed by technologies emphasizing visual and interactive learning—to help students gain English literacy.

Good reading to you.

Jane Nickerson,
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ASSESSMENT

Predicting Student Success in a Developmental English Language Program: Can it be Done?

Stephen Aldersley

Abstract

This paper reports on the relative utility of different kinds of data about student skills and performance, including ACT scores, entry placement tests, past grades, and outcomes assessment scores, for predicting student academic success, defined as graduation. The students in question are deaf and hard of hearing college students enrolled in a developmental English program. The finding that such data are not as highly predictive as one might think is interpreted to mean we should “never say never” when confronted with students with significant English language deficits.



Student success, defined for the purposes of this presentation as graduation, is a primary concern of all institutions of higher education and the National Technical Institute for the Deaf (NTID) is no exception.

NTID has approximately 1,150 deaf and hard of hearing students. The college, one of eight constituent colleges of the Rochester Institute of Technology, has traditionally offered two kinds of associate degrees: associate of occupational studies (AOS) and associate of arts & sciences (AAS). In addition, many NTID-supported students are matriculated in baccalaureate programs in one of RIT’s other seven colleges. (AOS and AAS programs differ very little in their technical course content but students in the former are not required to take courses in RIT’s College of Liberal Arts (CLA), and it is generally accepted that the AOS is a less desirable degree. A third associates degree, the AS, has been recently introduced, primarily as a vehicle allowing students to transfer into RIT baccalaureate programs. As a new arrival, there are as yet no graduation data, and so the degree does not factor into the discussion in this paper.)

Each September, NTID accepts somewhere between 200 and 300 new students. About 20% of these are directly accepted to baccalaureate programs at RIT. The data discussed in today’s presentation exclude these students. Instead, they focus on the 200 or so students who are accepted into NTID associate-degree programs and who, as a result, take entry English placement tests in reading and writing.

NTID’s recruitment information emphasizes the contrast between our graduation rates with those of our competition. The overall graduation rate for deaf and hard-of-hearing students at NTID is 55%, with associate degree students graduating at the rate of 49% and baccalaureate students

graduating at a rate of 70%. National Center for Educational Statistics (from 2003) indicate that deaf and hard of hearing students from other colleges graduate at a rate of 25%.

It is no accident that graduation rates have become an increasingly significant concern of the Institute. More than 75% of NTID's funding comes from the Department of Education (DOE). As part of its oversight function, DOE requires regular reporting of enrollment, retention and graduation statistics. Some years ago, the Department established a schedule of improvement in these so-called "performance indicators" approximating to 1%/year growth in each of the categories.

In addition to the pressure of federal oversight, NTID has had to face several further challenges over the last few years. First, state vocational rehabilitation agencies, the primary source of financial aid to deaf students, have become more reluctant to support students out of state, while at the same time tightening their criteria for continued funding of students who may take longer than the norm to graduate. Second, the institutional identity of RIT as a whole has begun to rapidly evolve over the last 15 years from a comprehensive university to a doctoral-granting institution with its eyes set on admitting an increasingly more highly qualified student body. Finally, despite the fact that 80% of our entering students are not directly accepted into RIT baccalaureate programs, our intake surveys indicate that 85% of our freshmen come with the expectation that they will graduate with baccalaureate degrees. Some are able to make the transition during their time at NTID, but for many of them, a baccalaureate degree is an impossible dream.

Because graduation rates are such an important institutional statistic, it would be helpful if we had some method of predicting which students are likely to graduate and which not. If we could do that accurately, we could be more purposefully selective in whom we accept and for whom, once accepted, we use scarce resources to encourage to stay. In demonstrating how difficult it is to make that kind of prediction accurately, this paper examines five questions related to various measures of student English skills. (1) How well do entry placement test scores in general predict academic success? (2) How well do entry writing test data, specifically of students with relatively weak English skills, predict academic success? (3) How well do pre-entry ACT scores predict academic success? (4) How well do data associated with past course performance predict performance in subsequent courses? (5) In general, does the widespread belief that deaf students don't graduate primarily because of deficits in English literacy hold water?

When students enter NTID, they are asked to take a number of placement tests. The two tests that are of interest here are the NTID Writing Test and the NTID Reading Test. The Writing Test is used to place students in the writing strand of the Institute's developmental English curriculum. Students are given 30 minutes to write a short essay in response to the prompt: "You are in a new place. Write an essay on your opinions of NTID and the people here. Give reasons and examples." Each essay is read by three faculty members. Scores range from 0-100 points with 25 points for each of four categories: organization, content, language use and vocabulary. The Reading Test is used to place students in the non-fiction reading strand of the Institute's developmental English curriculum. The 90-minute test measures reading comprehension and vocabulary. The test results in a score on a scale of 0-200.

Both the writing and reading strands of the developmental curriculum offer courses at four levels of difficulty. Thus, Academic Writing I and Non-fiction Reading I are offered at Level A (the lowest level), Academic Writing II and Non-fiction Reading II are offered at Level B, and so on. Students who test above the Level D range take English courses in RIT's College of Liberal Arts (CLA).

Question 1: How well do entry placement test scores in general predict academic success?

Table One approaches this question from the point of view of entry scores on the Writing Test for the entering class of 2000 and shows how many students from each level had graduated after six years as well as what degree they graduated with.

CLASS OF 2000 (n=255)					
ENTRY WRTNG	TOTAL STUDENTS	TOTAL GRADUATED	TOTAL BAC. DEG.	TOTAL AAS DEG.	TOTAL AOS DEG.
LEVEL A	73 (29%)	25 (34%)	1 (1%)	5 (7%)	17 (23%)
LEVEL B	66 (26%)	28 (42%)	5 (8%)	8 (12%)	14 (21%)
LEVEL C	57 (22%)	25 (44%)	11 (19%)	9 (16%)	5 (9%)
LEVEL D	36 (14%)	16 (44%)	13 (36%)	2 (6%)	1 (3%)
LEVEL PROF	23 (9%)	12 (52%)	8 (35%)	3 (13%)	1 (4%)

Table One: Graduation Data by Entry Writing Level

The table shows that students who placed in Level A Writing on entry graduated at the lowest rate of all five levels, and that students testing as proficient had the highest graduation rates – perhaps not a surprising statistic. However, the rates of graduation for Levels B-D show almost no difference, and if the bottom line from the Institute’s point of view is simply student graduation, this is a significant finding, indicative of the lack of predictive power of entry writing scores. On the other hand, the table does reveal group differences from the point of view of the kind of degree earned. Level D entrants are much more likely to graduate with a baccalaureate and Level B students with an AOS degree. However, where a BS degree is obviously more desirable, certainly to students, than an AOS degree, it is generally accepted that the AAS degree is also a desirable credential. With this in mind, the table shows that the graduation difference between students entering at Level D and Level C is significantly less than that between students entering at Level C and Level B: 35% of Level C entrants graduate with an AAS or a BS compared to 42% of Level D entrants, while Level B entrants, at 20%, lag far behind. In summary, although entry writing scores do not predict graduation per se, except at the two extremes, they do have some group predictive value for kind of degree earned.

Table Two approaches the question of how well entry placement test scores predict academic success by looking at average reading and writing scores of students within each level. These levels are, of course, artifacts of our curriculum design. Nonetheless, there is a natural tendency to think that a student scoring at the high end of say, Level C, would be more likely to succeed than a student scoring at the low end. The data in Table Two suggest that such a conclusion would not be justified. Another common assumption is that students who read better are more likely to enjoy academic success. Again, Table Two casts doubt on this assumption. For students who place on entry into Level A Writing, a higher reading score makes academic success slightly more likely, but the converse is true for students who place into Levels B, C or D students (although not for

proficient students). Thus, looking at average scores within the levels, there is no pattern predictive of overall graduation.

	LEVEL A (N=73)	LEVEL B (N=66)	LEVEL C (N=63)	LEVEL D (N=36)	LEVEL PROF (N=23)
GRADUATED	25 (34%)	28 (42%)	25 (44%)	16 (44%)	12 (52%)
AV. WRITING	31.3	43.5	54.2	62.9	71.7
AV. READING	83.5	98.8	124	144	170

NOT GRADUATED	48 (66%)	38 (58%)	32 (56%)	20 (56%)	11 (48%)
AV. WRITING	31.77	44.58	54.63	62.65	72.27
AV. READING	79.4	102.05	124.25	146.2	153.55

Table Two: Within Level Graduation Data

Question 2: How well do entry writing test data, specifically of students with relatively weak English skills, predict academic success?

The immediate impetus for this question originated in the pressure on the Institute to raise its graduation rate. As we have seen, students who test into Level A in the writing strand do not graduate at the same rate as students who test into higher levels. The Institute would seem to be faced with a choice. Should we become more selective and “raise the bar” to automatically exclude students who test at Level A? Or, alternatively, since some Level A students do graduate, can we identify some critical characteristics that will allow us to predict who among that group are more likely to succeed?

Since it is common to assume that many deaf and hard of hearing students do not graduate because of difficulty with reading and writing, it makes sense to look for critical characteristics in the English literacy skills displayed by entering students. It was with this in mind that a study was designed to assess the extent to which the entry writing tests of Level A students might be predictive of subsequent academic success.

Eight groups of three entry essays each were assembled on the basis of the following criteria: (1) One student in each triad had graduated with an AAS degree, while the other two had either left the Institute with no degree or graduated with an AOS degree; (2) The essays in each triad received the same score; (3) The essays had approximately the same number of words; (4) The students in each triad had very similar entry reading test scores.

Three groups of faculty were asked to read the essays and predict, based on whatever criteria they wished, which of the essays had been written by the AAS graduate-to-be. The three groups of raters were: English instructors teaching in the developmental program (Group One); English and Liberal Arts instructors teaching deaf students in the College of Liberal Arts (Group Two); NTID academic administrators (Group Three). Of the three groups, only faculty in Group One had any significant experience teaching Level A students.

To give a sense of the student writing that raters were asked to judge, the three essays written by students in the first triad are included in the Appendix.

Table Three gives the results. None of the three faculty groups scored above chance. In fact, the average number of correct responses out of eight for the three respondent groups was: Developmental Program faculty = 1.88; CLA faculty = 1.5; academic chairs = 1.86. The most common number correct was one out of eight (7 of 21 respondents). One person got five right and three people got none. There was broad consensus on the successful student in six of the triads among all three groups of faculty, however, in only one of the six was this consensus correct. (In the second triad, all 21 respondents picked the same paper – wrongly.)

			Faculty	Faculty	Admnstrtrs	
			GROUP A	GROUP B	GROUP C	TOTALS
			N=8	N=6	N=7	21
		AAS				
		Graduate				
	Student P		6	5	6	17
GROUP 1	Student T	Δ	1	0	1	2
	Student Z		1	1	0	2
	Student E	Δ	0	0	0	0
GROUP 2	Student M		0	0	0	0
	Student R		8	6	7	21
	Student C		2	2	1	5
GROUP 3	Student F		5	2	4	10
	Student V	Δ	1	2	2	6
	Student B		3	2	2	7
GROUP 4	Student G		0	3	3	6
	Student N	Δ	4	1	2	7
	Student A	Δ	0	0	3	3
GROUP 5	Student D		3	1	0	4
	Student J		4	5	4	13
	Student L	Δ	1	0	2	3
GROUP 6	Student O		1	0	0	1
	Student S		6	6	5	17

	Student Q		1	0	0	1
GROUP 7	Student X		7	5	6	18
	<i>Student Y</i>	Δ	<i>0</i>	<i>1</i>	<i>1</i>	<i>2</i>
	Student H		0	0	1	1
GROUP 8	<i>Student K</i>	Δ	<i>8</i>	<i>4</i>	<i>3</i>	<i>15</i>
	Student U		0	2	3	5

Table Three: Faculty Predictions of Student Success

This result demonstrates that, at least for this population of students with relatively low English skills, it is well nigh impossible to predict academic success from entry writing samples. And not only that: if asked to predict, experienced faculty will predict wrongly. As such, the study casts doubt on the wisdom of the Institute's seeking to make selection decisions about students from this specific population based on evaluating student writing at some point during the college application process.

Question 3: How well do pre-entry ACT scores predict academic success?

Some years ago, NTID began to ask applicants to take the ACT as part of their application process. The ACT gives a composite score and several sub-test scores, including an English score (essentially a test of judgments of grammaticality) and a reading score. It would seem reasonable to examine whether student scores on this test might predict academic success.

Looking at each of the three ACT scores (Composite, English, Reading) for each of the five groups of students (grouped by entry writing placement), it turns out that there is no pattern which might help predict which students will graduate and which will not. For students placed in Level B & Level D writing, the average differences in the three scores favor non-graduates. For Level C & "proficient" students, the converse is true. (For Level A students, there is next to no difference between graduates and non-graduates, a not unexpected result, given that students at that level are scoring at chance.)

	LEVEL A (N=73)	LEVEL B (N=66)	LEVEL C (N=63)	LEVEL D (N=36)	LEVEL PROF (N=23)
GRADUATED	25 (34%)	28 (42%)	25 (44%)	16 (44%)	12 (52%)
AV. ACT (C)	13.71	13.96	15.73	17.43	20.75
AV. ACT (E)	10.5	10.08	13.86	16.5	18.25
AV. ACT (R)	12.46	12.88	15.27	17.5	22.75

NOT GRADTD.	48 (66%)	38 (58%)	32 (56%)	20 (56%)	11 (48%)
AV. ACT (C)	13.76	14.39	15.69	17.83	18
AV. ACT (E)	10.6	11.08	12.83	16.17	17.33
AV. ACT (R)	12.4	13.71	14.69	19.44	18.67

Table Four: Graduates & Non-Graduates Average ACT Scores

Average ACT scores are not much more predictive of the type of degree our graduates earn. For example, Table Five compares the ACT scores of students entering at Level C, who graduated at different degree levels.

LEVEL C				
	BAC	AAS	AOS	Not
	GRADS	GRADS	GRADS	Graduated
AV. ACT (C)	15.9	15.5	15.8	15.7
AV. ACT (E)	14.2	12.1	16	12.8
AV. ACT (R)	15	15.6	15.2	14.7

Table Five: ACT Scores of Level C Graduates & Non-Graduates

In summary, ACT scores of entering students seem no more useful as predictive data than entry writing scores or entry written essays. Let us now finally turn to past course performance as a possible indicator of academic success.

Question #4: How well do data associated with past course performance predict performance in subsequent courses?

After revamping the Institute's developmental English program some years ago to make it a mastery-based sequence of writing and reading courses, we noticed that grades in different sections of the same course were more than desirably divergent – with some instructors appearing to be more generous than others. As a result, we decided that we would institute end of quarter outcomes assessment measures in both the Writing and Reading courses at Level C, with the goal of providing an independent check on the validity of grades. For the purpose of this paper, only the writing outcomes measure will be considered below.

The outcomes measure in question is an essay, which is written in the final week of the quarter during a 50-minute class period, without benefit of notes, or on-line assistance. Students are asked to pick from three simple prompts. Their essays are rated by three faculty on a three-point scale: "Ready" (R) for the next sequential course (W.IV); "Marginally Ready" (MR) for the next sequential course; and, "Not Ready" (NR) for the next sequential course.

Ideally, grades in W.III and the W.III outcomes measure both ought to predict performance in the sequential W.IV course. (When we first instituted the curriculum, we said that a “C” grade would indicate that a student had roughly a 50% chance of success in the next sequential course.) To see if they do, the correlations among five variables in the performance of 71 students who took both the W.III and W.IV courses were computed. In addition to the three immediate variables of Writing III course grades, Writing III outcomes assessment ratings, and Writing IV course grades, correlations were also computed for Writing test entry scores, and Reading test entry scores

In general, the correlations among the five variables were weak, ranging from a high of 0.425 to a low of 0.104. From strongest to weakest the correlations were as follows:

W.III Outcomes Assessment ratings & Entry Writing Test scores = 0.425
 W.III grades & W.IV grades = 0.368
 W.III Outcomes Assessment ratings & Entry Reading Test scores = 0.325
 Entry Reading Test scores & Entry Writing Test scores = 0.247
 W. III Outcomes Assessment ratings & W.III grades = 0.241
 Entry Writing Test scores & W.IV grades = 0.235
 Entry Reading Test scores & W.IV grades = 0.155
 Entry Writing Test scores & W.III grades = 0.137
 Entry Reading Test scores & W.III grades = 0.13
 W. III Outcomes Assessment ratings & W.IV grades = 0.104

Even though the second highest correlation is between W.III grades & W.IV grades, this is not saying much. Exactly half of the “A” students in W.III got “C” or less in W.IV, and the students who got “B” in W.IV were just as likely to have gotten “A” in W.III as “C”. [It should be noted that the grade distribution in W.IV is skewed because several years ago, the Department instituted a requirement of a “C” grade or higher in the W.III course to qualify for the W.IV course. As a result, the “D” grade is underestimated in the data - and of course there are no “F” grades for obvious reasons.]

The very poor correlation between W.III outcomes ratings & W.III grades, and the almost non-existent relationship between W.III outcomes ratings & W.IV grades is a puzzling result, since the outcomes measure was designed by the faculty to get at what we want students to be able to do at the end of the W.III course. (It should be noted that in the latter, low outcomes rating/high grade was much more common in the data than the converse.)

A possible conclusion is that the poor correlations indicate that something is going awry in the course grading. Of course, much goes into a grade, and there is conversely widespread acceptance of the notion that a one-time, 50-minute writing sample does not necessarily equate to a student’s true writing ability. However, it is hard not to think that such a writing sample as the outcomes measure ought to have strong validity – especially because it is rated with the W.IV course in mind. To find such low correlations is, to say the least, surprising.

Given the limitation on the correlational study that it include only W.III graduates who go on to take the W.IV course, a separate analysis of the relationship of all W.III outcomes assessment ratings & all W.III grades might yield a different result. One interesting finding in passing is that the highest correlation was between the two independent writing samples – the outcomes essay and the entry essay, the latter being the means by which we place students in the curriculum sequence in the first place! In any event, these results indicate that data associated with performance in the W.III course are not very good at predicting performance in the W.IV course. Despite its initial

attractiveness, therefore, the hypothesis that performance at the end of a sequential course on an independent measure ought to be predictive of future performance in subsequent courses, is not borne out in practice.

Question #5: In general, does the widespread belief that deaf students don't graduate primarily because of deficits in English literacy hold water?

The initial finding (in the data presented under Question #1) that entry writing level among graduates is somewhat predictive of the type of degree earned supports the contention that the level of English literacy deaf students is an important factor in academic success. However, this conclusion is tempered by the findings that, for the most part, entry writing level is not predictive of graduation per se, and that, within levels, average entry reading and writing scores are more or less the same for both graduates and non-graduates.

In addition, the absence of a strong correlation between the outcomes assessment measure in the W.III course and course grades, in a curriculum designed to be mastery-based also raises a question about the primacy of English literacy in academic success. In this case, it looks as if grades may be reflecting something other than English ability. It is also possible that the success of those Level A students who go on to graduate with an AAS degree - and occasionally even a baccalaureate degree - when their English on entry is indistinguishable from their peers, is based on something other than a sudden and inexplicable quickening in their ability to develop English skills unlearned in the previous 18 odd years of schooling.

A colleague, Dr. Kathleen Crandall, has suggested that such factors might be grouped into in-class behaviors and extra-classroom behaviors. In a paper entitled, "Factors Related to Deaf students' Success in College," she reports that high attendance, attentiveness and participation in class, and assignment completion, use of tutors and completion of optional work out of class, are all highly related to academic success in the same population considered here. Since she measured these characteristics in her students' initial academic quarter, it seems that these students must have developed these positive study habits before they enter college. Though this once again begs the question as to why they did not have a positive impact on English literacy development before they get there.

In summary, while the data discussed here largely support the contention that relative strength in English literacy skills is an important factor in our students' success, there is also a strong suggestion that it is not a sufficient factor, nor, in all cases, is it as necessary as one might expect.

This paper has sought to raise some questions about the relationship of standardized test scores, institutional placement tests and faculty-designed outcomes measures to the academic success, defined as graduation, of deaf and hard-of-hearing students. In particular, it has questioned the extent to which we can rely on these sorts of scores for the purpose of predicting academic success. Since institutional decisions regarding whom to accept and whom to reject, whom to expend resources on, and what sorts of programs to offer, can sometimes depend on such predictions, it seems important to examine their accuracy.

Within this broad conclusion, the data further suggest that educators should be particularly wary of the temptation to use group data to close the door of opportunity on any individual student. Not all students may have what it takes to succeed in college, but as long as we can't reliably tell which do and which don't, it behooves us to give the benefit of the doubt.

Appendix

STUDENT P: What do you like about NTID and the people here?

When I arrives here on National Tech. Int. for the Deaf on campus, I knew that, this will give me the ideas what the college is about. There are several things that I like about NTID, first of all, various students from all over states that came here and other countries. I was in culture shock but slowly accept who they are. Where they come from (lifestyle background). Of course, you learned lots of things about social thur your friends from your college.

Second things, NTID offer the students many different fields in majors for you to choose. To help the students to stay on the track until they graduated with major degree. This is a wonderful oppintries for the students to reach their goals and to be successful in future. It will be worth to have a degree when the students finished their career then it will pay off. So the jobs out there can hired them. Understand the reality in college to get ready for the real “outside” world. Sometime it will not going to be easy but learn to challenge it, once you do that, you can be an a leadership or be a successful in many gifted ways.

The only way you learned about college life is, thur by your own friends, no matter if that person is hearing or not. Accept who you are and move on.

STUDENT T

As I am new student at the NTID this year. NTID were setting in Rochester, New York. The NTID were offering the many wonderful choose for everyone to pick for their major for the future. The students who are borning as fully deafs or hard hearings that they can getting more time with the focus than attending at the RIT. Many people who were students at the NTID, where they can be society with other deaf people. Most of the college, the number of the deaf students are less on the percentage of the attending. Let’s discuss about my opinions of NTID and the people here.

The NTID were founded by the president of the United State. His name is Lyndon Johnson. He got his express from his neapew. Then, he found the deaf college of technologies. Many of the deaf people who really needing the best education for the future with their major.

The NTID’s place were built by the whole bricks to make look like more on the technologies of the institutes. The classrooms at the NTID have different location in the RIT’s campus.

The RIT were hoping for the future where they wants to keeping up with the deaf students” attending at the NTID. The NTID always to be there for the big helping with the education with the various of the subjects. They are many professors who receveing the high degree from the university with the wonderful experience. The deaf students will not be too isolation for self. They will be society for many hours.

The conclusion of this opinion is the NTID students who did made a right decision with their University’s choices. The NTID will be always be here in Rochester for next many years.

STUDENT Z: Welcome in NTID

I like about NTID, because I looked at any where in NTID or RIT alike much very nice. But I will get to more look all of buildings on more time. I would feel so more comfortable and encourage for ready to work and study hard into some classes if I need to find very easy to hard levels for some classes. I know I want to interest about good choices which any classes of arts. Because I always like so I can do drawing my own idea or image about just like as comic books. And I like about the people in here. That's ok, Because I would like be more enjoy to being alone and my life need to easily for improve into my skills. But, If I don't understand about everything, Some people can help to me for problem solve about somethings. I have to learn with my experience about find new friends or roommate. I don't like about NTID if someone give to me for more much difficult about some classes for grade or some hard work for final exams. Because I don't want my grade will getting to flunking for some classes. But I'll try to best doing that and trying to hardest study for good grades. I don't like about the people in here, because I wasn't feel so comfortable with new roommate same my room. I want to need feel so very much comfortable and better for being alone in new room single if I need it for new room. But I must to take my life with patient. I'll be getting to find much better for beginning of this year in NTID and my goal need to take sucsece in my future.

The Writing Processes of College Students with and without Learning Disabilities: A Protocol Analysis

Cynthia Edwards

Abstract

The number of students with learning disabilities attending college has increased; nevertheless, evidence shows that many college students with learning disabilities have difficulty completing their education. One of the most significant factors that affect the performance of college students with learning disabilities is difficulties with written language. A study was conducted to analyze the cognitive processes college students with and without learning disabilities use while composing an essay. A model of writing was used as a means for analyzing the holistic quality of writing, length of writing, planning and revising strategies used during writing. Twenty-three self-regulatory variables in planning, monitoring, and revising were used to identify the cognitive processes college students with and without learning disabilities used during the writing process. Think-aloud protocols, written essays, and videotapes were used to explore the writing processes of two groups of college students. This paper summarizes the study and discusses the results of the study and their implications.



