PURPOSE

The purpose of this lesson is to increase your awareness of access issues related accommodating students with disabilities in distance learning courses.

By reflecting on your own course while reading the Lesson Content, you will be guided to consider possible modifications specifically related to accommodating a student with a disability enrolled in a distance learning class.

Question to REFLECT upon while reading the CONTENT

If you offered your course using distance learning modes of communication (such as email, teleconferencing, or online courses), what access issues for students with disabilities would you need to consider?

CONTENT

In the past lessons we have concentrated on accommodations for students with specific disabilities. This lesson presents issues and suggestions of accommodations related to distance learning modes of communication.

Increasing access to more students is often a reason given for providing instruction in a distance learning format. However, these "access" arguments usually focus on people separated by distance and time and rarely include consideration of students with disabilities.

The following paragraphs discuss access issues and present design guidelines for assuring that a distance learning course is accessible to potential instructors and students with a wide range of abilities and disabilities. Principles of universal design provide a framework for this discussion.

ACCESS CHALLENGES

For people with disabilities the rapid development of adaptive technology makes it possible for almost anyone to access computing resources. Adaptive technology includes special hardware and software that allow individuals with a wide range of skills to make productive use of computers. Below are a few examples of access challenges faced by students and instructors in a typical distance learning course.

VISUAL DISABILITIES

A student who is blind may use a computer equipped with screen reader software and a speech synthesizer. Basically, this system reads with a synthesized voice whatever text appears on the screen. She/he may use a text-only browser to navigate the Internet or simply turn off the
graphics-loading feature of a multi-media Web browser. They cannot interpret graphics unless text alternatives are provided. For example, his/her speech synthesizer will simply say "image map" at the place where the graphic would be displayed to someone using a multimedia Web browser. Printed materials, videotapes, and other visual materials also create access challenges for this student.

A student who has limited vision can use special software to enlarge screen images. She/he may view only a small portion of a Web page at a time. Consequently, she/he is confused when Web pages are cluttered and when the page layout is not consistent from page to page. Standard printed materials may also be inaccessible to this student.

**LEARNING DISABILITIES**
Some specific learning disabilities impact the ability to read, write, and process information. Students with learning disabilities often use audio textbooks. For some, speech output or screen enlargement systems similar to those used by people with visual disabilities help them read text. People with learning disabilities often have difficulty understanding Web sites when the information is cluttered and when the screen layout changes from one page to the next.

**MOBILITY DISABILITIES**
Students with a wide range of mobility disabilities may enroll in a distance learning course. Some have no functional hand use at all. They use alternative keyboards, speech input, and other input devices that provide access to all of the internet-based course materials and navigational tools. Some options use keyboard commands to replace mouse functions and thus cannot fully operate software that requires the use of the mouse. Some students with mobility disabilities do not have the fine motor skills required to select small buttons on the screen. Those whose input method is slow cannot effectively participate in real-time "chat" communications.

**HEARING DISABILITIES**
Most internet resources are accessible to people with hearing disabilities because they do not require the ability to hear. However, when Web sites include audio output without providing text captioning or transcription, this group of students is denied access to the information. Course videotapes that are not captioned are also inaccessible to individuals who are deaf. Students that are Deaf also cannot participate in teleconferencing sessions that might be part of a distance learning course.

**SPEECH DISABILITIES**
Students with speech disabilities cannot effectively participate in teleconferences that might be part of a distance learning course.

**DESIGN GUIDELINES**
Potential students and instructors in an internet-based distance learning class may have visual, hearing, mobility, speech, and learning disabilities that impact their participation in the class. Planning for access as the course is being developed is much easier than creating accommodation strategies once a student with a disability enrolls.

When designers apply Universal Design principles, their products meet the needs of potential users with a wide variety of characteristics. Disability is just one of many characteristics that an
individual might possess. A goal should be to create a learning environment that allows a person who happens to have a characteristic that is termed "disability" to access all content and fully participate in activities. Universal Design of Education has been defined as the design of products and environments to be usable by all people, without the need for adaptation or specialized design.

