



This section provides a collection of stand-alone presentations on specific topics of interest to campuses nationwide. The presentations are designed for use with postsecondary faculty and administrators. They can be easily adapted to specific audience interests and program lengths. They can also be combined to create a series of presentations for a single group.

These topics were selected after conducting focus groups and a literature review which is summarized in the *Synthesis of Research* section of this publication. The *DO-IT Prof* and *AccessCollege* project team members helped develop the content. After the last

presentation module in this section, you will find a long and a short presentation evaluation form (pages 189-191) to give to your audience participants at the end of each presentation.

The suggestions in the sections entitled *Presentation Tips* and *Institutionalization Strategies* can be used in the process of developing an individual presentation and implementing professional development of faculty and administrators throughout the institution, respectively. Further details about the materials in this notebook are located in the section “How to Use These Materials” (pages 3-6).

## PRESENTATIONS

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## Building the Team

# Overview of Students with Disabilities and Postsecondary Education



## Purpose

After this presentation, faculty and administrators will be able to

- summarize rights, responsibilities, potential contributions, and needs of students with disabilities;
  - describe campus departmental rights and responsibilities for ensuring equal educational opportunities;
  - list strategies for working with students who have disabilities, emphasizing the faculty-student relationship; and
  - describe campus resources available to assist in the provision of appropriate academic accommodations for students with disabilities.
- Add the contact information for campus resources to the “Resources” slide and to printed publications as appropriate.
  - Photocopy handout template *Working Together: Faculty and Students with Disabilities*. Create alternative formats as necessary.
  - Photocopy the presentation evaluation instrument to distribute at the end of the session (see pages 189-191 for examples) or create your own.
  - Add a link on your department’s website to *The Faculty Room* at <http://www.washington.edu/doit/Faculty/>.

## Length

Approximately 20-30 minutes.

## Presenter

Department chair, faculty, staff, TA, student, or other department member. Little experience working with students with disabilities is required to deliver this short presentation.

## Preparation

- Select the presenter(s).
  - Develop presentation outline and activities using the “Sample Script” provided in this section and the ideas listed in the *Presentation Tips* section of this handbook.
  - Create presentation slides from templates provided in the *Presentation Tools* section.
- DVD player and monitor
  - video projector, computer, and presentation slides; Internet connection (optional)
  - video (open captioned and audio described version of *Working Together: Faculty and Students with Disabilities*)
  - handout (*Working Together: Faculty and Students with Disabilities*)
  - presentation evaluation instrument (pages 189-191)



## Presentation Outline

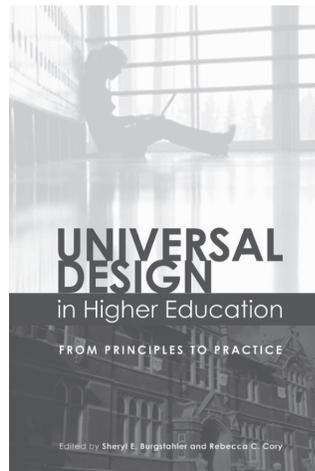
1. Distribute handouts.
2. Introductions.
3. Begin presentation.
4. Introduce and play video as noted in the script.
5. Hold a discussion on possible accommodations on your campus.
6. Discuss department or campus issues.
7. Note campus resources.
8. Distribute and collect completed evaluation instruments.

## Resources

For further preparation resources for this presentation, consult

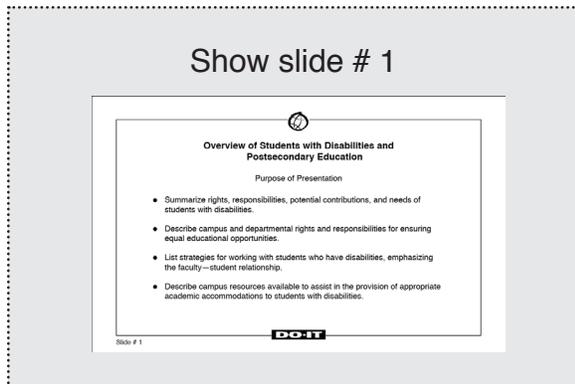
- *The Faculty Room* at <http://www.washington.edu/doit/Faculty/>

- *Universal Design in Higher Education: From Principles to Practice* published by Harvard Education Press, 2008.





## Sample Script



Today I will provide a short presentation about how you can work effectively with students who have disabilities and how to access campus resources for assistance.

Advancements in technology and increased job specialization have resulted in career opportunities in fields that were once considered unsuitable for individuals with disabilities. Many of these careers require knowledge and skills obtained through postsecondary education. Although the number of individuals with disabilities seeking postsecondary education has increased significantly in recent years, they are still underrepresented in many academic and career areas. Federal legislation mandates that, when needed, academic accommodations be made to ensure that otherwise qualified students with disabilities have educational opportunities equal to those of their non-disabled peers.

Studies show that faculty members, staff, and students who have had interactions with students with disabilities generally have more positive attitudes about working with these students. Further, those who are familiar with accommodation strategies are better prepared to make arrangements, which will ensure that students with

disabilities have an equal opportunity to participate in their programs.

### Video

Today we are going to view a video that will introduce you to several faculty members and successful students with disabilities who have worked well together. In this video, faculty members share their concern about, and strategies for, working with students who have disabilities. In addition, successful students with disabilities tell us first-hand about techniques and accommodations that have contributed to their success. The video emphasizes the importance of the faculty-student relationship.

The handout, *Working Together: Faculty and Students with Disabilities*, provides an overview of faculty, staff, and student legal rights and responsibilities, examples of accommodation strategies, and a list of resources available on campus to assist us in our efforts to ensure equal educational opportunities for all students in our programs and courses.

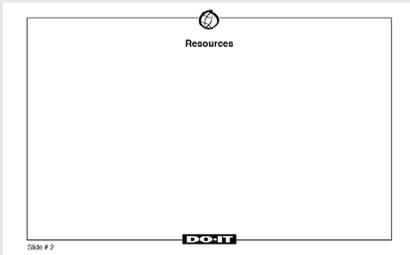
Show video, *Working Together: Faculty and Students with Disabilities* (9 minutes).

The people featured in this video have described some of the problems and solutions that surfaced in their academic experiences. We all encounter these and other issues in our programs and departments. Accommodation strategies may be simple, yet, they may also require a bit of creativity and flexibility.



### Resources

Show slide # 2 with your campus resources.



Here are some resources that might be useful to you as you work to maximize participation and success of all students in your classes. [Elaborate.]

Show slide # 3.



For comprehensive information on working with students with disabilities in postsecondary education, including accommodations, a wide range of case studies, frequently asked questions, and general resources, visit *The Faculty Room* at <http://www.washington.edu/doi/Faculty/>. This resource was developed by DO-IT at the University of Washington as part of a nationwide project to provide resources to faculty and administrators so that they can make their courses and programs accessible to all students. You can link to this resource from \_\_\_\_\_. [Arrange to provide a link from your campus' disabled student services website before the presentation.] Consider linking to this website from your department's faculty website.

Thank you for your time today and for your interest in finding ways to ensure that all of the students in our programs have equal opportunities to learn, explore interests, and express ideas.



## Purpose

After this presentation, faculty and administrators will be able to

- summarize rights, responsibilities, potential contributions, and needs of students with disabilities;
- describe departmental and individual legal rights and responsibilities for ensuring equal educational opportunities for all students in their programs;
- list strategies for working with students who have disabilities, emphasizing the relationship between instructor, student, and support staff;
- describe campus resources available to assist in the provision of appropriate academic accommodations to students with disabilities; and
- list actions that individuals and departments can take to ensure that students with disabilities have educational opportunities that are equal to those of their non-disabled peers.

## Length

Approximately two hours; content can be covered over several meetings.

## Presenter

Department chair, faculty, staff, teaching assistant, student, or other department member who has experience working with students with disabilities. This comprehensive presentation may be co-presented with, or presented by, a staff member of a campus unit responsible for providing academic accommodations for students with disabilities.

## Preparation

- Select the presenter(s).
- Develop presentation outline and activities using the “Sample Script” provided in this section and the ideas listed in the *Presentation Tips* section of this handbook.
- Create presentation slides from templates provided in the *Presentation Tools* section.
- Add the contact information for campus resources to the “Resources” slide and to printed publications as appropriate.
- Add contact information for resources available on your campus to the back page of the handout template *Working Together: Faculty and Students with Disabilities*.
- Photocopy the handout template *Working Together: Faculty and Students with Disabilities* and create alternative formats as necessary.
- If presenting the optional content “An Accommodation Model,” photocopy handout the templates *An Accommodation Model* and *Student Abilities Profile*.
- Photocopy the presentation evaluation instrument to hand out at the end of the session (see pages 189-191 for examples) or create your own.
- Add a link on your department’s website to *The Faculty Room* at <http://www.washington.edu/doit/Faculty/>.



### Equipment and Tools

- DVD player and monitor
- video projector, computer, and presentation slides; Internet connection (optional)
- video (open captioned and audio described version of *Building the Team: Faculty, Staff, and Students Working Together*)
- handout (*Working Together: Faculty and Students with Disabilities, An Accommodation Model* (optional), and *Student Abilities Profile* (optional))
- presentation evaluation instrument (pages 189-191)

### Presentation Outline

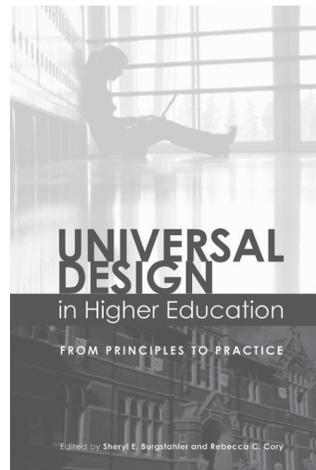
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3. Begin presentation.
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8. Distribute and collect completed evaluation instruments.

### Resources

For further preparation resources for this presentation, consult

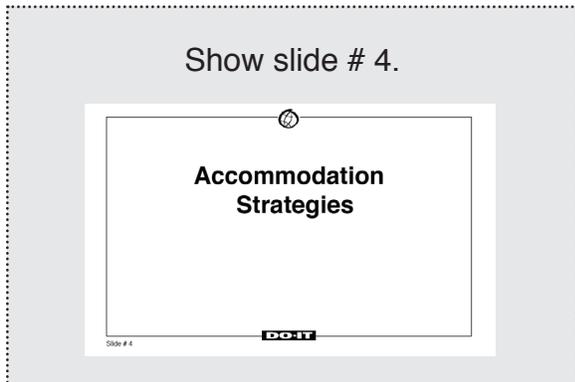
- *The Faculty Room* at <http://www.washington.edu/doit/Faculty/Strategies/>

- *Universal Design in Higher Education: From Principles to Practice* published by Harvard Education Press, 2008.

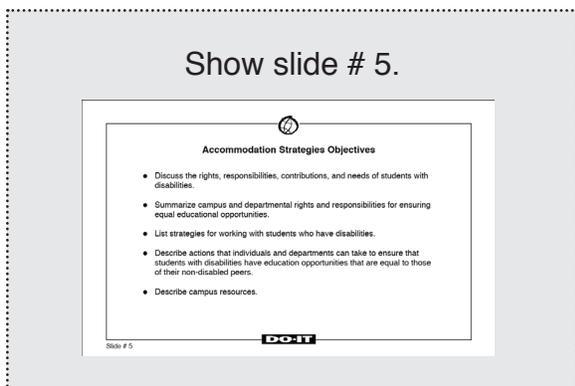




## Sample Script



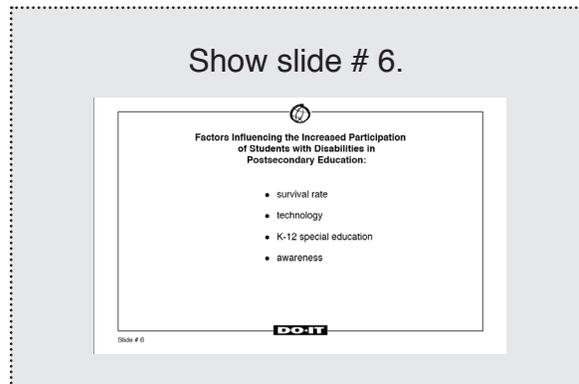
Today we will discuss accommodation strategies that can be used to make your courses accessible to all of your students.



The objectives of this presentation are to

- discuss the rights, responsibilities, contributions, and needs of students with disabilities.
- summarize campus and departmental rights and responsibilities for ensuring equal educational opportunities.
- list strategies for working with students who have disabilities.
- describe actions that individuals and departments can take to ensure that students with disabilities have educational opportunities that are equal to those of their non-disabled peers.

- describe campus resources.



## Postsecondary Enrollment of Students with Disabilities

Recent advancements in technology and increased job specialization have resulted in career opportunities in fields that were once considered unsuitable for individuals with disabilities. Many of these careers require knowledge and skills obtained through postsecondary education.

The number of individuals with disabilities seeking postsecondary education has increased significantly in recent years. Reasons cited for this increase include

- advances in medical technology and techniques resulting in greater numbers of people who survive traumatic accidents and problematic births;
- improvements in technology that make it possible for more people with disabilities to live independently and have productive lives;
- the creation of federal and state mandates for pre-college academic support programs helping more students with disabilities complete high school and consider postsecondary education options; and

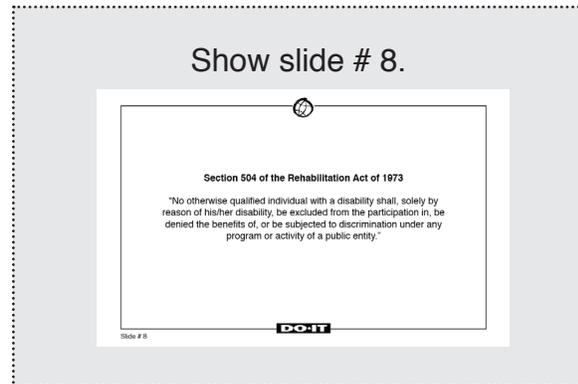


- publicity of federal disability-related legislation increasing awareness of rights to accommodation and equal opportunities in education and employment.

The probability that you will have a student with a disability in your class is quite high. According to the National Center for Educational Statistics of the U.S. Department of Education, 11.3% of all postsecondary students report having a disability.

Studies show that faculty members and staff who have experience with people with disabilities generally have more positive attitudes about working with students who have disabilities. Further, those who are familiar with accommodation strategies are better prepared to make arrangements which will ensure that students with disabilities have equal opportunities to participate in their programs.

Today we will go over our legal rights and responsibilities, examples of accommodation strategies, and resources available on our campus to help you work with students with disabilities. We'll also discuss the specific challenges in our department in working with students who have disabilities and explore strategies for improving access. Your handout *Working Together: Faculty and Students with Disabilities* provides an overview of faculty, staff, and student legal rights and responsibilities; examples of accommodation strategies; and a list of resources available on campus to assist us in our efforts to ensure equal educational opportunities for all students in our programs and courses.



### Disability Legislation

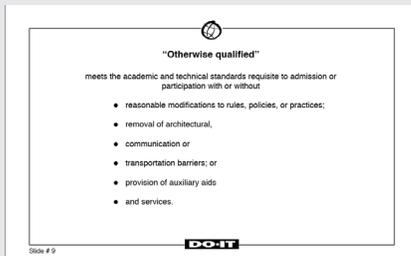
Let's begin with our legal obligations. According to Section 504 of the Rehabilitation Act of 1973, "no otherwise qualified individual with a disability shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity of a public entity." Federal legislation mandates that academic adjustments are made to ensure that otherwise qualified students with disabilities have access to educational opportunities.

Section 504 applies to all postsecondary institutions that receive federal funds, which includes almost every college campus. The Americans with Disabilities Act of 1990 (ADA) requires that public programs and services be accessible to individuals with disabilities, regardless of whether or not the entity receives federal funds. The ADA covers all postsecondary institutions.

Note that the law says, "otherwise qualified individual with a disability." What does "otherwise qualified" mean?

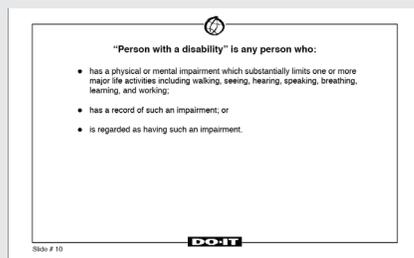


## Show slide # 9.



“Otherwise qualified,” with respect to postsecondary educational services, means “a person who meets the academic and technical standards requisite to admission or participation in the educational program or activity, with or without reasonable modification to rules, policies or practices; the removal of architectural, communication or transportation barriers; or the provision of auxiliary aids and services.” In other words, a person who has a disability is “otherwise qualified” if he can perform the essential tasks of a program or assignment when appropriate and reasonable accommodations are made.

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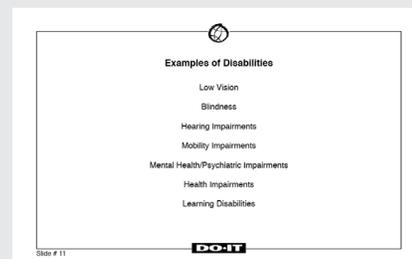


We should not assume that a person who has a disability cannot successfully participate in our programs or courses simply because he or she has a disability. Instead, if there is a concern that the student who has disclosed a disability may not be able to complete specific requirements,

we should discuss with the student (as well as campus staff who have experience in providing academic accommodations) how he or she may be able to accomplish essential tasks required in the program or course, with or without reasonable accommodations.

So, what exactly does “person with a disability” mean? “Person with a disability” means “any person who has a physical or mental impairment which substantially limits one or more major life activities including walking, seeing, hearing, speaking, breathing, learning, and working; has a record of such an impairment; or is regarded as having such an impairment.”

## Show slide # 11.



Disabilities covered by legislation include, but are not limited to, spinal cord injuries, loss of limbs, multiple sclerosis, muscular dystrophy, cerebral palsy, hearing impairments, speech impairments, specific learning disabilities, head injuries, psychiatric disorders, diabetes, cancer, and AIDS. Some of these conditions are readily apparent; some are not. Additionally, some students who have conditions with the same label may have very different abilities when it comes to performing specific tasks. For example, one student who has cerebral palsy may have difficulty walking. For another student, cerebral palsy may result



in no functional use of his or her hands. For another, it may limit the use of his or her voice.

Ultimately, a student who has a disability requires accommodations only when faced with a task that requires a skill that his or her disability precludes. If a student informs an instructor that he or she has a disability and would like to arrange for academic accommodations, the instructor may ask which course or program requirements are expected to be problematic and which strategies and campus resources can eliminate or minimize the access problems. On most campuses, a disability service office is involved in this process. Sometimes an effective solution can be found by thinking creatively about how the learning environment can be modified. The student is the best source of information about his or her disability. Many accommodations are simple, creative alternatives for traditional ways of doing things.

In summary, federal legislation requires that we accept otherwise qualified students with disabilities into our academic programs. Additionally, we should work with students who have disclosed their disabilities to identify and implement reasonable academic accommodations in order to ensure that they have educational opportunities equal to those of their non-disabled peers while preserving the academic standards in courses. Few of us have the experience to identify the effects of all disabilities on the learning process. Work with the student and campus disabled student services office when determining and implementing appropriate academic accommodations.

### **Faculty and Students with Disabilities**

Next we'll watch the video, *Building the Team: Faculty, Staff, and Students Working Together*. You'll learn about disabilities that impact students' participation in your class, examples of accommodations, and resources. Teamwork between the faculty member, the student, and the office that supports students with disabilities on our campus is key. The information covered is included in the handout entitled *Working Together: Faculty and Students with Disabilities*.