Purpose of Study

The objective of the dissertation study was to identify variables college students with and without learning disabilities used to monitor the writing process. The written product (essay), processes (planning, composing, and revising) and self-regulatory behaviors used while writing were analyzed.

Subjects in the Study

Twenty community college students (ten with learning disabilities and ten without learning disabilities) participated in the study. The students were selected from introductory English composition classes offered at the college. The students were paid for their work and were trained in thinking aloud while writing and gave evidence they possessed sufficient word processing skills.

Methodology

Data for the study were collected through think-aloud protocols, videotapes, audiotapes, and written essays. During one-hour sessions, each student composed an essay on a computer while thinking aloud.

Results

The results revealed that college students without learning disabilities wrote essays that were scored significantly higher than college students with learning disabilities. In addition, the college students without learning disabilities showed statistically significant positive correlations between holistic writing scores and the planning variables of generating ideas and self-instruction, the monitoring variables of monitoring content, process control, and self-questioning, as well as the reviewing variables of evaluating and revising text. No significant differences were found in the number and types of planning and revising instances, or with the length of writing (number of words written).

Implications

These results suggest that self-regulatory behaviors influence writing quality and college students with learning disabilities might benefit from instruction in the use of planning, monitoring, and reviewing processes to give them access to tools to help them produce better quality writing.

Reading Comprehension in Deaf Children: The Impact of the Mode of Acquisition of Word Meanings

Loes Wauters

Abstract

This paper discusses research on reading comprehension in deaf children and adolescents in the Netherlands. The average reading comprehension scores of deaf children and adolescents were found to be shockingly low. To find an explanation for these low scores, two central factors in reading comprehension were studied: word identification and mode of acquisition. The deaf participants scored only slightly lower than the hearing children on word identification, which indicates that the low reading comprehension scores cannot be completely explained by word identification problems. Knowing this, the focus shifts to mode of acquisition, which refers to the type of information children use in acquiring word meanings: perception, language, or both. Mode of acquisition is found to play an important role in deaf children's reading comprehension. Especially word meanings that have to be learned through language are difficult for deaf children, most probably because accessible language input is too scarce.



Many studies have shown that, on average, deaf adolescents perform at the mean reading comprehension level of 9-year-old hearing students (Allen, 1986; Conrad, 1979; Holt, 1993; Holt, Traxler, & Allen, 1997; Karchmer & Mitchell, 2003; Traxler, 2000). According to the Simple View of Reading (Hoover & Gough, 1990), reading comprehension consists of two components: decoding and linguistic comprehension. Both components are essential for reading comprehension and difficulties in this area can arise from deficiencies in one or both of these components. Together these two components explain about 80% of the variation in reading (de Jong & van der Leij, 2002). In the present study, the role of these two components in deaf and hearing children's reading comprehension are studied. Study 1 will focus on reading comprehension differences between deaf and hearing children and the possible explanatory role of word identification. In Study 2, the construct *Mode of Acquisition* will be discussed and will be related to the reading comprehension differences between deaf and hearing children. For more information on the research discussed in this paper, please consult Wauters, Tellings, van Bon, & Mak (2007), Wauters, van Bon, & Tellings (2006), and Wauters, Tellings, van Bon, & van Haaften (2003).

Study 1: Reading Comprehension and Word Identification

Over the past decades the reported average reading comprehension level of deaf children did not improve much. In recent studies the average level of 15- to 17-year-old deaf students is comparable to the level of 10-year-old hearing students (Holt, Traxler, & Allen, 1996; Traxler, 2000). Word identification is one of the components involved in reading comprehension. For hearing children, an important factor in reading comprehension is phonological coding (Bradley & Bryant, 1983; Caravolas, Hulme & Snowling, 2001). For deaf children, limited access to spoken language can obstruct access to phonological information and therefore word identification skill. Studies on deaf readers' use of phonological information have shown varying results (Perfetti & Sandak, 2000). Several studies have shown a relation between phonological awareness and reading related tasks (Dyer et al., 2003; Hanson & Fowler, 1987; Harris & Beech, 1998), but other studies failed to show this relation (Beech & Harris, 1997; Harris & Moreno, 2004; Kyle & Harris, 2006; Waters & Doehring, 1990). Studies on word identification skill have also shown varying results, but not all show lower scores for deaf children. Although Harris and Beech (1998) and Kyle and Harris (2006) found deaf 4- to 8-year-olds to score lower than their hearing peers, Burden and Campbell (1994) found no differences between deaf students (mean age = 14;6) and chronologically age-matched hearing students. The present study examined the relation between reading comprehension and word identification in 504 Dutch deaf children.

Method

Participants

Participants in this study were 504 deaf students with a hearing loss of 80 dB or more ($M = 108$, ranging from 80 to 140 dB), between the ages of 6;7 and 20;1 years ($M = 12;9$ years). None of the children had a cochlear implant. Thirty-five students were in mainstream education and 454 were in deaf education. Fifteen students had deaf parents and 97 students had parents of non-Dutch origin.

Materials

A lexical decision task and reading comprehension test were administered to all students. The lexical decision task consisted of 80 pairs of an existing Dutch word and a pseudoword (orthographically correct, but non-existent). In each pair, the participant had to cross out the non-existent word. The raw score is the number of correctly judged pairs within one minute. This task was also administered to 1475 hearing students in the same age range as the deaf students.

The reading comprehension test (Aarnoutse, 1996) was comparable to the Stanford Achievement Test, consisting of text passages with multiple choice questions. This task was not administered to hearing students, but data from the national pupil monitoring system were used for comparison.

Results

The mean score of the total group of deaf students on the reading comprehension test ($M = 22.20$, $sd = 5.19$) was comparable to the first grade level for hearing students ($M = 22.50$, $sd = 2.85$). Only 50% of the deaf participants scored above the level of first grade. Figure 1 shows the mean scores for deaf and hearing children. At all instructional ages (the number of years of formal instruction), deaf students scored lower than hearing students and only 4% of the deaf students read at an age-appropriate level.

Only 19% of the deaf students (with an instructional age of at least 3 years) reached the level of third grade, the average that is found in most previous studies. In several aspects, these children

differed from children who did not reach this level: on average, they were older ($M = 14.11$ versus $M = 12.6$); they were mostly from Dutch origin ($\chi^2(2) = 12.94$; $p < .01$); they were mostly in mainstream education ($\chi^2(2) = 36.91$; $p < .001$); and they had a higher IQ ($M = 106$, $sd = 16.3$ versus $M = 95$, $sd = 14.8$).

On word identification, the mean score of the total group of deaf children ($M = 34.63$, $sd = 16.29$) did not significantly differ from the mean score of the total group of hearing children ($M = 33.34$, $sd = 17.66$) and was comparable to the fifth grade level ($M = 34.41$, $sd = 8.74$). Figure 2 shows that some differences occur between the deaf and hearing students at the various instructional ages. From the instructional ages of five years on (around fifth grade), deaf students scored below the hearing students ($p < .01$).

Although a significant relation was found between reading comprehension and word identification ($r = .50$, $p < .01$), the higher scores on word identification than on reading comprehension imply that not all problems in reading comprehension can be explained by word identification. A regression analyses showed that the word identification scores were lower than would be expected from the instructional ages $t(503) = 14.2$, $p < .01$) and that reading comprehension scores would be higher if word identification skill had been age-appropriate ($t(463) = 8.3$, $p < .001$). However, the reading comprehension scores would still be far from age-appropriate ($t(463) = 446.8$, $p < .001$).

Conclusion

The results from the first study show that deaf children in the Netherlands score very low on reading comprehension. Although the mean instructional age is 7 years, the mean score is comparable to the first grade level (instructional age of 1 year) and only 19% scores above the fifth grade level. Age, educational setting, ethnicity, and IQ influence the chance that a deaf child will reach the fifth grade level.

Scores on word identification are more encouraging. Even though the deaf children do not show age-appropriate scores, the overall mean does not significantly differ from the mean for the hearing group. From these results, word identification does not seem to be the main explanation of deaf children's reading comprehension problems. Therefore, limited linguistic comprehension must be the main cause. Study 2 examined if reading comprehension difficulties can be explained by difficulties in word meaning acquisition.

Study 2: Mode of Acquisition

Hoover and Gough (1990) define linguistic comprehension as the ability to take semantic information and derive sentence interpretations. Knowledge of word meanings is an important aspect of this component. In order to examine the role of word meaning acquisition in reading, we use the construct Mode of Acquisition (MoA). MoA refers to the type of information children use in acquiring the meaning of words (or signs). The meaning of the word „red“ will be acquired mostly through perception. A child plays with the red ball, wears a red dress and people around her will use the label „red“ to talk about these things. To learn the meaning of „century“, linguistic information (language) will be used. Someone will explain the meaning of the word to the child or the child will infer the meaning from written or spoken language. Other words will be learned through a combination of perception and linguistic information, for example when someone uses pictures and language to explain the meaning of a word. In order to develop rich word meanings, both perceptual and linguistic information are necessary but the proportion of perception and language differs for each word and depends on the child's age and development.

MoA is a word characteristic just like concreteness, imageability, and age of acquisition (AoA), but even though these characteristics correlate they do not coincide. MoA differs from these characteristics in that it explains why concrete and imageable words are learned easier and earlier than abstract and less imageable words. Some word meanings cannot be learned without linguistic information. Young children can utilize linguistic information less well and therefore will acquire abstract word or sign meanings only when they are older. In addition, MoA is not only concept-relative, but also context-relative. Children living in the desert most probably will not acquire the meaning of „snow“ perceptually whereas children living in Iceland most probably will. Not just the abstractness or the imageability (both mainly concept characteristics) determine AoA or MoA, the context also matters.

Earlier research has shown that MoA can be reliably measured by asking adults to judge the MoA of words or signs on a five-point-scale (Wauters et al., 2003). The mean MoA of words gradually increases in reading materials from first to sixth grade and reading materials in the higher grades contain more words of which the meaning has to be acquired through linguistic information whereas these texts do not differ in their amount of concrete and imageable words.

Acquiring word meanings through linguistic information requires access to language (Bloom, 2000). For many young deaf children, language access is scarce. Speech is inaccessible and since 95% of the children have hearing parents (Mitchell & Karchmer, 2004), sign language usually is not available in the early years of life, and in later years it is available mostly in an imperfect form. According to Spencer and Harris (2006), there is wide variation in the sign input deaf children get, but most hearing mothers provide insufficient language input to their deaf child, mostly because they are not experienced using signs or interacting with deaf people. In addition, hearing mothers do not make their sign productions as accessible to their deaf child as deaf mothers do and they show less consistency in the form of their signs. Given that acquisition of linguistic word meanings is dependent on caregiver explanations, deaf children (of hearing parents) may experience greater disadvantage in acquiring these word meanings versus perceptual word meanings. Study 2 examines the role of MoA in deaf and hearing children's reading comprehension.

Method

Participants

Participants were 72 deaf and 99 hearing children with an instructional age of 2 to 6 years. The deaf children were selected from a group of 229 children who took the lexical decision task that was described in Study 1. Criterion for participation was a score within one standard deviation from the mean for the instructional age group. At the instructional age of 2 years, 12 children met this criterion. At the instructional ages of 3 to 6 years, 15 children were selected for participation. The 72 deaf participants had a mean age of 10 years and 3 months (ranging from 7;2 to 14;6) and a mean hearing loss of 100 dB (ranging from 60 to 130). Thirteen children had a cochlear implant. Eight children were in mainstream education. Two children had deaf parents and 12 children had parents from non-Dutch origin.

The 99 hearing children were selected from grades 2 to 6 of two elementary schools. For each grade, 20 students with an average word identification skill were selected for participation. Due to illness at both testing times, one student was excluded from the study resulting in 99 hearing participants.

Materials

The experimental task required participants to read sentences and answer a question after each sentence. The experiment consisted of two testing sessions with a two week interval. In each session 43 sentences and questions were presented, so a total of 86 sentences were presented. All sentences consisted of 7 words in which the fourth word was the target word. Half of the sentences contained a target word of which the meaning can be acquired through perception and half contained a target word of which the meaning has to be learned through linguistic information (as rated in a previous study by Wauters et al., 2003). The first will be referred to as perceptual words and the latter as linguistic words. Each sentence occurred twice: once with a perceptual target word in the one testing session and once with a linguistic target word. Except for the target word, these sentences were identical. In each testing session, half of the items consisted of sentences with a perceptual target word and the other half of the items with a linguistic target word. If a sentence occurred in the first session with a perceptual target word, it was presented in the second session with a linguistic target word and vice versa. After each sentence, a question with a yes-or-no format appeared on the screen to test the participant's knowledge of the meaning of the target word. A (translated) example of a sentence in the perceptual condition is: "The boy smelled soup in the kitchen.". The linguistic counterpart of this sentence is: "The boy smelled gas in the kitchen.". The question that is presented after each of these sentences is read, is: "Does the boy smell something that can be eaten?".

The experiment was conducted on a laptop with a three-button box connected to it. Each item started with an asterisk at the left side of the screen where the sentence would start. After pushing the middle button of the button box, the first word appeared together with a representation of the sentence with dashes for each letter, spaces between the words, and a period at the end. After pushing the button again, the next word appeared and the first one was replaced by dashes. When the last word of a sentence was read, another (middle) button-click revealed the question that had to be answered by pushing the button with the word yes (the left button) or the one with the word no (the right button). The reading time for each word was registered from the moment the child pushed the button to view that word until the child pushed the button again for the next word. Both the answers to the questions and the time it took to read and answer each question were recorded. The test was administered individually by a test instructor who sat next to the child. At the start of the first session, the instruction was given in the modality preferred by the child (Sign Language of the Netherlands, Sign Supported Dutch, or spoken language). Three example sentences were shown, then the participant started with 10 practice sentences before starting the actual experiment.

Results

To study the effect of MoA reading times and comprehension scores for perceptual and linguistic sentences were compared. In addition, reading times and comprehension scores of deaf and hearing children were compared. Reading times on the words in the sentences are represented in Figure 3. As can be seen from this figure, reading times on the target word are longer for the linguistic words than for the perceptual words. For the other words, no such difference exists. Analyses for the words before and the words after the target word indeed showed no effect of MoA. The only effects that are found there are an effect of instructional age for the hearing students only with faster reading times for older participants (words 1-3: $F(4,94) = 27.32, p < .001$; words 5-7: $F(4,94) = 30.06, p < .001$) and a difference between the deaf and hearing participants on the first three words with the deaf participants reading slower than the hearing ($F(1,169) = 6.06, p < .05$).

For the target word, an effect of MoA and instructional age was found ($F(1,169) = 235.29, p < .001$; ($F(4,166) = 10.46, p < .001$). Reading times for the linguistic words were longer than for the

perceptual words and reading times decreased as instructional age increased (see Figure 4). The effect of instructional age only pertained to the hearing participants ($F(4,94) = 36.09, p < .001$).

Processing times for the questions (both reading and answering them) showed effects of MoA, hearing status, and instructional age ($F(1,169) = 114.56, p < .001$; $F(1,169) = 45.92, p < .001$; $F(4,195) = 10.63, p < .001$). Processing times were longer for questions about linguistic sentences than for questions about perceptual sentences, longer for deaf than for hearing students, and they decreased as instructional age increased.

Analyses for the comprehension scores showed effects of MoA, hearing status, and instructional age ($F(1,169) = 391.84, p < .001$; $F(1,169) = 235.52, p < .001$; $F(4,94) = 13.01, p < .05$). Scores were lower for questions about linguistic sentences than for questions about perceptual questions, lower for deaf than for hearing students, and increased as instructional age increased (see Figure 5). Scores for the deaf students were not only lower on the linguistic items, but also on the perceptual items. For deaf students with an instructional age between 2 and 5 years, average scores did not exceed chance level. For the perceptual items, scores ranged between 60 and 75% correct. For the hearing students, a ceiling effect occurred on the perceptual words from an instructional age of four years on.

Conclusion

Results from this second study show that MoA influences sentence reading and comprehension. For both deaf and hearing students, reading times are longer for linguistic words than for perceptual words. For hearing students, reading times decrease as with instructional age. This effect was not found for the deaf students.

Apart from an effect on reading times, an effect is found for comprehension scores. For both deaf and hearing students, comprehension scores are lower for linguistic items than for perceptual items and knowledge of word meanings increases as they grow older. However, deaf students keep scoring below the hearing students on both linguistic and perceptual items.

General Discussion

The present study examined reading comprehension in deaf children in the Netherlands and investigated the explanatory role of word identification and Mode of Acquisition. Results on reading comprehension showed shockingly low results with an average score at first grade level, an average that is lower than the third or fourth grade level found in previous studies. Only 19% of the students in the present study reach that third grade level.

Word identification scores indicate that reading comprehension difficulties are not mainly caused by word identification difficulties. Merrills, Underwood, and Wood (1994) also concluded that word identification could not completely explain reading comprehension difficulties, because the deaf 11- to 15-year-olds in their study scored higher than younger hearing students who were matched on their reading comprehension skills and they did not differ from same-age hearing students with poor reading comprehension skills.

If word identification does not provide a sufficient explanation, linguistic comprehension should. Result from Study 2 show that sentences with linguistic target words are harder to read and understand than sentences with perceptual target words. No or minor differences between deaf and hearing students were expected on the perceptual items. However, the two groups differed in their

comprehension of these sentences. On the linguistic items, deaf students scored below chance level indicating that they do not know the meaning of these words. On the perceptual items, deaf students score above chance level but below the hearing students at all instructional ages. Obviously, they do not have enough knowledge of the meaning of these words to reach the same comprehension level as their hearing peers. Perhaps we underestimated how limited deaf children's access to the necessary information for acquisition of these word meanings actually is.

Apart from, or maybe as a result of, limited language input due to the lack of access to spoken language and the lack of efficient sign language use in their environment, deriving information from daily conversations is impossible for deaf children. They don't have access to conversations hearing people are having, while hearing children can derive information from those conversations which enriches their knowledge of (perceptual and linguistic) words.

The present study shows the importance of a rich and accessible language input to build the vocabulary necessary for reading comprehension. Especially in the early years that are so important for language development, deaf children have limited language access. Because language is necessary to enrich their concepts, it is important to provide accessible information from the early years on. Both the experience and the language need to be there. For hearing children this goes without saying, but for deaf children it does not. Partly because of a lack of language access deaf children enter education with a language delay that, in most cases, is not resolved over the years. Early intervention is extremely important. Children, both deaf and hearing, need to receive extensive language input that is linked to experience.

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Figure Captions

Figure 1. Mean and median reading comprehension scores for the deaf participants at various instructional ages compared to norms for hearing children. The lines below and above the hearing norms delimit the range within one standard deviation of the mean.

Figure 2. Mean and median scores for the deaf participants on the two-choices test compared to the mean scores for hearing participants. The lines below and above the mean scores for the hearing participants depict the range within one standard deviation of the mean.

Figure 3. Mean reading times for deaf and hearing participants on each word in the sentences for both conditions.

Figure 4. Mean reading times for deaf and hearing participants on the target word in both conditions by instructional age.

Figure 5. Mean comprehension scores (in percentage correct) for deaf and hearing participants in both conditions by instructional age.

Figure 1

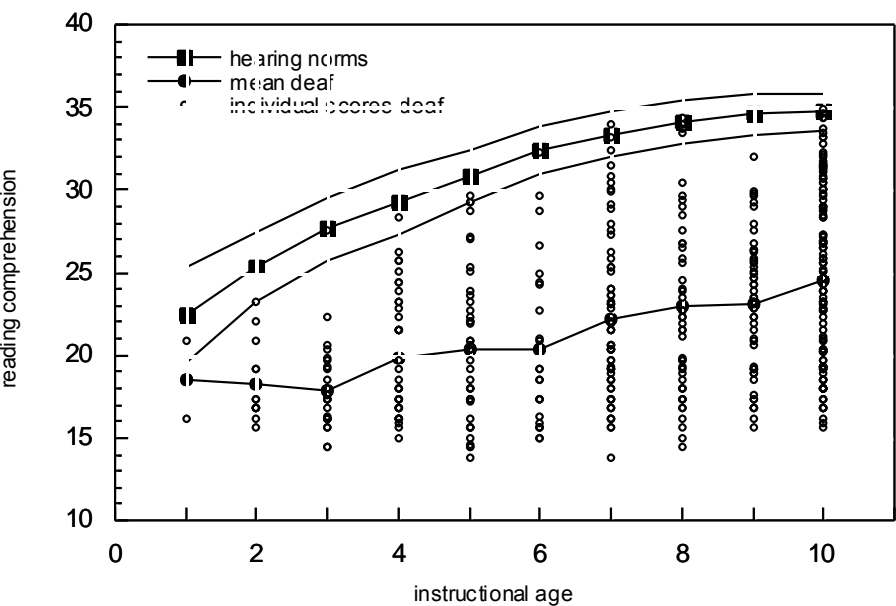


Figure 1. Mean and median reading comprehension scores for the deaf participants at various instructional ages compared to norms for hearing children. The lines below and above the hearing norms delimit the range within one standard deviation of the mean.

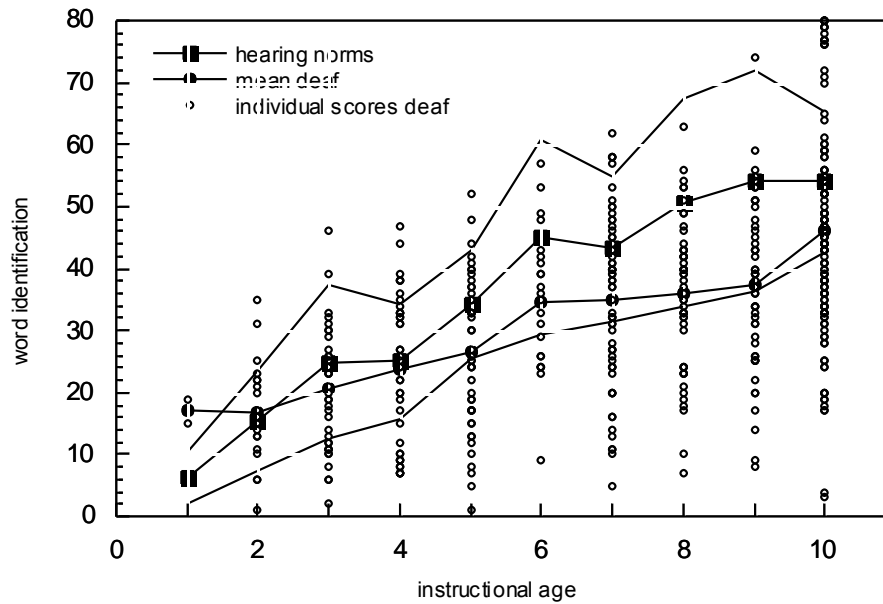
Figure 2

Figure 2. Mean and median scores for the deaf participants on the two-choices test compared to the mean scores for hearing participants. The lines below and above the mean scores for the hearing participants depict the range within one standard deviation of the mean.

