Access Cyberlearning

Equal Access: Universal Design of Cyberlearning Projects

A checklist for making Cyberlearning projects welcoming, accessible, and usable

by Sheryl Burgstahler, Ph.D.

The Cyberlearning and Future Learning Technologies (Cyberlearning) program of the National Science Foundation (NSF) supports projects that integrate the capabilities of emerging technologies with advances in what is known about how people learn. These projects advance innovation, the understanding of how people learn in technology-rich environments, and broad use and transferability of new genres.

As increasing numbers of people with disabilities participate in academic opportunities and careers, the accessibility of classes, services, electronic resources, events, and other Cyberlearning project activities increases in importance. The goal is simply equal access; everyone who qualifies to use Cyberlearning resources or participate in sponsored research and other activities should be able to do so comfortably and efficiently. Cyberlearning tools and pedagogy should be fully accessible to students and intructors with disabilities.

Legal Issues

Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and the Americans with Disabilities Act Amendments of 2008 mandate that no otherwise qualified person with a disability shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination in public programs. This means that courses, student services, information technology (IT) resources, and project activities should be accessible to qualified individuals with disabilities.

Universal Design

An approach to making facilities, information, and activities accessible to and usable by everyone is called universal design (UD). Universal design means that rather than designing for the average user, you design for people with differing native languages, genders, racial and ethnic backgrounds, abilities, and disabilities. Each UD practice is accessible, usable, and inclusive. The universal design of your Cyberlearning offerings will make everyone feel welcome and minimize the need for special accommodations for individual participants. Make sure that project staff and volunteers are trained to support people with disabilities, respond to specific requests for accommodations in a timely manner, and know who to contact regarding disability-related issues.

Guidelines and Examples

Addressing the following questions provides a good starting point for making your facility, products and resources, and project activities universally accessible. This content does not provide legal advice. Contact the U.S. Office of Education's Office for Civil Rights (OCR) about legal mandates.

Planning, Policies, and Evaluation

Consider diversity issues as you plan and evaluate Cyberlearning project activities.

- Are people with disabilities, racial and ethnic minorities, men and women, young and old students, and other groups represented in the project planning processes in numbers proportional to those of the whole campus or community?
- Do Cyberlearning project policies and procedures ensure access to facilities, events, resources, and IT for people with disabilities?
- Are disability-related access issues and other diversity issues addressed in data collection, research, evaluation, and instruments?
- Do you address issues related to the inclusion of participants with disabilities in grant proposals, perhaps by partnering with an organization with expertise in this area?

Information Resources and Technology

Computers and computer facilities, IT, as well as information resources, used in your Cyberlearning project should be accessibly designed. Staff should be aware of accessibility options, and systems should be in place to make accommodations when requested.

— Do pictures in your publications and website include people with diverse characteristics with respect to race, gender, age, and disability?
— In key publications, do you include a statement about your commitment to access and procedures for requesting disability-related accommodations? For example, you could include the following statement: "A project goal is to make materials, IT, and activities accessible to all participants. Please inform organization leaders of accessibility barriers you encounter and request accommodations that will make project activities and information resources accessible to you."
— Are all printed publications available (immediately or in a timely manner) in alternate formats such as Braille, large print, and accessibly-designed electronic text?
— Are key documents provided in language(s) other than English?
— Are printed materials in your facility or at an event within easy reach from a variety of heights and without furniture blocking access?
— Do electronic resources, including web pages, adhere to accessibility standards adopted by your institution, or your project or funding source? For example, are text alternatives provided for graphic images on web pages? Can the content be accessed with a text-only browser and by using the keyboard alone? The *Web Accessibility Initiative* (*WAI*) (*www.w3.org/WAI/*) guidelines are most commonly used. For general information about making your IT website accessible to everyone, consult *World Wide Access: Accessible Web Design* at *uw.edu/doit/accessibility/php?vid=35*.
— Do you include a statement on your website affirming your commitment to accessible design? For example, you could include the following statement: "We strive to make our website accessible to everyone. We provide text descriptions of graphic images and photos. Video clips are open-captioned and audio-described. Suggestions for increasing the accessibility of these pages are welcome."
— Do videos developed or used in the project have captions? Are they audio-described? Learn more at *uw.edu/accessibility.*
— Is an adjustable-height table available for each type of workstation to assist participants who use wheelchairs or are small or large in stature?
— Do you provide adequate work space for both left- and right-handed users?
— Is a large monitor available to assist people with low vision?
— Do you provide a trackball to be used by someone who has difficulty controlling a mouse?
— Are staff members aware of accessibility options (e.g., enlarged text feature) included in computer operating systems and of assistive technology available in the facility?
— Are procedures in place for a timely response to requests for assistive technology?

Project and Activity Facilities

Ensure that facilities, activities, materials, and equipment are physically accessible to and usable by all participants, and that all potential characteristics are addressed in safety considerations.