Show video,  
*Building the Team: Faculty, Staff, and  
Students Working Together*  
(16 minutes).

[If you feel that examples of accommodations presented in the video provide enough content in this area for the audience or if time is limited, skip to the section of the presentation "An Accommodation Model," "Discussion Questions," or "Case Study."]

### **Specific Disabilities and Accommodations**

Now we will review how disabilities may affect some students' abilities to participate in specific academic activities. Then we'll discuss examples of academic accommodations. I emphasize that these are only examples, since disabilities and learning styles are unique to the individual. You, the student, and campus support staff may generate many other effective strategies that are appropriate for that student.



[Following are examples of accommodations. The lists are by no means comprehensive. You may wish to substitute or add strategies that are pertinent to your audience.]

## Low Vision

Show slide # 12.

Accommodations for Low Vision

- Seating near front of class
- Good lighting
- Large print books, handouts, signs, and equipment labels
- TV monitor connected to microscope to enlarge images
- Assignments in electronic format
- Software to enlarge screen images
- Software to adjust screen colors

Slide # 12 **DO-IT**

For some students who have low vision, standard written materials are too small to read or objects may appear blurry. Others may only see objects within a specific field of vision. Still others may see an image with sections missing or blacked out. Learning via a visual medium may take longer and may be more fatiguing for people who have low vision than for people who have standard vision.

Examples of accommodations for students with low vision include seating near the front of the class; good lighting; and large print books, handouts, signs, and equipment labels. Since it may take weeks or months to procure class materials in large print or audio format, it is essential that instructors select and prepare their materials well before the materials are needed. Other examples of accommodations include reserved seating where the lighting is best, TV monitors connected to microscopes to enlarge images, class assignments made available in electronic formats, and computers equipped with screen enlargers.

## Blindness

Show slide # 13.

Accommodations for Blindness

- Printed materials in electronic format
- Describe visual aids
- Audio, Braille, or electronic notes and text
- Raised-line drawings and tactile models of graphic materials
- Braille lab signs, equipment labels; auditory lab warning signals
- Adaptive equipment (e.g., talking thermometers and calculators; tactile timers)
- Computer with optical character reader, voice output, Braille screen display, printer output
- Increased time on tests

Slide # 13 **DO-IT**

What are some examples of ways in which blindness may affect a student's ability to learn? Students who have no sight cannot refer to written materials. Students who have had no vision since birth may have difficulty understanding verbal descriptions of visual materials and abstract concepts. Consider the example, "This diagram of ancestral lineage looks like a tree." If one has never seen a tree, it may not be readily apparent that the structure of note has several lines of ancestry which can be traced back to one central family. Students who lost their vision later in life may find it easier to understand such verbal descriptions. Additionally, demonstrations based on color differences may be more difficult for students with blindness to participate in and understand than demonstrations that emphasize changes in shape, temperature, or texture.

Ready access to printed materials on computer disk, in an email, or on a webpage can allow a blind person who has the appropriate technology to use computers to read the text aloud or produce it in Braille. Some materials may need to be transferred to an audio format. Since it may take weeks or even months to procure course materials in Braille or in an audio format, it is essential that instructors select and prepare



their materials well before the materials are needed. During lecture and demonstration, clear, concise narration of the basic points being represented in visual aids is helpful. Other examples of accommodations for blind students include tactile models and raised-line drawings of graphic materials; adaptive lab equipment such as talking thermometers, calculators, light probes, and tactile timers; and computers with optical character readers, voice output, Braille screen displays, and Braille printers.

### Specific Learning Disabilities

Students with specific learning disabilities have average to above average intelligence but may have difficulties demonstrating knowledge and understanding. For a student who has a learning disability, auditory, visual, or tactile information can become jumbled at any point when it is transmitted, received, processed, or retransmitted. It may take longer for some students who have learning disabilities to process written information, making lengthy reading or writing assignments or tests difficult to complete in a standard amount of time. Some students who have learning disabilities may find it difficult to process and digest oral instructions and lectures. Some students who have learning disabilities may be able to organize and communicate their thoughts in a one-on-one conversation, but may find it difficult to articulate those same ideas in a noisy classroom.

#### Show slide # 14.

Accommodations for Specific Learning Disabilities

- Notetaker and/or audio recorded class sessions
- Captioned videos
- Textbooks on tape
- Visual, aural, and tactile instructional demonstrations

Slide # 14

#### Show slide # 15.

Accommodations for Specific Learning Disabilities, continued

- Course and lecture outlines
- Assignments given in advance
- Computer with speech output, spell checker, and grammar checker
- Extra exam time, quiet testing arrangements

Slide # 15

Examples of accommodations in the classroom for students who have learning disabilities include, but are not limited to, notetakers, recorded class sessions, captioned videos, and textbooks in an audio format. Students with learning disabilities have better comprehension of information when visual, aural, and tactile instructional activities are incorporated into instruction and course and lecture outlines are made readily available. Exams for these students typically require extended time in a quiet testing location. Computers with speech output and spelling and grammar checkers are helpful in class and for home study. Assignments given in advance ensure adequate review and preparation time.



### Hearing Impairments

Show slide # 16.

Ⓞ

**Accommodations for Hearing Impairments**

- Interpreter, real-time captioning, FM system, Notetaker
- Captioned videos
- Email
- Visual aids, visual warning system for lab emergencies
- Written assignments, lab instructions, demonstration summaries
- Repeat questions and statements from other students during class

**DOIT**

Slide # 16

Some students who have hearing impairments may hear only specific frequencies, sounds within a narrow volume range, or nothing at all. Students who are deaf from birth generally have more difficulty speaking and understanding the English language structure than those who lose their hearing later in life.

Students who are deaf or hard of hearing may have difficulty following lectures in large halls, particularly if the speaker talks quietly, rapidly, or is unclear. Also, people who are deaf or hard of hearing may find it difficult to simultaneously watch demonstrations and follow verbal descriptions, particularly if they are watching a sign language interpreter, a real-time captioned screen, or a speaker's lips. In-class discussion that is fast paced and unmoderated may be difficult to follow, since there is often a lag time between a speaker's comments and interpretation.

Examples of accommodations for students who are deaf or hard of hearing include using interpreters, sound amplification (FM) systems, notetakers, and real-time captioners. Real time captioners transcribe lecture material digitally to a computer screen. It is also helpful for instructors to distribute written lecture

outlines, assignments, lab instructions, and demonstration summaries. Providing visual warning systems to alert for lab emergencies is a must. During presentations it is important to turn your face toward your audience when speaking and repeat discussion questions and statements made by other students. Video should be captioned. Students with hearing impairments benefit when email is used for faculty-student meetings and class discussions.

### Mobility Impairments

Show slide # 17.

Ⓞ

**Accommodations for Mobility Impairments**

- Notetaker/lab assistant, group lab assignments
- Classrooms, labs, and field trips in accessible locations
- Adjustable table, equipment located within reach
- Extra exam time, alternative testing arrangements
- Access to online research resources
- Class assignments and materials in electronic format
- Computer with special input device (e.g., speech input, Morse code, alternative keyboards)

**DOIT**

Slide # 17

Mobility impairments range from lower body impairments, which may require the use of canes, walkers, or wheelchairs, to upper body impairments, which may result in limited or no use of the hands or upper extremities. It may take longer for students with mobility impairments to get from one class to another. For some students it may be difficult to get to fieldwork sites. It may also be difficult for some students to manipulate objects, turn pages, write with a pen or pencil, type at a keyboard, or retrieve research materials.

Examples of accommodations for students with mobility impairments include notetakers, scribes, and lab assistants; group lab assignments; accessible locations for classrooms, labs, and field trips; adjustable



tables; equipment located within reach; extended exam time or alternative testing arrangements; course materials available in electronic formats; computers with special devices such as voice or Morse code input and alternative keyboards; and access to research resources on the Internet.

### Health Impairments

Show slide # 18.

**Accommodations for Health Impairments**

- Flexible attendance requirements
- Extra exam time, alternate testing arrangements
- Notetakers and/or taped class sessions
- Assignments in electronic format
- Email
- Internet accessible services and/or resources

Slide # 18

Some health conditions and medications affect memory and energy levels. Additionally, some students who have health impairments may have difficulty attending classes full-time or on a daily basis.

Examples of accommodations for students who have health impairments include flexible attendance requirements; extra exam time or alternative testing arrangements; notetakers or recorded class sessions; assignments available in electronic format; Internet accessible services or resources; and email for faculty-student meetings, class discussions, and distribution of course materials and lecture notes.

### Speech Impairments

Show slide # 19.

**Accommodations for Speech Impairments**

- Listen carefully to what the person is saying; if you don't understand, ask student to repeat
- Relax and take as much time as necessary to communicate
- Ask questions that require short answers or a nod of the head when appropriate
- Written communication
- Email

Slide # 19

Speech impairments have a variety of origins, which may or may not be related to other disabilities. Qualities of speech impairments range from mild to severe word pronunciation and articulation differences as well as variations in rate, tone, and volume. It often takes longer for a student with a speech impairment to speak and express him or herself. Helpful accommodations and communication strategies when working with a student who has a speech impairment include relaxing and allowing ample time for communication, listening carefully to what the person is saying, asking the student to repeat a word or statement that you don't understand, asking questions that require short answers or a nod of the head when appropriate, using written notes to facilitate communication, and hosting discussions and assignments over email can allow full expression of knowledge and ideas.



## Psychiatric Disabilities

Show slide # 20.

**Accommodations for Psychiatric Disabilities**

- Tape recorder, notetaker
- Preferential seating near door
- Tests, assignments in alternate formats
- Extended time for taking tests
- Separate, quiet room for testing
- Review academic and behavioral expectations in regular meetings with student

**DO-IT**

Slide # 20

Increasing numbers of students with psychiatric disabilities are pursuing postsecondary education. The National Center for Educational Statistics (2003) report that 22% of students with disabilities in postsecondary education reported a mental illness or depression. These students are intelligent and capable of pursuing and succeeding in higher education once barriers to equal access are removed. Mood disturbance, cognitive changes, or altered perceptions may result in functional difficulties related to anxiety, disorganization, or concentration difficulty.

Providing a consistent, yet flexible, approach and maintaining a positive attitude with high expectations encourages success. Specific accommodations of students with psychiatric disabilities include recording the class or using a notetaker during class; preferential seating near the door to allow for breaks as needed; tests and assignments in alternate formats; and extended time for test taking in a quiet, separate room. Structure and clear, practical feedback regarding academic and behavioral expectations is helpful for self monitoring by students with psychiatric disabilities.

## General Strategies to Increase Classroom Accessibility

Show slide # 21.

**General Suggestions for Making Classes Accessible**

- Add a statement to the syllabus inviting students who have disabilities to discuss their accommodation needs
- Select materials early
- Talk with the student about accommodation needs
- Have policies and procedures in place
- Make sure facility is accessible
- Provide materials in electronic formats
- Provide clear signage in large print
- Use alternative methods of administering tests and testing comprehension of a subject
- Use campus disabled student services as a resource

**DO-IT**

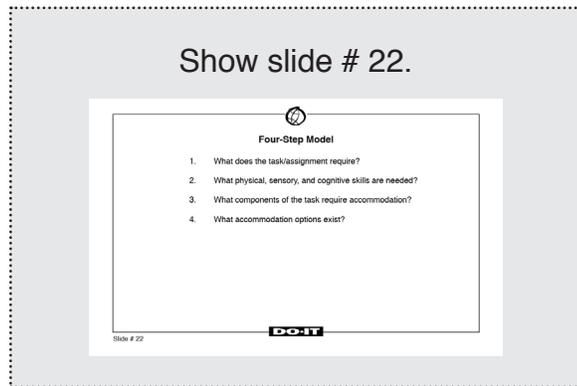
Slide # 21

To conclude our discussion of accommodation examples, here are some general suggestions for making your classes accessible:

- Add a statement to the syllabus inviting students with disabilities to discuss their needs and accommodation strategies with you.
- Select materials early so that they can be procured in appropriate formats in a timely manner.
- Ask students about accommodations that have worked for them in the past.
- Have policies and procedures in place.
- Make sure the facility is wheelchair-accessible.
- Use materials that are available in an electronic format.
- Provide clear signage in large print.
- Use alternative methods to administer tests and evaluate student comprehension of a subject.
- Use the campus disability services office.



[The following optional section may be appropriate for some audiences. If not, skip to “Discussion Questions.” This optional section requires two handouts: *An Accommodation Model* and the *Student Abilities Profile*.]

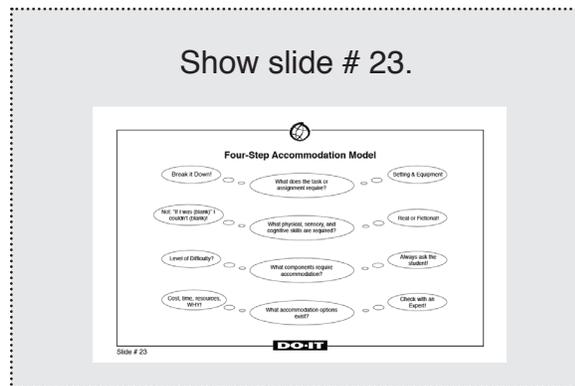


## An Accommodation Model (Optional)

[Distribute the publications *An Accommodation Model* and *Student Abilities Profile*.]

Accommodations are unique to the individual, but it is helpful to have a process to work through when determining appropriate accommodations for a student who has disclosed his or her disability. DO-IT, a center at the University of Washington, has developed *An Accommodation Model* and a *Student Abilities Profile* form that can be used to identify effective accommodations once a student has disclosed his or her disability. Information about the process and a copy of the form is available in the handouts.

The accommodation model is organized around the following four questions:



## Step #1: What does the task or assignment require?

Break down the components of the experiment, assignment, or exercise. Educators often focus on the overall outcome of an activity. To accommodate a student with a disability, it's helpful to think about the specific settings, tools, skills, and tasks that are required at each step. Analyzing and evaluating the task thoroughly will help you determine how best to fully and effectively include a student with a specific disability.

## Step #2: What physical, sensory, and cognitive skills are needed?

Match the tasks required to the physical, sensory, and cognitive skills needed to successfully complete the activity. It is easy to say, “If I had a physical, sensory, or cognitive disability, I would not be able to complete this assignment,” without really determining what skills are needed for specific aspects of the project. We need to separate the real requirements of a specific task from the perceived requirements of the project in total. It is impossible to place yourself in the shoes of the student with a disability. He or she may have learned several ways to solve a specific problem or task and work around the limitations imposed by the disability.

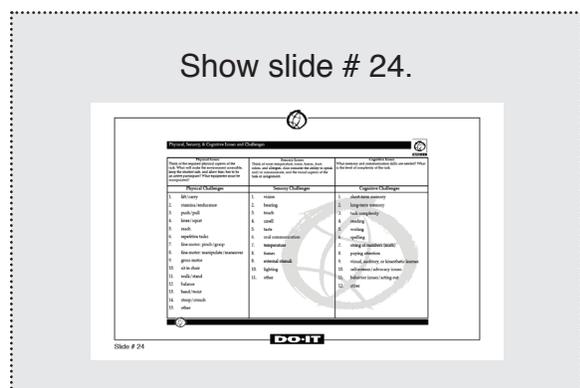


**Step #3: What components of the task require accommodation?**

Once the task has been analyzed and the needed skills are identified, determine what accommodations may be required or how the learning experience might be altered to make it more accessible to a specific student with a disability. Consult with the student to determine what he or she perceives will be required as an accommodation.

**Step #4: What accommodation options exist?**

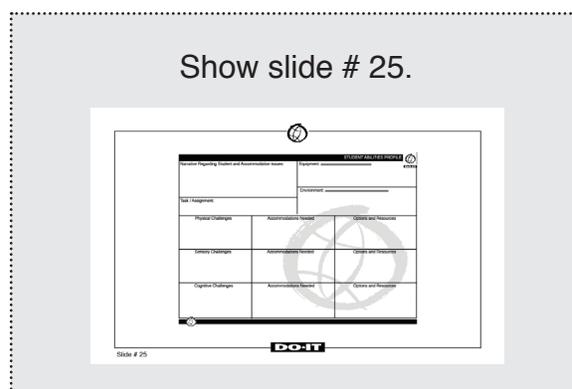
Now that the tasks needing accommodation have been determined, identify what resources exist for providing the accommodation(s). The student may have some good ideas. This is a time when other professionals may have expertise in specific areas and should be called on to provide input. In some cases, having students work in groups where each person is assigned a task that he or she has the ability to complete provides a reasonable alternative.



accommodations, and the physical, sensory, and cognitive skills needed for the task.

Let's go through one example together and then, in small groups, you can create your own. [Go through the process of filling out the form for a specific student using the "Background" and "Access Issues" sections of the case studies on pages 63-74.]

Now gather in small groups. Fill out the blank profile. Choose a classroom or lab activity and complete the *Student Abilities Profile* for a student who has a specific set of disability-related challenges.



[You can provide blank forms or distribute partially filled out forms if you want the activity to be more directed. Participants can work in small groups and then share their results with the large group.]

The *Student Abilities Profile* is designed to guide you in determining a student's skills and abilities as well as assist you in breaking down individual components of an assignment. The form asks you to briefly describe the student, the classroom or laboratory environment, equipment or supplies needed, available professional and external resources, possible effective



### Discussion Questions

[Discuss some or all of the following questions.]

- Do we currently have students with disabilities in our department? What types of disabilities are represented?
- Have any of you worked with students who have disabilities before? Describe your experiences. What strategies did you find to be successful or unsuccessful?
- What can we as a department and as individual instructors do to make our academic programs more accessible to students who have
  - visual impairments?
  - hearing impairments?
  - mobility impairments?
  - learning disabilities?
  - health impairments?

[Examples of accommodations include providing publications in accessible formats such as Braille, large print, and electronic formats; hosting advisor and staff awareness training; providing continuous evaluation of essential program course requirements; and offering classroom instructional improvements.]

- What actions can be taken to make our academic programs more accessible?

[Examples:

- Invite someone from outside of our department to answer specific questions and give us advice regarding appropriate accommodations.
- Designate someone to find out if there are disability access activities currently in progress on campus that we can contribute to and learn from.
- Consider mailing the publication *Working Together: Faculty and Students with Disabilities* to all faculty members and teaching assistants each year.]
- How can we make our facilities (e.g., classrooms, offices, and computer and instructional labs) more accessible to individuals who have
  - visual impairments?
  - hearing impairments?
  - mobility impairments?
  - learning disabilities?
  - health impairments?

[Examples of accessibility adjustments:

- Visual impairments: Braille labels, signage, arrangement and procurement of accessible lab equipment; adaptive technology in computer labs.



- **Mobility impairments:** Wheelchair access entrances clearly marked and notices posted at each non-accessible entrance regarding the location of accessible entrances; wheelchair-accessible entrances, if different from the main entrance; adaptive technology in computer labs.
- **Visual, health, and mobility impairments:** Hallways and classrooms kept clear of obstacles that could present a problem for an individual getting to class or safely negotiating the environment within class.]

- What actions should be taken to make our facilities more accessible and who should coordinate them?

[Examples:

- Survey facilities regarding accessibility.
- Identify and begin the procedure to procure signage, lab equipment, and adaptive computer technologies.]

### Case Study

[Consider having participants discuss a case study. Case Study #4 on page 69 in the *Presentation Tips* section of this notebook would be appropriate.]