Figure 3

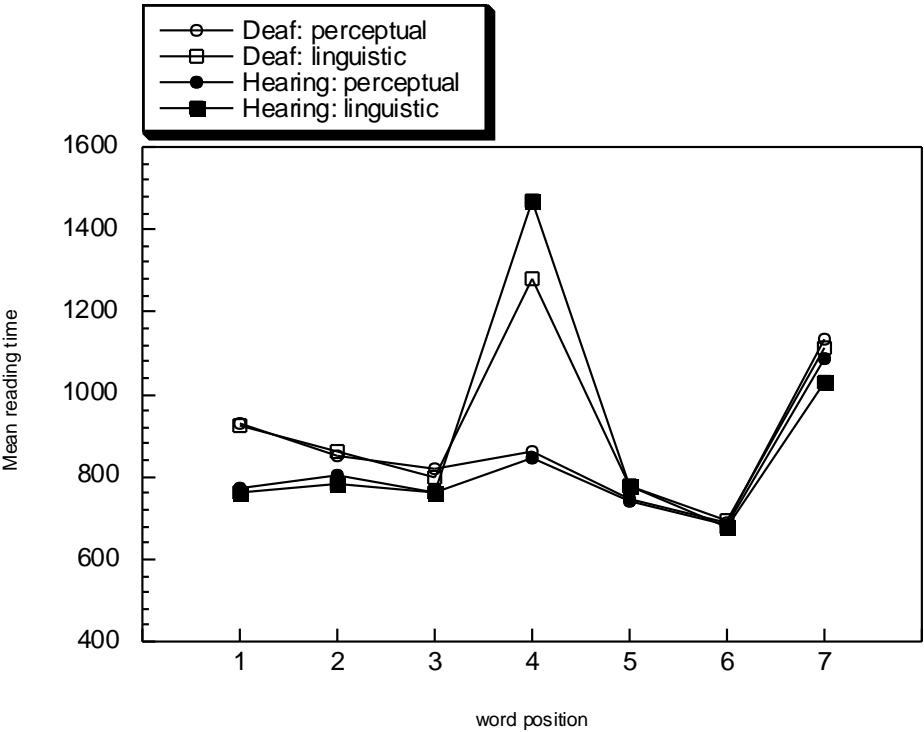


Figure 3. Mean reading times for deaf and hearing participants on each word in the sentences for both conditions.

Figure 4

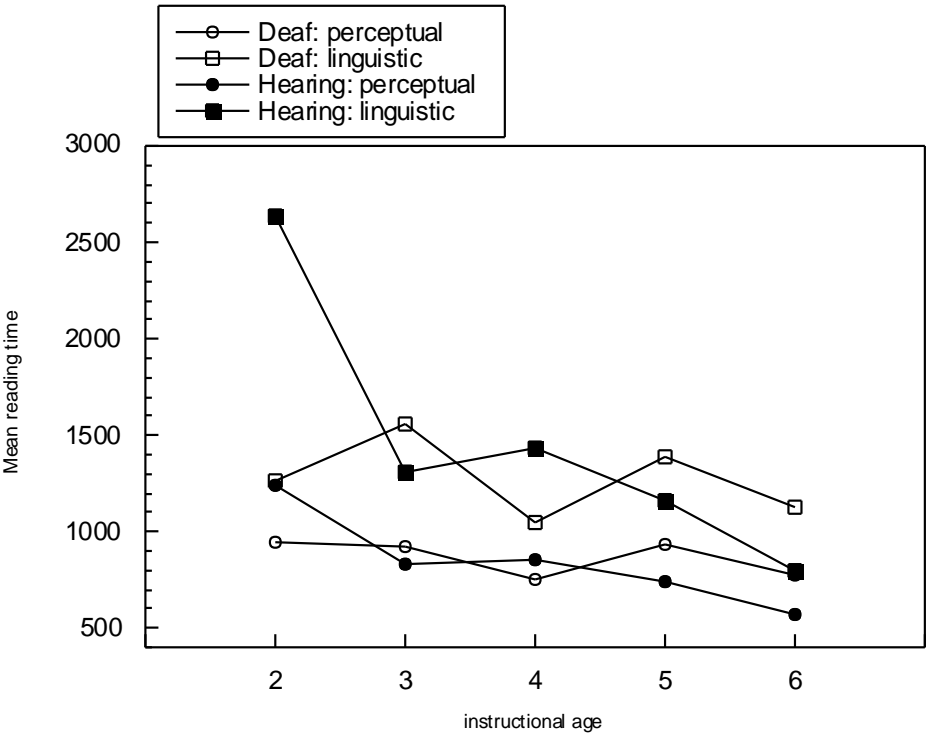


Figure 4. Mean reading times for deaf and hearing participants on the target word in both conditions by instructional age.

Figure 5

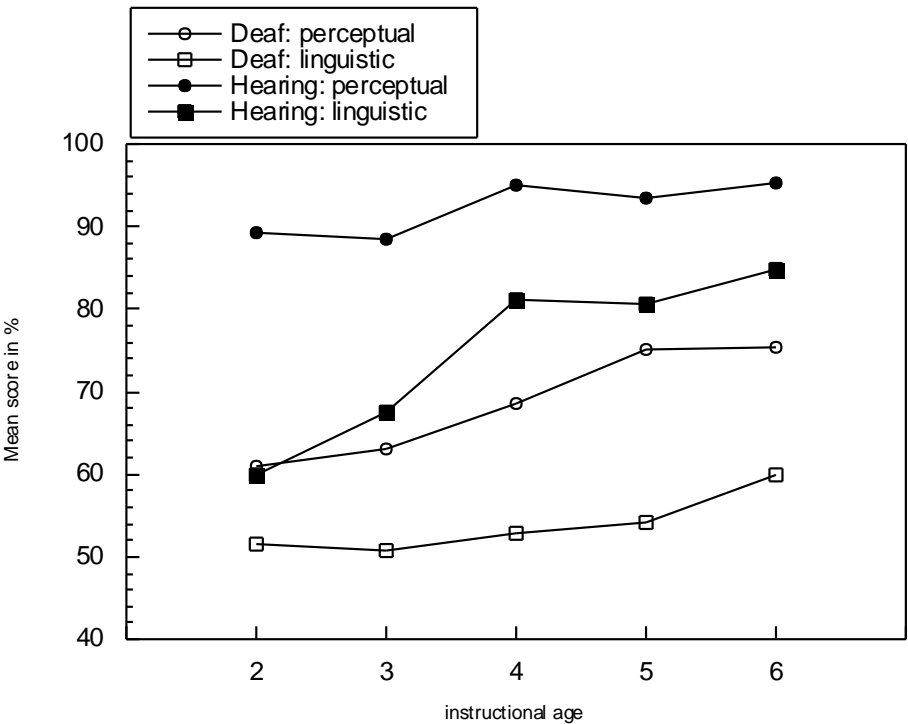


Figure 5. Mean comprehension scores (in percentage correct) for deaf and hearing participants in both conditions by instructional age.

DIVERSITY

Can Reading Stories in ASL Help Students Learn to Read and Write English? You Betcha!

Michael J. Burton

Abstract

This paper discusses a comprehensive computer-based interactive program designed to teach students ASL and English academic vocabulary. The program also enables teachers and students to track student gains in terms of conceptual understanding and English usage. The test information is available in ASL with graphics and other visuals to increase student attentiveness.



Hearing students learn the “academic” English used in textbooks and on standardized tests. Deaf students need to be immersed in the same kind of academic materials in ASL and have them related to English. This requires a program that provides dozens of poems, stories, and fables, accompanied by comprehensive tests, multiple-choice tests, matching tests, and spelling tests. Such a program has students “read” English via ASL and then write the story in English. It provides rubrics for evaluating the quality of English writing and academic ASL signing. It uses comprehension tests as a language teaching tool to enable the student to absorb the structure and meaning of English test items by repeated exposure to the test items via ASL. If it is difficult for hearing students to determine the correct answer of “not” questions then imagine the difficulty a DHH student encounters. Standard test items such as identifying the main idea, the main character, and the setting can be learned and absorbed by the DHH student in multiple test situations where the teacher uses the test results as an opportunity to teach the format and analysis techniques required to answer the questions properly. Research has shown that hearing students learn an average of 5 new words a day or more than 1500 new words a year while they are in school. The DHH student who is already light years behind when entering school needs a systematic approach to learn at least 10 new words a day in order to catch up. That program is available and in use today via ASL and the computer. This comprehensive interactive program is unique and has been beta tested for several years with impressive results.

Let us play a game to ensure that we are all in agreement as to the nature of the problem, the possible solutions for the problem, and a systematic method for verifying that we have, in fact, developed successful techniques for effectively dealing with the problem.

I will ask a series of questions that I want you to ponder and that I will then answer with what I hope meets agreement by consensus. What is the most difficult subject to teach a child who is deaf? Math, science, history, philosophy are subjects I have taught to a wide range of deaf students

with success, but the English language has always been a frustrating subject to teach. Why is it so darn difficult to teach English to a deaf child? I will answer this with another question: What is unique about the background of those deaf students (profoundly and pre-lingually deaf) who do read on level or above and who sometimes obtain a Ph.D. and have opportunities to teach in universities? After thinking about this for a moment our experience will lead us to the conclusion that these individuals have a different family environment. Yes, their parents are deaf. Ironical isn't it that so many teachers, speech pathologists and medical doctors argue that ASL hinders the development of quality English skills? The evidence glares at us that those students who were imbued with ASL as a first language during the critical formative linguistic development years (birth to six years old) can with relative ease transfer that first language to a second language, English.

What happens to the other 90% of deaf students without deaf parents? Let's answer this with another question: What is the verbal "working vocabulary" of the average middle class six year old child in the United States according to *Newsweek Magazine*? Researchers asked children to respond to verbal instructions and by recording their utterances determined that these children could use and understand 40,000 terms. Whoa! How is that possible? The researchers did not just count words spoken by a child but also counted words in combination that child was able to respond to such as: get up, get down, get it, get over it, get through it, get along, get mad, etc. Now I will ask you a trick question. What is the most vexing word in the English language for deaf children or even Japanese and Russians to learn? Here's a hint: it has three letters. No, it's not T-H-E although that is tough for deaf students to grasp sometimes. Another hint: it begins with the letter R. Now it hits you—the word R-U-N exasperates anyone wanting to learn English. Why is this true? Right, it is a word with multiple meanings. My unabridged dictionary provides 208 meanings: run down, run over, run through, run into, run about, run around on, run off. Believe it or not, there are 208 disparate signs for these permutations of the word run and I believe there are 208 Japanese terms for this word. What are the other words that cause English learners the greatest consternation? "Make," "take," "get," "cut," and "run" have a total of almost a thousand meanings. I remember a college professor writing a note to one of my students that said "take this paper home and run over it." Of course, he literally did that and seriously pondered the educational value of the exercise of placing a piece of paper on the floor and running in place.

Let's scrutinize the average six year old deaf child. They would employ how many signs? You are guessing 10 - 500. That is the range I encountered when I was Home Life Director for the Georgia School for the Deaf. Each year we would enroll 20 to 30 new six year olds into the dorm. I would greet these new students in the lobby and attempt to allay their fears as they were traumatized by tearful parents waving good-bye and driving off. It is extremely difficult to allay fears when there is no language, although some of our "grandmotherly" house parents had a knack for cuddling and holding children to their bosom and communicating in a language that only they and the children could understand. In my case, I observed the "home made signs" or gestures used by the children. Eat, drink, car, walk are universal gestures. Pointing at the groin area certainly conveyed a need to use the toilet. All in all, my observation demonstrated there were 30 or 40 signs and gestures that could be used effectively with these children.

Even in cases where enlightened parents had worked assiduously to use sign language at home, the children had fewer than 500 signs and typically a strong grammar system was nonexistent. These six year old children had missed the critical language development years and now they were 40,000 words behind.

Language researchers postulate that children learn seven new words a day during their elementary school years. If this is true then a hearing child can be expected to learn two to three thousand new words a year. Other educational theorists argue that any new material introduced to a student should represent 10% or less of the material or the student will be overwhelmed. How can the deaf child catch up?

We now have a conundrum: the students are 40,000 words behind with virtually no grammar system and they can be overwhelmed by new information and terminology. What to do?

Let's revisit our students with deaf parents. I wonder how many signs these students can articulate and understand. There is scant research in this area, but my experience informs me that there is probably a reservoir of 40,000 sign meanings when one takes into account that non-manual markers multiply the nuanced meanings of a hand shape by a factor of 5 to 10 times. Also, the grammar system is well developed although it resembles an Asian or African system with no "to be" verbs and an object-subject-verb sentence structure where the verb is usually integrated with the subject instead of the subject-verb-object sentence structure and parts of speech used by the European system. These students often read English on level or above. They are able to transfer a strong first language to a second language, English.

How can we duplicate this scenario? The obvious answer is to develop the ASL skills to as high a degree as possible. The dismal failure of deaf education for the past 120 years (since the Milan conference) informs us that it is nigh impossible to develop a strong English first language in individuals who cannot hear that language. Optimally, the deaf child would have an ASL rich environment. Unfortunately, this is extremely difficult. A few parents are foresighted enough and have the resources to become skilled signers although true fluency is even rarer still. Some enlightened states such as California have attempted to provide surrogate deaf parents one day a week or more if possible with some modest results. It has not been expanded for financial and emotional reasons and has been fairly isolated.

Now we see the problem clearly: the obstacles for a deaf student to learn English are vertiginous. The solution is for the student to develop a strong first language, ASL, but there is no effective mechanism to facilitate this happening.

Let's go back in time to the early 70's when I was a classroom teacher in a residential school of 650 students in k-12 that I taught every week. I was in a very rich ASL language environment where I seldom had an opportunity to speak English for 50 plus hours a week. This environment plus my drama and sculpture background allowed my ASL skills to flourish. I actually heard other teachers make snide remarks, "These deaf kids don't want to learn" or "These deaf kids can't learn." My experience was the exact opposite: They were desperate to learn. They were starved for English. I rapidly developed what the deaf humorist, Ken Glickman, refers to as "tap craters." From eight in the morning until five in the afternoon it was a constant barrage of "What does this mean?" or "What's the word for this sign?" I went home every night with both arms covered in bruises. I invented vocabulary games with little rewards if students could stump me or if they read something and explained it to me correctly in ASL. One especially bright senior approached me one day with the sentence: The man improved his house. He tapped my arm and asked, "What does I-M-P-R-O-V-E mean?" My supervisor has recently informed me, "The dictionary is a deaf student's best friend." I decided to pass this information along to this young man. He grudgingly took my advice and retrieved a dictionary from my desk. I noticed he became visibly agitated while reading the dictionary. I approached and asked, "What's the matter?" He angrily jabbed at the definition with his finger, "To enhance the quality thereof." You know what? I became somewhat

angry myself as I looked in the dictionary through that deaf student's eyes and determined a dictionary is not only not a friend, but in many ways an enemy that thwarts and belittles those students wanting to learn. I imagined myself with a smidgen of Russian trying to use a Russian dictionary to understand the meaning of new Russian words.

What to do? Simple. Create an English/ASL dictionary on video tape. The average sign is less than a half second. Have you ever tried to find a half second of video by fast forwarding and rewinding? Two years of experimentation finally convinced this hard headed old country boy that this was not an efficacious solution. My research did lead me to laser disc: 30 minutes of high quality video with 54,000 video frames that could be accessed instantly by a powerful desktop computer. I started work on this project in 1988 and created several ASL/English dictionaries which I demonstrated in the Netherlands at the NATO conference on technology for the deaf in 1992. It was well received but it required another three years to put it in a format to be used by schools. The cost was quite high and by the time the technology became affordable it also became obsolete.

Another eight years of research and development has led to a tool that will provide an ASL rich environment for non-signers and beginning signers. For example, one three year old deaf girl with no sign language learned the signs for 30 animals in less than ten minutes. Another young lady, a twelve year old deaf girl was writing two and three word sentences with a first grade vocabulary was able to write eight and nine word sentences with a fourth grade vocabulary in six months. You must understand that her grammar was still poor but markedly better than when she began. A class of high seniors in a residential school could spell only 20% of 1,000 third and fourth grade words correctly. In two months, ninety percent of the class could spell ninety percent or better of the words correctly. A fifth grade class in the same school took the same list and averaged about ten percent on the pretest but had the same results as the seniors on the post test after three months of practice for a few minutes each day.

How does this educational tool for the deaf perform these tasks? It provides students with a number of sequential exercises on the computer that allows the student, with the click of a mouse, to access either high quality video or the English text instantly. The exercises involve the student looking at ASL stories with English captions, seeing English text paired with ASL and working with a series of test/exercises. These exercises involve seeing the ASL and then typing the appropriate words or matching the appropriate English words or making multiple choice selections to match the ASL question or looking at the ASL sentences and translating them into standard English. All of these exercises provide instant feedback so the students are rewarded when they make correct choices and prompted to learn the correct terms when they make incorrect choices. Everything the student does is recorded in the student's file.

The automatic tracking of the student answers our last big question. How do we verify that our solution actually is effective? The tool will document longitudinally the student's activities and continuous progress. The teacher, parent and administrator can receive a print out of which activities the student has attempted, which activities, including vocabulary, the student has mastered, and which words the student is having difficulty with. The tool also records a student's writing attempts, progression of improvement, story comprehension, sign language acquisition, knowledge acquisition, and subtle things like how the student infers test questions. More importantly, students can see these results and chart their own progress and correct their own deficiencies. This tool can be a self-tutorial, but is most effective if the teacher works from the teacher manual to explain multiple meaning words, multiple sign words, and nuances of meaning not readily explained on a computer.

The program has ancillary benefits. Research in three residential schools demonstrated that most high students could spell elephant and giraffe but could not spell bacon and bread. The obvious deduction was that spelling animals was taught in several different grades, but spelling foods was seldom taught. This program let's you know what areas have not attained sufficient mastery and which areas need additional instruction.

These materials have been correlated with state standards so they can easily be adapted to the individual state's curriculum. Several institutions have agreed to be Beta sites to further test the validity of this educational tool. Additional data will be available by the summer of 2008

The Gullah Project: Experiential Learning through Cross-Cultural Journaling

Barbara Hardaway

Abstract

This paper discusses a travel/study interdisciplinary course offered by the English and History departments that focused on the Gullah people who reside along the coastline of South Carolina and surrounding areas. The Gullah, formerly enslaved West Africans, were virtually isolated on the islands until as late as the 1950's and were thereby able to maintain their cultural Afrocentric identity. They developed their own Creole language in order to communicate with one another on and off the islands. Journaling was a primary teaching tool for the class. It was used to help students prepare emotionally, enabling them to access their feelings/prejudices, as well as gain the cultural sensitivity necessary for a cross-cultural field experience.



This paper discusses a travel/study interdisciplinary course, offered by the English and History departments and focused on the Gullah people who reside along the coastline of South Carolina Sea Islands. Students studied the history, language, and culture of the formerly enslaved West Africans who were so isolated that they were able to maintain their very unique culture and Afrocentric identity. Journaling was the primary vehicle that was designed to prepare students emotionally for their cross-cultural encounters with the Gullah people. It enabled the students to address racism in America and their own racial prejudices.

The Sea Islands span the eastern coastline from North Carolina to the tip of Florida. The one-week field trip primarily focused on St. Helena, and Hilton Head Islands and Charleston, South Carolina. Enslaved West Africans from Senegal/Gambia, Ghana, Liberia, Angola, Nigeria and Sierra Leone regions were forced into bondage in the 1600's. At this time in history, the British and Spanish dominated the Slave Trade to the Americas; those West Africans, sold at auction in Charleston, S.C., who worked on the rice plantations of the Sea Islands, were in virtual isolation for almost nine months of the year with only the paid overseers to maintain the forced labor. White plantation owners and their families were unable to handle the very difficult climate, humidity and threat of malaria, so they often opted to live most of the year on the mainland and retreated to the Sea Islands when the season permitted them to do so. Because of the isolation, the Gullah people were able to maintain a great many of their cultural customs and traditions through oral histories passed down from one generation to the next.

The Gullah language is often referred to as an English-based, Creole language. It is a very rhythmic language that is a mixture of several languages and many West African dialects with its own grammar and sentence structure. The language, considered as a whole, possesses many similarities of expressions and loanwords from Sierra Leone in particular. Another striking similarity between Gullah and the languages of West Africa is the use of proverbs to teach, to socialize, and to provide advice. For example, “Take no more on your heels than you can kick off with your toes.” Another illustration of this folk proverb tradition is in the following Gullah language: “Ef oona ent kno eh oona da gwine, oona should know eh oona come from.” The English translation is, “If you don’t know where you are going, you should know where you come from.”

Students prepared themselves through assigned textbook readings, translation practice with the West African storytelling traditions and research projects. Lectures and discussions were designed to provide a scholarly foundation in cross-cultural communication principles, qualitative research methods, historical and economic implications of the Slave Trade, forced labor practices on plantations, religion, the impact of developers and tourism on Gullah communities, Gullah arts and crafts, West African cuisine, and education and family life on the Sea Islands.

Journal writing occurred outside of the classroom; students selected their teacher to discuss their journal entries. Weekly topics were assigned and students met either one-on-one, during office hours, or online with the teacher to discuss each entry. Journal writing was the process used for students to express their thoughts and feelings from their studies and events in their lives. Through the journal writing process, students were asked to sort out various hypothetical situations, solve problems and consider varying perspectives. Students were asked to examine their relationships with others and to reflect on personal experiences, values, goals and their own racial/cultural prejudices and stereotypes of African-Americans.

There are many benefits to journaling; the journal-writing model I developed focused on ten student outcomes. They are the following:

1. Improving sensitivity
2. Increasing memory of events
3. Allowing students to re-experience the past with today’s adult mind
4. Clarifying thoughts/ideas
5. Increasing self-awareness
6. Giving students permission to let go of the past
7. Integrating life experiences and learning
8. Offering new perspectives
9. Capturing family and personal stories
10. Increasing focus

The journal topics addressed issues closest to the students’ experiences and then progressed to hypothetical situations where they were asked to place themselves in another person’s reality.

Week 1: record a racial incident that you observed and write about your reaction. If you had the opportunity to relive the incident, would you change your behavior, or not? (Personal experience with racism)

Week 2: How do you react to racism within your own family (Intimacy and racism)

Week 3: If you were an enslaved African-American, knowing the risk of severe punishment if you were caught, what kind of a plan would you concoct to learn how to read and write? (Education)

Week 4: How do you imagine yourself surviving slavery as an adult on a Southern plantation?

Week 5: As an enslaved person, what thoughts would be present in your mind regarding the issue of escaping? Do you stay? Run away? How? Where? (Problem solving, hypothetical)

Week 6: Imagine that you have married into a family of slave owners in South Carolina. How would you adjust to this type of plantation lifestyle and infrastructure?

Week 7: How would you imagine yourself locating your family members, who had been sold during slavery, after Civil War? What would you do?

Week 8: As an emancipated African-American, what do you imagine would be the first 5 things you would do with this new social identity?

Week 9: If you were a light-skinned African-American, would you consider “passing” into White society or not? Indicate the reasons for your decision.

Week 10: What do you predict will be the future of the Gullah people and racial relations between Blacks and Whites within the next 50 years?

The weekly journaling practice prepared students for recording daily observations, clarifying personal opinions, thoughts and feelings for the week they were on the field trip to the Sea Islands. Students were instructed to record verbal and non-verbal communication variables such as environments, smells, eye-contact habits, colors and clothing, tactile behaviors, understanding of time, cross-cultural interactions, intrapersonal interactions of Gullah people and art expressions. Students shared their journal entries in informal settings with one another enabling them to explore issues on a deeper level while getting to know each other better and appreciating different points of views.

Designing an academic curriculum that was both interdisciplinary and provided the benefits of journaling allowed students to learn about themselves and another culture, using a multifaceted, global approach to teaching.

Students spent several days at the historic Penn Center, St. Helena Island, and Beaufort County, South Carolina. The Penn Center is one of the country’s most significant African-American educational and cultural institutions. The center was established in 1862 by Pennsylvania abolitionists and church organizations. Its purpose was to educate the freed Gullah people on the sea islands around Port Royal Sound that had been occupied by the Union Army. Today, the Penn Center supports many community-based projects, is a research center for Gullah culture, houses a bookstore, sponsors local art exhibitions in its museum, arranges tours, classes, and has conference facilities for business and academic communities. In 1974, the Penn Center was designated as a National Historic Site and in 1981, Executive Director Emory Campbell established “Gullah Heritage Days” as a vehicle to acknowledge and to celebrate islanders’ achievements with parades, food, songs, folktales, artistry, games and music. This celebration of Gullah culture is organized every November.

The field trip to the Sea Islands got the students out of the conventional classroom and provided them with an opportunity to use their tools to gain knowledge, record findings, and ultimately come to a better understanding of the world in which we all live. This is one of the primary goals of a liberal arts education. The Gullah Project demonstrated that journaling is indeed a valuable teaching tool and process for students seeking knowledge, sensitivity and scholarship in higher education.