The following sections include examples of distance learning tools as well as potential access issues and solutions.

**EMAIL**
Text-based resources such as Usenet discussion groups, email, and distribution lists create no special barriers for students with disabilities. Individuals who have visual disabilities or reading disabilities can use their own adapted systems to access course content with these tools.

If a prerequisite to the course is for students to have access to email, they can use any software that supports email on the Internet. Therefore, any access issues that students with disabilities might face have already been resolved before enrolling in the course. Their own computer systems provide whatever accommodations they need in this area. Email communication between individual students and course administration staff, the instructor, and other students is accessible to all parties, regardless of disability. Email can be used to deliver the syllabus, lessons, assignments, and reminders. Students can also turn in their assignments and tests using this accessible tool.

**REAL-TIME "CHAT"**
Some distance learning courses employ real-time "chat" communication in their courses. In this case, students communicate synchronously (at the same time), as compared to asynchronously (not necessarily at the same time as in electronic mail). Besides providing scheduling challenges, synchronous communication is difficult or impossible for someone who cannot communicate quickly. For example, someone with a learning disability who takes a long time to compose his/her thoughts, or someone with Cerebral Palsy whose input method is slow, may not be fully included in the discussion. If you choose to use this type of tool, be sure to make it optional or to provide an alternate, equivalent assignment for those who cannot fully participate.

**WEB PAGES**
When universal design principles are applied to the design of Web pages, people using a wide range of adaptive technology can access them. If universal design principles are employed in Web page development, people with characteristics besides disabilities will also benefit from the design. They include people working under environmental constraints such as in noisy or noiseless environments; people whose hands or eyes are occupied with other activities; people for whom English is a second language; people using older, outdated computer equipment; and individuals using monochrome monitors. Please refer to the previous lesson on Web Pages for further information.

**PRINTED MATERIALS**
Some distance learning courses use printed materials to support internet-based instruction. Students who are blind or who have specific learning disabilities that affect their ability to read may require these materials in alternative formats. Making the text of printed materials available
on-line may provide the best solution. You can also contact the Office of Disability Support Services at 405-974-3894 to discuss options for obtaining printed materials in alternative formats.

**VIDEOTAPES**
Ideally, if a videotape is one of the course materials, captioning should be provided for those who have hearing disabilities and audio description (describes aurally the visual content) provided for those who are blind. If the publisher does not make these options available, the distance learning program should have a system in place to accommodate students who have sensory impairments. For example, the institution could hire someone local to record themselves describing the visual material for the student that is blind. For further information on captioning of videos, please refer to the [Captioned Videos for Equal Accessibility](#) section in the DSS Handbook for Faculty and Staff.

**TELECONFERENCING**
Sometimes, on-line courses include teleconferencing opportunities for communication in small groups. This mode of communication creates scheduling challenges for everyone. It is also inaccessible to a student who is deaf. If you choose to use teleconferencing for small group discussion in your course, you might want to provide it as an option only, giving all students an alternative assignment (for example, to conduct the discussion on-line). Or, a student who is deaf can participate by using a relay system, where someone translates his printed input via teletype (TTY) into speech. Consult with the student about the best option for him/her.

**SUMMARY**

It is possible that you will create a distance learning course, or have already created one. In order to help your students, it is important for you to be aware of the many access issues facing students with disabilities and the solutions for providing access to distance learning courses.

Designed correctly, distance learning options create learning opportunities for students with disabilities. Designed poorly, they erect new barriers to equal participation in academics and careers. Employing universal design principles can bring us closer to making learning accessible to everyone, everywhere, at any time.

**QUESTION FOR DISCUSSION**

What specific features, if any have you included (or would you include) in a distance learning course you have given (or might give in the future), that facilitated access (or would facilitate access) to students with disabilities?

**FURTHER INFORMATION**
• Read answers to frequently asked questions, explore case studies, or access additional resources regarding distance learning
• Learn more at UCO’s Disability Support Services website
• Learn more at UCO’s DSS Handbook for Faculty & Staff
• View resources for helping instructors accommodate students with disabilities in specific academic activities