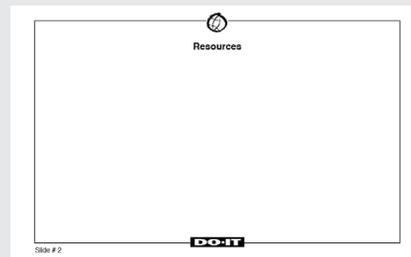
### Conclusion

Today we've discussed the rights and responsibilities of faculty, disabled student services staff, and students with disabilities. We've also considered typical accommodations for students with specific disabilities. Instructors, staff, and students should work together to develop the best

accommodation strategies. The ultimate result can be improved postsecondary education and career outcomes for people with disabilities.

### Resources

Show slide # 2 with your campus resources.



Here are some resources that might be useful to you as you work to maximize the participation of all students in your classes. [Elaborate.]

Show slide # 3.



For comprehensive information on accommodations, a wide range of case studies, frequently asked questions, and general resources, visit *The Faculty Room* at <http://www.washington.edu/doit/Faculty/>. This resource was developed at the University of Washington as part of a nationwide project to provide resources to faculty and administrators so that they can make their courses and programs accessible to all students. You can link to this resource from \_\_\_\_\_. [Arrange to provide a link from your



campus' disabled student services website before the presentation.] Consider linking to this website from your department's faculty website.

Thank you for your time today and for your interest in finding ways to ensure that all of the students in our programs have equal opportunities to learn, explore interests, and express ideas.



## Purpose

After completion of this lesson, participants will be able to

- list at least three universal design principles,
- list three ways that universal design principles can be used to make a more inclusive classroom, and
- describe the difference between employing universal design principles to maximize access and providing accommodations for students with disabilities.

## Length

Approximately 40-60 minutes.

## Presenter

Department chair, faculty, staff, TA, student, or other department member who has experience working with students with disabilities. This presentation may be presented by, or co-presented with, a staff member of a campus unit responsible for providing academic accommodations for students with disabilities.

## Preparation

- Select the presenter(s).
- Develop presentation outline and activities using the “Sample Script” provided in this section and the ideas listed in the *Presentation Tips* section of this notebook.
- Create presentation slides from provided templates.

- Add the contact information for campus resources to the “Resources” slide and to printed publications as appropriate.
- Photocopy the handout templates *Universal Design of Instruction (UDI): Definition, Principles, Guidelines, and Examples* and *Equal Access: Universal Design of Instruction*. Create alternative formats as necessary.
- Photocopy the presentation evaluation instrument to distribute at the end of the session (see pages 189-191 for examples) or create your own.
- Add links on your department’s website to *The Faculty Room* at <http://www.washington.edu/doit/Faculty/> and to *The Center for Universal Design in Education* at <http://www.washington.edu/doit/CUDE/>.

## Equipment and Tools

- DVD player and monitor
- video projector, computer, and presentation slides; Internet connection (optional)
- video (open-captioned and audio described version of *Equal Access: Universal Design of Instruction*)
- handouts (*Universal Design of Instruction (UDI): Definition, Principles, Guidelines, and Examples* and *Equal Access: Universal Design of Instruction*.)
- presentation evaluation instrument (pages 189-191)



## Building the Team

### Presentation Outline

1. Distribute handouts.
2. Introductions.
3. Begin presentation.
4. Discuss universal design principles and examples.
5. Introduce and play video as noted in the script.
6. Discuss universal design of instruction examples and contrast with the provision of accommodations.
7. Discuss department or campus issues.
8. Note campus resources.
9. Distribute and collect completed evaluation instruments.

### Resources

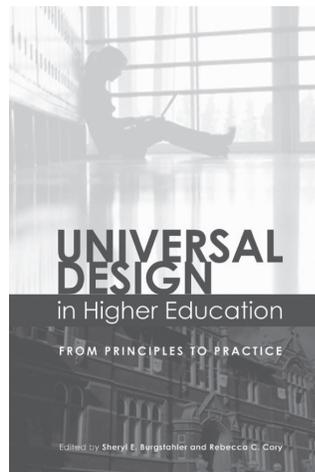
For further preparation resources for this presentation, consult

- *The Faculty Room* at <http://www.washington.edu/doit/Faculty/Strategies/Universal/>

- *The Center for Universal Design in Education* at <http://www.washington.edu/doit/CUDE/>

DO-IT Home	CUDE Home	Glossary
<b>The Center for Universal Design in Education</b>		
<p><b>The Center for Universal Design in Education</b>            The Center for Universal Design in Education (CUDE) develops and collects Web-based resources to help educators apply universal design to all aspects of the educational experience.</p> <ul style="list-style-type: none"> <li>• instruction,</li> <li>• student services,</li> <li>• information technology, and</li> <li>• physical spaces.</li> </ul> <p>The Center is directed by DO-IT at the University of Washington and funded by the U.S. Department of Education (grant #P333A05006) and the National Science Foundation (award #HSD-0227995 and #HSD-0533504). Consult the following resources for an introduction to and applications of UDE.</p>		
<p><b>Introduction to Universal Design</b></p> <p><b>DID YOU KNOW?</b></p> <p>Listening to a video product without viewing it simulates content access to a person who is blind.</p> <p><b>Search Knowledge Base</b></p> <p><b>Knowledge Base Index</b></p> <p><b>Promising Practices</b></p> <p><b>About The AccessCollege project</b></p> <p><b>Enter Conference Room, Faculty Room, Board Room, Student Lounge</b></p>	<p><b>Introduction to Universal Design</b>            Definition, principles, and processes of universal design and examples of applications in educational settings.</p> <p><b>Postsecondary Education</b>            Specific ways that universal design can enhance the postsecondary experience for all students.</p> <p><b>Elementary/Secondary Education</b>            How universal design can increase the inclusion and success of all students, including those with disabilities, at the precollege level.</p> <p><b>Projects, Exhibits, Conferences</b>            How projects, exhibits, and presentations can assure access to all participants, including those with disabilities.</p> <p><b>Resources and Training</b>            Materials for learning more about and delivering training on applications of universal design in education.</p> <p><b>Search the Knowledge Base</b>            Search for questions and answers, case studies, and <i>promising practices</i> about universal design.</p>	
<p><small>Copyright © 2007 - 2008 by DO-IT, University of Washington. Permission is granted to copy these materials for educational, noncommercial purposes provided the source is acknowledged.</small></p>		

- *Universal Design in Higher Education: From Principles to Practice* published by Harvard Education Press, 2008.

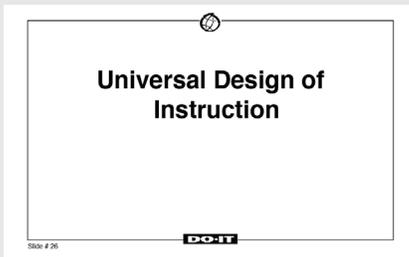


University of Washington		DO-IT Home	Site Map	Search	Glossary
<b>The Faculty Room</b>					
<p><b>Accommodations and Universal Design</b></p>	<p><b>Rights and Responsibilities</b></p>	<p><b>Faculty Resources</b></p>	<p><b>Faculty Presentations</b></p>	<p><b>Resources for Trainers, Staff, and Administrators</b></p>	
<p><b>The Faculty Room</b></p> <p>The Faculty Room is a space for faculty and administrators at postsecondary institutions to learn about how to create classroom environments and academic activities that maximize the learning of all students, including those with disabilities. Much of the content is duplicated in other publications, training materials, and web pages published by DO-IT. It includes six primary areas that address issues faced by postsecondary educators:</p> <p><b>Accommodations and Universal Design</b>            Strategies for creating (universal design) and modifying (accommodations) academic environments and activities to maximize the learning of students with a wide range of abilities and disabilities.</p> <p><b>Rights and Responsibilities</b>            The rights and responsibilities of faculty, campus services, and students with disabilities regarding academic accommodations.</p> <p><b>Faculty Resources</b>            Resources to help instructors more fully include students with disabilities in course activities.</p> <p><b>Faculty Presentations</b>            Video, publications, and interactive presentations designed especially for postsecondary educators.</p> <p><b>Resources for Trainers, Staff, and Administrators</b>            Resources for staff and administrators who support faculty in making their academic offerings accessible to students with disabilities.</p> <p><b>Searchable Knowledge Base</b>            A searchable database of frequently asked questions, case studies, and <i>promising practices</i> related to how postsecondary faculty can fully include students with disabilities in their courses.</p>					
<p><b>Search Knowledge Base</b></p> <p><b>Knowledge Base Articles by Topic</b></p> <p><b>About The Faculty Room project</b></p> <p><b>Enter Board Room, Center for Universal Design in Education, Conference Room, or Student Lounge</b></p> <p><b>Evaluate this site:</b></p>					



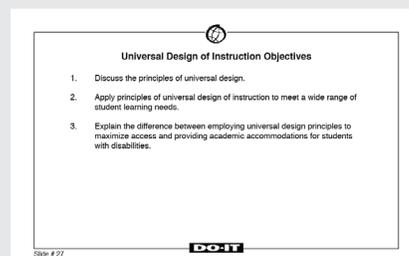
## Sample Script

Show slide # 26.



Today we will be discussing principles of universal design of instruction and how to use these principles in your instruction for the benefit of all students, including those with disabilities.

Show slide # 27.



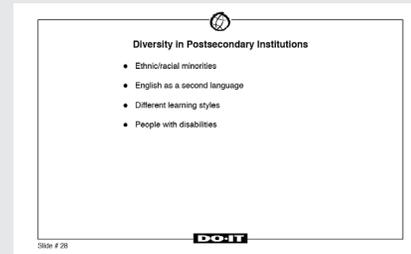
The objectives of today's presentation are to

- discuss the principles of universal design.
- apply principles of universal design of instruction to meet a wide range of student learning needs.
- explain the difference between employing universal design principles to maximize access and providing academic accommodations for students with disabilities.

## Diversity in Postsecondary Institutions

Today, postsecondary institutions attract a diverse student body.

Show slide # 28.



Students come from a wide variety of ethnic and racial backgrounds. There are many types of learning styles and strengths represented, including students who are primarily visual or auditory learners. In addition, increasing numbers of students with disabilities are pursuing postsecondary education.

Their disabilities may include spinal cord injuries, loss of limbs, multiple sclerosis, muscular dystrophy, cerebral palsy, hearing impairments, visual impairments, speech impairments, learning disabilities, head injuries, psychiatric disorders, diabetes, cancer, and AIDS.

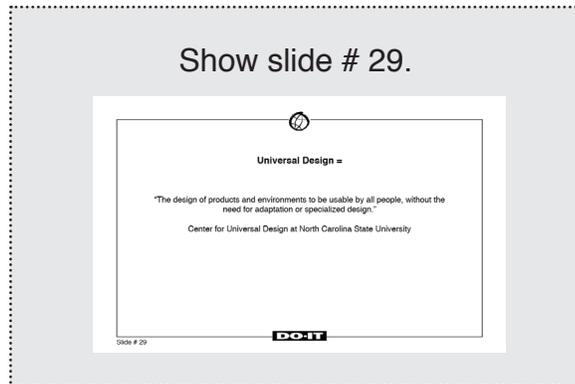
The probability that you will have a student with a disability in one of your classes is high. According to the National Center for Educational Statistics, Postsecondary Education (2006), 11.3% of all undergraduates reported having a disability.

You and the students in your classroom share the common goal of education. So how can you design your instruction to maximize the learning of all students? The field of universal design can provide a starting point for developing a model



for inclusive instruction. Universal design can be applied to instructional design and help you create courses in which lectures, discussions, visual aids, videos, printed materials, and fieldwork are accessible to all students.

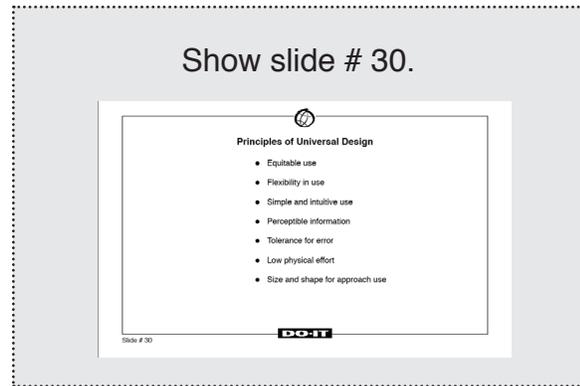
### Universal Design



Designing any product or service involves the consideration of factors that may include aesthetics, engineering options, environmental issues, safety concerns, and cost. One issue that designers often overlook is that of “universal design.”

Universal design is defined by the Center for Universal Design at North Carolina State University as “the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.”

At the center, a group of architects, product designers, engineers, and environmental design researchers collaborated to establish a set of principles of universal design. The principles provide guidance in the design of environments, communications, and products.



Let’s discuss the meaning and an example of each principle as provided in your handout *Universal Design of Instruction (UDI): Definition, Principles, Guidelines, and Examples*.

1. *Equitable use.* The design is useful and marketable to people with diverse abilities. Example: A professor’s website is designed so that it is accessible to everyone, including students who are blind and using text-to-speech software.
2. *Flexibility in use.* The design accommodates a wide range of individual preferences and abilities. Example: A museum, visited as a field trip for a course, allows each student to choose to read or listen to a description of the contents of display cases.
3. *Simple and intuitive use.* Use of the design is easy to understand, regardless of the user’s experience, knowledge, language skills, or current concentration level. Example: Control buttons on science equipment are labeled with text and symbols that are simple and intuitive to understand.
4. *Perceptible information.* The design communicates necessary information effectively to the user, regardless of ambient conditions or the user’s sensory



abilities. Example: A video presentation projected in a course includes captions.

5. *Tolerance for error.* The design minimizes hazards and the adverse consequences of accidental or unintended actions. Example: Educational software provides guidance and background information when the student makes an inappropriate response.
6. *Low physical effort.* The design can be used efficiently, comfortably, and with a minimum of fatigue. Example: Doors to a lecture hall open automatically for people with a wide variety of physical characteristics.
7. *Size and space for approach and use.* Appropriate size and space is provided for approach, reach, manipulation, and use regardless of the user's body size, posture, or mobility. Example: A flexible science lab work area has adequate workspace for students who are left- or right-handed and for those who need to work from a standing or seated position.

When designers apply universal design principles, their products and facilities meet the needs of potential users with a wide variety of characteristics. Disability is just one of many characteristics that an individual might possess. For example, one person could be five feet four inches tall, female, thirteen years old, a poor reader, and deaf. All of these characteristics, including her deafness, should be considered when developing a product she might use.

Making a product accessible to people with disabilities often benefits others. For example, sidewalk curb cuts, designed to make sidewalks and streets accessible to

those using wheelchairs, are today more often used by people on skateboards, parents with baby strollers, and delivery staff with rolling carts. Another example is television displays in airports and restaurants that are captioned. The captioning benefits people without disabilities as well as those who are deaf.

[Discuss examples of things you would consider if you were designing a microwave oven, toaster, building, or other product that would be universally accessible.]

### Universal Design of Instruction

Universal design principles can be applied to many products and services. In the case of classroom instruction or a distance learning class, a goal should be to create a learning environment that allows all students, including people with disabilities, to access the content of the course and fully participate in class activities.

In the short video that we will now watch, we will see an example of the application of universal design principles to distance learning instruction. The video itself is universally designed, including open captions and audio descriptions for viewers with hearing and visual impairments, respectively. Your handouts summarize the content of the video.

Show video, *Equal Access: Universal Design of Instruction*  
(13 minutes).



As demonstrated in the video and summarized in the handouts, universal design principles can be applied as you develop online and on-site courses. They can apply to lectures, classroom discussions, group work, handouts, web-based instruction, fieldwork, and other academic activities.

When universal design principles are applied to the design of webpages, people using a wide range of adaptive technology can access them. For example, people who are blind often use speech output systems to access computers. These systems read aloud text that is presented on the screen but do not read graphical images. Therefore, to provide access to websites for students who are blind, we must be sure to include text descriptions for content presented in graphical form, such as pictures, images, and graphs.

Let's create a list of examples of how principles of universal design apply to instruction. What are some of the diverse characteristics your students might have?

[Encourage discussion. Consider English as a second language, different cultures, blindness, no use of hands, etc.]

What are some examples of instructional methods that employ principles of universal design and make your course content accessible to people with a wide range of abilities and disabilities, language skills, and learning styles?

### Show slide # 31.

Slide # 31

### Show slide # 32.

Slide # 32

[Encourage participation and include all or some of the following examples. This activity could be conducted in small groups followed by a large group discussion.]

[Examples of universal design instructional methods:

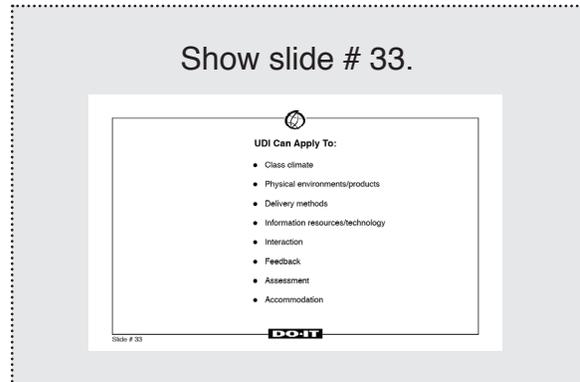
- Create a classroom environment that respects and values diversity. Put a statement on your syllabus inviting students to meet with you to discuss disability-related accommodations and other special learning needs.
- Ensure that classrooms, labs, and fieldwork are in locations accessible to individuals with a wide range of physical abilities and disabilities.
- Use multiple modes to deliver content. Alternate delivery methods include lecture, discussion, hands-on activities,



Internet-based interaction, and fieldwork.

- Provide print or web-based materials that summarize content delivered orally.
- Face the class and speak clearly.
- Provide captioned videos.
- Provide print materials in an electronic format.
- Provide text descriptions of images presented on webpages.
- Provide printed materials early. This allows students to prepare for the topic to be presented and access materials in alternative formats.
- Create print and web-based materials in simple, consistent formats. This practice is particularly helpful to students with learning disabilities and students for whom English is a second language.
- Provide effective prompting during an activity and feedback after the assignment is completed.
- Encourage different ways for students to interact with each other and with you. These methods may include in-class questions and discussion, group work, and web-based communications.
- Provide multiple ways for students to demonstrate knowledge. For example, besides traditional tests and papers, consider group work, demonstrations, portfolios, and presentations as options for demonstrating knowledge.

- Make sure equipment and activities minimize sustained physical effort.]



Now, let's summarize how you might employ universal design principles to make specific activities accessible to all students. Consider the following areas of application:

[Encourage discussion and sharing of examples.]

- class climate
- physical environments/products
- delivery methods
- information resources/technology
- interaction
- feedback
- assessment
- accommodation



### Universal Design vs. Accommodations

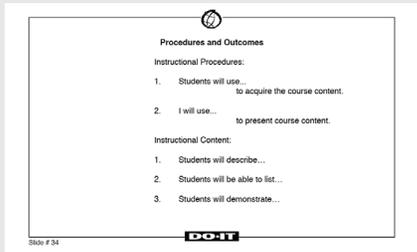
Does employing universal design principles in instruction eliminate the need for specific accommodations for students with disabilities? In a word, no. There will always be the need for some specific accommodations, such as sign language interpreters for students who are deaf. However, using universal design principles in course planning will ensure greater access to the content for most students and minimize the need for specific accommodations. For example, designing web resources in accessible formats as they are developed means that no redevelopment is necessary if a blind student enrolls in the class. Planning ahead can be less time-consuming in the long run.

### Preserving Educational Standards

Course content and evaluation standards are the purview of the instructor. An instructor can preserve academic instructional integrity when employing universal design principles or when providing instructional accommodations for students with disabilities. Disability accommodations should not alter instructional content or evaluation standards. The student with a disability should face the same intellectual challenges as other students.