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The Portrayals and Perceptions of Deaf Characters in Adolescent Literature

Sharon Pajka-West

Abstract

Acquiring fictional books which include deaf characters can be time-consuming and challenging for teachers and librarians. The benefits of reading literature with diverse characters are extensive, especially for reluctant readers who seldom find characters like themselves in novels. This paper provides an overview of the presenter's research answering such questions as: Are deaf characters being presented as culturally or pathologically deaf; How do readers perceive deaf characters; and, Do readers favor deaf authors over hearing ones? Participants received a list of resources and over 100 contemporary titles of young adult books with deaf characters.



My research began when one of my former students sent me an email requesting summer reading recommendations. As a deaf student who attended a residential school for the deaf and viewed herself as a member of a linguistic cultural minority, she hoped that I would recommend a book with a character similar to her. She did not want to read novels that pitied her or her peers. She wanted to read about characters who used American Sign Language and participated as members within the Deaf Community. She did not want to read didactic books about deafness but instead wanted books with unpredictable plots and believable characters.

Memoirs and biographical selections are relatively easy to acquire; however, fictional books for adolescents including deaf characters is a bit more challenging. Yet, the general public's awareness of and perhaps interest in deaf people has risen in our increasingly multicultural world. Authors are incorporating more deaf characters than they did in the past. However, this increase does not necessarily translate to an increase in understanding of the deaf, nor does it translate to the most accurate, respectably well-rounded characterization of the deaf. This dilemma, along with the student's request, provided me with an interesting doctoral dissertation.

Problem and Purpose

Acquiring fictional books that include deaf characters can be time-consuming and challenging for teachers and librarians. The research examining deaf characters in fiction is extremely limited (Burns, 1950; Guella, 1983; Krentz, 2002; Wilding-Diaz, 1993). The most recent articles predominately focus on children's literature-- specifically picture books (Bailes, 2002; Brittain, 2004). Despite decades of research affirming culturally authentic children's literature and the merits of multicultural literature, a coexisting body of research reveals the lack of culturally

authentic texts (Applebee, 1992; Campbell & Wirttenberg, 1980; Ernest, 1995; Larrick, 1965; Sherriff, 2005; Taxel, 1986). Moreover, children's books with deaf characters are used as informational depictions of deaf individuals (Bockmiller, 1980). Readers of such resource books, typically parents, teachers and their students, gain information about deafness and individuals with "disabilities" (Bockmiller, 1980; Civileto & Schirmer, 2000). If an important purpose for deaf characters in fiction is educational and informational, then I suggest that there is a need for the characters to be presented as realistic models of deaf people. If not, the readers of such fiction gain inaccurate information about deafness including reinforced negative stereotypes, as can occur in any other literature portraying cultural minorities.

Similar to authors' informational depictions, writers also reveal societal understanding of groups of people through their fiction (Banfield & Wilson, 1985; Panara, 1972; Rudman, 1984). Literature has often stigmatized minority culture individuals based upon race, ethnicity, disability, gender and/or sexual orientation. While readers might recognize the negative depictions and dismiss them as harmless stereotypes, these portrayals can become a part of the unconscious of members of our society. If books continually reinforce stereotypical depictions of deaf people, individuals belonging to the group might be typecast and discouraged into a limited way of being. As an educator, I want all of my students to have unlimited opportunities for a future not disadvantaged by stereotypes.

The Study

The research methodology for this study required book selection, reader sample selection, instrument creation, book analysis, questionnaire creation, and data analysis. The book sample included 102 possible books for the study ranging from adolescent to adult selections. I selected books that are recognized as suitable for middle school or high school readers based upon the reading and interest levels established by publishers. The books also included main characters who identified as deaf and deaf characters who were human. The books selected were all realistic fiction, available to the public, and published or reissued for publication within the last fifteen years.

The participant sample included adult readers who fit within three categories: those who identified as deaf, those who were familiar with or had been acquaintances with deaf individuals, and those who were unfamiliar having never associated with deaf individuals.

The instrumentation of the Adolescent Literature Content Analysis included both pathological and cultural perspective statements derived from Deaf Studies, Disability Studies and Queer Theory. The instrument was developed to specifically analyze adolescent literature with deaf characters.

The instrumentation of the Reader-Response Survey included ten main questions derived from Deaf Studies and Schwartz' „Criteria for Analyzing Books about Deafness" and regarded how the participants perceived the deaf characters in the books they were given. The survey included both dichotomous and open-ended questions.

Data Analysis

The data collected from the Adolescent Book Content Analysis Check-off forms answered: How do authors portray deaf characters? I completed an Adolescent Book Content Analysis Check-off Form (ALCAC) for each adolescent book in my study. The findings were presented in percentages for both the pathological and the cultural perspectives to demonstrate that all of the books in the study included aspects of both perspectives, not one perspective or another.

There were two groups of data collected from the Reader-Response Surveys: 1. responses to the dichotomous questions, and 2. responses to the open-ended portion of each question. My variables included preferences, beliefs and attitudes toward particular characteristics of adolescent literature with deaf characters. I analyzed my data based upon nominal scales.

Limitations of the Study

The conclusions drawn from this study address the researcher's completion of the ALCAC forms in connection to how the participants responded to books based on their perceptions. The pathological and cultural perspective labels from the content analysis do not address how readers perceive the books nor do they address literary merit or usefulness. Through the Reader-Response Surveys completed by the participants in this study the participants shared their attitudes and beliefs as adult readers of adolescent fiction. Since biases, opinions, and perceptions are revealed, one must be cautious about inferring or generalizing the findings from this study. There are other limitations to this study. When requesting participants for this study, only one male participant responded and was included in the research. The study included only Virginia residents and was limited to twenty-seven participants and six adolescent literature books. Another group of twenty-seven participants may have responded differently than those included in this study. The participants may have responded differently if six different adolescent books with deaf characters were included. The participants remained anonymous in this study; thus, the researcher was unable to ask clarifying follow-up questions.

Conclusions

Research Question 1: Are deaf characters being presented as culturally Deaf or as pathologically deaf and disabled?

Based upon an increase in awareness of deaf people, my initial assumption was that the authors of the six adolescent books would present their deaf characters as more culturally „Deaf“. This was confirmed for the majority of the books.

Research Question 2: Do the readers favor deaf authors over hearing ones?

I assumed that the deaf and familiar participant groups would prefer the books written by the deaf authors while the unfamiliar participants would act as more of a control group. This was not confirmed through the data. In fact, the deaf participants along with the participants as a whole preferred the books written by the hearing authors as better describing their perceptions of realistic deaf people, for presenting deaf characters adequately and realistically, and for the hearing authors' portrayals of deaf characters matching with their perceptions of deaf people. Again some researchers have avowed that deaf authors include more culturally authentic accounts of deaf characters; yet, prior research pertaining to deaf characters including Schwartz" (1980) and Wilding-Diaz" (1993) studies have highly praised but then excluded deaf authors. In general, the deaf participants in my study were more critical of the deaf authors while the familiar participants, although as a group preferred the books by the hearing authors, were more critical of the hearing authors.

Research Question 3: How do readers perceive deaf characters?

I assumed that although authors are incorporating more deaf characters in their books this increase does not necessarily translate to the most accurate, respectably well-rounded characterization of deaf people. While the research did not measure whether there was an improvement in more positive characterization, themes that emerged from the Reader Response Surveys included the participants' perceptions of these characters as: the "normal" curious kid; the egocentric spoiled brat; the advocate; those dependent upon the majority culture; those isolated; and, those searching for their identities. The participants' responses revealed that the themes were not necessarily positive or negative. For example, participants believed that Dr. Roper, a character in *Of Sound Mind*, chose to be isolated in the workplace. As a PhD, it was better for him to work within the majority culture of hearing individuals so that he could earn more money for his family. With communication technology, such as his pager, Dr. Roper communicated with his peers with virtual ease. After work he socialized with Deaf adults in Deaf clubs. This example contradicts the prior research. Batson (1980) wrote that deaf characters were helpless, isolated, and victimized. This was not found in the books by either the deaf or hearing authors in my study. Nick in *Nick's Secret*, which is written by a deaf author, remains the hero of the story when he rescues a friend and her dogs; Similarly, Melanie in *A Maiden's Grave*, which is written by a hearing author, overcomes a hostage situation and rescues the other deaf children. Both characters, Nick and Melanie, rise to the occasion while they are surrounded by friends and loved-ones.

Guella (1983) wrote that the deaf characters were childlike, grotesque, evil and a constant „outsider“. Aside from those deaf characters who are children in the books, the „childlike“ references, as well as the other comments, were not found to be true in the books by either the deaf or hearing authors. For example, Palma in *Of Sound Mind* is not portrayed as a particularly likeable character but she also is not seen as „evil“; and Megan from *Deaf Child Crossing* is actually popular at camp because she is different from the other girls.

Overall, participants made positive comments about the deaf characters in the books by the hearing authors. The participants made more positive comments about the culturally Deaf characters and about the male Deaf characters, particularly Ben Roper, Jeremy and Thomas of *Of Sound Mind*, and Harry of *Apple is My Sign*.

Research Question 4: How do the participants' responses and perceptions of deaf characters relate to the ALCAC forms? What do these relations imply?

There appears to be a slight correlation between how the books rated on the ALCAC forms and in the Reader Response Surveys. With the exception of one book, *Deaf Child Crossing*, the books including higher percentages of the cultural perspective statements were perceived to be more positive by the participants. This may indicate a preference for those books including more cultural perspective themes. While the deaf authors included more pathological statements from the ALCAC forms, 4 of 6 of all of the books included more cultural perspective statements. The participants were asked to compare and select a book preference. They did not discredit the stories or information by the deaf authors. I understand the participants' preferences for the books by the hearing authors to be more associated with the particulars of these authors' books. This is not a broad conclusion that all readers prefer hearing authors over deaf authors. The participants simply selected the books that they preferred. For example, the participants commented frequently that they enjoyed the „spectrum“ and „variety“ of deaf characters; they noted their interest in various aspects of the cultural perspective including the addition of American Sign Language in the storyline; and, they favored the authors' focus on the positive portrayals of a minority cultural group. These topics happened to be found more frequently in the books by the hearing authors than in the books by the deaf authors.

Overall, the participants stated that they enjoyed reading all of the books. One deaf participant wrote, “I enjoyed reading these books and wish they had been available when I was growing up. The only books about deaf people I can recall as a child or teenager were about people like Beethoven and Helen Keller, very extraordinary people who are hard role models to emulate! Or characters like Johnny Belinda and the deaf guy in *The Heart is a Lonely Hunter*” (9d). A familiar participant wrote, “I enjoyed both of these books and have already recommended them to professionals who work with [the] Deaf and Hard of Hearing population” (4f). An unfamiliar participant wrote, “[This research] would be an excellent learning tool to bridge the gap between deaf children and those who can hear” (7u).

Resources and Future Endeavors

In addition to sharing my research, I introduced participants to my „Deaf Characters in Adolescent Literature“ Blog (<http://pajka.blogspot.com/>) which assists in recommending books with multiple realities of the D/deaf human experience focusing on adolescent and Young Adult chapter books. The Blog includes a „100+ and Counting“ post which includes contemporary books with deaf characters and features original book reviews, author interviews and resources for finding additional information regarding Deaf Characters.

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Deaver, J. (1995). *A Maiden’s Grave*. New York: A Signet Book.

Ferris, J. (2001). *Of Sound Mind*. New York: A Sunburst Book.

Matlin, M. (2002). *Deaf Child Crossing*. New York: Aladdin Paperbacks.

Riskind, M. (1981). *Apple is my sign*. Boston, MA: Houghton Mifflin Company.

Scott, V. (2000). *Finding Abby*. Hillsboro, OR: Butte Publications, Inc.

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Our Stories: Using Deaf Writers to Inspire Student Writing

Tonya Stremmlau

Abstract

This paper discusses the importance of including deaf writers in course readings and provides practical suggestions for doing so. Deaf writers are role models for students. Reading them provides strategies for addressing writing problems such as how to write an ASL dialogue or how to use deaf experiences as subject matter.



I'm obsessed with the topic of including deaf writers in course readings, a topic I started thinking about a lot beginning when I was in graduate school. I was in a women's literature class during my MA program at the University of Nebraska-Lincoln. On the first day of class we had a discussion about reasons for having a course focused on women writers, such as that women writers were not well represented in other literature courses. At one point the professor asked us to share examples of how we had been discriminated against as women (and for the lone male in the class, if he had been discriminated against based on gender). When it was my turn, I told the class that I had my examples of course, and shared the one about quitting girl scouts because I was mad that my younger brothers got to go on real camping trips with the cub scouts where they slept in tents and cooked over campfires, but when my troop went on a so-called camping trip we had to sleep in cabins and ate in a mess hall.

Then I said that I was discriminated against a lot more as a deaf person than as a female. Employers were skeptical I could do the job. Teachers were skeptical I could handle course work. I said that the course discussion earlier got me thinking about if there were deaf writers that were being neglected the way women writers had been. I had not even stopped to wonder before that if there were deaf writers to be neglected.

I thought about if I had been assigned deaf writers to read in school and realized I had never been assigned anything to read by a deaf writer. Since I started thinking about this topic, I have asked many other people (including my students at Gallaudet) if they had been assigned to read deaf authors in school, and no one remembers any assigned deaf writers.

Of course, reading is not limited to school, and as a true bookworm I had read more than my share growing up. Still, at that point in graduate school, the only deaf writer I had read (on my own) was Helen Keller. Since my parents had made a conscious decision (encouraged by a social worker) to keep me out of deaf education programs or even from meeting other deaf people, I did not know

anything about how other deaf people made it through life. Even though Keller's life was nothing like mine, I still found a lot to identify with—not just the communication difficulties created by not being able to hear, but the connection she found to the rest of the world through reading.

In college I got into the deaf world a bit. I made deaf friends, started learning ASL, went to a deaf church and some deaf community events. There seemed to be no connections between that world and my academic studies as an English major except that both worlds seemed to think that deaf and written literature were an unusual combination and saw me as a freak: a deaf person who liked to read and write. A friend who worked in the English Department overheard two of my professors my freshman year discussing how surprised they were that I was doing very well. One of my new Deaf friends gave me the sign name T-English like the English-major part of me was my defining characteristic. (I have a different sign name now.)

That women's literature class got me thinking, though, and I decided to start searching for deaf writers. It took me a while since I did not know where to start (not to mention it was something I had to do with my rare free time). When I started working on my Ph.D. I figured out ways to combine my search with course work. Among the first works I found were autobiographies¹:

- √ Henry Kisor, *What's That Pig Outdoors*. New York, Penguin, 1991.
- √ Leo Jacobs, *A Deaf Adult Speaks Out*. 3rd ed. Washington, Gallaudet UP, 1989.
- √ Bernard Bragg, *Lessons in Laughter*. Washington, Gallaudet UP. 2002.
- √ Philip Zazove, *When the Phone Rings, My Bed Shakes*. Washington, Gallaudet UP, 1993.

I also found Trent Batson and Eugene Bergman's *Angels and Outcasts: An Anthology of Deaf Characters in Literature* and Jill Jepson's *No Walls of Stone*. I spent a lot of time filling out interlibrary loan requests. I read everything I could find by deaf writers. I also read about deaf culture and education (by deaf and hearing writers).

At the same time I was taking more courses in women's literature (of various periods), feminist theory, African-American literature, and post-colonial literature and theory. I started seeing parallels between deaf writings and the other literatures, particularly in the clear sense deaf writers have of writing for hearing readers. There is a limited audience otherwise. The deaf autobiographies in particular almost always primarily address hearing readers, either to plead for understanding (Learn sign! Give deaf people a chance!) or to look for acceptance (See all the obstacles I overcame to join your world!). There is always a clear sense that the deaf author is Other to the majority hearing world.

After I finished my doctorate, I came to teach at Gallaudet and found that even my students who had been to deaf schools or programs had not read deaf writers in school. I had excused my hearing teachers in mainstream schools for not knowing about deaf writers, but deaf schools should celebrate them. Not that there are not logistical challenges since textbooks and standard curricula do not include deaf writers.

My reasons for including deaf writers include:

1. Letting students read things they can identify with.
2. Providing role models.
3. Providing literary models of how to write about being deaf.

¹ Publication information is for the most recent edition published at the time of this writing.

4. Sparking discussion on the concepts of authorship and writing.
5. Increasing awareness of deaf writers.

It is a challenge to include deaf writers. Many deaf literary works are published in small runs by independent presses—the books go out of print and the presses out of business. For example, in 2006, The Tactile Mind Press, which published works by authors such as Willy Conley, Christopher Jon Heuer, and Raymond Luczak, went out of business. The editor, John Lee Clark, is now involved with a new venture, the Handtype Press.

The Gallaudet University Press does have a decent selection of literary works by deaf authors. Poetry/fiction/drama:

1. Raymond Luczak, Editor. *When I am Dead: The Writings of George M. Teegarden*. Gallaudet Classics in Deaf Studies, Vol. 6. 2007.
2. Trent Batson and Eugene Bergman, Editors. *Angels and Outcasts: An Anthology of Deaf Characters in Literature*. 3rd ed. 1986.
3. Tonya M. Stremlau, Editor. *The Deaf Way II Anthology: A Literary Collection by Deaf and Hard of Hearing Writers*. 2002.
4. Jill Jepson, Editor. *No Walls of Stone: An Anthology of Literature by Deaf and Hard of Hearing Writers*. 1992.
5. Judy Yaeger Jones and Jane E. Vallier, Editors. *Sweet Bells Jangled: Laura Redden Searing, A Deaf Poet Restored*. Gallaudet Classics in Deaf Studies Vol 4, 2003.

Autobiographies/Memoirs

1. Paul Jacobs. *Neither-Nor: A Young Australian's Experience with Deafness* Deaf Lives Series, Vol. 5. 2007.
2. Madan Vasishata. *Deaf in Delhi*. Deaf Lives Series, Vol. 4. 2006.
3. Baineey Cyrus, Eileen Katz and Celeste Cheyney, and Frances M. Parsons. *Deaf Women's Lives: Three Self Portraits*. Deaf Lives Series, Vol. 3, 2005.
4. Emmanuelle Laborit. *The Cry of the Gull*. 1999.
5. Leo M. Jacobs. *A Deaf Adult Speaks Out*. 3rd ed. 1989.
6. Mary Herring Wright. *Far From Home: Memories of World War II and Afterward*. 2005.
7. Mary Herring Wright. *Sounds Like Home: Growing Up Black and Deaf in the South*. 1999.
8. Bernard Bragg, as signed to Eugene Bergman. *Lessons in Laughter: The Autobiography of a Deaf Actor*. 2002.
9. Albert Ballin. *The Deaf Mute Howls*. Gallaudet Classics in Deaf Studies, Vol. 1. 1998.

I like using GUP books because I can build course content around them and count on the books being available the next time I teach the course. I may just have bad luck, but almost every non-GUP book I have used has gone out of print.

Of course, there are also ways to work writing by deaf authors into courses without needing a whole book. For instance, my fall 2007 course Literature by Women included poems by Laura Redden Searing since a portion of *Sweet Bells Jangled* is available via books.google.com; I gave the students the link and had them read on line. Raymond Lukzac and John Lee Clark's new Handtype Press (www.handtype.com) is planning to have an e-zine, filling the spot left by the demise of TheTactileMind's weekly. There are also numerous deaf blogs. The ones at www.deafdc.com are generally well written, thought provoking, and on a variety of topics (mostly deaf related).

I generally choose readings by deaf writers whose writing is also deaf-themed, but not exclusively. Especially in a course on Deaf Literature I like to include non-deaf theme works to provide a platform to discuss what “deaf literature” means. Is it hearing loss? Culture? Content? Can a hearing person write deaf literature? What if the hearing person grew up in deaf culture? What if the deaf writer does not sign? What if the writer became deaf as an adult?

When I teach Deaf Literature, I require a creative writing project from students, and nearly all end up writing works with deaf content—stories with deaf characters, or poems about horrible speech therapy sessions, plays about a bad deaf/hearing date, and so on. On the other hand, when I teach creative writing (fiction) with little outside reading (but lots of exchanging of works in progress) many students actively avoid writing anything deaf-themed. They are more likely to be English majors and doing a lot of reading of hearing literature. I bring this up for discussion in class along with the standard writing advice to “write what you know,” to make use of one’s experiences and observations.

Creative writing students have told me there is nothing interesting or different about their life or deaf culture. Others say they cannot possibly base characters on people they know because everyone would figure out who the characters are based on and someone might get mad. They also find the various solutions for indicating ASL conversation in written English to be awkward. I do not get these excuses in the Deaf Literature class. I have to wonder if we had more deaf literature, and if it was standard content throughout schooling if the creative-writing English majors would feel differently.

LITERACY

Back to Basics: Writing Strategies that Work

Marcia B. Bordman, Cynthia Edwards, J. Douglas Miller, Diane O'Connor

Abstract

The panel, “Strategies that Work,” brought together four instructors with 125+ years of experience teaching developmental writing courses. Each panelist described a favorite technique to help improve student writing. The paper below summarizes the panel’s presentations: Miller’s “Using Sentence Reducing and Combining Exercises,” Bordman’s “From the Bottom Up: Reading Analytically,” Edward’s “Outlining Technique for Developmental Students,” and O’Connor’s “Collaborative Writing for Developmental Students.”



Introduction

Every semester, our goal is the same: to enable students not fluent in English to become better practitioners of the language—better able to use English to communicate complex and nuanced ideas. To do so, students must not only learn how to manipulate complex sentences and move back and forth in time. They must also learn how to organize and support their ideas in logical and appealing ways.

As panelists at the Gallaudet English Think Tank (June, 2007), we each described a exercise designed to engage students and help them write better. J. Douglas Miller demonstrated how to help students understand the principles of complex sentences and so write better sentences themselves. Marcia Bordman discussed a technique to help students understand how verb tense operates to shift time within a paragraph. Cynthia Edwards discussed the need to teach developmental students how to pre-write so that they have a step-by-step guide to writing their essay and, later, a standard to which to compare their final essay. Finally, Diane O’Connor discussed how writing essays collaboratively can enable students to become more objective and therefore better critics of their own writing.

1. Using Sentence Reducing and Combining Exercises

J. D. Miller

Adult learners in developmental English classes want the ability to read with confidence texts containing complex sentences. And, of course, they want to learn to express themselves in a like manner. To help these students, I’ve developed a series of exercises designed to help them understand the principles of complex sentences. These exercises have proved to be effective tools for teaching reading, grammar, and writing on the sentence level. As reading tools, the exercises force students to focus on and isolate each of the various parts of given complex sentences and then

create the shorter sentences that are “embedded” in the complex sentence. As writing tools, the exercises force students to reassemble or reconstruct the complex sentences by looking at the shorter sentences they have created.

As a bonus, the exercises are easy to create and duplicate (You can ~~use~~ exercise material from newspapers, magazines, and texts assigned as class reading.). Students can work on these exercises individually or as members of groups in the classroom. The exercises also work as blackboard assignments, allowing the entire class to read and consider answers created by individual students or by assigned groups of students.

Before introducing these exercises, you may want to review the various parts of complex sentences—prepositional phrases, participial phrases, dependent and independent clauses, etc. I have found that by the time students reach my classes, these concepts aren’t new although they may be half forgotten. Nevertheless, students aren’t starting from scratch. A review helps students see how they are building on prior exposure and practice.

What follows are examples of several types of sentence exercises—sentence reducing, sentence expanding, and clause/phrase identification.

I. Sentence Reducing

The original sentences can be as simple or as complex as you wish. In addition, the possible “answers” can vary from student to student, but the goal should be that of helping students find as many smaller sentences as possible within the larger ones given.

Directions:

Reduce the following sentences to smaller ones. Read the example carefully.

Example:

When the harsh wind blows in December, I dream of an exotic vacation on a tropical island in the middle of deep, blue waters.

