Online Learning:
Benefits and Barriers

What does online learning look like?

Today's student is presented with a wide array of online technology for accessing educational material and a diverse selection of settings in which to utilize them. Technological tools, which are constantly evolving, include both synchronous and asynchronous communication options, such as online web portals, blogs, web chat, email, video lectures, and more.

In particular, blended/hybrid classrooms and distance learning are growing increasingly common.[2,3,11] In distance learning, students receive the entirety of their instruction online. In blended/hybrid courses, students access educational content in both a traditional brick and mortar classroom and online. In addition, many traditional classrooms supplement instruction with online learning components.

"Online learning is increasingly used in deaf education settings."

Where is online learning happening?

- About 90% of colleges offer distance-learning opportunities.[1]
- Around 75% of K−12 schools offer blended-learning programs.[5]
- High schools are increasingly offering distance education opportunities.[2,3,5,7]
- Online learning is already a prerequisite for graduation in five states.[7]
- Online learning is increasingly used in deaf education settings, particularly for specialized programs (i.e., teacher training, science education).[6,13]

Who are the students participating in online learning?

- In 2001−2011, 46% of college graduates had taken a class online.[11]
- 4-15% of college students complete their degree entirely online.[3,11]
- In 2011−2012, more than 4 million K-12 students were learning online.[7]
- College students who are older, have full time jobs, spouses, or dependents are more likely to enroll in distance learning.[12]
- Online learning may be particularly beneficial for rural and/or gifted deaf learners.[4]
- Online learning is often said to "level the playing field" for deaf students.

What do deaf students experience in online learning?

- Increased quantity and quality interactions with professors and peers[9,10]
- Greater access to course content[9,14]
- Higher comprehension, learning outcomes, and grades[6,8,14]

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- Less communication difficulties related to classroom accommodations[10]

What role does internet chat play in online learning for deaf students?

- Increased interaction leads to academic gains for both deaf and hearing students.[8]
- Deaf students report that online chat "levels the playing field" for them.[8,9]
- Even deaf students with lower literacy report positive experiences with online chat.[8,9]
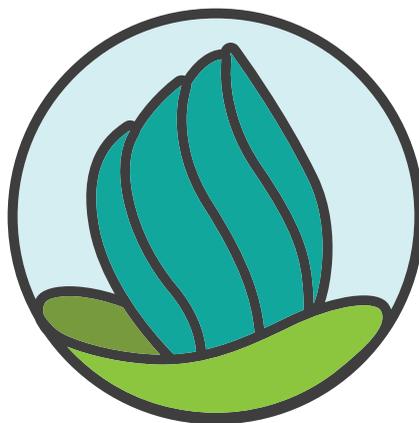
What are things to be mindful of when designing online learning content?

- Interaction, feedback, and multimodal instruction are all crucial to successful learning.
- Accessibility is lost when online learning courses utilize audio content without captions or transcripts, services reliant on voice communication, and/or exclusively English content without ASL translations of text and audio content.
- Visual demands should be minimized. Multitasking demands are higher on deaf students, as they must attend to video representation of audio content in addition to the same visual information hearing students are presented with.[15]
- While hearing students can attend to multiple sources of auditory and visual stimuli simultaneously, deaf students must switch between sources consecutively, which often leads to missed information when content is presented concurrently.[16]
- Lags in internet connection can disrupt reception of information. All video representations of the audio stream should be rewindable and accessible without time limit.
- Over-video captions are preferable for nontechnical content, while full transcripts are preferable for technical content.[17]

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