To ensure that the same content is presented to every student in the class, it is helpful to distinguish the academic content from the instructional methods used to deliver the information.

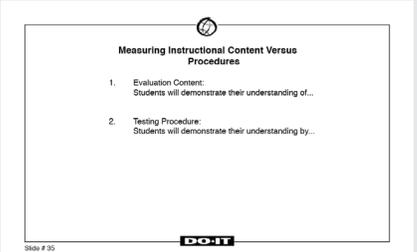
Show slide # 34.



Slide # 34

When instructional objectives and academic content are separated from the method of instructional content, it is easier for the instructor to think about how he or she can provide the information in a variety of modalities. The goal is to modify the methods and procedures for a student with a disability while preserving the educational content and evaluation standards of the course.

Show slide # 35.



Slide # 35

Let's look at examples for separating essential instructional content in an academic class from the methods used to deliver and evaluate content.

[Ask participants to give examples from their own classrooms.]

For example, testing objectives and content should be considered separately from testing method. Tests should be designed to measure the level of mastery in a subject area. For a student with a disability, you



may need to use an alternate method that tests for the same level of mastery as is used for other students. In other words, you change the testing procedure to evaluate mastery of the same content as that expected of other students. To fail the student who knows the content but has difficulty with a type of testing methodology because of his disability, is as unfair as passing a student who does not know the material.

### Benefits to All Students

Universal design of instruction can benefit all students. For example, captioning course videos, which provides access to deaf students, is also a benefit to students for whom English is a second language, to some students with learning disabilities, and to those watching the video in a noisy environment. Delivering presentation content using multiple modes can benefit students with a variety of learning styles.

### Case Study

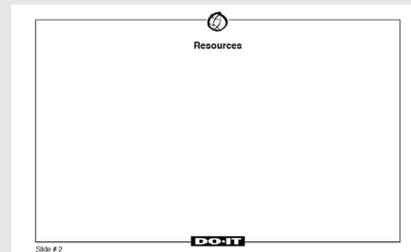
[Consider having participants discuss a case study. Case #6 on page 73 in the *Presentation Tips* section of this notebook would be appropriate.]

### Conclusion

Employing universal design principles in everything we do provides information and access for all individuals regardless of learning style, language, or ability.

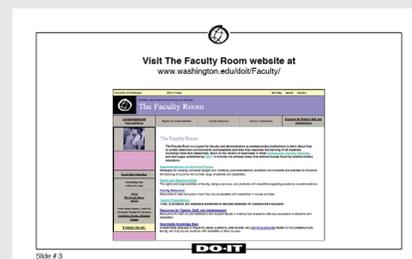
### Resources

Show slide # 2 with your campus resources.



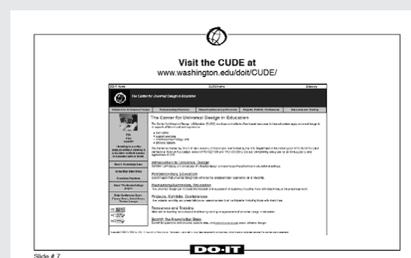
Here are some resources that might be useful to you as you work to maximize effective communication with all students in your classes. [Elaborate.]

Show slide # 3.



For comprehensive information on accommodations, a wide range of case studies, frequently asked questions, and general resources, visit *The Faculty Room* at <http://www.washington.edu/doit/Faculty/> and *The Center for Universal Design in Education* at <http://www.washington.edu/doit/CUDE/>.

Show slide # 7.





These resources were developed at the University of Washington as part of a nationwide project to provide resources to faculty and administrators so that they can make their courses and programs accessible to all students. You can link to these resources from \_\_\_\_\_. [Arrange to provide a link from your campus' disabled student services website before the presentation.] Consider linking to these websites from your department's faculty website.

Thank you for your time today and for your interest in finding ways to ensure that all of the students in our programs have equal opportunities to learn, explore interests, and express ideas.

# Effective Communication with Students Who Have Communication Disorders



## Purpose

At the end of this presentation, participants will be able to

- summarize the rights and responsibilities, potential contributions, and needs of students with disabilities;
- discuss departmental and individual legal rights and responsibilities for ensuring equal educational opportunities for all students in their programs;
- list a range of disabling conditions that can affect communication in courses;
- list strategies for communicating with students who have disabilities using technology, trained support staff, and instructor creativity; and
- describe campus resources available to assist in the provision of appropriate academic accommodations to students with disabilities.

## Length

Approximately 60–90 minutes.

## Presenter

A faculty member or TA who has successfully taught students with disabilities that affect oral and auditory communication or someone from the campus unit providing services for students with disabilities. It may be possible to arrange for a student to co-present. At an appropriate time during the presentation, the student could describe the impact of his disability on communication and effective communication strategies.

## Preparation

- Select the presenter(s).
- Develop presentation outline and activities using the “Sample Script” provided in this section and the ideas listed in the *Presentation Tips* section of this notebook.
- Create presentation slides from provided templates.
- Add the contact information for campus resources to the “Resources” slide and to printed publications as appropriate.
- Photocopy the handout template *Effective Communication: Faculty and Students with Disabilities*. Create alternative formats as necessary.
- Photocopy the presentation evaluation instrument to distribute at the end of the session (see page 189-191 for examples) or create your own.
- Add a link on your department’s website to *The Faculty Room* at <http://www.washington.edu/doi/Faculty/>.

## Equipment and Tools

- video projector, computer, and presentation slides; Internet connection (optional)
- handout (*Effective Communication: Faculty and Students with Disabilities*)
- presentation evaluation instrument (pages 189-191)



## Presentation Outline

1. Distribute handout.
2. Introductions.
3. Begin presentation.
4. Discuss communication disabilities and accommodation strategies.
5. Discuss case studies.
6. Note campus resources.
7. Distribute and collect completed evaluation instruments.

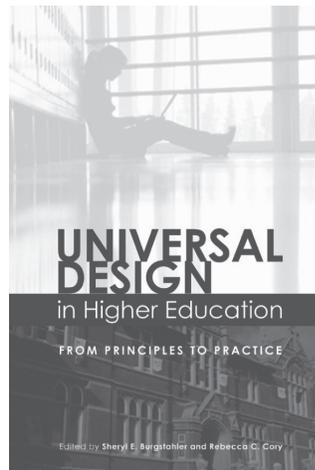
## Resources

For further preparation resources for this presentation, consult

- *The Faculty Room* at <http://www.washington.edu/doit/Faculty/Hearing/>

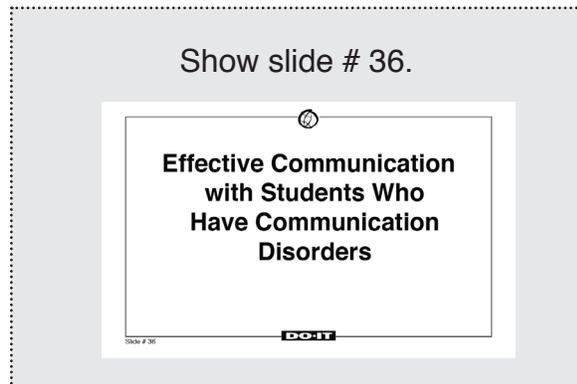
The screenshot shows the 'The Faculty Room' website. At the top, it says 'University of Washington DO-IT Home' with links for 'Site Map', 'Search', and 'Glossary'. Below this is a navigation bar with categories: 'Accommodations and Universal Design', 'Rights and Responsibilities', 'Faculty Resources', 'Faculty Presentations', and 'Resources for Trainers, Staff, and Administrators'. The main content area features a header 'The Faculty Room' and a paragraph explaining its purpose: 'The Faculty Room is a space for faculty and administrators at postsecondary institutions to learn about how to create classroom environments and academic activities that maximize the learning of all students, including those with disabilities. Much of the content is duplicated in other publications, training materials, and web pages published by DO-IT. It includes six primary areas that address issues faced by postsecondary educators:'. Below this are six links: 'Accommodations and Universal Design', 'Rights and Responsibilities', 'Faculty Resources', 'Faculty Presentations', 'Resources for Trainers, Staff, and Administrators', and 'Searchable Knowledge Base'. Each link has a brief description of the resources available in that category.

- *Universal Design in Higher Education: From Principles to Practice* published by Harvard Education Press, 2008.

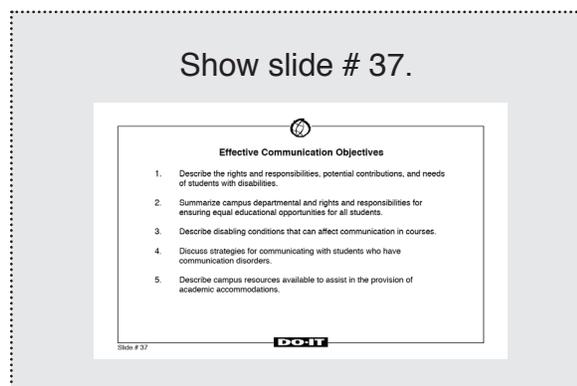




## Sample Script



Today we'll be discussing effective strategies for communicating with students who have disabilities.



The objectives of this presentation are to

- describe the rights and responsibilities, potential contributions, and needs of students with disabilities.
- summarize campus departmental and rights and responsibilities for ensuring equal educational opportunities for all students.
- describe disabling conditions that can affect communication in courses.
- discuss strategies for communicating with students who have communication disorders.

- describe campus resources available to assist in the provision of academic accommodations.

## Communication and Learning in Postsecondary Settings

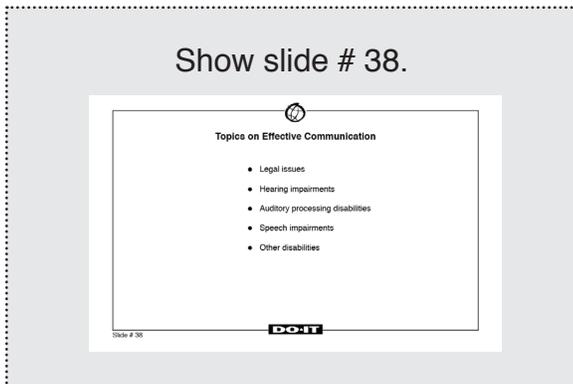
The number of individuals with disabilities seeking postsecondary education has increased and the federal government has made it clear that institutions must provide reasonable accommodations to ensure that otherwise qualified students with disabilities have access to educational opportunities offered to other students. With advancements in technology, state and federal mandates, and improved awareness about disability issues, students with a wide range of disabilities have better access to postsecondary educational programs. They are part of the student body in every institution of higher learning.

Postsecondary courses often use a traditional lecture format. Even distance education programs that have emerged in the last decade rely heavily on lectures (e.g., audio or video presentations) and discussion. Lectures and classroom interaction can present significant barriers to some students. Students who, for one reason or another, have difficulty listening, speaking, or understanding are at a disadvantage in academic courses. Without accommodations, it might be impossible for a student who cannot hear, speak, or understand spoken language to pursue an education. Developing an awareness of how communication can pose barriers to learning, as well as strategies that can help remove these barriers, may help to maximize learning opportunities in your classroom.



Disabilities that affect communication include hearing impairments, auditory processing disabilities (typically resulting from brain injuries or specific learning disabilities), and speech impairments. These disabilities represent a significant part of the postsecondary student population. According to the National Center for Educational Statistics of the U.S. Department of Education (2006), 11.3% of all students attending a postsecondary institution reported a disability.

The information we'll cover today is included in your handout *Effective Communication: Faculty and Students with Disabilities*.



We'll review issues of legal rights and responsibilities. I'll provide information on hearing and speech disorders and other disabilities that can affect communication in courses. Examples of accommodation strategies and resources available on our campus and on the Internet will also be presented. The overall goal is to enhance your ability to communicate effectively with students who have disabilities that affect expressive or receptive communication.

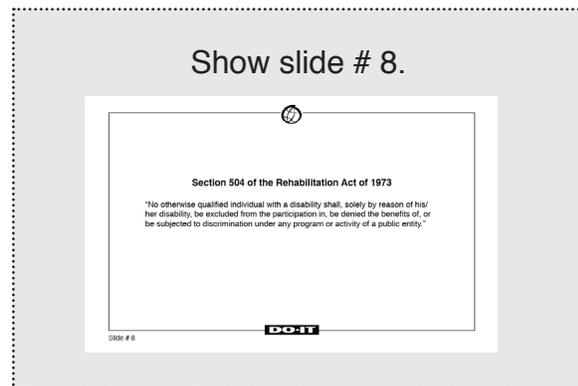
What are some of your experiences working with students who have disabilities? Have you worked with a student with a disability that affected his communication with you

or fellow students? What strategies were successful? What didn't work?

[This interaction should encourage active participation and help you understand what participants know and don't know before you continue with the presentation. Try to use the ideas from participants in later discussions. Be sure to revisit their experiences by the end of the presentation.]

### Legal Issues

Let's talk about our legal obligations.



According to Section 504 of the Rehabilitation Act of 1973, "no otherwise qualified individual 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 under any program or activity of a public entity." Most postsecondary institutions that receive federal funds are covered under Section 504. The Americans with Disabilities Act of 1990 reinforces and extends Section 504 requirements to all postsecondary institutions and other organizations that provide services to the public.



Show slide # 9.

“Otherwise qualified,” with respect to postsecondary educational services, means “a person who meets academic standards requisite to admission or participation in the education program or activity, with or without reasonable modifications to rules, policies or practices; the removal of architectural, communication or transportation barriers; or the provision of auxiliary aids and services.”

Show slide # 10.

“Person with a disability” means “any person who has a physical or mental impairment which substantially limits one or more major life activities including walking, seeing, hearing, speaking, breathing, learning, and working; has a record of such an impairment, or is regarded as having such an impairment.”

In summary, federal legislation requires that we accept otherwise qualified students with disabilities into academic programs.

We must work with students who disclose disabilities to identify and implement reasonable accommodations that will ensure equal access to the educational opportunities we offer to other qualified students. Experienced staff in our disabled student services office can assist instructors in understanding the effects of disabilities on the learning process. The instructor, campus disabled student services staff, and the student with disabilities can work together to identify and implement appropriate accommodation strategies.

### Communication Disabilities

I will discuss examples of how students with some disabilities communicate and learn. Then we will discuss academic accommodations that might be suitable in these situations. I emphasize that these are only examples. The combination of learning styles, abilities, and disabilities are unique to the individual.

Communication can be classified as “expressive” or “receptive.” Expressive communication is the ability to produce speech. Receptive communication is the ability to understand speech.

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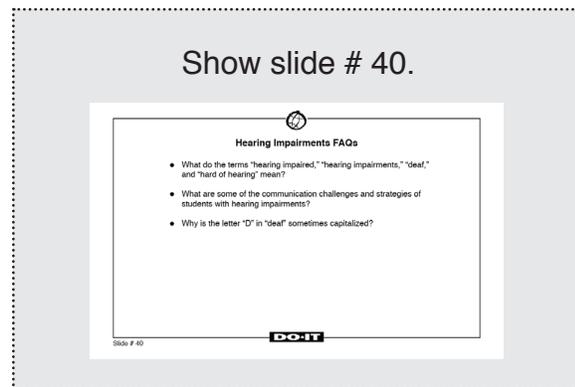


Students who have difficulty communicating in class include those who are deaf or hard of hearing, have speech impairments, have difficulty processing auditory information because of a learning disability, or have physical impairments that affect their speech or language. Often these students require extensive time or effort to communicate and use teaching aids, augmentative communication devices, and assistants. Although some of these conditions are obvious, many are not. A student with a mild hearing loss or a language processing disability does not appear different from other students.

Students with the same type of impairment or diagnosis may perform similar tasks with different degrees of success; they may require different accommodations in order to participate in classroom activities. For example, one deaf student might be much better at group discussion and participation than another deaf student who excels at written exams.

Because of the diverse impact similar disabilities have on each student, there are no standard accommodation strategies that work with everyone. Flexibility and creativity are key to providing accommodations. The goal is that each student has access to the course content and for you, the instructor, to be able to assess what the student has learned. The student may have developed successful coping strategies during high school or other previous learning environments. Discuss with the student what has worked or not worked in the past before deciding on the best accommodation strategies for your class or program.

## Hearing Impairments



First, we'll discuss challenges and accommodations for students who are deaf or hard of hearing. We'll answer the following questions.

- What do the terms “hearing impaired,” “hard of hearing,” and “deaf” mean?
- Why is the letter “D” in “deaf” sometimes capitalized?
- What are some of the communication challenges and strategies of students with hearing impairments?

[Teaching activity suggestion: For the first sentence below, speak normally. Gradually, speak quieter. During the last sentence, just move your mouth without using sounds. After the audience is silent or wondering for a moment, restate using normal volume. Discuss reactions with the audience.]

“Hearing impairment” is a generic term that includes the entire range of hearing loss, from mild to profound. Hearing loss is generally measured by an audiogram, which determines the loudness (decibel level) and frequency (hertz) at which a person can and cannot hear. A student with a measured level of hearing loss could be



categorized as hearing impaired, but this term does little to describe the specific level of hearing loss.

People who are hard of residual hearing rely a great deal on their residual ability to hear. Most hard-of-hearing students can follow one-on-one conversations but have a more difficult time communicating in groups or understanding lectures. Hard-of-hearing students might only be able to hear parts of audio information. They usually wear hearing aids and use technology aids to amplify and clarify sounds. They may be able to connect their hearing aids to output devices. For example, a computer usually has a place to attach earphones, as do some video and audio players. Some students who are hard of hearing may prefer seeing printed text or using a sign language interpreter. Some use American Sign Language (ASL) as their primary communication method.

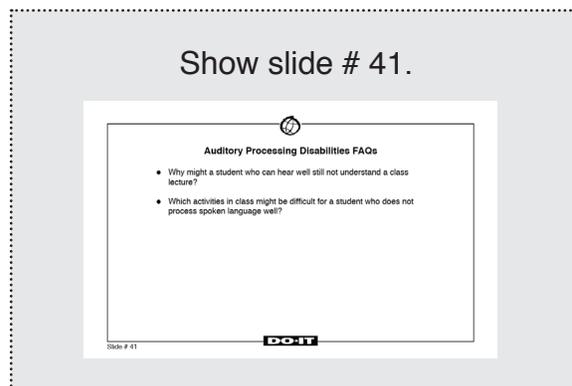
Deaf students have a very limited or no ability to understand sounds, even with amplification. Film narration, lectures, and group communication may be especially difficult to follow. They generally depend on visual information to understand content. Visual information includes sign language, printed text, handwritten notes, captioning, a computer screen, and speech (lip) reading. Although some deaf students can speak, many do not use speech to express their ideas, especially if their primary communication method is sign language. Instead, they write, type, or use sign language to communicate with others.

Most students with hearing impairments experience fatigue as they watch intensely or listen hard. Consequently, students who have hearing impairments may have

difficulty with lectures or activities lasting more than two hours.

When the term “Deaf” is capitalized in literature, it ascribes a cultural identity to the group, much like an ethnicity. Although those who choose to affiliate significantly with other ASL users as members of “Deaf culture” identify with the ASL language community, this affiliation does not necessarily mean that the person is profoundly deaf.

### Auditory Processing Disabilities



Other types of disabilities, besides hearing impairments, affect communication with others. Next, we’ll discuss auditory processing disabilities.

A student who has a brain injury or a specific learning disability may speak and hear sounds quite well. However, if this student has an auditory processing disability, he or she might not readily or efficiently understand the meaning of the words spoken by an instructor. Accents, fast pace, and new terminology can further complicate processing of the information. This student may be able to read written text or understand visual information that is inaccessible to him aurally.