— Are all spaces welcoming, accessible, comfortable, and safe to a variety of abilities, racial and ethnic backgrounds, genders, and ages?
— Are there parking areas, pathways, and entrances to the building that are wheelchair accessible and clearly identified?
— Are all levels of the facility connected via an accessible route of travel?
— Are aisles kept wide and clear of obstructions for the safety of users who have mobility or visual impairments?
— Are wheelchair-accessible and child-friendly restrooms with well-marked signs available in or near the facility?
— Is at least part of a service counter at a height accessible from a seated position?
— Is adequate light available?
— Are there ample high-contrast, large-print directional signs to and throughout the facility, including directions to accessible routes? When appropriate are these signs marked in Braille?

Consult the *ADA Checklist for Readily Achievable Barrier Removal* at *www.ada.gov/checkweb.htm* for more suggestions. For accessibility guidelines for specific facilities (e.g., engineering

labs, makerspaces, computer labs), see the collection of DO-IT resources at *www.uw.edu/doit/programs/accesscollege/stem-lab/resources/make-physical-environments-accessible-students.*

Staff
Make sure staff are prepared to work with all Cyberlearning project participants.

— Do staff members know how to respond to requests for disability-related accommodations, such as sign language interpreters?
— Are staff and contractors in specific assignment areas (e.g., web page development, video creation) knowledgeable about accessibility requirements and considerations?
— Are staff members aware of issues related to communicating with participants who have disabilities? Do staff deliver conference presentations and exhibits that are accessible to all participants? See Presentation, Exhibit, and Other Communication Hints are at the end of this publication. For suggestions, consult *Equal Access: Universal Design of Your Presentation* at *www.uw.edu/doit/equal-access-universal-design-your-presentation*.

Checklist Updates
To increase the usefulness of this working document, send suggested improvements to *sherylb@uw.edu*.

Additional Resources
To learn about applications of universal design consult *The Center for Universal Design in Education* at *www.uw.edu/doit/programs/center-universal-design-education/overview*. The book *Universal Design in Higher Education: From Principles to Practice, Second Edition* published by Harvard Education Press shares perspectives of UD leaders nationwide.

About DO-IT
DO-IT (Disabilities, Opportunities, Internetworking, and Technology) serves to increase the successful participation of individuals with disabilities in challenging academic programs and careers such as those in science, engineering, mathematics, and technology.

For further information, to be placed on the DO-IT mailing list, to request materials in an alternate format, or to make comments or suggestions about DO-IT publications or web pages, contact:

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Communication Hints

Treat people with disabilities with the same respect and consideration with which you treat others. Here are some helpful hints when it comes to delivering a presentation, hosting an exhibit, and otherwise relating to people with disabilities.

General

- Ask a person with a disability if that person needs help before providing assistance.
- Talk directly to the person with a disability, not through their companion or interpreter.
- Refer to a person's disability only if it is relevant to the conversation.
- Avoid derogatory slang or negative descriptions of a person's disability. For example, "a person who uses a wheelchair" is more appropriate than "a person confined to a wheelchair." A wheelchair is not confining—it's liberating!
- Provide information in alternate means (e.g., written, spoken, diagrams).
- Do not interact with a person's guide dog or service dog unless you have received permission to do so.
- Do not be afraid to use common terms and phrases, like "see you later" or "let's go for a walk" around people with disabilities.
- Do not touch mobility devices or assistive technology without the owner's consent.
- Do not assume physical contact—like handshakes, high-fives, or hugs—is okay.
- Understand that not everyone uses eye contact.

Blind or Low Vision

- Be descriptive. Say, "The computer is about three feet to your left," rather than "The computer is over there."
- Speak all of the projected content when presenting and describe the content of charts, graphs, and pictures.
- When guiding people with visual impairments, offer them your arm rather than grabbing or pushing them.

Learning Disabilities

- Offer directions or instructions both orally and in writing. If asked, read instructions to individuals who have specific learning disabilities.

Mobility Impairments

- Consider carrying on a long conversation with an individual who has a mobility impairment from a seated position.

Speech Impairments

- Listen carefully. Repeat what you think you understand and then ask the person with a speech impairment to clarify or repeat the portion that you did not understand.

Deaf or Hard of Hearing

- Face people with hearing impairments, and avoid covering your mouth, so they can see your lips. Avoid talking while chewing gum or eating.
- Speak clearly at a normal volume. Speak louder only if requested.
- Repeat questions from audience members.
- Use paper and pencil, or type things out on your cell phone, if the person who is deaf does not read lips or if more accurate communication is needed.
- When using an interpreter, speak directly to the person who is deaf; when an interpreter voices what a person who is deaf signs, look at the person who is deaf, not the interpreter.

Psychiatric Impairments

- Provide information in clear, calm, respectful tones.
- Allow opportunities for addressing specific questions.