Suggested Answers:

- 1) The wind blows in December.
- 2) The wind is harsh.
- 3) I dream of a vacation.
- 4) The vacation is exotic.
- 5) The vacation is on a tropical island.
- 6) The island is in the middle of waters.
- 7) The waters are deep.
- 8) The waters are blue.

Example:

Shopping at Lake Forest Mall, we saw many customers buying expensive gifts, looking in colorful shop windows, and chatting noisily in the large plaza.

Suggested Answers:

- 1) We were shopping at Lake Forest Mall.
- 2) We saw customers.
- 3) The customers were many.
- 4) The customers were buying gifts.
- 5) The gifts were expensive.

- 6) The customers were looking in shop windows.
- 7) The shop windows were colorful.
- 8) The customers were chatting in the plaza.
- 9) The chatting was noisy.
- 10) The plaza was large.

II. SENTENCE COMBINING

The goal is to help students practice how kernel sentences can combine into one interesting and informative sentence by answering “how,” “when,” “where,” —why”

Directions:

Combine the sentences below making clear the *how*, *when*, and *why* of the action.

Example:

People shop.

The shopping is hurried. (*how?*)

The shopping is during the holidays. (*when?*)

The shopping is to buy gifts. (*why?*)

The gifts are expensive.

The shopping is to please their loved ones happy. (*why?*)

Suggested Answer:

People shop hurriedly during the holidays to buy expensive gifts to please their loved one.

III. SENTENCE COMBINING (adjective clauses vs. adjective phrases)

The goal is to help students see how to introduce variety in their sentence structures.

Example:

I like traveling to places.

The places are new and exciting.

Suggested Answers:

- **Adjective Phrase:** I like traveling to **new and exciting places**
- **Adjective Clause:** I like traveling to places **that are new and exciting.**

2. From the Bottom Up: Reading Analytically

Marcia B. Bordman

By definition, Gallaudet students enrolled in developmental English courses lack fluency in English. However, they are still expected to read hundreds of pages of text from credible sources and, then, write about what they've read with authority.

As their English teachers we find ourselves stuck, trying to square our classroom real with an academic ideal. When things get tough, should we sign the reading material to students or plead with them to take on less challenging work? Should we accept ungrammatical written English because the student *seems to get it*?

These questions drive our teaching strategies. We want students *to get it*, not just seem to. My presentation outlines a technique for teaching verb tense in context. As such, it's a very small piece in a very large puzzle, but I like the technique for several reasons. It engages the intellect. It divorces developmental students from the all-too popular one-one rule (one idea to a sentence and one verb tense to a paragraph). And, it forces students to read and analyze a complex text and so provides a guide for their own writing.

Students can guess the narrative line of a non-linear text when the logic of the storyline makes it obvious what happened first, second, etc. In the following excerpt, students knew that two American soldiers disappeared before 8,000 troops went to look for them, that the spokesman spoke after the 8,000 troops started searching, and that the reporter wrote last.

BAGHDAD, June 19 -- More than 8,000 U.S. and Iraqi troops have been deployed to villages south of Baghdad in a massive search for two Army privates who have been missing since an attack Friday at a vehicle checkpoint, an American military spokesman said.

What they didn't know was how the verb tenses allowed the writer to write both clearly and non-linearly. The idea that they themselves could learn to write like that was a dream. Now, with that build up, I'm almost ready to give you examples of the exercise. But first a couple of warnings: Students need to be familiar with verb forms; they must know how to manipulate past, present, and future tense and be able to *see* the difference between *—eft*, "have left," "had left," *—had been left*." The technique works best in small doses that provide increasingly complex text as the semester progresses.

The key to the technique is students' understanding that every text—even a short paragraph—is framed in time. As long as the writer stays true to that time frame, he can move *backward* to an earlier past or *forward* to a later time. For example, an historian writing in the past tense who switches to the present perfect expresses a connection within his frame (the past) to the present. A politician writing within a present-time frame who switches to the future expresses a connection within her frame between the present and the future.

Examples

1. Siege of Leningrad

The 900-day siege of the Russian city of Leningrad by the German army during World War II **counts** as one of the most tragic periods in European history. For Russians who now **live** in Leningrad (today called St. Petersburg), this period **marks** an important part of their heritage. For

the older generations that **survived** those terrible days, talk of the three-year siege **reminds** them of their almost unbearable sufferings. These memories **will go** with them to their graves.

- What tense is used the most?
 - Present tense
- What is the basic time frame in the paragraph?
 - The present time
- How does the author relate the present to the past?
 - Uses the past tense
- How does the author relate the basic time frame to the future?
 - Uses the future tense

2. Saddam Hussein

"Everyone now understood exactly how things would work from that day forward," Bowden writes. —Saddam now wielded absolute power, and those who crossed or challenged him would be eliminated."

- In two places the writer looks forward from the past to the future-in-the-past. Select one example that predicts the future from the perspective of the past.

3. Outlining Technique for Developmental Students

Cynthia Edwards

My presentation provided instructors with an outlining technique shown to be successful with students in developmental writing classes.

Writing is a challenge, even for the best of writers, so it is important that students have a good understanding of the entire writing process, from prewriting to the completion of a final draft. Writing teachers routinely guide their students through the process of writing by having them do some prewriting, then write a first draft, revise their draft, and continue writing and revising as needed. From my years of experience teaching writing, however, I have noticed that developmental students tend to ignore or gloss over any prewriting activity. They immediately proceed to writing their first draft without any forethought. Therefore, I require my developmental students to submit an outline with all writing assignments. They are taught to use the following steps with their paragraph and essay assignments:

1. Decide on your purpose for writing (i.e., compare/contrast; cause/effect).
2. Select a topic.
3. Decide on your opinion/feeling.
4. Write a topic sentence (essay – thesis statement).
5. Brainstorm a list of ideas/examples to support the topic (a minimum of three ideas supporting sentences are required).
6. Select and arrange ideas to be used in your writing. Also, gather additional information as needed.

The following are examples of student paragraph and essay writing that used the outline technique discussed above. This outline can be used with a wide range of writing— description, classification, compare/contrast, and cause/effect.

Prewriting for Paragraph Writing

1. Purpose: to describe.
2. Topic: an important time in my life.
3. Feeling: this experience helped me learn about relationships.
4. Topic sentence: A very important time in my life was when I found my first true love.
5. Supporting sentences:
 - a. I was a sophomore in high school.
 - b. I learned about relationships.
 - c. We are not together anymore.

Paragraph Using the Above Outline

I was a sophomore in high school when I found my first true love. I know it's too young to find someone to love so serious, but it was one of the best things that happened to me in my life. If I didn't find true love for myself, then I would not learned about trust or anything related to relationships. I also learned that I can lost someone important to me and still remain strong. We are not together anymore due to not wanting a long distance relationship. It's okay as it's all about Gallaudet and I want an education, so I did not blame him for that. You should not forget about an important time in your life, just think of the best things that every happened to you.

Prewriting for Essay Writing

1. Purpose: to compare and contrast.
2. Topic: two cities that are similar.
3. Opinion: Chicago and San Francisco are very much alike.

4. Thesis statement: Chicago and San Francisco are very similar cities as both have piers, waterfront areas, and the same styles of buildings.
5. Supporting sentences:
 - a. Piers are places on the water where people can see boats.
 - b. Waterfront areas are beautiful places with many shops.
 - c. Chicago and San Francisco have the same styles of buildings.

Essay Using the Above Outline

People know that no two places are exactly alike. It is true that most cities have different stores, buildings, schools, businesses, etc. However, cities are more same than you think. Chicago and San Francisco are very similar as both have piers, waterfront areas, and same styles of buildings.

Chicago and San Francisco are interesting cities that people like to live in or visit. Both have piers where people can walk on dock and look at boats and see people enjoy themselves on the water. The waterfront areas of both cities are beautiful areas for people to walk around and visit restaurants, shops, and a lot of arcades near the water. In the downtown areas of both cities are buildings that people recognize, like Sears Tower in Chicago and the tall bank building in San Francisco.

People can see how most cities are similar to other cities. Many people may think Chicago and San Francisco are different, but they are more like than people know. I think that my suggestion is everyone should visit both cities where you can enjoy shop, visit the waterfront areas, and walk on the piers.

4. Collaborative Writing for Developmental Students

Diane O'Connor

Collaborative writing can be defined as the creation of text through a group effort. It helps students see other perspectives and, by teaching students to work together, is good preparation for the workforce. For developing writers it has additional benefits because it provides a less threatening environment for writing and allows each student to contribute to a successful product. The collaborative writing of paragraphs also enables the teacher to offer immediate feedback and functions as a useful bridge to independent writing.

For teachers, the end of the semester is a time for reflection about the successes and failures of the preceding fifteen weeks. What did we do that now seems to have been wasted time? What, on the other hand, seems to have actually helped students meet the goals of the course? A few years ago, our class size increased from the previous 8-10 students to 12-15 students in each writing class. Because we spend so much time working individually with students in our classes, classroom management became a concern. The writing of paragraphs in small groups of (ideally) three students each became an exercise that allowed us to handle the larger numbers and still provide the appropriate immediate feedback that is so helpful to students. What began as a matter of necessity, however, delivered unexpected benefits.

Collaborative writing has been used in both developmental writing classes and in freshman composition classes for students in need of continued language support. In both courses students are expected to produce acceptable short essays by the end of the semester. The developmental course accepts a three-paragraph essay, while the freshman composition course leads to 5-6 paragraph essays using a variety of patterns of development. Students in both classes enjoyed the activity of writing paragraphs together on the classroom blackboards and later produced better essays when writing on their own.

The process involved five steps that took one to one and a half class hours. First, a new writing pattern was introduced. This might be a specific pattern of development (narration, description, comparison, and so on) or a part of an essay (introduction, body paragraph, conclusion). This was followed by reading and discussing a model paragraph or longer essay that demonstrated the target form. While the models found in every writing text are useful, they are often so far beyond the capabilities of developing writers that some bridge is needed to show how to apply the pattern. Collaborative paragraphs served this purpose.

The third step was to divide the class into groups of three to write a paragraph on a new topic of the same sort. There was an attempt to balance the groups to achieve the desired result, and a mixing of methods of assigning students so that the goal of learning to work with a variety of individuals was achieved. Naturally not every class neatly divided itself into threesomes, so an occasional foursome or pair had to be used.

The students enjoyed the activity of getting up, sorting out their roles in the group (Who became the de facto leader? Who would write on the board?), and discussing the topic with each other. The teacher's role was primarily to keep the group on track and offer encouragement and suggestions as the groups worked.

When all the paragraphs were finished, the whole class read each of them and had a short discussion of the virtues of each. Although sharing written work can be scary to most uncertain writers, because these paragraphs were group efforts no one seemed concerned. Of course there

was the occasional —I thought that, but my group didn't do it.” Sometimes students would vote on their favorite and discuss why they preferred it.

Students followed up this exercise by writing paragraphs or essays of their own on a new topic that required a similar pattern. The resulting work was better than expected. Students commented that they really understood the assignment and knew what was required after the group practice. All in all, the class time spent on this exercise was both popular and useful in helping students write better essays, the primary goal of these two courses.

Engaged Curriculum Enhances Learning

Paige Franklin, Jane Nickerson, and Leslie Rach

Abstract

Gallaudet did not receive high marks on the 2005 National Survey of Student Engagement (NSSE). That publication was a spur to our re-thinking curricula. Our faculty has been involved ever since in an effort to improve its score—to create enriched and rigorous curricula that engage students and incorporate new technologies to help teach reading, writing, and critical thinking. This paper discusses the results of the 2005 NSSE Report and its impact on the creation of new courses and strategies at Gallaudet. In particular, we share examples of two English classes—a class on Media Literacy and a class on Multicultural Literature. Both classes, despite their different academic content, incorporated activities aimed at enhancing student engagement by increasing the student's role in classroom learning.



In 2005, Gallaudet University was one of the participating schools in the National Survey of Student Engagement (NSSE). Participants in the 2005 survey included more than 660,000 college first year and senior students. The purpose of the survey was to identify “the extent to which students engage in educational practices associated with high levels of learning and development” (Exploring Different Dimensions of Student Engagement, 2005 Annual Survey Results, overview). When NSSE published its results, Gallaudet faculty read them as a guide to developing new curricula designed to increase student engagement in learning.

In its 2005 report, the NSSE identified the following Benchmarks of Effective Educational Practices:

1. Level of Academic Challenge
2. Active and Collaborative Learning
3. Student-Faculty Interaction
4. Enriching Educational Experiences
5. Supportive Campus Environment

Gallaudet University students, whether first-year freshmen or seniors, ranked Gallaudet low on all five benchmarks. In terms of overall satisfaction, data from respondents at Gallaudet University yielded the following problem areas:

- First-year and senior student data indicated a negative result for the question —How would you evaluate your entire educational experience at this institution?”

- First-year freshmen (34%) and senior students (26%) rated their entire educational experience as poor or fair.

The results of the NSSE report (2005) indicated a sharp need for Gallaudet faculty to re-examine the undergraduate curriculum and determine ways to revitalize it. In this paper, we focus on the results of two English Department courses designed to address two NSSE benchmarks: (1) Enriching Educational Experiences and (2) Active and Collaborative Learning.

Course One: Media Literacy

Media Literacy was designed to provide students with an overview of advertisements, television, films, newspapers, blogs, and vlogs. Students in this course focused on active and collaborative learning as well as enriching educational experiences which were two of the benchmarks discussed in the NSSE report (2005). As discussed in the NSSE report, students were asked to participate in the following Active and Collaborative Learning Experiences:

- Ask questions in class discussions
- Make class presentations
- Analyze and discuss ideas from your readings

Students also had the following opportunities to engage in Enriching Educational Experiences:

- Serious conversations with students who have different personal values and opinions.
- Serious conversations with students of a different race or ethnicity

Students in the Media Literacy course were asked to work in teams, make class presentations, and discuss ideas from their readings. For one of the class discussions, students were asked to think carefully about how the media portrayed the messages sent during Hurricane Katrina. The instructor asked the students to think about the news reports they saw about the hurricane. Members of the class focused on what they remembered about the reports and the various news channels they watched during that time. After a brief discussion, students in the class were shown two photos that were taken during the hurricane. The first one showed a young African-American man who was walking through the flood waters; the caption for the photo explained that the young man had looted a grocery store. The second photo showed two young Caucasians who found food at a local grocery store. Both of these photos, published by Yahoo! News, raised concerns to many Americans watching the media since the photos clearly showed bias in the news. For a discussion of media bias and both photos about —Hurricane Katrina and the “Two-Photo Controversy,” see the following website: http://www.media-awareness.ca/english/resources/educational/teachable_moments/katrina_2_photo.cfm.

During a class discussion of those images, students were asked to analyze what they saw. These rigorous discussions about serious topics allowed students to engage more fully with the issues and also gave them opportunities to explore their beliefs and feelings about different races and cultures. In discussing how the media portrayed people during the hurricane, students began teaching each other about racial disparities demonstrated by the media during the hurricane. Class members then had an in-depth discussion about other news stories they saw that were biased or discriminatory. This type of analysis, while being a strategy for engagement, also met one of the course skills goals (analysis of news reports).

Students were also asked to create a project for this media literacy class. The projects were flexible enough to work within their desired content areas. For example, one psychology major created a Public Service Announcement that focused on race. As an African-American woman, she wanted

to create an announcement that she could share with her African-American friends. Her Public Service Announcement (PSA) asked young African-American teenagers to stop using the word “~~nigger~~.” After this presentation, she asked students in class to analyze it. When she wrote a reaction paper about this class discussion, she noted with surprise that she had touched upon a subject that many of the students had not thought about before. In many ways, her experience and new knowledge showcased the goals of the course their success. In learning the course content—media literacy—students were forced them to think more about their own ideas about race and identity. Moreover, they had ample opportunity to seek and receive critical peer feedback, another indication of engaged learning.

Course Two: A Cautionary Tale

The second course we describe here was a section of American Literature, ~~“Multicultural Perspectives.”~~ The course goal was to provide students a taste of the wide variety of literature written within the American experience by members of minority cultures—African American, Asian American, Native American, Immigrant, Deaf, Gay/Lesbian, etc.

The course content was the attraction. Students were eager to learn how ~~“others”~~ understood the tensions between self-identity and group-identity—how they were able to turn their inner contradictions and understanding into art. Classroom discussions were lively. This easy communication broke down, however, when students had to continue their discussions online via the Blackboard Discussion Board. In theory, the Discussion Board seemed an excellent way to incorporate what the NSSE labels Community-Based Engagement. The aims of the Discussion Board (as reflected in NSSE, Level of Academic Challenge) were to:

- Engage students in close readings and discussions of course materials such as the following:
- Analysis of basic elements of an idea, experience, or theory
- Synthesis of ideas and organization of them into new and complex interpretations and relationships
- Analysis of judgments about value in information or arguments
- Application of theories and concepts to practical problems or new situations.

Several issues arose with community-based Discussion Board. While this counted for 30% of the final grade, only five out of ten students actively participated. Students explained the following as possible reasons for not actively participating in the community-based Discussion Board. They were unaccustomed to the community-based learning situation and having their scholarly activities made public. They feared exposing their weaknesses in analysis, thinking skills, writing skills.

The instructor proposed several solutions as a way to help students cope with these issues. She developed clear guidelines for writing posts for the class. She also emphasized a clear justification for the Discussion Board, such as the idea that this prepares students for future training in professional collaboration settings such as group publications or group presentations. The faculty member also discussed materials before posting them on the Discussion Board so she could provide analyses as well as hypotheses shared for immediate feedback and assistance. This instructor also agreed to review the student posts at their request.

Reflection and Implications

When we create courses for our students, we want to engage them so they analyze, synthesize, evaluate and think about what they read and do for class. Our examination of the NSSE report (2005) enabled us to take a closer look at what and how we teach.

There are several implications that come from our look at student engagement. First, faculty need to “buy in” to the results that are discussed in the NSSE report (2005). Faculty members need to read the report and determine how they can engage students in their own classes. Also, it will be important for faculty members to use the language of NSSE in communication with students in their syllabi, assignments, and assessments. When faculty members examine the NSSE results and start using them, then they will be creating “pathways” for student engagement and success.

As faculty members, we need to think about how we engage our students. Kuh, Kinzie, Schuh, and Whitt (2005) have discussed how to use the NSSE results. They list ideas for questions that faculty members can ask themselves about student engagement. In order to assess ourselves, we need to think about the following questions and determine how effective we are in each of these areas:

- Does this course expect students to be active learners?
- Are students instructed in active participation? Do the students know what active participation means?
- How can faculty members engage students in classes of all types and sizes?
- Are we using technologies that foster active learning or are the technologies making learning more passive?
- Are students taught to learn collaboratively?
- Do faculty members model collaboration across departments and units?

The answers to these questions will enable us to become more engaged faculty members who are responding to the needs of our students.

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Enticing the Reluctant Writer

Andrea Galvin

Abstract

Reluctant student writers who have met repeated failure in learning to write may be reluctant for a variety of reasons, be they cognitive challenges, poor schooling, lack of information or just a perceived aversion to the printed word based upon negative experiences. If a child is able to cognitively connect the symbol of letters and words to objects and ideas and they are able to physically produce words and pictures on paper or a computer, that student can learn to love writing! In order to teach reluctant students to love writing, one has to be willing to challenge their own belief systems and be willing to take risks as a teacher. For challenged students, learning to love writing requires a strong commitment and love to the sacredness of writing. The writing techniques shared in this paper have been developed over a thirty-year teaching career with multi-handicapped deaf and hard of hearing children, as well as work with hearing students with severe learning disabilities. Although it is not a fast process, these are writing techniques that actually work!



Working with Challenging Populations

As a teacher, it was serendipitous to have the opportunity to work in three states and two countries on different continents over thirty years. The benefit of teaching in a variety of places was learning and sharing with a diverse group of colleagues, borrowing their ideas and adapting them to meet the needs of more severely involved students, all of whom were not truly included as a potential population of student writers. It was also fortunate to be educated by the best and brightest in undergraduate and graduate schools, movers and shakers always excited about the learning process! Additionally, exploring one's own learning style and writing style later on in one's teaching career also enhanced the commitment to the writing process for severely involved students. Exploration established a baseline for both self and students. More often than not, however, the students who were considered by school systems to be the most "challenged" were the greatest teachers in learning how to overcome the hurdles of igniting a love of writing in them. Students gave cues and showed the pathway into how they think and learn when one was able to actually see them. It was a group of multi-handicapped students in England that began a very different path towards teaching reluctant students to write. They were the students located at the end of a dark hall where no one came to visit.

Soul Searching

In teaching students to write in a language that is difficult for them there are challenges, whether the student is a hearing child with learning disabilities, or a deaf child trying to understand English. Reluctant writers often have met repeated failure in learning to write for a variety of reasons, be

they cognitive challenges, no initial language base to work from, poor schooling, improper teaching or just a perceived aversion to the printed word based upon negative experiences. When one boils down the absolute baseline for what is actually required to teach a child to write it turned out there were only three basic necessities for those students:

1. Cognitive ability to put the symbol of a letter to an idea or word
2. Mechanical ability to put down their ideas, using manually writing or a keyboard
3. A good command of the written alphabet

In order to teach reluctant students to love writing there was one more necessity, there was also a need to examine and readjust one's basic belief system as a teacher. Some soul searching was required and the answers to certain questions needed to be addressed:

Did I believe that all students have a desire to succeed?

Did I believe that severely handicapped students had a desire to communicate their thoughts and ideas and that the desire was extremely important?

Was it ok for students to make mistakes, and was slow progress acceptable?

Was there a difference between creative writing and teaching grammar, spelling and vocabulary?

Was I willing to risk looking foolish by following a hunch that was untested and perhaps not yet fully formulated in my mind as a teacher?

Getting Started By Learning to Draw

It was actually at a school in Exeter, England that the awareness of how critical it was for students to be able to communicate with their world became a reality. Students in residential schools go into cities where their schools are located, and if unable to communicate verbally or in writing with the shopkeepers, need a way to communicate their needs first as young students, but later as adults. Unsure at first if these students would be able to learn to write, the first approach to teaching paper and pencil communication was teaching the students to draw so that what they drew was easily recognizable by the world. There was a question that lingered but a hunch that said yes. Could illiterate students transition from drawing to the written word?

As a visiting American teacher, the students trusted their new teacher; they were seldom students who received the best or brightest, and probably the selection of that particular group for a visiting teacher was made so that the least harm would be caused in case the new teacher was terrible. The students trusted and that trust had to be honored.

The task of igniting enthusiasm and belief that these challenged students would succeed as writers began. Not particularly skilled in drawing, or any of the visual arts for that matter, teaching drawing was boiled down to learning to view objects as simple geometric shapes, and both teacher and students had to learn to look at the world differently. Simple drawing books provided examples of how to draw complex animals and objects using simple circles, triangles and rectangles; with the shift in seeing and practice, drawing became doable. As is often the case, there was one "class artist" and the rest of the students made it clear that they did not draw! They had learned that not trying was better than failing and some students had actually developed an aversion to pencil and paper. These students only wrote their first names, everything else using paper and pencil was a painstaking task.

But drawing at the beginning of the morning was the way every class started. The subject of the day was demonstrated and students practiced. Drawing calmed the students; it also shifted the students into more of a work mode at the start of the day. Standards for drawings were low during

the practice stages: It was ok to make mistakes. Practice meant practice! It turned out that drawing also had an extra benefit; it helped the students with understanding —~~parts~~ of the whole,” a concept that is often difficult to grasp even for students who did not have additional handicapping conditions! But perhaps best of all, drawing allowed students to become comfortable with extended periods of doing paper and pencils tasks, and besides one student loved it immediately!

During this time the enthusiasm and belief in magic happening in the classroom became catching. Who of us had not clapped for Tinkerbell when Peter Pan begged us to bring her back to life? So too, the students began to believe in themselves, especially when the initial belief came from their teacher; they trusted her and she would not let them down! Learning to draw provided their first avenue for written communication. In retrospect, it made sense that drawing was the avenue; cartoonists have known it for years! Because most of the students initially —~~did~~ not draw,” there was a need for simple drawing exercises initiated by their teacher who had no observable artistic talent and no research to back up a hunch. Nonetheless, drawing was the first activity done at the start of everyday. Learning to be light and gentle about all of one’s early skill building became valued by all in the classroom.