A student with difficulty processing auditory information may not be able to follow extensive verbal instructions or lectures but may perform well on manual and written tasks. He or she may not be able to fully participate in a group discussion or question and answer session without appropriate accommodations.

### Speech Impairments

Show slide # 42.

Slide # 42

Now let's discuss speech impairments and how they affect communication.

Although some students might hear and understand everything that is happening in your classroom, their contribution may be limited because they cannot participate through speech. For example, students who have cerebral palsy or certain types of brain injuries may experience difficulties making their ideas clear through speech. Sometimes only close friends and family members can understand their speech. There is a great deal of stigma associated with speech impairments, perhaps in part because of a misconception that intelligence is somehow correlated with clarity of speech.

People who have speech impairments may choose not to use their own voices if they expect they will not be understood. Some use computer-based communication systems that allow them to communicate

with a synthesized voice. With these devices, students can complete oral exams, deliver presentations, and participate in group discussions.

### Other Communication Disabilities

Show slide # 43.

Slide # 43

Although most of the origins of communication-related disabilities are speech, language, or hearing impairments, there are other reasons a student might have difficulty communicating.

A student with a phobia, an anxiety disorder, or autism may take extended time to begin speaking in public. The same student might also experience a great deal of difficulty answering a question posed to him in a small group situation. Some students who have chronic medical conditions, such as asthma, may simply need extra time to express themselves verbally. Side effects of medications can also impact spontaneity in speaking. Even students without diagnosed disabilities may be shy or unwilling to participate verbally in class, even though they comprehend the information presented.

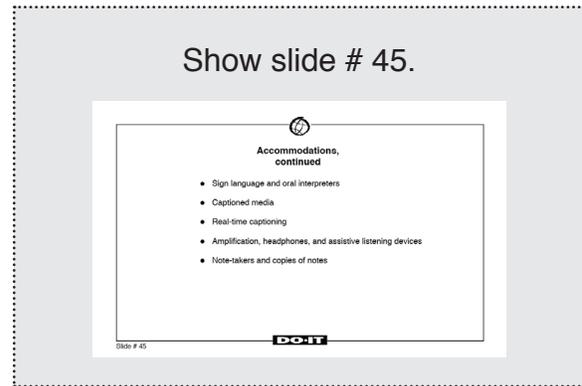
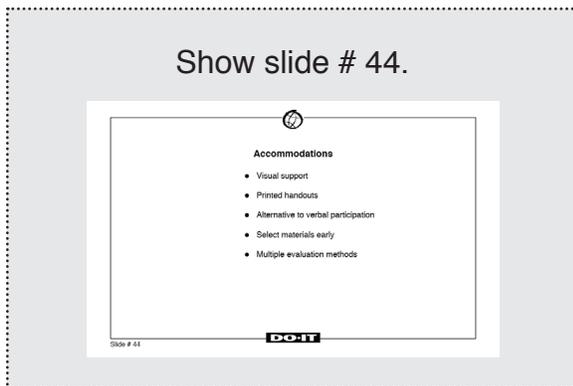
### Accommodation Strategies

Communication in class can present minor or major barriers to students with a range of disabilities. Making classes more accessible to these students can also help other



students learn. We'll discuss some general strategies that can facilitate classroom communication.

- Add a statement to your syllabus inviting students who have disabilities to discuss their needs and accommodation strategies with you. Read the statement out loud to the class.
- Ask a student who has identified him or herself as having a specific disability to share with you what strategies have worked and what accommodations will be useful to him or her in your class.
- Use disability support services available on campus as a resource. The student should provide documentation of disabilities to this office. You may receive a letter from this office discussing reasonable accommodations for the student.
- Provide printed handouts with key content before or at the beginning of class.
- If your classroom activities involve verbal participation, provide alternatives or support for students who have difficulty speaking. For example, the student could prepare the printed materials needed for a group presentation or project.
- Select course materials and media early so that if captioning or alternate formats are required, they can be procured in a timely manner.
- Use multiple or alternative methods for evaluating student achievement. Provide different ways to test learning and submit assignments (e.g., written or oral formats, projects, in-class participation).



Here are some specific strategies that can minimize the effects of a communication-related disability of a student in your class.

- If you plan to lecture or use primarily auditory delivery, ensure that you use adequate visual support, such as slides with a video projector.

### Sign Language and Oral Interpreters

Some students who have hearing impairments require the presence of an interpreter at the front of the classroom. A professional interpreter is trained to translate spoken English (or another language) into sign language. If the student cannot speak, the interpreter will also reverse interpret, or voice, what the student signs. Sign language interpreters often



work in pairs so that they can take turns to prevent physical and mental fatigue. The disability support services office typically schedules sign language interpreters for students.

If the student does not know sign language but needs to be able to lip-read consistently, an oral interpreter is sometimes used. Oral interpreters are trained professionals who understand which words are visible on the lips and make spoken language more accessible to a lip-reading deaf student. Sometimes oral interpreters fingerspell or gesture to help the student follow conversations.

Interpreters are not allowed to add or change anything they interpret. However, they must sometimes ask the instructor for clarification or repetition of a word or phrase in order to provide the student with accurate and complete class content.

When a student who does not speak has a question, adequate time needs to be given so that he can sign the question to the interpreter. Time also needs to be taken following your answer to allow the student to seek further clarification.

Normal pacing of presented content is usually appropriate when an interpreter is used. However, speak slower when reading passages out loud and when using technical terms. Discuss options with the disabled student services office for training and orientation of interpreters. It is also recommended that you take time before the presentation to discuss presentation content and other relevant issues with the interpreters. Sign language interpreters are there not only for the student to understand what classmates and instructors are saying,

but also for the instructor and fellow students to understand the student who is deaf.

### **Captioned Media**

When showing films or videos, it is important to use a captioned version that provides access to the audio content using text. Captioning, in contrast to a transcript, has the advantage of presenting both video and text together so that individuals who are deaf or hard of hearing can follow the video. In addition, students who are learning English as a second language benefit from seeing the English subtitles while hearing the audio. If you are not able to get a captioned version of the media, it might be necessary to provide a transcript or printed summary of the spoken information, or to use a sign language interpreter to translate the presentation. Students who are deaf, hard of hearing, or have difficulty processing spoken language might need extra time to process this information as they cannot watch the video or film and read the text or watch an interpreter at the same time. For them, putting the video online or on reserve in the library provides the option for them to watch it multiple times.

### **Real-Time Captioning**

Court reporting techniques have been adapted to classroom use so that people who rely on text to communicate have instant access to spoken words. Real-time captioning requires a trained professional to enter what is spoken into computer-based equipment; the system presents text on a monitor for the student to read. Sometimes these systems also provide a notetaking service by giving the student an electronic or printed version of the presentation or group discussion. These systems are particularly



useful for students who are deaf, yet for whom written English is a strength.

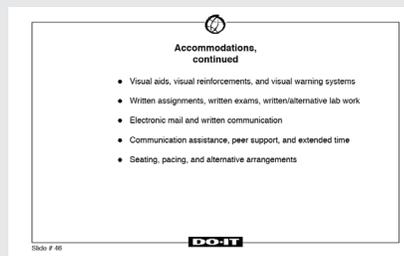
### **Amplification, Headphones, and Assistive Listening Devices**

In large lecture halls a microphone and normal amplification might assist many students. People who have difficulty processing sounds because of hearing loss or learning disabilities may benefit from using headphones, which directly transmit sound to the ears and block out environmental noise. People who are hard of hearing may benefit from assistive listening devices such as FM systems, infrared transmissions, and loops. These devices are designed to bring sound directly to the ear or hearing aid from a transmitted location. Students using headphone or hearing aid that is receiving from the microphone do not hear background noise or comments from other students. Therefore, for these students, it is important to repeat questions or comments directly into the microphone. Repeating questions, comments, and key points is beneficial for students with and without hearing impairments.

### **Notetakers and Copies of Notes**

For some students, listening requires extraordinary energy. Intense concentration is needed to follow the sign language interpreter, to lip-read the instructor, or to process what is being heard through an FM system. These students are often unable to write notes as well as maintain attention to the spoken information. Therefore, it is important for these students to have access to printed notes. Student notetakers are often recruited and trained to provide the student who has a disability with detailed notes. Sometimes instructors give the student printed or electronic copies of lecture notes.

Show slide # 46.



### **Visual Aids, Visual Reinforcements, and Visual Warning Systems**

Although it benefits most students, the use of visual information is a specific accommodation strategy for students with auditory processing difficulties. Visual examples, icons, diagrams, colored charts, and illustrations often reinforce information delivered verbally. These materials could include online resources as well as printed handouts.

For students who cannot hear, it is also important that any auditory warning signals for fire, smoke, or other purposes be made available in a visual form (for example, using a strobe light). This is especially important for students working in isolated labs or study rooms.

### **Written Assignments, Written Exams, and Written or Alternative Lab Work**

Students with speech disabilities can complete most required homework as assigned. When an accommodation is arranged, it is often needed for the process of delivering the assignment. For example, a student who was expected to make an oral presentation might be allowed to use an interpreter or hand in a written assignment. An exam that is normally given orally could be redesigned in written form. Work that is normally done using multimedia might be done in writing. Make sure that assignments



and tests assess the students' abilities and knowledge, not their hearing and speech.

### **Email and Written Communication**

Classroom comments and student questions can be made via email or handwritten notes if verbal communication in class is difficult. These options are especially useful if anxiety, voice production, or communication speed is a problem.

### **Communication Assistance, Peer Support, and Extended Time**

A third party might be able to provide support to a person with a communication disability. This person might be someone trained to interpret a speech pattern, read the communication board of a non-speaker, or simply help a person make words more clear. Sometimes a student with a disability may benefit from a peer or fellow student providing this support. However, this strategy should only be used with prior agreement from both students. Never put students on the spot or breach confidentiality by identifying a student with a disability in need of support.

Extended time is often needed for communicating orally or in writing if devices are used. Extended time accommodations for assignments or exams are typically arranged through the disabled student services office on campus.

### **Seating, Pacing, and Alternative Arrangements**

Most students with hearing impairments will want to sit near the front of the room to lip-read an instructor, read real-time captioning, or watch an interpreter. In situations with circles or other nontraditional seating arrangements, the student may have to sit across from the

instructor with the interpreter or real-time captioner sitting in the middle. Students may also prefer to sit away from doors or windows that bring in outside noise. A student using an assistant will need an extra seat for this person. A student using technical aids may need to sit near power outlets or close to a specific piece of equipment.

If possible, arrange for a slower-paced question and answer period or discussion within class time. Simply slowing the pace slightly can facilitate the participation of some people with communication disabilities. You could also provide alternatives such as smaller groups, seminars, or one-on-one opportunities so that the benefits of interaction are not lost for the student who cannot participate in large class discussions.

As you may have noticed, some accommodations require technology, others require trained professionals, but many simply require creativity and flexibility on the part of the instructor and the student.

### **Discussion Questions**

[Discuss questions of interest to the audience. Questions to start the conversation follow:]

1. Based on what we have discussed today, is there anything you would do differently with the students with communication-related disabilities you have worked with previously?
2. What do you think could be done by the department or an individual instructor to make courses and programs more accessible to students with communication-related disabilities?



3. Who should coordinate or implement these actions?

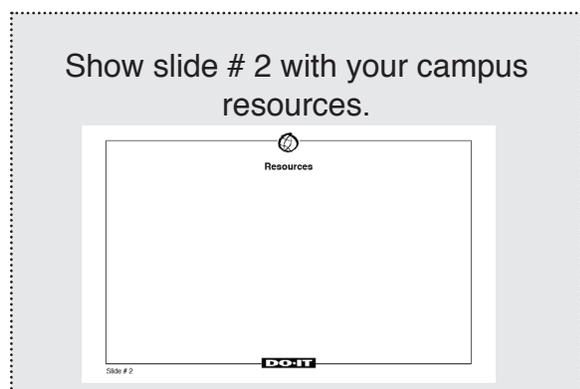
**Case Study**

[Consider having participants discuss a case study. Case #1 on page 63 in the *Presentation Tips* section of this notebook would be appropriate.]

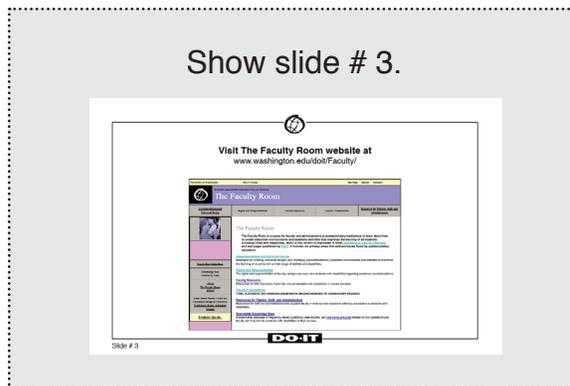
**Conclusion**

Communicating information is an essential part of learning in an academic setting. Creativity and flexibility can ensure an equal experience for students who have communication disorders. The best accommodations occur when the student with a disability, his or her instructor, and support staff work together.

**Resources**



Here are some resources that might be useful to you as you work to maximize effective communication with all students in your classes. [Elaborate.]



For comprehensive information on accommodations, a wide range of case studies, frequently asked questions, and general resources, visit *The Faculty Room* at <http://www.washington.edu/doit/Faculty/>. This resource was developed at the University of Washington as part of a nationwide project to provide resources to faculty and administrators so that they can make their courses and programs accessible to all students. You can link to this resource from \_\_\_\_\_. [Arrange to provide a link from your campus' disabled student services website before the presentation.] Consider linking to this website from your department's faculty website.

Thank you for your time today and for your interest in finding ways to ensure that all of the students in our programs have equal opportunities to learn, explore interests, and express ideas.



## Building the Team



## Purpose

After this presentation, faculty and administrators will be able to

- list typical ways that information is presented at postsecondary institutions (e.g., lectures, printed materials, webpages, email, videos);
- describe the challenges each mode of information delivery creates for people with different types of disabilities; and
- list solutions to the barriers to obtaining information students with disabilities typically face in academic settings.

## Length

Approximately 90 minutes.

## Presenter

Department chair, faculty, staff, TA, student, or other department member who has experience working with technology and with students with disabilities. The program may be co-presented with a staff member of a campus unit responsible for providing academic or computing accommodations for students with disabilities.

## Preparation

- Select the presenter(s).
- Develop presentation outline and activities using the “Sample Script” provided in this section and the ideas listed in the *Presentation Tips* section of this notebook.
- Create presentation slides from provided templates.

- Add the contact information for campus resources to the “Resources” slide and to printed publications as appropriate.
- Photocopy the handout templates *Working Together: People with Disabilities and Computer Technology* and *World Wide Access: Accessible Web Design*. Create alternative formats as necessary.
- Photocopy the presentation evaluation instrument to distribute at the end of the session (see pages 189-191 for examples) or create your own.
- Add a link to your department’s website to *The Faculty Room* at <http://www.washington.edu/doit/Faculty/> and to *The Center for Universal Design in Education* at <http://www.washington.edu/doit/CUDE/>.

## Equipment and Tools

- DVD player and monitor
- video projector, computer, and presentation slides; Internet connection (optional)
- videos (open captioned and audio described versions of *Computer Access: In Our Own Words* and *World Wide Access: Accessible Web Design*)
- handouts (*Working Together: People with Disabilities and Computer Technology* and *World Wide Access: Accessible Web Design*)
- presentation evaluation instrument (pages 189-191)



## Building the Team

### Presentation Outline

1. Distribute handouts.
2. Introductions.
3. Begin presentation.
4. Introduce and play videos as noted in the script.
5. Discuss possible accommodation strategies and department or campus issues.
6. Note campus resources.
7. Distribute and collect completed evaluation instruments.

### Resources

For further preparation resources for this presentation, consult

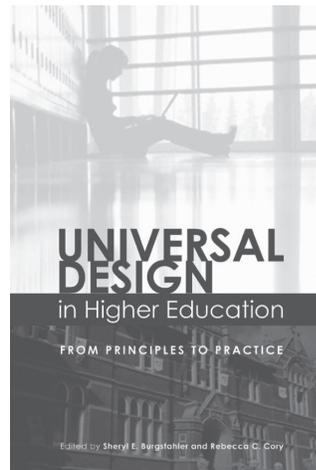
- *The Faculty Room* at <http://www.washington.edu/doit/Faculty/Strategies/Academic/>

University of Washington		DO-IT Home		Site Map Search Glossary	
Disabilities, Opportunities, Interactivities, and Technology					
<b>The Faculty Room</b>					
Accommodations and Universal Design	Rights and Responsibilities	Faculty Resources	Faculty Presentations	Resources for Trainers, Staff, and Administrators	
 <p><b>The Faculty Room</b></p> <p>The Faculty Room is a space for faculty and administrators at postsecondary institutions to learn about how to create classroom environments and academic activities that maximize the learning of all students, including those with disabilities. Much of the content is duplicated in other <a href="#">publications</a>, <a href="#">training materials</a>, and web pages published by <a href="#">DO-IT</a>; it includes six primary areas that address issues faced by postsecondary educators:</p> <p><a href="#">Accommodations and Universal Design</a> Strategies for creating (universal design) and modifying (accommodations) academic environments and activities to maximize the learning of students with a wide range of abilities and disabilities.</p> <p><a href="#">Rights and Responsibilities</a> The rights and responsibilities of faculty, campus services, and students with disabilities regarding academic accommodations.</p> <p><a href="#">Faculty Resources</a> Resources to help instructors more fully include students with disabilities in course activities.</p> <p><a href="#">Faculty Presentations</a> Video, publications, and interactive presentations designed especially for postsecondary educators.</p> <p><a href="#">Resources for Trainers, Staff, and Administrators</a> Resources for staff and administrators who support faculty in making their academic offerings accessible to students with disabilities.</p> <p><a href="#">Searchable Knowledge Base</a> A searchable database of frequently asked questions, case studies, and <a href="#">promising practices</a> related to how postsecondary faculty can fully include students with disabilities in their courses.</p>					
Search Knowledge Base					
Knowledge Base					
About The Faculty Room project					
Enter Board Room, Center for Universal Design in Education, Conference Room, or Student Lounge					
Evaluate this site					

- *The Center for Universal Design in Education* at <http://www.washington.edu/doit/CUDE/>

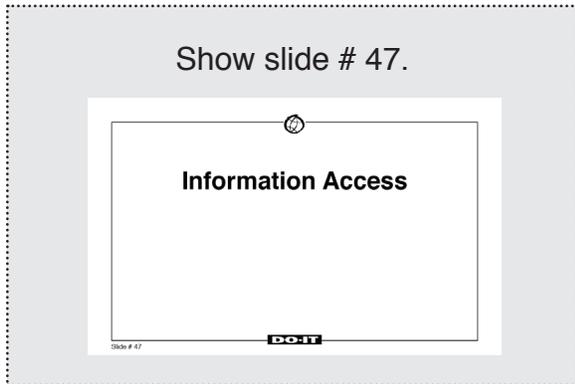
DO-IT Home		CUDE Home		Glossary	
The Center for Universal Design in Education					
Introduction to Universal Design	Postsecondary Education	Elementary/Secondary Education	Projects, Exhibits, Conferences	Resources and Training	
 <p><b>The Center for Universal Design in Education</b></p> <p>The Center for Universal Design in Education (CUDE) develops and collects Web-based resources to help educators apply universal design to all aspects of the educational experience:</p> <ul style="list-style-type: none"> <li>• instruction;</li> <li>• student services;</li> <li>• information technology; and</li> <li>• physical spaces.</li> </ul> <p>The Center is directed by DO-IT at the University of Washington and funded by the U.S. Department of Education (grant #P333A05006) and the National Science Foundation (awards #ED-0227959 and #ED-0533051). Consult the following resources for an introduction to and applications of UDE:</p> <p><b>Introduction to Universal Design</b> Definition, principles, and processes of universal design and examples of applications in educational settings.</p> <p><b>Postsecondary Education</b> Specific ways that universal design can enhance the postsecondary experience for all students.</p> <p><b>Elementary/Secondary Education</b> How universal design can increase the inclusion and success of all students, including those with disabilities, at the precollege level.</p> <p><b>Projects, Exhibits, Conferences</b> How projects, exhibits, and presentations can assure access to all participants, including those with disabilities.</p> <p><b>Resources and Training</b> Materials for learning more about and delivering training on applications of universal design in education.</p> <p><b>Search the Knowledge Base</b> Search for questions and answers, case studies, and <a href="#">promising practices</a> about universal design.</p>					
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- *Universal Design in Higher Education: From Principles to Practice* published by Harvard Education Press, 2008.

