



Tips for Instructors: Teaching Deaf Students Online



Introduction

When teaching online, instructors have an important role in supporting and ensuring the success of students—especially deaf¹ students. Online courses need to be accessible for deaf students. This resource outlines some key tips to think about when designing online courses and planning for course materials that are a good fit for online instruction.

Not All Deaf Students Are the Same

You might have had a deaf student in one of your classes without knowing it. Almost half of deaf students do not disclose their disability.² Deaf students are not all the same—some deaf students use sign language, some use speech, and many use both. What’s more, the communication preferences of deaf students, and their accommodation needs, change across setting and context—and even change over time. Many deaf students have additional disabilities that need to be accommodated in the classroom.³ Accommodations may include visual descriptions, extended time for tests and assignments, interpreters, captioned media, media descriptions, and more. Some accommodations that work for students in a physical classroom may not be a good fit for students in an online classroom—this means that access is not a one-size-fits-all formula!



Learn more about deaf people by watching our videos at youtu.be/eBoIOr0HZUY, taking online classes, and downloading additional resources at nationaldeafcenter.org/deaf-101.

Start a Continuing Dialogue

Accessibility in the classroom requires continued dialogue before, during, and after the semester. Having an open dialogue with deaf students and service providers⁴ (e.g., interpreters, speech-to-text professionals) is vital to the success of deaf students taking online courses. Be sure to apply these principles not only for students, but also with teaching assistants, service providers, and the disability services office—these conversations will result in better outcomes for everyone!

1. **Add an accessibility statement in your syllabus** to communicate with all students in your class, not only those who have disclosed a disability, that you welcome conversations about ways to accommodate different ways of learning in the classroom. This statement should include information about the disability services office (e.g., where to start to get accommodations), say that you value open dialogue, and emphasize that you are there to support students.
2. **Reach out to the student** when you receive an accommodations letter from a student or the disability services office. If there are any changes to the accommodation letters, contact the student again. Any accommodation letter you receive should be a starting point for continued dialogue. The student is the expert in what accommodations work for them and can suggest solutions that have worked in the past.
3. **Check in with students regularly** throughout the semester to see whether anything needs to be adjusted. Create space for feedback and consider different ways to accommodate students.

Consider the Pros and Cons of Synchronous Versus Asynchronous Approaches



Many online courses use a mix of synchronous and asynchronous discussions, lectures, assignments, and more. Some instructors create recordings of lectures for students to watch at their own pace, others have live discussions, and many do both. Often, a mix of different delivery approaches can be a good option. When designing a course, think about the best fit for the students in your classes and the best fit for the content.⁵



In synchronous lectures or discussions, the class connects at the same time through the use of video conferencing platforms. Service providers, such as speech-to-text providers and interpreters, join the video conference to provide remote real-time access.



Asynchronous courses are often designed around assigned readings, prerecorded lectures, podcasts, and similar materials to be reviewed at a pace that fits students. Asynchronous courses are often a good fit for students who have families and busy lives.

	 Synchronous	 Asynchronous
Timing	Real-time meetings are scheduled in advance.	Timing is flexible.
Lectures	Service providers must be included in real time.	Accessibility needs are planned for ahead of time.
Internet	High-speed internet is required for live video.	Lower-bandwidth internet can be used—may be a good fit for rural areas.
Discussions	Discussion protocols and rules must be set in advance.	Students can participate at their own pace.
Group work and student presentations	Real-time meetings and presentations allow students to get immediate feedback and support.	Students can work at their own pace and don't have to dedicate a block of time for group projects.



Present course content and materials in a range of diverse media. Consider using a mix of various types of media to better engage students. For example, use text-based readings, lectures or presentations (live and prerecorded), and visual content like videos with captions, graphics, charts, and GIFs.

Engage Students in Interactive Discussions

Engaging students in interactive discussions is an important component of successful online learning for deaf *and* hearing students.^{6,7} Interactive discussions can occur asynchronously through discussion boards or synchronously through real-time video and text chat. There are advantages and disadvantages to both approaches—it depends on the course design and course content.

Before the course begins, think through strategies for students to best engage with class discussions throughout the semester. These strategies should be part of conversations you have with deaf students about accommodation needs and preferences.