Preparing Tools to Use During Sacred Writing

In order for students to transition from drawing to writing, students needed a bank of words, and they were not readers. Students were given bound —~~ictionaries~~” that had 150 basic nouns, verbs, and adjectives taken from student life at the school; each word was labeled one per page. During Language Arts the class went through all words and discussed each word. They acted the word out, talked about it in their personal lives, and then drew their version of what the word meant so that they could easily find the printed word at the top of the page if they wanted to use it in their writing. Today the pictionary has changed in that it also includes past and present tense of verbs and there is lots of room for descriptive words under the simple adjective, noun or verb. Students still draw the meaning of words in the pictionary so that they can easily find the word they are seeking during writing time.

All students also received individual pieces of chart paper that were taped up on a moveable blackboard; they were what are now known as —~~Word Walls~~” but they were individualized. The chart paper word walls were made to accommodate any words not covered in the pictionary that a student might need during their writing, although they initially they remained blank for several weeks. It wasn’t until the class’s student artist came in wanting to write about a new movie he had seen, —~~Star Wars~~,” and he asked how to write additional vocabulary that his word wall magically grew to include ten new words. The student asked for character names, names of tools, names of weapons, and words like outer space. When the other students realized that Steven’s word wall was full, they asked what his words meant, and then asked if they could borrow Steve’s words to use in their stories. When asked if he would be ok if some of —~~his~~ words” were used in future stories written by other students, Steven responded positively. Copying was the highest form of flattery, but students were only allowed to copy the words, not copy story lines from each other. From that day on, the sky was the limit in terms of topics and vocabulary words that students wanted to access for creative writing time. Writers kept a vigilant eye on each other’s word walls.

Teacher-made writing books allowed for designing lines and adjusting the space to illustrate their stories. Their writing books were simply bound and early books were 3-5 lines long with large spaces for illustrations. As the writing became more prolific the need for more lines was apparent, and eventually there 12-14 lines on each page. Students wrote more quickly and filled up more than one page. The students requested more lines as they had more to say in print. Initially the rule was students had to fill all of the lines of each page they wrote on, a rule that eliminated students from asking —How long does it have to be?” For students who wanted to do minimum work, the rule was

writing for the full 15 minutes, 5 minutes for drawing and fill at least one page. Students actually made adjustments to those rules for themselves. Near the end of the year some students used the full 20 minutes to write and even went back to their stories to finish them during “free time” after other required class work was completed. Actually, the class rule was always working at all times; if required work was completed then working on one’s own projects was acceptable as long as one was working. Students created a variety of wonderful things including puppets, crazy paper hats, “inventions,” and stages to do plays during their “free time.”

The Creative Writing Resource Table

The students had special pencils, markers, crayons and colored pencils that were kept on the creative writing table. These were only used at creative writing time. They were special tools for a very special time. Students knew that the time to write was strictly for a sacred communion time with paper, pencil and their ideas. They also knew their task was to get their story on paper in a flow of ideas, without regard to spelling, grammar or sentence structure and they used special tools to work with those ideas. Duplicate pencils and tools used throughout the day were kept in their individual desks. The creative writing table also held other tools discussed later in this paper, as well as picture dictionaries and a Children’s Thesaurus. The students did not use the books initially, and even near the end of the year they were not used extensively, but having the knowledge that books existed to help one find words was an important concept for the students.

Sacred Writing Time versus Language Arts class

The creative writing process is a sacred process where the flow of ideas should not be stopped. It was not the time correct to spelling, sentence structure or grammar! Following “drawing” time was creative writing time and it was the next priority in the day’s activities. It was a time that was kept sacred and both students and teacher wrote no matter what else was on the day’s agenda. Early stories were expectedly stilted and grammatically incorrect, but the important thing was that the students were writing. Students were encouraged but not required to share their stories with the class at the end of creative writing time. Using characters named after students in the classroom and people in their lives was exciting and fun. A ground rule was the use of the name of a person known by the class could not be used in a cruel way or to make fun of another person. This technique of bringing what students knew moved the student’s from “boy” into having characters with names and descriptions. The class wrote like typical deaf children in terms of using deaf written language. It was not grammatical English, however, the important thing was that they were finally writing and had actually began to love the creative writing time block.

Ground Rules

Students needed a few more additional ground rules. If a student was writing and made a mistake during the writing process, one rule was simply cross it out with one line through it and move on; there was no erasing or rewriting. Another ground rule was that sharing creative writing pieces done during the creative writing block was optional. No one was ever forced to “read” their story to the class. Stories were never criticized or graded during the creative writing time; keeping the writing process open and safe was critical to continued success and enthusiasm for the newly emerging writers. While reading one’s story, another ground rule was that one could not embellish the story if the words were not actually written on the paper! Writers were encouraged to use their own ideas for their writing, however when ideas were sparse, writing prompts were open-ended prompts like “something magical happened.” Initial stories were short, stilted, and labored but they were written and illustrated daily during the creative writing time.

Using Music

Using music with profoundly deaf children would have been senseless, however there were some hard of hearing students in the class. Using prerecorded music that was approximately 20 minutes

long helped to relax those students who had some hearing, and it got them into the writing mode and the repeated playing of the same music everyday helped students shift into a writing mode as soon as the music began. It also helped both students and teacher by providing a designated start and stop time to creative writing. Instrumental music worked best; words were distracting.

Editing and Revising

Not every written piece should be —published”; it is a guideline that even professional writers use. Choosing one’s best writing to revise and edit worked best. In terms of improvement in a piece of writing, editing and revising was done at a time separate from the creative writing time. Creative writing time was kept as a sacred time; however, when a student had accumulated a collection of stories from creative writing time, it was time to have students choose their best stories to —publsh.”

Revising and editing stories to be published was done at an identifiably different part of the day from creative writing time. It was done during Language Arts class. It is the writer’s opinion that keeping the writing time sacred and choosing only the best work to revise and edit during Language Arts class helped the student writers invest in their published work while creating a safe place to let ideas flow freely during creative writing time. Only chosen stories required revising and editing, and the author of the story had the final say in which story was to receive concentrated effort with the purpose of being —published.”

More Ideas to Help Improve Writing

Additional ideas discussed in this section come from best practices in teaching children to write. Some are ideas that they have been shared by unpublished teachers who primarily teach general education children to become good writers. Although they were not used with the class from England, the first suggestion that worked with severely involved children was to establish only three correction areas for a student to focus on while editing a piece of writing that was to be published. For example, with severely involved emerging writers, the chance that they were using correct grammar was slim to none. Learning to focus on properly using a capital letter at the beginning of the sentence and a period at the end of the sentence were two initial correction areas that emerging writers needed to focus upon in the publishing process. Learning to use a capital letter for proper names was a third. During the editing process for published pieces, a newly emerging writing student was responsible for only those three correction areas. Other problematic areas like verb tenses were saved for later focus correction areas when the student was developmentally ready for them.

Once a correction area was mastered, it meant it was used correctly and consistently. It then became permanent criteria in the individual’s writing rubric for published stories. New correction areas were identified replacing mastered areas; a student still only dealt with three areas of focus at a time. For emerging writers, Language Arts lessons supported the writer’s abilities in a way that honored the writers developmentally. Grammar and spelling lessons were best received when they are driven by the writing need of the student. Beloved stories covered in red pen corrections were a thing of the past for emerging writing students. Students used their own red pens to improve their writing during the editing and revising phases. Progress was slow but steady.

It was also helpful to have the first read through of a soon to be published story be signed or voiced by the author with the teacher. As students read their stories aloud, the teacher was able to keep the student focused upon the actual words written on the paper, not what the student had wanted to say in the story. When a student stumbled on a word he or she could easily fix the mistake right then and there or ask how to fix awkward wording.

Peer Conferencing

Peer conferencing was also very helpful after the first read through with the teacher! Peers questioned the writer from a child's perspective. More often than not however, authors had to do the reading of their story to the peer. Peers were able to check for clarification of ideas and understanding sequence of events from a child's perspective. It was important to remind peers of another ground rule; students could only make positive, constructive suggestions that might enhance or clarify a story and the person giving criticism had to be ok if the writer did not take a suggestion.

Use of Rubrics

Over the years, students became more skilled in the writing process as their teacher became more skilled. Their abilities to select pieces from their cadre of creative writing stories to publish also improved. A final ground rule for published stories was that words in the pictionary or on their individual word lists had to be spelled correctly in the final draft of their published story in order to get high scores on their rubrics. High scores on the rubrics meant that there was a place for their story or collection of stories in either the classroom or school library.

Making Published Books

After the writing process began to flow for students and they accumulated some published stories, it was a time to publish the stories into a collection. There are several resources for making children's books; the internet provides many and one that is a favorite is a collection of ideas by Susan Kapuscinski Gaylord at her web site, <http://www.makingbooks.com>. Even the most challenged writer is enthusiastic when they see their book in print and available for others to read, especially if the books take different sizes, shapes and forms.

Upping the Ante!

There are a variety of spelling and word games that bring new vocabulary into the writing arena; however, there is not enough space to discuss them. Games were done as an integral part of Language Arts class, not during creative writing. One game that was developed by the writer for more capable students who needed a way to increase their vocabulary of descriptive words was the Description Game. The game was named by the students and it has stuck over the years. The results of "Description Game" actually caused a revision of the original *Pictionary* design to include space for synonyms and antonyms as the game, if played regularly, truly expanded the ability of emerging writers to describe things. It was a game played with teams and it required the purchase of inexpensive but identical items, one item per team. A good place to find items was party, paper or gadgetry type stores. Rubber bugs, sparkly pencils, and other interesting finds were all good if they had color, texture and/or interesting details. The objects were passed out to the teams and the teams have 10 minutes to come up with a list of descriptive words and/or uses for the object. A team recorder wrote down the list of descriptions for their team. At the end of 10 minutes the teams listed the descriptors one at a time and either a student or the teacher wrote their words on the board. The team got a point for each descriptor, but if another team duplicated a descriptor neither team got a point. Art stores and paint stores provided free color swatches with exotic names of colors on them. New color swatches were placed on the creative writing "resource" table along with the other creative writing tools almost daily. It was not necessary to announce that new items had been placed on the creative writing resource table; students checked it daily as it helped with adding new words for the Description Game. The second time students played the game instead of using words like "red" students began using crimson, scarlet, and candy apple red. Instead of "big" they used gigantic, magnificent, and gargantuan. Competition to find new and exotic descriptors ran high. Of course remembering the words in order to use them in stories was highly encouraged, especially when students were revising and editing stories to be published. The suggestion "Can you think of better descriptive word to give the reader a strong picture in their mind?" was met

with less and less resistance during the publishing stage of writing once students began playing the Description Game.

A new ground rule had to be added, —No hiding color cards.” Students were not allowed to use the cards during the game; resources were to be used during free time after assigned work was completed. It set up an interesting dynamic; the resources at the creative writing table became sought after and treasured. It was a privilege to use them. Some of resource words began showing up in their writing.

Moving reluctant writers into emerging writers is possible with a little chutzpah and the willingness to act upon hunches. With populations of students where professionals have given up on academics it is actually easier for teachers to break outside the box and try new approaches. All it takes to learn to love writing is to be lucky enough to be in a classroom where magic is possible!

Perspectives on Errors in Deaf College Students' Texts: Correction at the Roots

Susan K. Keenan and Kathryn L. Schmitz

Abstract

Responding to students' texts is an ongoing issue when teaching English as a second language to deaf students. One response model uses rules governing a Basic Variety (BV) of English. This paper explores the differences between deaf and hearing nonnative users of English and then parallels similarities in their respective use of BV. Deaf students' English has been traditionally characterized from an error standpoint. We argue, however, that such deviances from English are productions following rule systems in this population's interlanguage. Using student texts we demonstrate deaf students' use of an interlanguage with BV characteristics. We suggest that student texts reveal rule systems, and understanding these systems enable teachers to better guide these learners' linguistic development.



One of the hardest tasks facing English instructors is, not only knowing what to correct on students' texts, but how to correct it. With regard to the WHAT, we correct with a very light hand for reasons which we hope will become clear. The HOW part of correcting texts can be even trickier. This paper explores both the WHAT and the HOW of error correction through discussions on:

1. Deaf students as ESL learners
2. Characteristics of the English used by deaf students
3. Why deaf students' deviations from Standard English should not be viewed as errors but rather as productions that adhere to rule systems
4. A recently identified rule system in the field of ESL called the Basic Variety or BV
5. Similarities between the rule systems used by deaf students and hearing learners of English as a second language (BV)

This paper also demonstrates the use of the Basic Variety in action through a deaf student's written text and concludes that deaf students texts reveal their operating rule system and suggest that understanding these rules will enable teachers to guide these learners' linguistic development.

Deaf Students as ESL Learners

Deaf students can be viewed as ESL learners for two reasons:

- The nature of their first and second language
- The similarities in nature and kind of errors shared by these populations

The Nature of the First and Second Language

Deaf students are rarely considered native users of English because it is not acquired from their primary caregivers and because it is acquired differently from their hearing counterparts – up to 95% of deaf children are born to hearing parents. Their hearing loss impedes natural acquisition. However, ASL is not considered a native language either because it is not – at least initially – shared between caregiver and child. While many deaf students eventually use ASL or a variant, there are significant differences between ASL and many spoken languages:

- ASL has no written form
- Deaf students have to learn to make sense of print which has no usable aural counterpart and for which there is no model in their manual language

As a result, English is a language arrived at late and learned ‘imperfectly’ because of delayed exposure both aurally and in print. This English used by deaf students is called a “primary language” rather than a first or even a second language. Berent (1988) states that once deaf children have some functional use of English, their acquisition of English proceeds similarly to those hearing students learning English as a second language.

The Similarities in Nature and Kind of Errors between the Deaf Population and ESL Students

Errors found in ESL students' texts which occur with enough regularity to be labeled are called developmental. These same kinds of errors can be regularly found in deaf students' writing. According to Dulay, Burt and Krashen (1982), these errors show that the learner simply has an incomplete second language rule system. These researchers believe that many, if not all, of these errors self-resolve as students' knowledge of the target language becomes more complete.

These errors are:

- Omitting grammatical morphemes which do not contribute meaning, e.g., *She opened present*
- Double marking a feature when only one marker is needed, e.g., *She didn't walked home*
- Generalizing rules, e.g., *oxes* for *oxen*
- Archifoms, or using one form in place of several, e.g., *Her eat with Bob*
- Using two or more forms in random alternation, e.g., using *he* and *she* randomly regardless of the gender of the person in question
- Misordering items in constructions, e.g., *What you are doing?* (Dulay, Burt & Krashen, 1982).

The English Used by Deaf Students, or the Characteristics of Deaf Students' Texts

Given the above developmental errors, then, what does the English used by deaf students look like? First – it is just shorter. Deaf students use fewer words and clauses per T unit – a group of words that function as a sentence. They use fewer words for two reasons: 1) they have difficulty understanding relationships between major parts of the sentence, and they have a small English vocabulary – general one lexical item per referent.

Another characteristic of deaf students' English is its simplicity. These students generally use unembellished agent/action forms when they express themselves in writing

A third characteristic of Deaf students' texts is its cohesion – or the way text hangs together. Studies have shown that it may differ both quantitatively and qualitatively. For example, DeVilliers (1991) found that deaf students use fewer cohesive devices than hearing counterparts. However, Maxwell and Falick (1992) found no quantitative differences, but qualitative differences – mainly that deaf students rely on *and*, *then* and *because* and attribute this limited use to the way in which deaf students are taught English out of context.

A Different Perspective

What is common with both the above mentioned textual characteristics and the developmental characteristics that Dulay, Burt and Krashen (1982) identified for ESL learners is that they are all labeled as errors – that is, deviations from Standard English. We are suggesting a different view – one that is related to the nature and meaning of interlanguage.

The term interlanguage describes the language system – or grammar that is being used by second language learners. Corder (1991) believes that second language learners induce rules which are mirrored in their language production. He believes that there is evidence that these rules exist and this evidence lies in the systematic nature of the errors themselves.

What this means is that any learner – and here we are including the deaf – acquiring a language passes through a series of grammars on his way to the target language. These grammars are completely systematic even though they don't match the target language. Put another way, the learner constructs an interlanguage system with its own rules and these interlanguage principles drive his communicative production. The communicative production of a second language learner, then, should best be described as a perfect interlanguage production rather than an imperfect target language production.

The best way to help students improve their communicative production is to know what rules are driving their interlanguage. Yates and Kenkel (2002) believe that any second language learner's interlanguage system is informed by what they know about communicative organization and what they know about language.

What Deaf Students Know about Communicative Organization

They know:

- Conversations follow structures and involve turn taking
- This turn-taking varies according to the social setting
- The static nature of speech acts
- How information is organized for purposes of communication -- deaf students know – and use – the rhetorical organizational mode known as given/new
- How to organize their communication. They organize visually -- they structure their texts in visual images and scenes, rather than presenting events chronologically or thematically, producing what Maxwell (1994) terms a vision-centered narrative
- ASL uses other ways to organize communication. Campbell (personal communication) identifies another discourse structure in ASL, one with emphatic organization, where the most important information is communicated first and increasingly obscure details follow. This is called —Discourse in an ASL lecture.”

Discourse in an ASL lecture follows this pattern – the main point is introduced—details follow – the main point is stated again and then, when a new topic is introduced, the sign NOW is made.

What Deaf Students Know about Language

By around age 13 deaf students know:

- The function of nouns and verbs and their interrelation in simple sentences
- The use of subject-verb-object (or agent-action-patient) word order
- The purpose of simple negation
- The use of adjectives and adverbs for embellishment and clarification

- The function of prepositions to denote relationships
- Question forms
- The use of coordinate conjunctions to show relationships
- The use of some subordinate conjunctions
- The use of some demonstratives
- The completion of a thought must be denoted in some way
- Time must be identified in some way

Klein and Perdue (1997) found enough similarities in their subjects' interlanguage, or operating rule system to formulate what they called the Basic Variety of English. We are suggesting that the rules operating in the BV are so similar to what we have observed with deaf students' writing that this operating rule system can be used as a jumping off point for knowing HOW to correct students' texts. That is, deaf students who are not skilled in English demonstrate common characteristics in their writing that can also be found in the BV. Instructors may be better able to help students work with their texts if they understand that these are the rules that are driving the deaf students' production.

Deaf Students' BV in Action

We can see examples of the BV in the following paragraph written by a deaf student in class at the beginning of a 10-week quarter. This student demonstrates competency in the use of certain English constructions, but not others.

A best friend is important to me and I don't know if I could have done without a best friend. Her name is [name] and I remembered how much I really admire her when I was young. I considered her as my role model. When I became older, she joined into wrong crowd who are doing illegal drugs. She has influenced several friends to become involved into drugs. However, my parents were the only one who noticed that and they don't want me to become like them. They decided to transfer me to different school. During that time, I was not able to understand why my parents doing this and of course I was angry. When I attended college, it has impacted me that my best friend is not my best friend anymore. Therefore, our friendship has faded away. A few years later, I found out that she was sent jail for assault to one of our good friend. I spoke to victim about how does it happen and she explained me that it was all about drugs. She was very addicted to heroin and couldn't handle it anymore. So, I decided to visit her at court and she was shocked to see me. I just simply said —love you” in sign language. The purpose I am doing this is to make her realize. At next day, she emailed me and mentioned —I cried so hard when I saw you at court.” I am not sure if she is telling truth or so.

This sample text shows inconsistent verb tense usage: —amembered” and —admire” in the second sentence, and —became,” —joined,” and —æ” in the fourth sentence. The writer also omits articles (—transfer me to different school”), offering the uninflected English. In the writer's rule system, these features are not errors, but rather consistent application of appropriate verbs in the correct sentence locations. For this writer, either past tense or present tense is acceptable as long as an appropriate verb is included in the sentence. The writer's meaning remains clear throughout, reinforcing the rule system in place and reflecting the writer's BV.

Interestingly, the writer uses the infinitive form correctly, but is inconsistent in using —a” as a preposition. In this writer's rule system, the word —to” apparently has a clear role as used in the infinitive form, but a less clear role as a preposition. The writer also persists in using the perfect

aspect (~~has~~ influenced,” ~~has~~ impacted,” ~~has~~ faded”), but with the incorrect helping verb tense. The consistency of this ~~error~~” again reflects the power of this writer’s rule system.

Nine weeks later, the writer created a different paragraph:

Imagine losing someone that you love the most is nightmare. On March 29th 2007 was my worst day ever. During the spring break, my mother found out that she has breast cancer. She was planning to have surgery on April 28th, 2007. I decided to visit her during the Easter weekend. All the sudden, my mother changed her mind and wanted to have surgery on March 28 instead of April 28. I have no idea about this until few days before her surgery. I was disappointed because I wasn’t informed—I believe that they don’t want me to know because they don’t want me to worry about her. Of course, I became worried about her all the times and I missed few classes because I wasn’t sleeping well. I didn’t go class on March 28th, 2007 because I was worried about my mom all the day. My mother was successful at surgery but I still not feel like I am satisfied to know that she is 100% fine. On March 29th, 2007 is when my homework was due for one class. I didn’t finish it at all. My teacher gave me zero for this assignment. That is when I broke down because I feel like no one could understand me. She recommends me to go home and visit my mom. Somehow, I felt that I should stick with my plan by going home on Easter weekend. My teacher made me realized that I should go home and see my mom. So, I went home on that weekend instead of Easter weekend. I felt all better afterward!

This paragraph shows better use of standard English and fewer examples of what could be termed the student’s BV. Some demonstratives (~~few~~,” ~~this~~”) are used as well as a variety of temporal adverbs. The temporal adverbs in the paragraph include calendric adverbials (~~on~~ Easter weekend,” ~~on~~ March 28 instead of April 28”), anaphoric adverbials (~~all~~ the day (sic),” “afterward”), and deictic adverbial (~~All~~the sudden (sic)). Also included are complementizers (~~for~~ one class,” ~~instead~~ of Easter weekend”) and quantifiers (~~few~~,” ~~all~~ the time”). This writer uses a topic/focus organizational structure and shows improved use of the perfect aspect in that incorrect usages that were present in the first sample are absent from the second sample. The writer’s rule system seems to be evolving from the BV toward more standard English.

Conclusions

Second language learners – including the deaf – begin writing with rules they know. And we are suggesting that many of the rules coincide with the BV. As they feel more confident, they attempt more sophisticated language use and alter their interlanguage to accommodate. Eventually they may elaborate their interlanguage until it become almost indistinguishable from the English of native users. This is our goal as teachers and we see evidence of this process with our students. Instructors of deaf students may wonder if their students are making progress in acquiring English. We believe that focusing on correcting grammar and taking the perspective that their grammar is wrong in a way that disregards their operating rule system will not help the students to internalize rules that move them to more complex use of English. Students’ texts reveal the linguistic knowledge they bring to the English language learning situation. These texts are a reflection of their understanding of and ability to use the English language, competently or not. Understanding their operating rule systems enables teachers to more effectively appreciate, support and guide these learners’ linguistic development.

Characteristics of the Basic Variety (BV)

1. BV is an uninflected form of English, meaning there is no marking of case, gender, number, aspect, agreement or tense.
Lexical items typically occur in one form, which frequently corresponds to the stem form.
 - Pronoun system limited to references to the speaker, the hearer and a third person
 - Limited use of quantifiers (*each, every, all, some*, etc.)
 - Single form for negation (e.g., exclusive use of *no*)
 - Limited and overgeneralized prepositions
 - No complementizers. A complementizer is a subordinate conjunction that marks an embedded complement clause. For example, *I know that John is lazy* where *that* marks the clause used as a direct object or complement in the sentence or *I planned for my son to go with you*, where *for* marks a phrase that complements *plan*. The most common complementizers are *for, that*, and *whether* (Crystal, 1991).
 - Some demonstratives, but no determiner system (e.g., use of *these*, but not *those*). Determiners are words that mark nouns – articles, possessive nouns, possessive pronouns, indefinite pronouns (*few, more, all, every*), numbers and demonstratives (*this, that, these, those, such*) (Celce-Murcia & Larsen-Freeman, 1983).
1. The bare stem of a verb is most frequently used. Utterances frequently lack the copula (*to be*). The verb plus *-ing* is also used often, but without the assisting copula.
2. Temporal adverbs are frequently used. The repertoire of these kinds of adverbs includes:
 - Calendric adverbials – *Tuesday, in the morning*
 - Anaphoric adverbials that show the AFTER relation (*then, after*) and the BEFORE relation (*before*)
 - Deictic adverbials (*now, yesterday*)
 - Frequency adverbs (*often, always*)
 - Durational adverbs used as bare nouns (*two hour*) (Klein & Perdue, 1997, p. 320)
3. The referent with more control takes the head position.
4. Some boundary markers are used which show the beginning and end of a situation (*work finish*) (Klein & Perdue, 1997, pp. 320-321).
5. Text organization is of two types. The first is given/new, or backgrounded/foregrounded. The second structure is topic-focus.