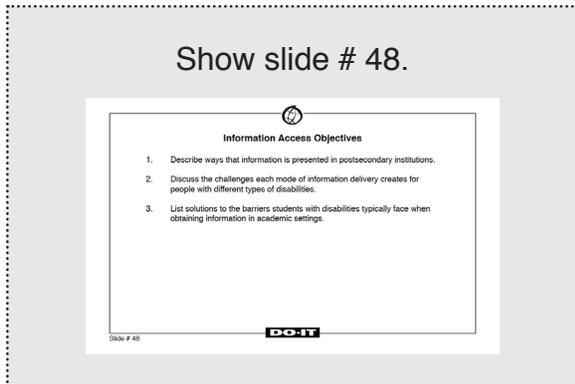




## Sample Script



Today we'll be discussing the challenges that people with disabilities face in accessing the information we provide in postsecondary education institutions and the means of ensuring their full access to the content.



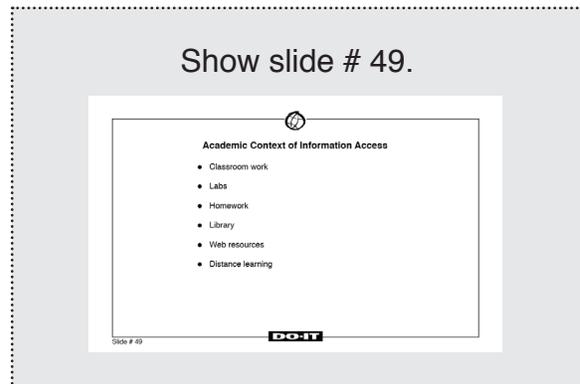
The objectives of this presentation are to

- describe ways that information is presented in postsecondary institutions.
- discuss the challenges each mode of information delivery creates for people with different types of disabilities.
- list solutions to the barriers students with disabilities typically face when obtaining information in academic settings.

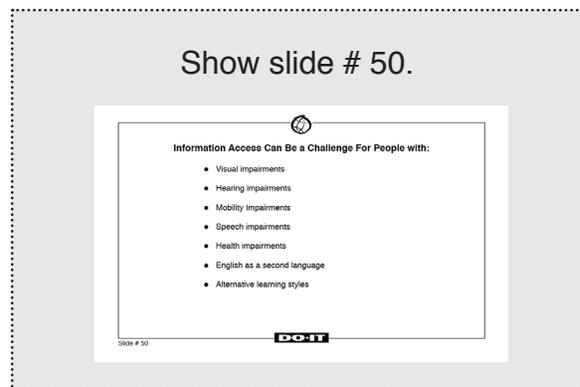
## Presentation Modes

Colleges and universities are in the business of sharing information, and we do it in many forms, including spoken, printed, and web-based media.

In our academic programs, we share information through classroom work, labs, homework assignments, library resources, webpages, and distance learning programs.

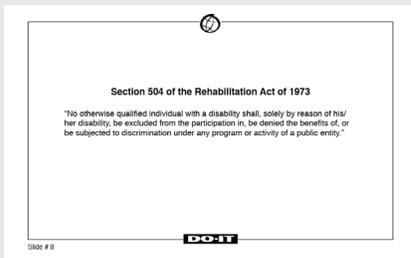


On our campus, the administration provides information to students through processes such as registration and records. We provide information to the public through our many publications and webpages. How else do we provide information to our students and employees and to the public? [Solicit input from participants.]





Show slide # 8.



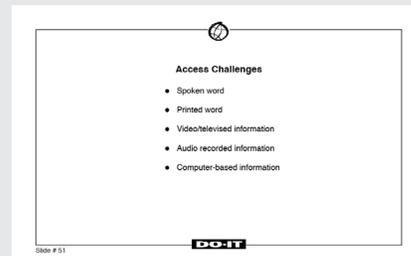
Specific methods that we use to impart information are not accessible to some people, particularly those with visual impairments, hearing impairments, mobility impairments, speech impairments, and health impairments. Those whose first language is not English or who have alternative learning styles also face difficulties in accessing some types of information.

Besides being the right thing to do, in the case of people with disabilities, it is our legal obligation to provide access to all of the programs and services we offer. Section 504 of the Rehabilitation Act of 1973 requires that “no otherwise qualified individual with a disability shall, solely by reason of his/her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity of a public entity.”

### Access Challenges

Let’s look at some of the specific ways we impart information on our campus and the challenges these modes impose.

Show slide # 51.



### Spoken Word

Much of the information in our classes is presented via the spoken word. Which of our students might have difficulty accessing information in this way, and how can we ensure access?

[Solicit input from participants to make this portion interactive. Be sure to cover issues related to the following:

- Low vision (e.g., description of visual aids that may accompany spoken word, technology to help with notetaking).
- Blindness (e.g., description of visual aids that accompany spoken word, technology to help with notetaking).
- Deaf or hearing impairment (e.g., sign language interpretation, notetaking, real-time captioning, lip-reading, printed information).
- Speech impairment (e.g., computer-based communication devices, opportunities to ask questions and participate in discussions via printed format, discussions conducted electronically, more time to communicate orally).



- Mobility impairment (e.g., accessible classroom/meeting locations for in- and out-of-class activities, reserved seating, notetaker, information provided electronically or in printed format).
- Health impairment (e.g., extra exam time, information provided electronically, discussions conducted electronically, notetaker).
- Learning disability, English is a second language, and visual learner (e.g., printed information, clear and well-organized information, visual cues, captions, electronic text).]
- Speech impairment (typically do not have challenges accessing the printed word).
- Mobility impairment (e.g., materials in an electronic format if unable to manipulate printed materials).
- Health impairment (e.g., materials in electronic form if unable to manipulate printed materials).
- Learning disability, English as a second language, and visual learner (e.g., create printed information that is clear, well-organized, and includes visuals such as overheads, graphics, and diagrams).]

### Printed Word or Images

We also impart information to our students via printed word or image. What access challenges do we create when we deliver information in this way?

[Solicit input from participants. Be sure to cover the following issues in the discussion:

- Low vision (e.g., use a copy machine to enlarge printed materials, reformat electronic documents into large print, send the material in an electronic text format, audio books, audio description of visual content).
- Blindness (e.g., provide information in an electronic text format to be used with a computer system for speech output or Braille output, to create the materials in Braille or audio format, audio books, audio description of visual content).
- Deaf or hearing impairment (typically do not have challenges accessing the printed word).

### Video and Televised Content

People with what types of characteristics might have difficulty accessing video or televised content? [You may want to put up the list of disability types again and go through the list to solicit input that may include hearing impairments, learning disabilities, and English as a second language, for which captioning and transcription can be useful; and blindness, for which audio description of visual content might be appropriate.]

### Audio Content

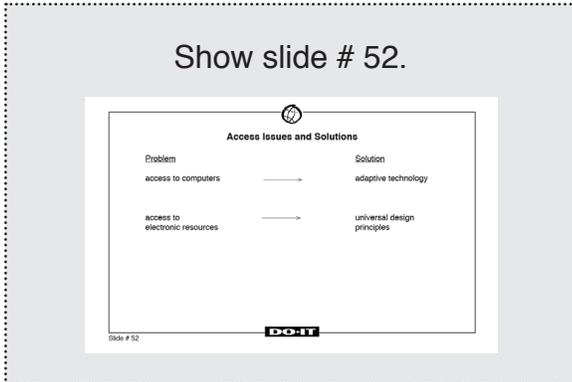
For audio content, a written transcript or real-time captioning can be helpful for students with hearing impairments, learning disabilities, or for whom English is a second language.

### Computer-Based Content

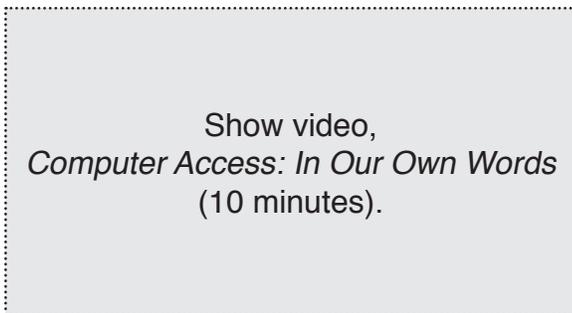
For the rest of our time today we will focus on computer-based technology, which is a common mode for delivering information. We will discuss the access issues and solutions for specific individuals.



There are two levels where access barriers can occur. The first challenge is gaining access to the computer itself. The second is gaining access to the information delivered via computer.



Let's discuss the first challenge, computer access. To cover this topic, we will view a video in which individuals discuss the various ways they access computers, some using adaptive (or assistive) technology. Note that this video is captioned, which makes it more accessible to individuals who have hearing impairments, those for whom English is a second language, and those who have learning disabilities. This version of the video is also audio-described, so you will notice an additional voice that periodically describes the visual content for a viewer who is blind.



[Solicit questions and comments from the audience.]

The adaptive (or assistive) technology demonstrated in the video provides access to the computer hardware. However, the software, including websites, must be designed in such a way that they can be accessed by individuals who use adaptive technology. Providing information on webpages in accessible format is the right thing to do. The ADA also requires that we make information accessible to individuals with disabilities. A Department of Justice ruling in 1996, clarified that the ADA also applies to information delivered over the Internet. Developing webpages in an accessible format can also help us avoid costly and time-consuming redesign at a later time if an individual with a disability needs access to the content.

Now we will view a short video that shows how websites can be designed so that they are accessible to everyone, including people with disabilities and people for whom English is a second language.



[Solicit questions and comments from the audience.]

### Case Study

[Consider having participants discuss a case study. Case #5 on page 71 in the *Presentation Tips* section of this notebook would be appropriate.]



Show slide # 29.



**Conclusion**

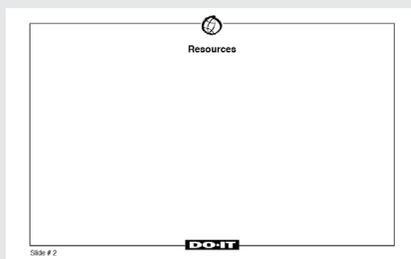
Today we have focused on how we can impart information in a way that makes it accessible to everyone. A good way to conceptualize this topic is to think about it as an application of the principles of universal design.

Universal design is “the design of products and environments to be usable by all people, without the need for adaptation or specialized design.”

If, in every way we present information, we think about the variety of characteristics of individuals with whom we want to share this information, we can ensure that everyone can access the content.

**Resources**

Show slide # 2 with your campus resources.



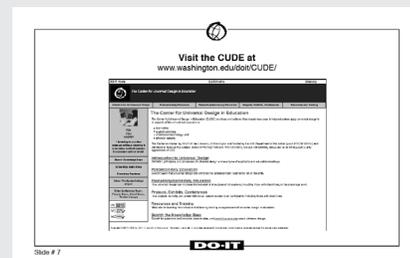
Here are some resources that might be useful to you as you work to maximize access to information for all students in your classes. [Elaborate.]

Show slide # 3.



For comprehensive information on accommodations, a wide range of case studies, frequently asked questions, and general resources, visit *The Faculty Room* at <http://www.washington.edu/doit/Faculty/> and *The Center for Universal Design in Education* at <http://www.washington.edu/doit/CUDE/>.

Show slide # 7.



These resource were developed at the University of Washington as part of a nationwide project to provide resources to faculty and administrators so that they can make their courses and programs accessible to all students. You can link to these resources from \_\_\_\_\_. [Arrange to provide a link from your campus’ disabled student services website before the presentation.] Consider linking to these websites from your department’s faculty website.



Thank you for your time today and for your interest in finding ways to ensure that all of the students in our programs have equal opportunities to learn, explore interests, and express ideas.



## Purpose

After this presentation, faculty and administrators will be able to

- summarize the legal rights of students with disabilities as they relate to computer access,
- discuss the issues, needs, and concerns of people with disabilities in accessing electronic resources,
- describe common types of adaptive technology for students with disabilities, and
- plan for the procurement of adaptive technology for campus computer workstations.

## Modifications

This presentation can be modified or expanded to include more specific information about computer technology for students with sensory, learning, or mobility disabilities by using the videos and handouts entitled *Working Together: Computers and People with Sensory Impairments*, *Working Together: Computers and People with Learning Disabilities*, and *Working Together: Computers and People with Mobility Impairments*.

## Length

45 minutes or longer with modifications.

## Presenter

Department chair, faculty, staff, TA, student, or other department member who has experience working with technology and students with disabilities. The program may be co-presented with a staff member of a campus unit responsible for providing

computer accommodations for students with disabilities.

## Preparation

- Select the presenter(s).
- Develop presentation outline and activities using the “Sample Script” provided in this section and the ideas listed in the *Presentation Tips* section of this notebook.
- Create presentation slides from provided templates.
- Add the contact information for campus resources to the “Resources” slide and to printed publications as appropriate.
- Photocopy the handout template, *Working Together: People with Disabilities and Computer Technology*. Create alternative formats as necessary.
- If presenting the optional content “Mentoring: Case Study,” photocopy the handout template *Opening Doors: Mentoring on the Internet*.
- If presenting the optional content “Universal Design” or “Planning for Computer Access,” photocopy the handout template *Equal Access: Universal Design of Instruction*.
- If expanding the content to include more information about specific disabilities, photocopy the handout templates listed under the “Modifications” section above.
- Photocopy the presentation evaluation instrument to distribute at the end of the session (see pages 189-191 for examples) or create your own.



## Building the Team

- Add a link on your department's website to *The Faculty Room* at <http://www.washington.edu/doit/Faculty/>.

### Equipment and Tools

- DVD player and monitor
- video projector, computer, and presentation slides; Internet connection (optional)
- videos (open captioned and audio described version of *Working Together: People with Disabilities and Computer Technology*, *Opening Doors: Mentoring on the Internet* (optional), and those listed under "Modifications" as desired)
- handouts (*Working Together: People with Disabilities and Computer Technology*, *Opening Doors: Mentoring on the Internet* (optional), *Equal Access: Universal Design of Instruction* (optional), and those listed under "Modifications" as desired)
- presentation evaluation instrument (pages 189-191)

### Presentation Outline

1. Distribute handout(s).
2. Introductions.
3. Begin presentation.
4. Discuss computer access and case studies.
5. Introduce and play video(s) as noted in script.
6. Discuss possible accommodation strategies on your campus.

7. Discuss department or campus issues.
8. Note campus resources.
9. Distribute and collect completed evaluation instruments.

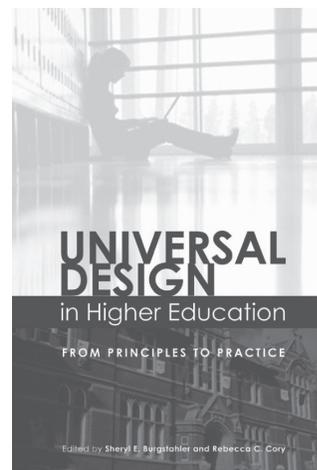
### Resources

For further preparation resources for this presentation, consult

- *The Faculty Room* at <http://www.washington.edu/doit/Faculty/Strategies/Academic/Adaptive/>

The screenshot shows the website for 'The Faculty Room' at the University of Washington. The header includes 'University of Washington', 'DO-IT Home', 'Site Map', 'Search', and 'Glossary'. Below the header is a navigation menu with categories: 'Accommodations and Universal Design', 'Rights and Responsibilities', 'Faculty Resources', 'Faculty Presentations', and 'Resources for Trainers, Staff, and Administrators'. The main content area features a title 'The Faculty Room' and a description: 'The Faculty Room is a space for faculty and administrators at postsecondary institutions to learn about how to create classroom environments and academic activities that maximize the learning of all students, including those with disabilities. Much of the content is duplicated in other publications, training materials, and web pages published by DO-IT. It includes six primary areas that address issues faced by postsecondary educators: Accommodations and Universal Design, Rights and Responsibilities, Faculty Resources, Faculty Presentations, Resources for Trainers, Staff, and Administrators, and Searchable Knowledge Base. Each area has a brief description and a link to the corresponding content.

- *Universal Design in Higher Education: From Principles to Practice* published by Harvard Education Press, 2008.





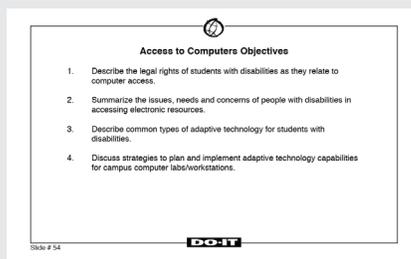
## Sample Script

Show slide # 53.



Today we will be discussing computer access and adaptive (or assistive) technology for students with varying types of disabilities.

Show slide # 54.



The objectives of today's presentation are to

- describe the legal rights of students with disabilities as they relate to computer access.
- summarize the issues, needs and concerns of people with disabilities in accessing electronic resources.
- describe common types of adaptive technology for students with disabilities.
- discuss strategies to plan and implement adaptive technology capabilities for campus computer labs/workstations.

## Computer Technology in Postsecondary Education

Computers are essential tools in academic studies and employment. It's difficult to imagine a state-of-the-art university without thinking of computer databases, email, interactive websites, and online-based distance learning. Recent advances in assistive technology, greater reliance on computers in all fields, and increased availability of electronic information have resulted in life-changing opportunities for many people with disabilities. In combination, these technologies provide people with disabilities better access to education, careers, and other life experiences that were not available to them in the past. Faculty and administrators can play important roles in ensuring access to these empowering tools for students with disabilities.

What are some of the computing resources currently used in your classes or by your department?

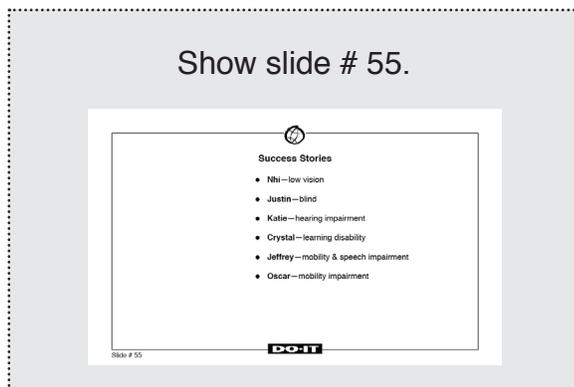
[Solicit audience input, such as online journals, websites, and databases. List items noted by participants.]

The information covered in this presentation will provide you with tools and insights that will help ensure that these resources are accessible to students with disabilities. Today, I will share some success stories that provide examples of the impact that adaptive computer technology has had for people with disabilities. Then we will consider the most important legislative directives that apply to computer access and look at some statistics about people with disabilities. With that background, a video presentation will provide an overview of how people with disabilities use computers.



