

# Research Summarized!

## Designing Accessible Environments

Postsecondary training and education programs are gateways to employment and maximizing one's potential. There is no permanent or prescriptive "one-size-fits-all" solution to making educational programs and services accessible for deaf\* learners, especially for a population with a high incidence of co-occurring disabilities.

**What can be learned from the existing literature on designing environments that provide access to these critical learning opportunities for deaf individuals?**

### INSTRUCTIONAL DESIGN AND ACCESSIBILITY

The transition from secondary to postsecondary learning environments marks two important changes in accessibility for students with disabilities.

- First, the responsibility for initiating the use of accommodations shifts from the school district in secondary education to the student in postsecondary education.<sup>7</sup>
- Second, at the secondary level, school districts are responsible for designing special instruction to meet the needs of students with disabilities and for providing accommodations. At the postsecondary level, education programs are not required to design special instruction; instead, accommodations are provided so that students with disabilities can access the same course program and content as other students.<sup>20</sup>

Institutions and instructors are responsible for designing learning to meet the needs of as wide a range of students as possible. Best practices in accessible instructional design call for multiple representations of content and multiple means of expression and engagement.<sup>21</sup>

Providing information and formal training on accessible design for instructors may result in more inclusive learning environments.<sup>10</sup>

\*In this report, we use the term *deaf* in an all-encompassing manner to include individuals who identify as Deaf, hard of hearing, hearing impaired, late deafened, and deafdisabled.

Students can be more successful when flexible options are available to all.<sup>8</sup>

Deaf individuals who use sign language interact more when direct access to sign language is provided.<sup>22</sup> Deaf students' greater active involvement in learning environments is related to higher learning outcomes.<sup>15</sup>

Accessible vocational training and on-the-job training lead to higher employment success for deaf vocational rehabilitation clients.<sup>19</sup>

Internship and practicum experiences are often challenging for deaf individuals to obtain due to supervisors' concerns with cost and competence. Educating internship programs about how to hire qualified interpreters, how to use accommodations, the benefits of cultural diversity, and the unique communication skills of deaf applicants can help change the attitude toward deaf applicants.<sup>12</sup>

### USE OF ACCOMMODATIONS TO IMPROVE ACCESSIBILITY OF LEARNING AND ASSESSMENT

The most important factors in providing accommodations to deaf individuals are their personal needs and preferences. Students' needs can change over time and often differ based on instructional content and format. Classroom-access accommodations for deaf students include a range of options, such as sign language interpreters, note-takers, captioned media, speech-to-text providers, or a combination thereof.<sup>5,24</sup>

- Deaf students who sign often report presence of quality interpreters as being a main factor in effective classroom communication.<sup>10</sup>
- There is evidence that real-time speech-to-text transcription is effective for some students in college-level classes.<sup>17</sup>
- Contemporary learning environments often include a high degree of interaction between students. Furthermore, postsecondary content often contains a high degree of technical terminology. The format and content of curricula, as well as the preferences of deaf individuals, may dictate the need for dual accommodations (e.g., interpreting and speech-to-text) to facilitate both interaction and access to course content.<sup>4</sup>
- A common misconception is that deaf students who have an interpreter have equal access to classroom instruction as hearing students. Interpreters typically cover direct instruction by faculty members but rarely can capture all the dialogue that occurs in a postsecondary classroom setting.<sup>1,18</sup>
- Access providers who work in postsecondary settings need to have sufficient content language proficiency, education, and skill to work in a higher education environment.<sup>9,25</sup>

When administered appropriately, testing accommodations can facilitate access to critical content and allow for more valid measurement by providing deaf individuals an opportunity to demonstrate their true abilities in a domain.

- Examples of assessment accommodations for deaf individuals include an interpreter or scribe during a test, extra time for standardized tests, or translation of test items into sign language.<sup>5</sup>
- There is no one set of ideal testing accommodations for deaf individuals. Accommodation decisions should be made by examining the faculty member's intent for the test and matching student needs and preferences with accommodations that provide the greatest access to the content.<sup>3</sup>
- Translating test items from English to American Sign Language requires thoughtful consideration of balancing American Sign Language linguistics and conventions while maintaining the original meaning of the items in English.<sup>13</sup>

## ACCESSIBILITY IN INFORMAL LEARNING ENVIRONMENTS

Informal learning experiences, or incidental learning, include gaining knowledge from the broader educational environment, overhearing conversations, and learning from others during social interactions.<sup>14</sup>

- Language, cognitive, academic, and social delays in young adults are often explained, in part, by the lack of access to incidental learning.<sup>2,16</sup>
- Most deaf postsecondary students are in a predominantly spoken-language environment; therefore, they often experience reduced opportunities for social networking and expanding their language competency, vocabulary, and knowledge of world events.
- Postsecondary institutions can increase access to informal learning opportunities by embedding language-accessibility options into formal social events, such as departmental presentations, mixers, and club meetings.

## INFLUENCE OF INSTITUTIONAL CAPACITY ON ACCESSIBILITY

An institution's capacity to effectively serve deaf individuals relies on a variety of factors, including the following:

- Whether the institution has enough qualified service providers available, including interpreters and captionists
- Proximity of available resources (i.e., accessibility differs across rural and urban settings)
- Request systems that are flexible enough to allow for complex accommodation needs<sup>7</sup>
- Institutional readiness and proficiency in the use of technology

Ease of access to accommodations is an important factor for institutional capacity to serve deaf individuals. For example, the structure or process for requesting accommodations can become a barrier to access for many students, especially if the process for requesting accommodations is unclear or unduly complicated.<sup>5</sup>

## TAKE-AWAYS

Accessible postsecondary environments are critical for deaf students' learning and growth but often are challenging to design and implement. The changes in accessibility requirements between secondary and postsecondary environments are significant and call for a focus on meeting the access needs of individual students in a variety of learning environments, including professional environments.

The evidence-based strategies presented in this brief show that there is a range of accessibility strategies, including direct instruction via sign language, use of interpreters, and use of speech-to-text services. Deaf individuals' needs and preferences for specific accessibility strategies or combinations of strategies need to be thoughtfully considered when designing high-quality accessible environments.

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