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Visual Journals Poster Session

Sharon Pajka-West, Ph.D.

This presentation showed how students who struggle with written language can use visual journals as a way to record their experiences and emotional reactions. Visual Journals assist students in exploring the connection between image and print. They also help students learn how to access their inner language to express their thoughts visually and verbally.



Painting is just another way of keeping a diary.
Picasso

Students who struggle with written language can use visual journals as a way to record their experiences and emotional reactions. Visual Journals assist students in exploring the connection between image and print. They also help students learn how to access their inner language to express their thoughts visually and verbally.

Through this form of journaling students become more capable of articulating connections between their own personal experiences and those in the text. We, as educators, begin seeing our students' worlds through their journals and are more able to tap into their background knowledge.

This poster session showed some of my students' work with visual journals in classes offered by the Department of Applied Literacy at Gallaudet University. Visual Journals were used to assist them with book reports and class presentations.

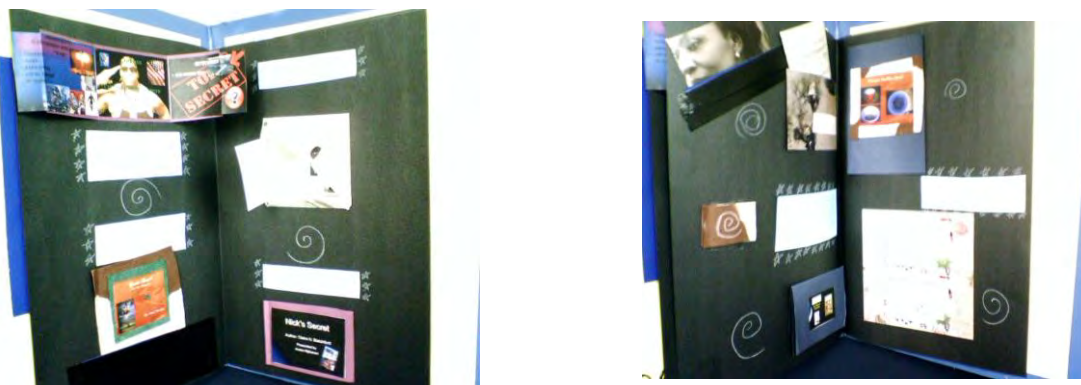
What Are Visual Journals?

Visual journals can include mixed-media collages, sketch drawings, designs through computer software, or any original work created in a visual format. Traditionally, visual journals are in book format where the pages fold out featuring pockets that can hold sketches, quotes, drawings or photos which can be overlaid with watercolors, markers or fabric.

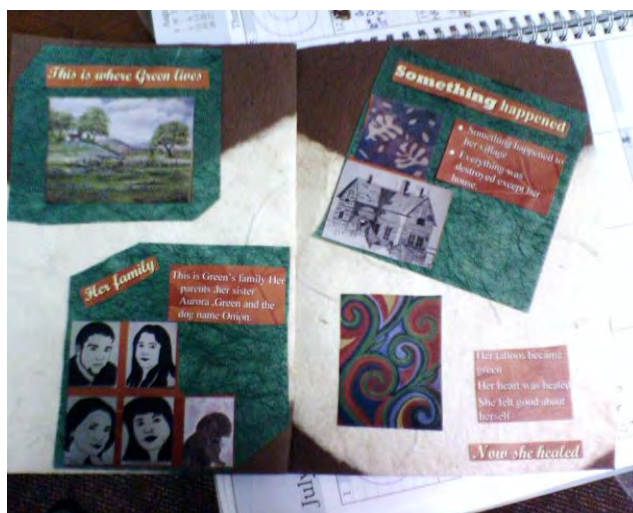
Visual Journals can include map clippings, brochures and almost anything that holds meaning to the individual. —Anybody can experience success, because there are no rules"(Downs, 2007). Many of my students felt comfortable



creating their visual journals through a PowerPoint format where they could include photos, maps, and clip art onto slides.



One student used both a traditional and a contemporary medium for her artwork. She painted and then took digital pictures of her paintings to include them in a PowerPoint presentation.



Why Should Educators Use Visual Journals?

A visual journal is a means of communication that is captured without the struggle of proficiency in a written language. Students who struggle with written language can use visual journals as a way to record their experiences and emotional reactions. This type of journal assists students in exploring the connection between image and print. They also help students learn how to access their inner language of imagery to express their thoughts visually and verbally.

Through this form of journaling students become more capable of articulating connections between their own personal experiences and those in the text. We, as educators, begin seeing our students' worlds through their journals and are more able to tap into their background knowledge.

The student's visual journal, regardless of the format, can become a 'place' where students can work out what themes (i.e. issues, questions and ideas) are developing. This gives students a dialogue and point of interest, and this can be a good starting point for discussions with other

students” (Murphy, 2007). It is a safe place where students can and should experiment with abstractions finding ways to express their emotions and feelings (Murphy, 2007).

According to Flood, Heath, and Lapp (1997), visual arts includes everything from dramatic performances, comic books, to television viewing. The communicative arts, such as reading and writing, exist as integrated elements in the visual arts. They argue that using visual arts in literacy instruction motivates students to become involved in the communicative arts.

What Should Educators Do to Encourage the Use of Visual Journals?

Rosenblatt (1978) introduces the term *transaction* to describe the lived-through experience of reading a text. The terminology replaces *interaction* which implies that the reader and the text are separate from one another. The transactional theory understands that readers approach a text with their own history of personal, cultural and linguistic experiences. Once the reader and text transact, the reader constructs meaning from the text. Prior to that, the text is considered nothing but a series of symbols (Rosenblatt, 1982).

Rosenblatt’s (1978) transactional theory of reading supports ‘educational drama’ strategies for use with literature and reading. Educational drama differs from more traditional script-driven drama and includes improvisations with the emphasis on the process, not the product. Aesthetic activities such as dancing, pantomime, role playing, oral interpretation, drawing and tableau can be included under educational drama. Rosenblatt (1991) emphasizes the need for such activities after a reading event and suggests that students should continue to experience the reading without being moved quickly to another assignment.

There are numerous observational and empirical studies supporting the use of educational drama techniques, including the use of visual arts, to promote literacy (Barnes, 1968; Britton, 1970; Dixon, 1975; Heathcote, 1981; Moffett & Wagner, 1983; Wagner, 2003). Three academic literature reviews conclude similar findings that educational drama works effectively to promote literacy (Kardash & Wright, 1987; Isenberg & Jacob, 1983; Pellegrini, 1985).

Research also shows that educational drama benefits deaf students. Wagner alludes to qualitative studies in 1995, which proved that educational drama, particularly Heathcote’s teacher-in-role and mantle-of-the-expert strategies, assists in eliciting language from deaf students (Wagner, 2003, 1012). In addition, Wagner (2003) reports on a study from the 1980s by Timms with eight deaf students. Timms found that the students benefited from education drama and that it increased their understanding of story structure.

Process should be at the heart of this alternative pedagogy. It is the teacher's responsibility to preserve the integrity of process over product. As an English instructor, I am certainly not trying to teach art but to engage the student’s abilities and insist them in transferring these capabilities into a subject where they may feel uncertain of success. Incorporating visual journals carries within it a broad range of opportunities for students to develop new ways of seeing and knowing, and the capacity to “read” and represent their own world.

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Learn More about Visual Journals

- "The Journey is the Destination: The Journals of Dan Eldon" by Kathy Eldon (Chronicle Books, \$35): Dan Eldon was a photojournalist for Reuters who created haunting visual journals using collages of his photos, map clippings, ripped newspaper pages, gum wrappers and other ephemera from travels through four continents. A Somali mob reacting against a U.N. bombing stoned 22-year-old Eldon to death in 1993. His mother, Kathy Eldon, published his journals.
- Illuminations: Visual Journaling Inspirations
<http://www.kporterfield.com/journal/Illuminations.html>
- 14 reasons artist keep visual journals http://www.busywomen.com.au/visual_journal.htm
- Visual Journals http://www.mbellart.com/visual_journals.html
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TECHNOLOGY

Using Blogs and Tech Tools to Teach Writing to Deaf and Hard of Hearing Students

Mollie Kropp and Eileen McCartin

Abstract

The purpose of this paper is twofold: first, to give an account of how blogs were used in two separate school programs for middle and high school aged, deaf and hard of hearing students, and secondly to demonstrate how commonly-used tools in word processing programs can be used to help students improve reading and writing skills. Included is information on what a blog is, how to set one up, and educational activities that can be used to improve writing at the sentence and paragraph level. Information on locating timely, age-appropriate reading material and discussion questions is also included. The authors conclude that using blogs and teaching students how to use available word processing tools can be a useful and empowering experience that enhances the reading and writing process and the development of literacy skills.



The purpose of this paper is twofold: first, to give an account of how blogs were used in two separate school programs for deaf and hard of hearing students, and secondly to demonstrate how commonly-used tools in word processing programs can be used to help students improve writing skills.

Initially we planned to have students in our two schools communicate with each other via blogs, however, that plan was dropped for a number of reasons. We considered that the rather large age difference between the students in middle school and seniors in high school might be problematic. Subjects that would be acceptable or appropriate for graduating seniors would not be suitable for middle school students. Scheduling was also a challenge. Many students did not have out of school access to computers and only limited time could be used during the school day to work on blogs, and access to blog sites from some school computers was blocked.

Another change from the original plan was that instead of blogs, the high school students used a discussion board tool in *Blackboard*, the courseware product used by the high school. The discussion board was used in a bloglike manner, and the students discussed current event topics that expanded on issues covered in the government textbook. At the time we began this project, *Blackboard* did not have a blog tool. It does have this feature now, however, and blogs can be created for such courses.

Logistically, it simply proved more feasible to work with the students at our own individual schools and check in with each other via e-mail. It was a learning process for both the students and the teachers, and we all learned from both our mistakes and our successes.

What a Blog is and How to Set One Up

The word “blog,” a portmanteau of the words “web” and “log,” is a website perhaps best described as an online journal. Entries are written in chronological order, however, they typically are displayed in reverse chronological order.

A blog is often maintained by just one person or organization. Information or commentary is posted by the blog “owner” and visitors may leave comments and questions for the original poster as well as subsequent posters. What results is an amalgamation of entries from a variety of interested parties on a given subject. The blog tool can be a useful way for teachers to engage students in digital discussions and to create a motivating reason to write.

There are a number of ways that a blog can be set up. If you use the courseware program *Blackboard* there is a blog creation tool available, and it is easy to use and monitor. There are also numerous blog hosting websites available. Some such sites are learnerblogs.org, blogsavvy.com, and blogger.com. The students at SSD used the blogger.com site.

Using Blogs for Different Purposes

Students at SSSD used blogs regularly as part of their language arts classes. The high school government students used discussion boards intermittently as supplemental activities to augment difficult textbook topics. As a tool for teaching English, blogs are akin to teacher/student journals where a teacher models Standard English as he or she responds to student writing. Like journals, blogs motivate students to write for an audience and receive feedback. Using blogs in the content areas can also provide similar motivation for students, while at the same time, encourage students to explore academic topics more fully. Blogs can be used as a main course or as a garnish to satisfy divergent educational needs.

At Woodson, the students used a discussion board tool to discuss current events that meshed with topics discussed in the text. Topics such as state and federal courts and different types of laws were discussed in class and on the discussion board. Students found articles in the newspaper that reflected topics in their textbook and were also able to link to online articles in their discussion posts. This approach encouraged the students to read the newspaper and be more aware of local and national events.

At SSSD, blogs were used as a replacement for traditional written journals and were the backbone of language arts instruction. Input for topics came from the students, as well as the teacher, which increased student motivation to participate. Because the blogs dealt with such a wide variety of topics, students incorporated new vocabulary and ideas into their writing. And because the blog required ongoing discussion, students’ exposure to printed English increased significantly and the development of English language took place in an interactive environment. SSSD students in 7th and 8th grade classes totaled over 1,000 posts from October to May and their writing assessment scores increased dramatically from the beginning of the year.

Along with the development of grammatical structures of written English, students also learned pragmatics and self-monitoring of language usage as a result of using blogs. Students had to be able to explain their thoughts in a manner that was understandable to their classmates and teachers, as well as learn to respectfully request clarification from each other. They also learned to self-edit before posting, as well as to “listen” to their peers in a manner to which they were not previously

accustomed. As they learned to use quotes from peers in their responses, students also learned about the importance of using citations in their writing in order to avoid plagiarism.

Examples of Classroom Activities by Area

Teachers can target specific areas for instruction and review when using blogs.

Writing a Paragraph

Begin by using graphic organizers to develop a single paragraph that contains a topic sentence, relevant details, and a concluding statement. Encourage students to use the paragraph writing principles when writing blog posts. Use student blog posts as editing materials for review of these instructional concepts.

Reading

Make reading newspapers, books, and online news sites a requirement for participating in online discussions. Students should be encouraged to read a wider variety of authentic texts than they may have traditionally done without the discussions. In an English or civics class, blog topics might include personal, political, environmental, educational, and ethical ideas, many of which required additional research.

On a weekly basis, have students choose an article from the newspaper, then pull out the key information from the story, and record it on a “5 WH Chart”. Once finished, set up a in a Round-Robin activity in which they share their news articles. Allow students to choose the most interesting article, and begin a discussion about it. Spend about 10 minutes discussing the concepts in the article, and then bring it into the blog for further research and discussion. For example, last spring, European astronomers discovered a planet near the Libra constellation that might be comparable to Earth which could possibly sustain life as we know it. Students were asked, “How would you feel about living on another planet, given the problems we have on this one, and how realistic is this expectation?” This topic required hypothetical discourse and research.

To differentiate instruction, a teacher might read news articles as a group utilizing an interactive whiteboard and flex-cam, which is a light-weight digital camera used in tandem with a projector to present opaque items onto a white board. Using these tools would allow students to learn how to read a newspaper, or how to determine key facts and ideas in a story as a group. Use the flex-cam to project the story to a central location, and the interactive whiteboard functionality to complete graphic organizers together or to learn to highlight key information in a story.

At the time this project was done, Woodson High School was able to obtain free *USA Today* newspapers for students. Subscriptions may no longer be free, but are generally discounted for educators. The USA Today website (<http://www.usatoday.com/educate/home.htm>) offers teachers a variety of resources including a discussion guide on selected current events topics of the day. Another good website for daily current events is <http://www.izzit.org/events/index.php>. This website locates articles of interest from around the country and accompanies each article with questions designed to encourage critical thinking and discussion. A free e-mail subscription service is available for teachers. Articles on the USA Today website are archived; however, the articles on the Izzit site mentioned above are not. Teachers should save any articles of interest and discussion questions on the Izzit site that they will not use that week, as each week a new series of articles replaces the past week’s series.

Grammar

Students can increase their grammar skills by self, peer, and group editing activities, which are pulled out of the blog discussions.

As students learn grammatical features of English in class, have them assist in the development of an editing checklist that they can use to self-edit and you can use to assess their skill development. This checklist should grow throughout the year, and can be used for grading purposes, as well as for IEP documentation. Again, use sentences or paragraphs posted in the blog as group-editing materials.

A checklist can include any feature of writing that is part of the curriculum. Here is one example that was used at SSSD to develop the concept of a complete English sentence:

Elements of a Complete Sentence

That not supposed do. (This sentence was taken from an SSSD blog.)				
Subject	Verb	Capitalization	Punctuation	Complete Thought
o	o	x	x	o
Correction: They are not supposed to do that.				

Once students determine what was missing from the sentence, go back and correct the original.

Word Processing Tech Tools that Help Students with the Writing Process

There are a number of tools in Word that teachers and students can use to help improve the quality of student writing.

Pre-writing

Students can organize ideas using the outline feature of Word and bulleting.

Use outline view (Select View > Outline) to create an outline

Use bullets, numbering to brainstorm, order ideas

Editing

Use AutoSummarize (Select Tools > AutoSummarize) to examine a text document for relevant info and summarize the main points. (AutoSummarize can also be a useful reading tool for pulling out main ideas and relevant details.)

Vocabulary and Word Choice

Many of our students have limited vocabulary and are unsure about word choice and parts of speech. Many of the students in our classes are new to this country, to formal schooling, and to English and ASL. They need to expand their vocabulary in as many ways as possible. Students tend to need more explanation of a word's meaning rather than simple synonyms, and the synonym/thesaurus feature is often not the best way of teaching new vocabulary. That being said, it can still be very helpful, especially because students can access it independently without teacher help, and they are much more likely to use the computer to look up a word than to go to a dictionary and find it there.

The thesaurus tool also provides the word's part of speech. Reminding students to pay attention to a word's part of speech keeps them mindful of proper usage.

Synonyms/Thesaurus

Place cursor on targeted word > Right click > Select Synonyms > Scroll right

Place cursor on targeted word > Right click > Select Synonyms > Select Thesaurus

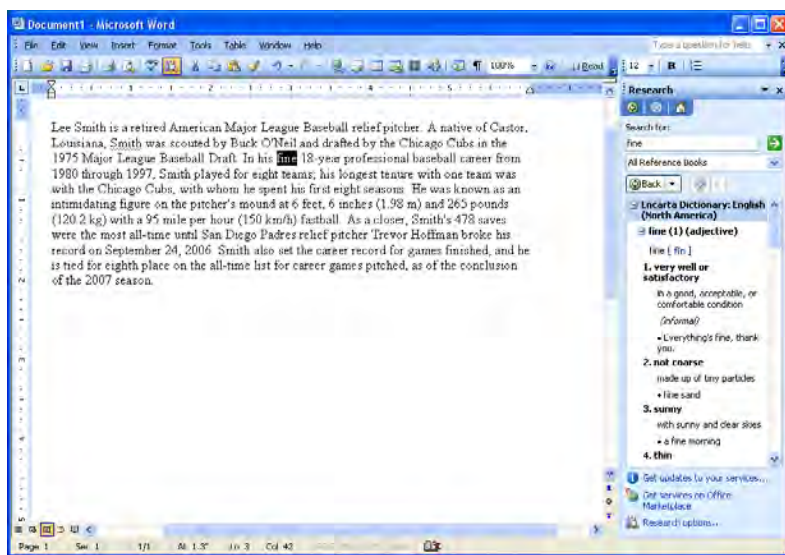
The “lookup” function, available in Word 2003 and later editions is helpful in encouraging writers to go beyond tried and true words like “fine” for example, when used to mean “good” or “acceptable.”

Place cursor on targeted word > Right click > Select Lookup >

or

Place cursor on targeted word > Right click > Type “k” (short for “lookup”)

On the right of the screen you will see reference source options such as a regular dictionary, as well as Spanish (and other) language dictionary and thesaurus. (See image below.)



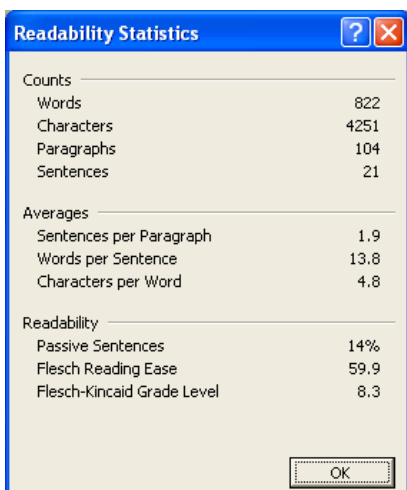
Encouraging and Measuring Sentence Fluency

Students often need to be encouraged to write more and varied sentences than they are accustomed to writing. Counting words for assignments and looking at readability measurements can be a good way to encourage students, as well as a means for teachers to collect data over the course of a school year for documentation purposes.

Word Count > Select Tools > Select Word Count

Readability > Select Tools > Spelling and Grammar > Options > Show readability statistics” > “OK”

Readability stats will appear at the end of the spelling and grammar check and will look like this:



Using or Disabling Auto Correct Features

Teachers may want to assess if students are aware of capitalization and other rules, and may want to turn off the auto correction feature of Word. AutoCorrect is found in the Tools section of the main menu bar. It is set to enable the following:

Correct Two Initial Capital letters

Capitalize the first letter of each sentence

Capitalize the names of days and months

Correct accidental usage of the caps lock key

Replace commonly misspelled words with correct spellings and use common suggestions from the spell checker

Capitalizes the first letter of a word following a period or in a list.

To turn any of these options off

Click on Tools> Select AutoCorrect > Deselect options as needed

Spelling

Click on the spell check icon  on the main tool bar.

Editing/Commenting on Student Work

Teachers can add notes regarding student work, without changing the text the student has written using the “comments” feature of MS Word.

Select the text you wish to comment on > Select Insert > Comments > Type comments.

Comments will appear when the cursor is placed over the highlighted text.


Delete comments by right clicking on the brackets and selecting “Delete Comments.”

Changing Text Colors/Backgrounds

Students who struggle with writing may benefit from changing text color and/or background.

Viewing text with increased spacing between words may also help them. Students can use their preferred background and text colors while composing/editing and revert to standard formatting when the work is complete.

To change font color, select the text you wish to change> Go to Format menu > Select Font >

Deselect “automatic” and chose color desired or click on the font color shortcut icon  to view and change color choices.

To change background color, go to the Format Menu > Select Background > Select the new color.

To increase spacing between words and between lines, select all text > Go to the Edit Menu > Select Replace>type a space in the “Find” box by hitting the space bar once (nothing will appear) > In the “Replace with” box, type two or more spaces > Select Replace All.

Technology is an Effective Tool with Deaf and Hard of Hearing Students

We found that our students responded extremely positively to all opportunities to use technology to complete reading and writing tasks. The use of blogs and editing features in Word kept students motivated and engaged in class discussion and were effective in the teaching of both English and content area subjects. There were many benefits that we saw in the classroom and beyond, some of which we will list below:

Increased Exposure to Print in an Interactive Environment

As deaf students do not have auditory access to English, their opportunities to practice and perfect their skills with the English language are significantly lower than those of their hearing peers. Online discussions provided them with greater access to written language, as well as a motivating and effective way to practice it in a safer environment than the traditional English classroom.

Development of Background/General Knowledge

Again, deaf students do not have full access to spoken language, and therefore their opportunities for incidental learning are significantly lower than those of their hearing peers. The increased opportunities to read authentic texts and discuss abstract concepts, first in their primary language, then in print, increased our students’ knowledge and understanding of the world around them.

Development of Ideas and Complexity/Clarity of Expression

Increased exposure to abstract concepts in news and other print media gave our students the opportunity to develop complexity of thought and expression that they may not have gotten in a traditional classroom. Likewise, the necessity to understand their peers and to make themselves understood allowed them to hone their expressive clarity in both manual and written language.

Development of Pragmatics and Practice of Shared Discourse

Blogs allowed our students to develop skills in shared discourse, discussing their ideas with peers and adults, thus increasing their repertoire of knowledge, ideas, and pragmatics, as well as their awareness of the ideas and opinions of others. They also developed a better understanding of audience and purpose for writing, and the difference between formal and informal language use.

Increase in Students’ Motivation and Confidence in Practicing English in a “Safe” Environment

Rather than only writing “for a grade,” students felt more confident posting their ideas to their peers in an online environment that is more akin to their daily participation in instant messaging and other online activities. Because of increased practice, student also became more comfortable with reading news media and other authentic texts that might previously have been perceived as “above their level.”