Today's presentation will help you understand the impact of computer-based technologies for people with disabilities and give you ideas about improving access in your course or department. Much of the information presented today is provided in your handout *Working Together: People with Disabilities and Computer Technology*.

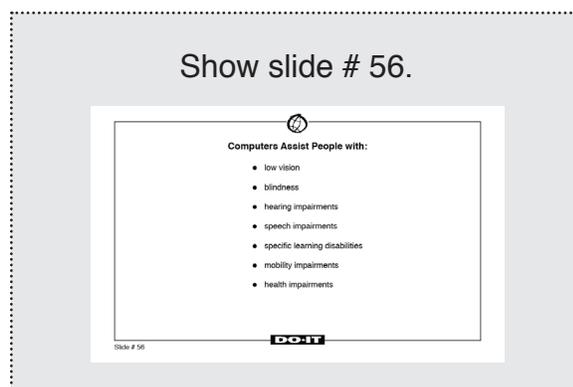
### Access to Computers: Case Studies



I'm going to start by sharing with you a few stories of people with disabilities who are able to access electronic resources, thanks to the availability of adaptive technology and accessible resources. You'll meet them in the video we'll view shortly.

- Nhi has low vision. She uses a computer that has a large screen, as well as a speech output system that reads text or images that appear on the screen. When she uses her computer she can research a term paper easily and quickly.
- Justin is blind. He uses a portable Braille display and printout system. He is able to type his notes for his college classes using the Braille display and then print them out for his teachers.

- Katie is deaf. She often uses a sign language interpreter. Online, however, Katie communicates with the reference librarian quickly and easily through email.
- Crystal has a learning disability that makes it difficult for her to read. She uses a speech output system that reads the computer screen to her. This helps her read and understand books for her classes more quickly.
- Jeffrey has a mobility impairment. He uses a keyboard on which the keys are enlarged and widely spaced to avoid hitting more than one key at a time.
- Oscar has a mobility impairment. He uses a voice-activated system that replaces his keyboard. It allows his computer to write what he says as he speaks into a microphone, allowing him to write his papers on his own. Having this adaptive technology makes him feel more independent; he doesn't have to rely on someone else as much.



These stories provide examples of students with disabilities who can successfully access computers and electronic resources. You will see more examples in the following video presentation. This presentation and the accompanying handout are both entitled

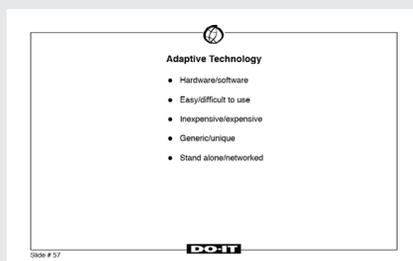


*Working Together: People with Disabilities and Computer Technology.* The handout gives an overview of computer access problems and solutions. The video highlights the educational opportunities that access to computers, adaptive technology, software, and the Internet provide to people with specific disabilities.

Show video,  
*Working Together: People with Disabilities and Computer Technology*  
(13 minutes).

As the individuals in the video demonstrate, computers help reduce many barriers faced by people with disabilities. The students in the presentation demonstrate various technologies that make it possible for them to access computing resources. These are only a few examples, since abilities, disabilities, and learning styles are unique to individuals and vary depending on different situations.

Show slide # 57.



Adaptive technology can be hardware or software, easy or difficult to use, inexpensive or expensive, generic or unique to an individual, and stand alone or network. [Provide examples of each.]

[Note: You can modify or expand this presentation to focus on specific disability types by using the videos and handouts *Working Together: Computers and People with Sensory Impairments*, *Working Together: Computers and People with Learning Disabilities*, and *Working Together: Computers and People with Mobility Impairments*.]

**Mentoring: Case Study (optional)**

Next we will consider an example of an application of computer and online technologies that benefit people with disabilities—mentoring. We will view a video presentation and review the accompanying handout, *Opening Doors: Mentoring on the Internet*. The handout gives an overview of the benefits of mentoring on the Internet and of how technology overcomes barriers found in traditional in-person mentoring. The video highlights how students develop supportive relationships with adult mentors online.

Show video,  
*Opening Doors: Mentoring on the Internet*  
(14 minutes).

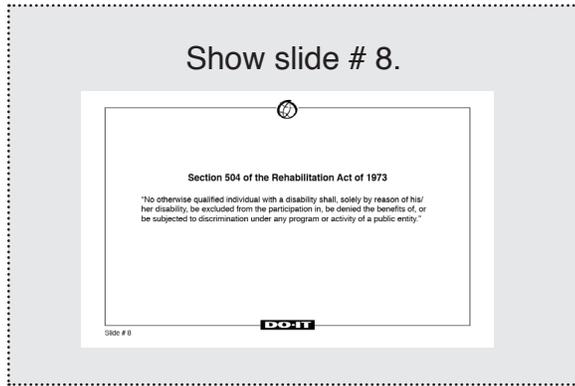
**Legal Issues**

We'll continue this presentation by talking about legal issues, universal design, and planning for computer access.

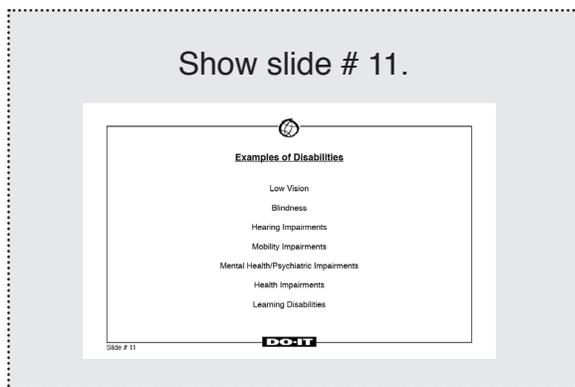
Ensuring that individuals with disabilities have access to computing resources can be argued on ethical grounds. Some simply consider it to be the right thing to do. Others are more responsive to legal mandates. The Americans with Disabilities Act (ADA) of 1990 requires that people with disabilities



be given the same access to public programs and services, including educational programs, that are offered to people without disabilities.



The ADA is federal civil rights legislation that reinforces and extends the requirements of Section 504 of the Rehabilitation Act of 1973 requirements to all postsecondary institutions. Section 504 states: “no otherwise qualified individuals with disabilities shall, solely by reason of their disabilities, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination in any program or activity of a public entity.” When people think of the ADA they often think of elevators in buildings, reserved spaces in parking lots, and lifts on busses. However, ADA accessibility requirements apply to people with all types of disabilities and to all programs and resources offered at our institutions, including those that use computers and the Internet.

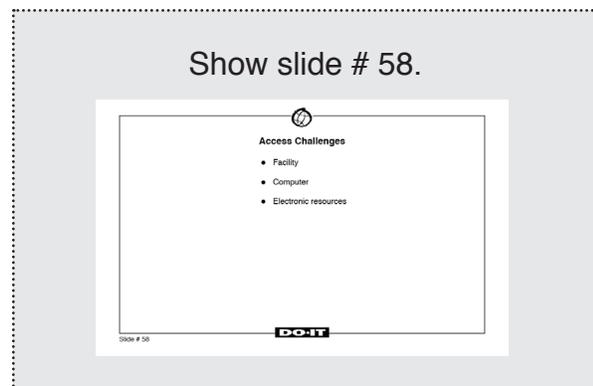


Disabilities covered by legislation include, but are not limited to, spinal cord injuries, loss of limbs, multiple sclerosis, muscular dystrophy, cerebral palsy, hearing impairments, visual impairments, speech impairments, specific learning disabilities, head injuries, psychiatric disorders, diabetes, cancer, and AIDS. The conditions listed may limit people’s abilities to perform specific tasks. Some of these conditions are readily apparent; some are invisible. Some affect computer use; some do not.

Additionally, some students who have the same diagnosis may have very different abilities when it comes to performing a specific tasks. For example, one student who has cerebral palsy may have difficulty walking. For another student, cerebral palsy may result in no functional use of his or her hands or voice. Ultimately, a student who has a disability requires accommodations only when faced with a task that requires a skill that his or her disability precludes. This may include computer access.

### Universal Design (optional)

[Include the following content if appropriate for your audience.]



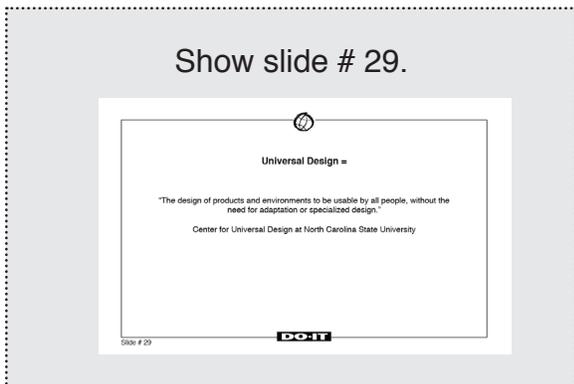
When it comes to using computing resources, individuals with disabilities face access issues in one or more of three areas. The first is access to the computing facility



itself. Users must be able to get to the facility and maneuver within it.

Second, users must be able to access a computer. When the needed accessibility features are not built into commercial products, special hardware and software (called adaptive or assistive technology) can be used to provide access. For example, people who are blind can equip their computers with software and hardware that will read aloud all text that appears on the screen.

Third, users must be able to access electronic resources. Once computer access barriers are removed, electronic resources, such as applications and websites, may present access challenges for some people with disabilities. This problem can be avoided if software and website developers employ principles of universal design when they create their products.



Designing a product or service involves the consideration of myriad factors that include aesthetics, engineering options, environmental issues, safety concerns, and cost. One issue that designers often overlook is that of universal design. In general, universal design refers to designing products and services that can be used by people with a range of characteristics, abilities, and disabilities.

Universal design is defined by the Center for Universal Design at North Carolina State University as “the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.”

At this center, a group of architects, product designers, engineers, and environmental design researchers collaborated to establish a set of principles of universal design to provide guidance in the design of environments, communications, and products.

General principles of universal design require that the design is useful and marketable to people with diverse abilities; the design accommodates a wide range of individual preferences and abilities; the design communicates necessary information effectively to the user, regardless of ambient conditions or the user’s sensory abilities; the design can be used efficiently and comfortably, and with a minimum of fatigue; and appropriate size and space is provided for approach, reach, manipulation, and use regardless of user’s body size, posture, or mobility.

When designers apply these principles, their products meet the needs of potential users with a wide variety of characteristics. Disability is just one of these characteristics. For example, one person could be male, tall, fifteen years old, a poor reader, and blind. All of these characteristics, including his blindness, should be considered when developing a product he might use.

In the case of computer design, people with disabilities benefit when computers and software are designed with universal access in mind. Then, they can access the computer

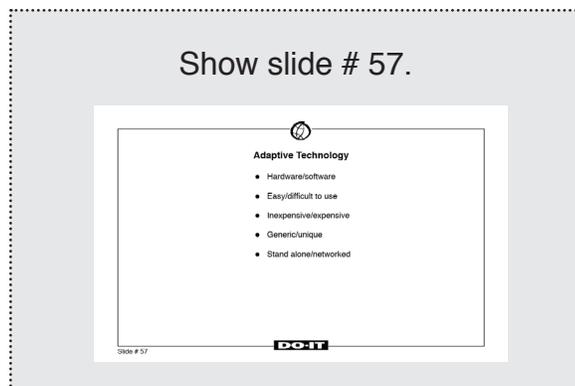


using built-in features or, in some cases, with the addition of adaptive technology.

### Planning for Computer Access (optional)

[This section is optional; include if appropriate for your audience.]

Computer and network technologies can play a key role in increasing the independence, productivity, and participation of students with disabilities. Now that we've considered universal design, let's think generally about some of the characteristics of adaptive technology to consider as you plan to incorporate such technology into your department.



Adaptive technology comes in many forms with many different characteristics. It comes as hardware, software, or a combination of the two. What examples of hardware and software did you see in the video presentation?

[Examples:

- Jeffrey has a mobility impairment. He uses a keyboard on which the keys are enlarged and widely spaced to avoid hitting more than one key at a time.
- Oscar has a mobility impairment as well, and he uses a voice-activated system that replaces his keyboard.

It allows his computer to write what he says as he speaks into the microphone, allowing him to write his papers on his own.]

Adaptive technology can be easy to install or it can require long-range planning, analysis of needs and options, and funding for implementation. For example, a trackball is inexpensive and can be easily added to a workstation, assisting people who have difficulty using a standard mouse. On the other hand, a blind student may use hardware that includes a personal computer, screen reading software, and Braille printer. Setup and support of such a system requires extensive training to use effectively. Adaptive technology can be generic or unique to the individual. For example, screen enlargement software serves people with a variety of visual and learning impairments. On the other hand, a speech input system needs to be trained by an individual user. Each user must train the system to recognize his or her voice.

Adaptive technology software solutions, such as screen enlargement programs, can be installed on one machine or networked so that they are available from more than one computer workstation. Solutions that incorporate hardware are often most appropriate on stand-alone stations. However, if these are stored near computer workstations, they can be easily moved to the particular station a person is using.

Given these characteristics of adaptive technology, multiple approaches should be considered when providing accommodations. Some solutions can be implemented quickly and easily. These solutions will provide quick rewards that



will provide the necessary motivation and support for the longer processes required to install more complex equipment and software.

Remember, you don't have to do everything at once. A department can start small and add to its collection of adaptive technology as it receives requests and as staff gain skills in providing training and services for them.

**Discussion Questions**

[Discuss these and other questions of interest to participants.]

1. What are the ethical and legal issues related to providing students with disabilities access to computing resources?
2. How would you respond to administrative concerns related to the added costs involved in making campus computing resources accessible to people with disabilities?
3. In our institution, who should be responsible for ensuring that computing resources are accessible to individuals with disabilities?
4. What procedures do we have or should we have for responding to accommodation requests from students with disabilities?
5. When should we be proactive and when should we be reactive regarding provision of equipment and software that makes computers accessible to students with disabilities?

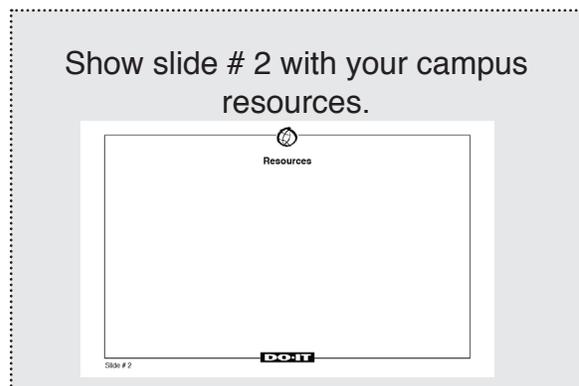
**Case Study**

[Consider having participants discuss a case study. Case #2 on page 65 in the *Presentation Tips* section of this notebook would be appropriate.]

**Conclusion**

This presentation addressed issues related to adaptive technology. We learned how adaptive technology can assist people with a variety of disabilities. But remember, there are two other parts to the access equation—ensuring that campus computer facilities are accessible to students with disabilities and using universal design principles to ensure that electronic resources at our school are accessible. Only when all facilities, computers, and electronic resources are accessible can students with disabilities participate on a level playing field in academics and careers.

**Resources**



Here are some resources that might be useful to you as you work to maximize effective communication with all students in your classes. [Elaborate.]



Show slide # 3.



For comprehensive information on accommodations, a wide range of case studies, frequently asked questions, and general resources, visit *The Faculty Room* at <http://www.washington.edu/doit/Faculty/>. This resource was developed by the University of Washington as part of a nationwide project to provide resources to faculty and administrators so that they can make their courses and programs accessible to all students. You can link to this resource from \_\_\_\_\_. [Arrange to provide a link from your campus' disabled student services website before the presentation.] Consider linking to this website from your department's faculty website.

Thank you for your time today and for your interest in finding ways to ensure that all of the students in our programs have equal opportunities to learn, explore interests, and express ideas.

# Making Computer Labs Accessible to Everyone



## Purpose

After this presentation, participants will be able to

- summarize the legal rights of students with disabilities with regard to computer access,
- plan for making computer services accessible to a wide range of users by applying universal design principles, and
- list steps that can be taken to ensure that students with disabilities have access to campus computer labs.
- Add the contact information for campus resources to the “Resources” slide and to printed publications as appropriate.
- Photocopy the handout template *Equal Access: Universal Design of Computer Labs*. Create alternative formats as necessary.
- Photocopy the presentation evaluation instrument to distribute at the end of the session (see pages 189-191 for examples) or create your own.
- Add a link on your department’s website to *The Faculty Room* at <http://www.washington.edu/doit/Faculty/> and to *The Center for Universal Design in Education* at <http://www.washington.edu/doit/CUDE/>.

## Length

Approximately 45-60 minutes.

## Presenter

Department chair, faculty, staff, TA, student, or other department member who has experience working with computer facilities and students with disabilities. The program may be co-presented with a staff member of a campus unit responsible for providing computer accommodations for students with disabilities.

## Preparation

- Select the presenter(s).
- Develop presentation outline and activities using the “Sample Script” provided in this section and the ideas listed in the *Presentation Tips* section of this notebook.
- Create presentation slides from provided templates.
- DVD player and monitor
- video projector, computer, and presentation slides; Internet connection (optional)
- video (open captioned and audio described version of *Equal Access: Universal Design of Computer Labs*)
- optional video (open captioned and audio described version of *Computer Access: In Our Own Words*)
- handout (*Equal Access: Universal Design of Computer Labs*)
- presentation evaluation instrument (pages 189-191)



## Building the Team

### Presentation Outline

1. Distribute handout.
2. Introductions.
3. Begin presentation.
4. Discuss access challenges and universal design.
5. Introduce and play video(s) as noted in script.
6. Discuss possible accommodations on your campus.
7. Discuss department or campus issues.
8. Note campus resources.
9. Distribute and collect completed evaluation instruments.

### Resources

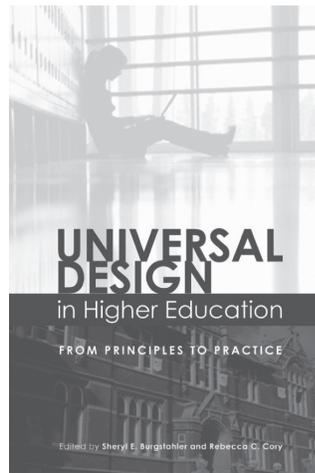
For further preparation resources for this presentation, consult

- *The Faculty Room* at <http://www.washington.edu/doit/Faculty/Strategies/Academic/ComputerLabs/>

- *The Center for Universal Design in Education* at <http://www.washington.edu/doit/CUDE/>

DO-IT Home	CUDE Home	Glossary
<b>The Center for Universal Design in Education</b>		
<p><b>The Center for Universal Design in Education</b> The Center for Universal Design in Education (CUDE) develops and collects Web-based resources to help educators apply universal design to all aspects of the educational experience.</p> <ul style="list-style-type: none"> <li>• instruction,</li> <li>• student services,</li> <li>• information technology, and</li> <li>• physical spaces.</li> </ul> <p>The Center is directed by DO-IT at the University of Washington and funded by the U.S. Department of Education (grant #P333A05006) and the National Science Foundation (award #HRD-0227995 and HRD-0533504). Consult the following resources for an introduction to and applications of UDE.</p>		
<p><b>Introduction to Universal Design</b></p> <p><b>Did You Know?</b></p> <p>Listening to a video product without viewing it simulates content access to a person who is blind.</p> <p><b>Search Knowledge Base</b></p> <p><b>Knowledge Base Index</b></p> <p><b>Promising Practices</b></p> <p><b>About The AccessCollege project</b></p> <p>Enter Conference Room, Faculty Room, Board Room, Student Lounge</p> <p>W3C WCAG WCAG 2.0 WCAG 2.1</p>	<p><b>Introduction to Universal Design</b> Definition, principles, and processes of universal design and examples of applications in educational settings.</p> <p><b>Postsecondary Education</b> Specific ways that universal design can enhance the postsecondary experience for all students.</p> <p><b>Elementary/Secondary Education</b> How universal design can increase the inclusion and success of all students, including those with disabilities, at the precollege level.</p> <p><b>Projects, Exhibits, Conferences</b> How projects, exhibits, and presentations can assure access to all participants, including those with disabilities.</p> <p><b>Resources and Training</b> Materials for learning more about and delivering training on applications of universal design in education.</p> <p><b>Search the Knowledge Base</b> Search for questions and answers, case studies, and <i>promising practices</i> about universal design.</p>	
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- *Universal Design in Higher Education: From Principles to Practice* published by Harvard Education Press, 2008.