1. **Consider a mix of options for class discussions**, so that deaf students can engage in conversations in the ways that they feel most comfortable with. Some students feel most comfortable expressing themselves in American Sign Language, and others prefer text-based discussions. Some students prefer time to process their thoughts in asynchronous discussion formats, and others enjoy the real-time nature of synchronous discussions. Use different discussion formats with a range of ways to participate!
2. **Avoid penalizing students for English grammar** while providing feedback or grading text discussions. For many deaf students, English is not their first language. Encourage students to focus on the content of their contributions and not their grammar, as appropriate.
3. **Plan strategically for small-group discussions** to ensure that deaf students can participate. Peer-to-peer work is a key component of successful online learning, but deaf students can easily be left out of those opportunities. Whether asynchronous or synchronous, accessibility needs to be planned in advance.
4. **Use cloud-based features**, such as Google Drive, to share content and encourage students to group-write discussion notes during the lecture and discussion. Deaf students can often follow the lecture more easily this way and participate more effectively! Chat boxes in conferencing platforms are also a good option.
5. **Post a summary** or a review of the content at the end of each class that covers what was discussed and create space for students to ask any questions to reinforce what was learned. This practice will benefit all students, not just deaf students.

Establish Clear Guidelines and Communication Protocols

For synchronous lectures and discussions, it is important to set up class protocols and communication guidelines. Remote speech-to-text and interpreting providers may need more support in these conditions. For example, speakers need to introduce themselves and pause when switching speakers.

Think about how students are expected to participate and ensure that deaf students have equitable access to these synchronous activities. Real-time discussions and lectures can be difficult to follow when many competing visual demands are on the same screen. Help deaf students have more positive experiences by considering the following tips.

Tip	Rationale
Record meetings and lectures.	<ul style="list-style-type: none"> • Provides access in case of technology or internet connectivity issues • Allows for accessibility features to be added • Allows recorded courses, discussions, and lectures to be reused and refined for the next semester
Limit the number of participants on screen. (Rotate participants as needed.)	<ul style="list-style-type: none"> • Makes it easier to follow what is going on • Makes it easier to facilitate the course • Improves video and audio quality
Establish participation protocols, including rules for turn-taking.	<ul style="list-style-type: none"> • Makes it easier to follow and allows service providers to keep up • Example: Students must comment or use built-in “hand-raising” features in the chat box of the video conferencing software to ask or answer a question or to turn on video.
State your name when talking.	<ul style="list-style-type: none"> • Makes it easier for the student and the service providers to follow the conversation, especially for participants who don’t use video • Leads to more accurate transcripts and videos
Build in pauses.	<ul style="list-style-type: none"> • Makes it easier to follow along: <ul style="list-style-type: none"> – It can be difficult read and listen at the same time. Deaf students often have to watch the interpreter, look at the information on the screen, and read captions at the same time. – Deaf students need time to process visual information before responding to a discussion prompt. Lag time is expected and should be built in.

Ensure That Instructional Materials and Media Are Accessible

Effective teaching online is linked to using a variety of multimodal materials, such as visuals, text, videos, and interactive media—all of which need to be checked for accessibility. Make sure that all of your students can access instructional materials, especially when you use graphics, videos, and visuals. Your campus has resources to help you ensure that all of your instructional materials are accessible. The disability services office at your institution is a good starting point. Consider the features on the following page when including graphics and visuals in lesson plans.

Access Features

Alt text and visual descriptions



Group learning sign language



Group of school children with their teachers sitting and learning sign language. They are indoors in a workshop lodge with a wood-burning stove lit in the background.

Alternative text (alt text) and visual descriptions are text-based descriptions of visual content.⁸ These benefit blind, deafblind, and low-vision students. Alt text is typically hidden by internet browsers but can be read by screen readers. Visual descriptions go into more detail and can be used in image captions, embedded in the body of the text, or uploaded as attachments. There are many different strategies for adding alt text or visual descriptions, depending on the platform. Some platforms add automatic alt text—but check for accuracy!

Visual indicators

Visual indicators are features like arrows, circles, and short descriptions, much like captions for an image. An example is using labeled arrows and circles to show the difference between two types of brush strokes within a painting. Graphic organizers have been shown to improve student scores in online courses, including infographics, visual indicators, or even slides that are labeled well. Consider this not just for deaf students, but for all students.