Improved Grammar and Composition Due to Increased Practice Opportunities

One student’s IEP progress toward her writing goal increased from 0-100% in the area of including capitalization and appropriate subjects in her sentences, not necessarily because she previously lacked the skills, but because she learned to pay more attention to her language output.

Increased Research Skills

Including a variety of topics allows students to research a wider breadth of information and to understand that research may vary according to field of study. They also learn how to cite sources in order to avoid plagiarism.

Individualized Instruction

Teachers can pinpoint misunderstandings in concepts and grammar that they may not have realized existed in a traditional English classroom. They can also use blogs as a “center activity” to allow for flexible scheduling for individualized instruction.

Increased Parent Involvement

Parents can be given access to the blogs so that they can discuss the topics at home, thus strengthening their familial bond. This is a valuable outcome for all the students, but particularly so for residential students who may only see their parents on the weekends.

Conclusion

We both found that using blogs was an effective method for helping students improves their overall English literacy. Students developed better writing and reading fluency as well as increased motivation to write and confidence in their expressive language. Both the teachers and the students enjoyed this experience using technology and will continue to use blogs in the future. To read students’ opinions about using blogs, go to <http://bearschat.blogspot.com> and scroll down to “Has Blogging Helped?” Other topics and discussions can be found at <http://deafchats.blogspot.com>. We believe using blogs with deaf students has great potential.

Using Blogs to Teach Writing

Mollie Kropp - Scranton State School for the Deaf, Scranton, PA
Eileen McCartin - W.T. Woodson High School - Fairfax, VA

1/10/08

Topics of Discussion

- Introduction to blogs
- The blog experience
 - Purpose
 - Sample activities
 - Benefits
- Resources for teachers
- Setting up your own blog

1/10/08

Blogs

- What is a blog?

1/10/08

Using Blogs at SSSD

- Topics - both teacher and students provided topics
- Discussions - began in the classroom and moved into the blog
- Posting - students posted at least three times per week, often more (points earned)

1/10/08

Using Blogs at SSSD

Students created their class sites:

- <http://deafchats.blogspot.com/>
- <http://bearschat.blogspot.com/>

1/10/08

Using Discussion Board on Blackboard

- High School Government class
- Textbook topics brought to life through current events discussions

1/10/08

Teacher Resources for Topics

- Topics can be found at <http://www.izzit.org/events/index.php>
- <http://www.usatoday.com/education/home.htm>
- World Around You
- Teachers can get free subscriptions to USA Today

1/10/08

Why blog with deaf and hard of hearing students?

- Develop background knowledge
- Learn pragmatic communication
- Use critical thinking skills
- Practice research skills
- Use authentic English
- Involve parents

1/10/08

Sample Classroom Activities

Peer editing of single sentences using student created checklist.

- Class Editing
- Editing Worksheet

1/10/08

Sample Classroom Activities

Students compose first in Microsoft Word and copy and paste to site.

MSWord has many features that help students



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Sample Classroom Activities

- 'Lookup' function (i.e. "fine")
 - Right-click on the word
 - Type 'k'
 - View reference sources such as a dictionary, Spanish (and other) language dictionary and thesaurus



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Sample Classroom Activities

Quick lookup

Right click on the word for a list of synonyms and link to thesaurus



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Sample Classroom Activities

Outline feature

Tracking



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Sample Classroom Activities

Weekly news discussion

CA Forest Fire

What would be fair punishment for the arsonist?

This involved ethics discussions and research.



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Sample Classroom Activities

- Shared reading activities
 - determining key facts and ideas in a story - 5 WH Chart



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Benefits

- Improved grammar and composition due to increased practice opportunities (documentation sample)
- One student's IEP progress toward her writing goal increased from 0-80% in the area of including capitalization and appropriate subjects in her sentences.



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Writing Samples

- Fall 2006: America can earn for old toys or old clothes
example: too small clothes or not like clothes can give to africa... Or can give to africa for snack. Oh well seed hard to grow because there have derrest? IMPORTANT QUESTION!

- Spring 2007: People are Deaf for a reason. Why try to cure? Nothing wrong with us. We fine but not hear that all. I am proud deaf because I not hear everythings and wan't bother me and keep a quite.



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Benefits

- Increased exposure to print in an interactive environment
- Development of background/general knowledge



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Benefits

- Understanding of audience and purpose
- Understanding difference between formal and informal language use



1/10/08

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Benefits

- Improved discourse through English and ASL
- Increased student confidence with printed English



1/10/08

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Benefits

- Motivation - Students and Teachers
 - 1000+ posts
- Comfort with reading news media and other authentic texts that might previously have been perceived as "above their level."



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Benefits

- Individualized instruction
 - teachers can pin-point misunderstandings in concepts and grammar
 - flexibility in scheduling



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Benefits

- Conceptual Development
 - ideas
 - complexity/clarity of expression
 - abstract thought
 - reasoning skills



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Benefits

- Increased parental involvement
 - Parents can read blogs and access Blackboard
 - Parent opinions are solicited
 - Students/parents enjoy sharing opinions.



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SSSD Student Opinions about Using Blogs

- <http://bearschat.blogspot.com>



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Setting up a Blog

- How to Set Up Your Blog
 - www.blogger.com
- Blogger "Dashboard"



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Computers and the Writing Process: Students' Comfort Level with Computer-Assisted Writing--Shortcomings of the Grammar Checker

John Panara

Abstract

This paper examines how students in developmental writing classes learn to maximize the „seamless“ nature of composing on a computer in order to strengthen their writing skills and discusses how deaf students' comfort with computers can be used to enhance the teaching-learning dynamic in the writing classroom.



When today's deaf and hard-of-hearing college students compose, they word process in a seamless way in which spelling, grammar, and writing style feedback is instantly available from the built-in checkers of the programs they use. This feedback occurs in the writing classroom, in the writing lab, in the dorm—wherever students have access to computers. These students represent a generation whose comfort level with computers surpasses all previous ones. While deaf and hard-of-hearing students in developmental writing classes certainly benefit from this seamless nature of composing on a computer, this comfort level can lead to a false sense of “grammar security.” They sometimes assume that if a sentence contains no green line indicating some sort of mistake, the sentence is grammatically correct. As we instructors well know, however, this certainly is not always the case. So, part of the instruction in my developmental writing courses at NTID includes enlightening students about the various limitations found in grammar and style checkers. I try to do this by applying the old Hollywood adage “Show ‘em; don’t tell ‘em.” Demonstrating some of the checker shortcomings of computer-assisted writing helps students realize the importance of practicing and internalizing the grammar rules that we cover in a given quarter of instruction.

For the past six years, my instructional setting has been what is commonly termed a “smart classroom.” The particular classroom in which I teach has fifteen laptops, all networked for display sharing, allowing each student to project his or her work to the other fourteen laptops. This student-driven approach with networked computers lets students work separately as they compose and then together when they share their work. Each student can take turns displaying his or her work to the entire class and receive instant feedback. This collaborative review through display sharing works at various levels: sentence, paragraph, and essay. As students make observations and offer advice to each other, the revising that occurs is often in real-time, with students making changes “on the fly,” sometimes as their classmates watch. While some students need time at first to get used to feeling like “a big fish in a small pond” as they project and share their writing in class, they soon learn to value the teaching-learning dynamic that such a model promotes. Because

the entire process is so visual and gives students the opportunity to compose on machines they are so familiar with anyway, the smart classroom is an ideal place in which to teach writing.

In my typical writing course, lesson plans include prepared grammar exercises that I wish to cover during the quarter. Although I try to stick to this schedule, I always allow room to maneuver because oftentimes, in the smart classroom, grammar ends up being discussed a more spontaneous way. As students are sharing their writing in the later stages of the writing process (when sentence skills become more of an issue), we examine mistakes that have “gone right by” the grammar checker and look at acceptable wording that has been flagged, an activity that sometimes leaves students incredulously asking, “How could this happen?” This always leads to lively discussions that yield beneficial results.

One grammar checker shortcoming can be classified as the complete oversight. Simply put, grammar checkers are better programmed to catch mistakes made by typical hearing student writers than by deaf and hard-of-hearing ones. The sentence-level errors that deaf and h/h students make sometimes avoid the checker’s tackle like an elusive running back in a football game. For instance, we all know how adept the grammar checker is at catching a range of problems involving word agreement: “a computers,” “five claw,” “these category,” and “my friend believe.” These are errors that hearing writers could easily make. Take the following sentence:

She hope to graduate in a year.

The grammar checker will recognize the subject-verb error, generate the green line, and suggest “hopes.” However, oftentimes deaf and h/h students make composing errors that the checker does not know how to handle. For example, while the checker will correctly highlight the above sentence as containing a subject-verb agreement error, it will consider the following sentences acceptable:

She hope graduate in a year.
She hopes graduate in a year.

While hearing student writers are less inclined to fuse verbs together as in the two sentences above, many deaf student writers tend to do it. Part of the reason is that the grammar checker sometimes overlooks errors involving the infinitive phrase (to + simple verb) because it is not programmed to catch such a “non-traditional error” in which the preposition “to” has been omitted. As a result, many deaf/h-h students will consider the absence of the “green squiggly line” as an indication that the sentence is perfectly fine, when actually it contains an error. So, this provides me with an opportunity to discuss not only subject-verb agreement but also the infinitive rule with students. Students can take turns writing and sharing sentences in which an infinitive phrase is used correctly.

In addition, this classroom discussion gives me the opportunity to point out the fact that grammar checkers tend to do a better job at catching verb errors when there is not much “distance” involved. To illustrate, the checker will correctly label the following sentence as having a verb form (infinitive) mistake:

The soccer player attempted to kicking the ball into the net.

However, the grammar checker considers the following sentence correct:

The soccer player attempted a trick shot in order to kicking the ball into the net.

As you can see, the only difference is that more information has been added, increasing the distance between the main verb and the infinitive. The result? No error—according to the grammar checker.

Sometimes, distance has nothing to do with grammar checker oversights. It can just be a matter of inconsistency in programming. For example, take past modals. The following sentence contains a wording mistake that is fairly common among hearing student writers but not among their deaf counterparts:

I should of studied for the test, but I decided to go out with my friends.

The grammar checker will quickly mark such a sentence as being incorrect and offer a solution (change “of” to “have”), reflecting a correct past modal form (modal + have + past participle): *I should have studied for the test....*

However, in the following four sentences that require a past participle as part of a past modal form and reflect the kind of writing errors a deaf or h/h student might make, only the first two were highlighted by the checker as having an error, while the last two went unmarked:

You should have go to the captioned movie.

You would have love it.

You should have pay attention during class.

Your cat should not have climb up a tree.

This suggests to students that the last two sentences are grammatically acceptable when that is not quite the case. If they don’t know or haven’t yet internalized a given rule, students will defer to the grammar checker, and confusion will set in when their papers are returned with comments/corrections.

Another area in which the grammar checker tends to miss the mark is with word forms. Some deaf and h/h student writers who know basic rules such as “*adjective modifies noun*” and “*,a, an, & the are noun markers*”—and who will use word forms correctly on a ten-sentence fill-in-the-blanks exercise—will produce the wrong wording on a computer because such errors oftentimes are not flagged, as in the following:

My friend is a creativity person.

There is a big different between my roommate and me.

However, all of the grammar checker oversights listed above involve grammar errors that do not affect the logic of the sentences. They are “surface errors.” The reader still knows what the writer means, which, of course, is crucial—and which leads to another point I like to make with students: grammar checkers are not “logic checkers.” In class, we discuss how students themselves are responsible for assessing the overall logic behind their sentences, not the machines on which they compose. Considering verb tense is a good way to discuss this. Typically, while the grammar checker might recognize verb tense inconsistency within a sentence, it will not see it in a series of sentences. For instance, the checker correctly sees a problem here:

Last year, I spend three weeks at summer camp and really enjoyed the experience.

But it sees no problem here:

Last year, I spend three weeks at summer camp. I really enjoyed the experience.

This is partly why some students have difficulty keeping their tense straight in a paragraph. The grammar checker is limited in the way it monitors verb tense consistency.

I encourage students to rely less on the checker and more on their thinking skills as they review their writing before submitting work to me. They need to ask themselves, “Does the sentence make sense on its own and in relation to the paragraph?” Oftentimes their answer will help them to find and self-correct non-highlighted grammar errors. The above error involves a mistake in simple verb tense, and, interestingly, during discussion a number of students will recognize such a mistake and explain how to correct it, clearly indicating that sometimes students’ reliance on the grammar checker is the reason behind their composition errors, not their lack of knowledge regarding a certain rule. Pointing this out also reinforces the value of peer review to students, for it represents a process in which classmates can provide feedback that goes beyond what the computer can offer.

For instance, a stronger writing student who understands past modals might notice on a classmate’s essay that although the computer deemed the following sentences grammatically correct, they are not quite right:

*I would go with you this morning, but I needed to study for the test.
You should not trick your friend yesterday.*

In the above sentences, the checker cannot process the logic. Each sentence requires an addition and a verb form change to indicate a completed action (“*would have gone*” and “*should not have tricked*”). [Teaching tip: If you want to teach past modals and the logic behind using them, use the “train gone, sorry” approach. Tell students that if it’s too late to fix the situation, then the sentence requires a past modal: *Hey, ref, you should not have called that catch out of bounds! We lost the game on that call!* (The call was made and the game is over; it can’t be changed. Train gone, sorry!)]

Additionally, if the “grammar & style” option is activated within a word processing program (as opposed to “grammar only”), the checker will send mixed signals to students regarding use of passive voice. For instance, the checker will accurately label the following sentence as passive and suggest a revision:

The cake was baked by me. (Computer suggests “I baked the cake.”)

However, there is nothing grammatically wrong with the above passive-voice sentence. It’s a style issue. The computer can suggest changing a passive-voice sentence to active voice only when the original sentence is correctly written:

We are frightened by big bugs. (Computer: *Big bugs frighten us.*)
The car was repaired by the mechanic. (Computer: *The mechanic repaired the car.*)

However, the computer cannot recognize a mistake in the following sentences:

We frighten by big bugs.
The car was repair the mechanic.

As a result, the sentences are not flagged and the deaf or h/h student writer assumes they are acceptable, when, in fact, they not only contain grammar errors but also leave the reader somewhat baffled as to their meaning at first.

In other situations, the computer will recognize passive voice but will make no attempt to suggest a revision, as in: *Computer games are enjoyed by people of all ages.* This is frustrating for both teacher and student because the sentence in its original form is correctly written (hooray!), yet the student is “green-flagged” for it and ends up making a change that transforms a perfectly good sentence into a not-so-good one:

Computer games enjoy by people of all ages.

The checker recognized “are enjoyed” as passive voice but left it at that. As a result, the deaf student writer, seeking to eliminate the dreaded green line, came up with the above sentence, which the computer, alas, left unmarked, leading the student to believe it was fine.

All of the above examples of the type of shortcomings in which the grammar checker overlooks sentence-level errors or suggests problems with “style” reinforce the point that I often make to students in my writing courses: the grammar checker is a tool with limitations.

The other type of grammar checker shortcoming is the highlighted sentence with incorrect feedback. This type of miscommunication can really waste our student writers’ time. For example, consider the following situation in which the grammar checker correctly highlighted a sentence as containing an error but gave an incorrect explanation regarding the error. In his essay comparing his own high school experience to one described in an article, my student had written the following sentence:

Last of all, the students at my high school tired to manipulate the teachers.

The checker highlighted the entire sentence, labeling it a “fragment.” After struggling with why the sentence supposedly was a fragment and trying a few unsuccessful revisions, the student eliminated the word “to” (part of a perfectly fine infinitive). The checker then considered the sentence correct:

Last of all, the students at my high school tired manipulate the teachers.

After explaining why this sentence was actually weaker (a new infinitive problem where there initially was none), I asked the student to go back to his original sentence, telling him to read carefully for a spelling mistake. The problem was with the word “tired.” Eventually, my student caught the mistake and changed “tired” to “tried,” which immediately resulted in the disappearance of the green line. But my student had spent a lot of time trying to figure out the error!

To sum up, while the grammar and style checkers will greatly assist deaf and hard-of-hearing students with their written compositions, these “hi-tech helpmates” are not without limitations. What I have listed here is only a sampling of some of the checker trip-ups that students have encountered during the computer-assisted writing process. Undoubtedly, you could add examples from your own experiences to the list. As teachers, we need to be aware of the limitations of the checkers when we read and respond to student writing, realizing that some errors are the result of students investing too much confidence in the technology that they so eagerly embrace and not enough confidence in their own knowledge. As the checkers improve, hopefully the feedback will address more of the specific needs of our students. Meanwhile, I will continue to remind students

that while the computer is a remarkable tool, their developing literacy skills give them something very powerful—the potential for an “internal reference manual” of sorts, an inner voice or a Force to be consulted at times during the writing process through independent reflection and thought, and whose advice just might happen to be better than the machine’s.

Blackboard® in College Writing Classrooms with Deaf Students

Kathleen M. Wood

Abstract

The single best thing a college writing teacher can do to promote the written English skills of Deaf students is to make the classroom intentionally print-rich. Such an environment—one so intentionally rich in printed English—can transform the way individual students even conceive of the task of improving their writing skills. Students become participants not only in their own learning but also in the learning of others; and, as they do, the classroom becomes a learning community, bringing students into purposeful and engaged written communication with their peers as well as with their teachers, tutors, and teaching assistants. Blackboard® classroom platform (or similar software) plays a key role in designing and maintaining such a learning community. This brief article offers a practical guide for teachers wanting to use Blackboard® as a tool promoting a writing community for Deaf college students.



Deaf students in college writing classrooms are generally taught in classes with other Deaf students, taught alone in classes with hearing students, or taught in classes with just a few other Deaf peers in mainstream classrooms. In any case, the single best thing a teacher can do to promote written English skills is to make the writing classroom as print-English-rich as possible, which makes the classroom a learning community, bringing students in contact with each other, their writing, the revising process, and with teachers, tutors, and teaching assistants. Blackboard® classroom platform—and others like it, can accomplish these—as long as teachers are intentional about their use. Intentional use of classroom platforms like Blackboard®, in order to enhance the writing classroom, should:

- Be based on solid theory-based writing-instruction principles
- Be based on agreed-upon best practices
- Should promote students' work with print-English texts

Below is a list of writing principles and a discussion of their connection to the Blackboard® course management system:

Writing classrooms are print-rich for reading, writing, and managing texts.

As basic as it seems, there are some writing classes in which the students do not write—but rather watch instruction about writing. Or where they practice parts of writing, as in worksheets or de-contextualized grammar lessons. Some teachers lecture and then hand out the assignments. Others

have students sitting at computer terminals on day one—composing and reading—they seem to know that students learn to writing by writing.

Course management systems like Blackboard© help instructors organize announcements, assignments, and other information of the class that is commonly presented during class time—which eats up valuable practice time. When class time is used for writing and critical analysis of texts, students benefit, and especially Deaf students, whose only fully-accessible form of English is print-English. And organized teachers, who save time with a course management system, have extra time to meet with students knee-to-knee to discuss their work—to revise and improve it.

Writing is a process.

There are certain principles of college writing instruction and the accompanying practices, that are virtually inarguable—but which should be named and agreed on by the faculty of the writing program. There is no finite set of principles or practices, but here are a few that guide this author and some of our programs:

First, assignments, work, and the Blackboard© platform should be set up to promote the principle that *writing is a process*. That is, there should be an easily accessible storage place for first and subsequent drafts, for feedback and interactions with drafts, and for storage of final drafts.

At our University, teachers have used Blackboard’s Digital Drop Box, the Discussion Board and Content Collection, which are all popular. If students set up a folder in the Content Collection for each assignment, and drafts are saved there, then they can access those drafts to revise, send, and upload, etc. for class-sharing purposed and individual tutorials. But there is a variety of other ways to accomplish the same thing - helping students see their writing as a process.

Writing is tied to critical thinking and critical reading.

Another important college writing classroom principle is that *writing should be tied to reading and critical thinking*. This includes reading and thinking about all sorts of texts. When students engage in the “deliberate process of actively summarizing, analyzing, synthesizing, and evaluating information, situations or ideas (Troyka and Hesse 2007),” they are honing the tools they will need when they write critically within the academy and beyond. And reading critically—examining facts vs. opinions, authors’ assumptions, authors’ biases, and authors’ tones—for the purpose of determining the effectiveness of the pieces—these are also important tools for writing.

Blackboard© allows instructors to keep critical reading and critical thinking skills front and center—by developing libraries of texts, links, photos, video-clips for easy retrieval and use by students and teachers during and outside of class. The class community can develop a reading list, a series of PowerPoint© presentations, or video-clips, to be used as class texts—to be mined for critical analysis. Blackboard© offers an easy way for students and faculty to access a variety of texts—and call them up for scrutiny.

Academic and professional writing take many forms.

Even in the recent past and in very traditional college writing classrooms today, the 5-paragraph essay and research paper are revered. But the truth is, all kinds of writing shows up in academia and in the world of work: email messages, blogs, wikis, list posts, etc. And overt analysis, instruction, and practice with these rhetorical forms are crucial for students’ success with them.

On Blackboard©, students can easily send email messages to instructors, classmates, and others by accessing the single-user, groups, or entire-class options. Blackboard-based classes can blog and wiki and make electronic portfolios of their final products. And each of these contexts has

concomitant rules and expectations—parameters for their success. These texts can then become part of the library of the class—places for students to think critically, compose critically, and post critically.

The rhetorical decisions students are forced to make in order to participate in these writing contexts give students important practice. When students write, they must write for real or imagined audiences. And they must make choices about tone and purpose of the piece—its depth, breath, and length—as discussed above, the parameters of the writing context. With the variety of electronic writing forms discussed above, students must confront those choices each time they post—and in each setting, considerations of audience are crucial. And classroom platforms like Blackboard provide convenient access the variety of rhetorical forms that students need.

For example, a group of first semester freshman composed their academic portfolios much like they composed their *My Space*® pages—before understanding that these portfolios would be used for major program admissions, internship applications, and jobs—administrators and bosses were their audience. Second drafts of their portfolios showed improved decision-making for content, tone, and purpose.

Writers write as members of communities.

More often than not, workplace writing means team writing—or at least revising with feedback from several reviewers. And workers must rely on a facility with text within the community of the workplace—being able to manipulate, compose, upload, send, receive feedback on, etc. to a great extent—and by utilizing the skills available to them in the workplace community (Leslie Rach, Personal Communication, January 10, 2008.) This suggests that our college writing classrooms should prepare students for this eventuality. Our writing classrooms should encourage the co-writing, group-writing process and the sharing and critiquing of texts. Blackboard® allows students ample tools for posting, storing and retrieving texts, feedback on texts, and revising of these texts.

The Content Collection feature on Blackboard® allows students to manage their writing—post it and revise it—and give access to it—affording students ample opportunity for participating in the class as members of a writing community. In fact, students can be assigned writing roles—a content and ideas checker, a grammar checker, an audience-awareness checker, etc. and could be given access to classmates’ work in order to provide on-line or face-to-face feedback on this work.

In the end, there is no set list of the principles that can guide a writing program in the use of course management systems like Blackboard®—but if the members of the program agree to use Blackboard® or another platform system, then program principles should be agreed upon and should be made transparent. After the principles are set and teachers and students explore the use of Blackboard® in writing classrooms, program assessment can determine best practices, which can then be highlighted and promoted.

References

Quitman Troyka, L., & Hesse, D. (2007). *Quick Access*. Upper Saddle River, NJ: Pearson Prentice Hall.

Appendix

Below is a list of principles good teaching and use of Blackboard at Bradley University:

(http://blackboard.bradley.edu/faculty/Recommended_Ef_Use_BB/index.shtml)

1. [Create An Active Learning Environment](#)
2. [Focus Attention](#)
3. [Connect Knowledge](#)
4. [Help Students Organize Their Knowledge](#)
5. [Provide Timely Feedback](#)
6. [Demand Quality](#)
7. [Balance High Expectations with Student Support](#)
8. [Enhance Motivation to Learn](#)
9. [Encourage Faculty-student & Student-student Interaction & Communication](#)
10. [Help Students Productively Manage Their Time](#)