Captions

As a standard practice, all videos, podcasts, audio tracks, and related media should be captioned! First, select media that is already captioned if available. If you are creating your own media (like prerecorded lectures) or using media that is not captioned, find out the protocol for getting media captioned through your institution. Captions benefit everyone.⁹ Don't wait until you have a deaf student or until you show the media for the first time to get it captioned!¹⁰

Plain language

Use plain language, or accessible language.¹¹ Providing clear assignment directions and emails improves comprehension and performance. Consider supplementing directions with visuals such as screenshots and icons for clarity. Structure content and communications in a way that supports comprehension—don't bury important details in large paragraphs. Incorporate diagrams or illustrations to demonstrate points or concepts; use visual projections of content while engaged in lectures or discussions. This benefits all students, not just deaf students, especially when considering a range of language backgrounds.

Work Closely With Service Providers

Working with service providers is an important piece of the puzzle when teaching deaf students. The service providers assigned to your course become a part of your access team and can be more effective when you provide additional support.

1. **Make sure that the service providers have access to your course** on the learning management software platform (e.g., Canvas, Blackboard). This ensures that they are ready to provide access for synchronous interaction and can access all course materials.¹²
2. **Send course materials to the providers ahead of time**, so they can prepare. These materials can include things like lecture notes, lesson plans, and discussion prompts.
3. **Think through access needs outside of synchronous lectures and discussions.** Group projects, labs, tutoring, office hours, and time to practice presentations require access. Planning for access in advance means deaf students can focus more on course content and less on planning for access for all course activities. As an example, you can create designated times for meetings and small-group discussions—like office hours but with the service providers available.
4. **Ask deaf students about access when they schedule meetings** with you or your teaching assistants. If you will talk on the phone with deaf students, you should be familiar with telecommunications video relay services.¹³



Be Flexible!

Be flexible and open to different ways of communication and collaboration! All students are not the same, and every course is different.

As part of your dialogue with deaf students, service providers, and the disability services office, you may need to be flexible to ensure that the course is accessible. Consider alternative assignments or course designs as needed. In short, check in often and work closely with deaf students, and they will succeed in your course!

Notes and References

1. The term *deaf* is used in an all-inclusive manner to include people who identify as deaf, deafblind, deafdisabled, hard of hearing, late-deafened, or hearing impaired. NDC recognizes that for many individuals, identity is fluid and can change over time or with setting. NDC has chosen to use one term, *deaf*, with the goal of recognizing the shared experiences of individuals from diverse deaf communities while also honoring their differences.

2. National Deaf Center on Postsecondary Outcomes. (2019). *Postsecondary enrollment and completion for deaf students*. The University of Texas at Austin, National Deaf Center on Postsecondary Outcomes.
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3. Newman, L., Wagner, M., Knokey, A.-M., Marder, C., Nagle, K., Shaver, D., Wei, X., Cameto, R., Contreras, E., Ferguson, K., Greene, S., & Schwarting, M. (2011). *The post-high school outcomes of young adults with disabilities up to 8 years after high school. A report from the National Longitudinal Transition Study-2 (NLTS2)* (NCSE 2011-3005). SRI International.
4. “Service providers” denotes interpreters or speech-to-text providers. For more information on service providers and related topics, go to nationaldeafcenter.org/dsptoolkit
5. Cavanaugh, T., & Ehrlich, S. (2019). Accommodating in the online course environment for students who are deaf/hard of hearing. In K. Graziano (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 391–397). Association for the Advancement of Computing in Education.
6. Long, G. L., Marchetti, C., & Fasse, R. (2011). The importance of interaction for academic success in online courses with hearing, deaf, and hard-of-hearing students. *The International Review of Research in Open and Distance Learning*, 12(6), 1–19.
7. Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies*. Office of Planning, Evaluation, and Policy Development.
8. Selected guidelines are available from the Cooper Hewitt Smithsonian Design Museum: cooperhewitt.org/cooper-hewitt-guidelines-for-image-description
9. Gernsbacher, M. A. (2015). Video captions benefit everyone. *Policy Insights From the Behavioral and Brain Sciences*, 2(1), 195–202.
10. For more information related to captioned media, review our resources at nationaldeafcenter.org/topics/captioned-media and nationaldeafcenter.org/dsptoolkit
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12. McKeown, C., & McKeown, J. (2019). Accessibility in online courses: Understanding the deaf learner. *TechTrends*, 63(5), 506–513.
13. National Deaf Center on Postsecondary Outcomes. (2019). *Telecommunications: VRS, VRI, and TRS*. The University of Texas at Austin, National Deaf Center on Postsecondary Outcomes.
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