University of Washington		DO-IT Home	Site Map	Search	Glossary
<b>The Faculty Room</b>					
<p><b>Accommodations and Universal Design</b></p> <p><b>Search Knowledge Base</b></p> <p><b>Knowledge Base Articles by Topic</b></p> <p><b>About The Faculty Room project</b></p> <p>Enter Board Room, Center for Universal Design in Education, Conference Room, or Student Lounge</p> <p><b>Evaluate this site:</b></p>	<p><b>Disabilities, Opportunities, Inter networks, and Technology</b></p> <p><b>The Faculty Room</b></p> <p>The Faculty Room is a space for faculty and administrators at postsecondary institutions to learn about how to create classroom environments and academic activities that maximize the learning of all students, including those with disabilities. Much of the content is duplicated in other publications, training materials, and web pages published by DO-IT. It includes six primary areas that address issues faced by postsecondary educators:</p> <p><b>Accommodations and Universal Design</b> Strategies for creating (universal design) and modifying (accommodations) academic environments and activities to maximize the learning of students with a wide range of abilities and disabilities.</p> <p><b>Rights and Responsibilities</b> The rights and responsibilities of faculty, campus services, and students with disabilities regarding academic accommodations.</p> <p><b>Faculty Resources</b> Resources to help instructors more fully include students with disabilities in course activities.</p> <p><b>Faculty Presentations</b> Video, publications, and interactive presentations designed especially for postsecondary educators.</p> <p><b>Resources for Trainers, Staff, and Administrators</b> Resources for staff and administrators who support faculty in making their academic offerings accessible to students with disabilities.</p> <p><b>Searchable Knowledge Base</b> A searchable database of frequently asked questions, case studies, and <i>promising practices</i> related to how postsecondary faculty can fully include students with disabilities in their courses.</p>				



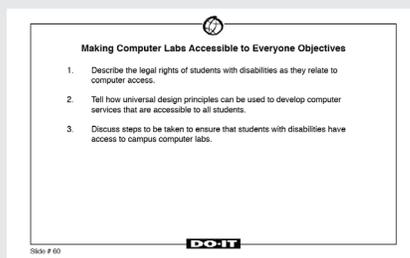
## Sample Script

Show slide # 59.



Today we'll be discussing how to make computer labs accessible to all students, including those with disabilities.

Show slide # 60.



The objectives for this presentation are to

- describe the legal rights of students with disabilities as they relate to computer access.
- tell how universal design principles can be used to develop computer services that are accessible to all students.
- discuss steps to be taken to ensure that students with disabilities have access to campus computer labs.

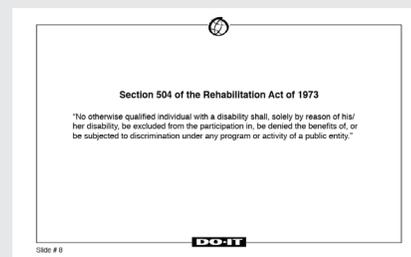
Everyone who needs to use your computer lab should be able to do so comfortably. As increasing numbers of people with disabilities pursue educational

opportunities that require computer use, access to computing facilities becomes even more critical. The key is to provide equal access.

## Legal Issues

Ensuring that individuals with disabilities have access to computing resources can be argued on ethical grounds. Some simply consider it to be the right thing to do. Others are more responsive to legal mandates. The Americans with Disabilities Act (ADA) of 1990 requires that people with disabilities be given the same access to public programs and services, including educational programs, that are offered to people without disabilities.

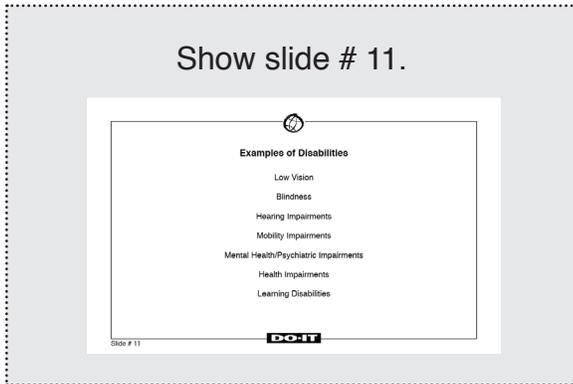
Show slide # 8.



The ADA is civil rights legislation that reinforces and extends the requirements of Section 504 of the Rehabilitation Act of 1973 to all postsecondary institutions. Section 504 states: "no otherwise qualified individuals with disabilities shall, solely by reason of their disabilities, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination in any program or activity of a public entity." When people think of the ADA they often think of elevators in buildings, reserved spaces in parking lots, and lifts on busses. However, the ADA accessibility requirements apply to people with all types of disabilities and to all programs



and resources offered at our institutions, including those that use computers and the Internet.



Disabilities covered by legislation include, but are not limited to spinal cord injuries, loss of limbs, multiple sclerosis, muscular dystrophy, cerebral palsy, hearing impairments, visual impairments, speech impairments, learning disabilities, head injuries, psychiatric disorders, diabetes, cancer, and AIDS. The conditions listed may limit people's abilities to perform specific tasks. Some of these conditions are readily apparent; some are invisible. Some affect computer use; some do not.

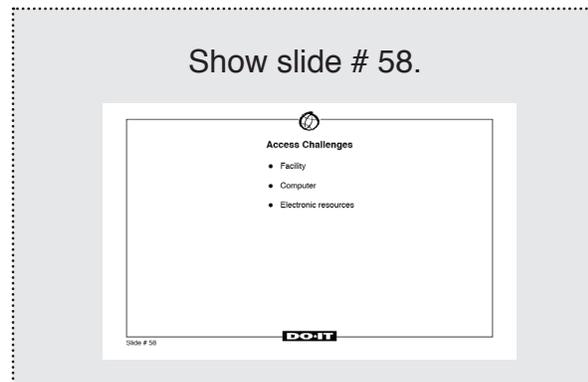
Additionally, some students who have the same diagnosis may have very different abilities when it comes to performing specific tasks. For example, one student who has cerebral palsy may have difficulty walking. For another student, cerebral palsy may result in no functional use of his hands or voice. Ultimately, a student who has a disability requires accommodations only when faced with a task that requires a skill that his or her disability precludes. This may include computer access.

In summary, federal legislation requires that we accept otherwise qualified students with disabilities into our academic programs. Additionally, we should work with students

to identify and implement academic accommodations, which will ensure that they have educational opportunities equal to those of their peers without disabilities. Ensuring access to computers and information technology is also an important step in leveling the playing field for students with disabilities in postsecondary institutions.

The rest of today's presentation will help you develop an understanding of access challenges, universal design principles, and strategies to create accessible computer labs for all students.

### Access Challenges

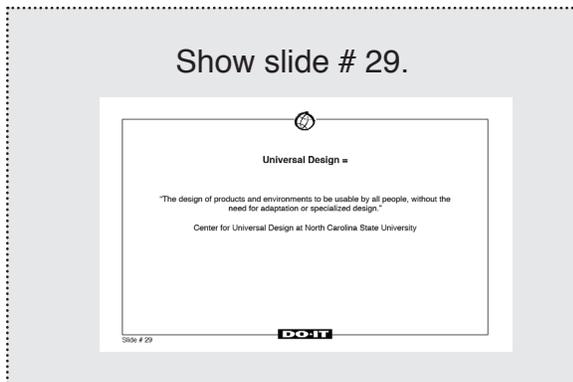


When it comes to using computer resources, students with some disabilities face access issues in one or more of three areas. The first is access to the computing facility itself. Students must be able to get to the facility and maneuver within it. Second, they must be able to access the computer. When the needed accessibility features are not built into commercial products, a wide variety of special hardware and software, adaptive (or assistive) technology, provides solutions. For example, people who are blind can equip their computers with software and hardware that will read aloud all text that appears on the screen.



[Optional: If you would like your audience to gain an overview of ways individuals with disabilities access and use computer technology, show the video *Access to Computers: In Our Own Words*.]

Third, users must be able to access electronic resources. Once computer access barriers are removed, electronic resources, such as software and websites, may present access challenges for some people with disabilities. This problem can be avoided if software and website developers employ principles of universal design when they create their products. The first challenge, computer lab access, is the topic of our presentation today.



## Universal Design

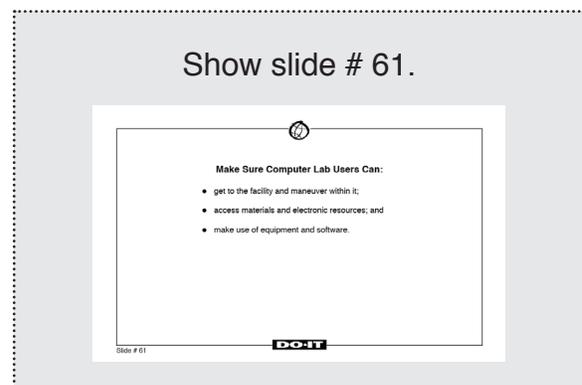
We'll start by talking about principles of universal design. Designing a product or service involves the consideration of myriad factors that include aesthetics, engineering options, environmental issues, safety concerns, and cost. One issue that designers often overlook is universal design. In general, universal design means designing products and services that can be used by people with a range of characteristics, abilities, and disabilities.

General principles of universal design require that the design is useful and marketable to people with diverse abilities;

the design accommodates a wide range of individual preferences and abilities; the design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities; and the design can be used by individuals with a wide variety of characteristics.

When designers apply these principles, their products meet the needs of potential users with a wide variety of characteristics. Disability is just one of these characteristics. For example, one person could be male, tall, fifteen years old, a poor reader, and blind. All of these characteristics, including his blindness, should be considered when developing a product he might use.

In the case of a computer lab, rather than design your facility for the average user, design it for people with a broad range of abilities. Keep in mind that individuals using your computing lab may have learning disabilities or visual, speech, hearing, and mobility impairments.



## Accessible Computer Labs

As you plan services in your computing facility, consider all of your potential users, including those with disabilities. Make sure lab users can

- get to the facility and maneuver within it,



## Building the Team

- access materials and electronic resources, and
- make use of equipment and software.

Also, make sure that staff are trained to support people with disabilities and have a plan in place to respond to specific requests in a timely manner. With these goals in mind, you can make your lab accessible to everyone. Let's watch the video *Equal Access: Computer Labs* to learn about the challenges and solutions for designing an accessible facility. Then we'll review some of the guidelines listed in your handout with the same title.

Show video,  
*Equal Access: Universal Design of  
Computer Labs*  
(11 minutes).

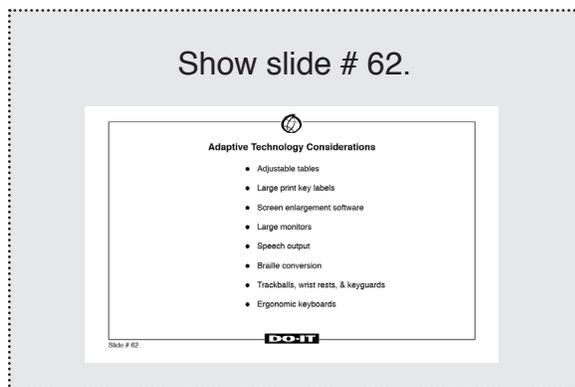
You can use the list of guidelines in the handout as a starting point for surveying your computer facility for accessibility. Designing an academic or work area that is accessible to everyone begins with the physical environment of the facility. Ask the following questions when determining how to make your facility more accessible [have participants refer to handout *Equal Access: Universal Design of Computer Labs*]:

- Is the lab wheelchair accessible?
- Are doorway openings at least 32 inches wide and are doorway thresholds no higher than a ½ inch vertically?
- Are aisles kept wide and clear for wheelchair users? Have protruding objects been removed or minimized for the safety of the users who are visually impaired?
- Are printed materials within reach from a variety of heights and not blocked by furniture?
- Are all levels of the computer facility connected? Are ramps or elevators provided as an alternative to stairs? Do elevators have both auditory and visual signals for designating floors? Are elevator controls marked in large print and Braille or raised letters? Can people seated in wheelchairs easily reach all of the elevator controls?
- Are wheelchair-accessible restrooms with well-marked signage available near the lab?
- Are service desks wheelchair accessible?
- Are there ample high-contrast, large print directional signs throughout the lab?
- Is equipment marked with large print and Braille labels?
- Are hearing protectors and quiet areas available for users who are distracted by noise and movement around them?
- Is at least one table for each type of computer adjustable so that a student or an employee who uses a wheelchair can type comfortably? Can users in wheelchairs reach the adjustment controls?
- Are wrist rests available for those who require extra wrist support while typing?



- Are document holders available to help position work papers so that they can be easily read?
- Is there a closed-circuit TV available to enlarge documents and user guides for lab users with low vision?
- at least one adjustable table for each type of electronic resource provides access to patrons who use wheelchairs;
- large-print key labels assist patrons with low vision;

In a computer lab, it is desirable to provide options at a computer workstation that will address the needs of a variety of users. You should also have procedures in place to deal with specific needs that these general solutions cannot address. Include students in discussions to come up with creative, simple solutions. For example, in the video, you saw Mitch, whose health impairment required him to lay on his side for a month. Staff turned Mitch's monitor on its side and built a holder for his keyboard so that he could use it independently.



Remember, you don't have to do everything at once. Start small and add to your collection of adaptive technology as you receive requests and as computer lab staff gain skills in providing training and services. Here is a sample of the adaptive technology you might want to purchase in order to get started right now. As you review this sample list, describe the types of adaptive technology, if any, currently available in your facility. [Encourage participants to share their ideas.] This list is also in your handout:

- software to enlarge screen images provides access to patrons with low vision and learning disabilities;
- large monitors of at least 17-inches assist patrons with low vision and learning disabilities;
- a speech output system can be used by patrons with low vision, blindness, and learning disabilities;
- Braille conversion software and a Braille printer can provide Braille output for patrons who are blind;
- trackballs provide an alternative for those who have difficulty controlling a mouse; wrist rests and keyguards assist patrons with limited fine motor skills; and
- different types of ergonomic keyboards are available to assist those with a variety of needs; compact keyboards are available for those with limited range of motion.

### Discussion Questions

[Discuss the following questions as well as other relevant questions with participants.]

1. What are the ethical and legal issues related to providing students with disabilities access to resources in our computer labs?



2. How would you respond to administrative concerns related to the added costs involved in making computer labs accessible to people with disabilities?
3. In our institution, who should be responsible for ensuring that computing resources are accessible to individuals with disabilities?
4. What procedures do we have, or should we have, for responding to accommodation requests from students with disabilities?
5. What changes can we make now so that our computer labs are more accessible to students with disabilities?

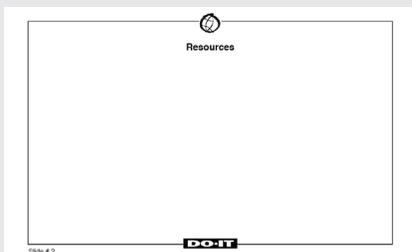
### Case Study

[Consider having participants discuss a case study. Case #2 on page 65 in the *Presentation Tips* section of the notebook would be appropriate.]

### Conclusion

Making your computing resources accessible to all students, including those with disabilities, is a legal requirement and the right thing to do. Employing universal design principles as you plan for users with a broad range of abilities and disabilities will reduce the need for special accommodations as people with disabilities access your facility.

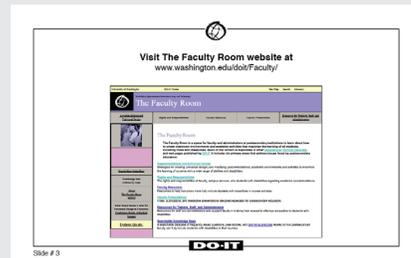
Show slide # 2 with your campus resources.



### Resources

Here are some resources that might be useful to you as you work to maximize design computer labs that are accessible to all students, including those with disabilities. [Elaborate.]

Show slide # 3.



For comprehensive information on accommodations, a wide range of case studies, frequently asked questions, and general resources, visit *The Faculty Room* at <http://www.washington.edu/doit/Faculty/>. This resource was developed at the University of Washington as part of a nationwide project to provide resources to faculty and administrators so that they can make their courses and programs accessible to all students. You can link to this resource from \_\_\_\_\_. [Arrange to provide a link from your campus' disabled student services website before the presentation.] Consider linking to this website from your department's faculty website.

Thank you for your time today and for your interest in finding ways to ensure that all of the students in our programs have equal opportunities to learn, explore interests, and express ideas.



## Purpose

After this presentation, faculty and administrators will be more aware of

- potential barriers to information access on websites for students with disabilities,
- their institution's legal responsibilities for ensuring equal access to information presented on websites,
- universal design guidelines for developing accessible websites, and
- universal design principles for developing websites and other electronic resources.

## Length

Approximately 45-60 minutes.

## Presenter

Department chair, faculty, staff, TA, student, or other department member who has an understanding of technology used by students who have disabilities and of key elements of accessible website design. This presentation may be presented or co-presented by a staff member of a campus unit responsible for providing academic accommodations for students with disabilities and a website developer.

## Preparation

- Select the presenter(s).
- Develop presentation outline and activities using the "Sample Script" provided in this section and the ideas listed in the *Presentation Tips* section of this notebook.

- Create presentation slides from provided templates.
- Add the contact information for campus resources to the "Resources" slide and to printed publications as appropriate.
- Photocopy the handout templates *Working Together: People with Disabilities and Computer Technology*, *World Wide Access: Accessible Web Design*, and *Web Accessibility: Guidelines for Administrators* (optional). Create alternative formats as necessary.
- Photocopy the presentation evaluation instrument to distribute at the end of the session (see pages 189-191 for examples) or create your own.
- Add a link on your department's website to *The Faculty Room* at <http://www.washington.edu/doit/Faculty/> and to *The Center for Universal Design in Education* at <http://www.washington.edu/doit/CUDE/>.

## Equipment and Tools

- DVD player and monitor
- video projector, computer, and presentation slides; Internet connection (optional)
- videos (open captioned and audio described versions of *Computer Access: In Our Own Words* and *World Wide Access: Accessible Web Design*)
- handouts (*Working Together: People with Disabilities and Computer Technology*, *World Wide Access: Accessible Web Design*, and *Web Accessibility: Guidelines for Administrators* (optional))



## Building the Team

- presentation evaluation instrument (pages 189-191)

### Presentation Outline

1. Distribute handouts.
2. Introductions.
3. Begin presentation.
4. Introduce and play videos as noted in the script.
5. Discuss universal design, accessible website design, and possible accommodations on your campus.
6. Note campus resources.
7. Distribute and collect completed evaluation instruments.

### Resources

For further preparation resources for this presentation, consult

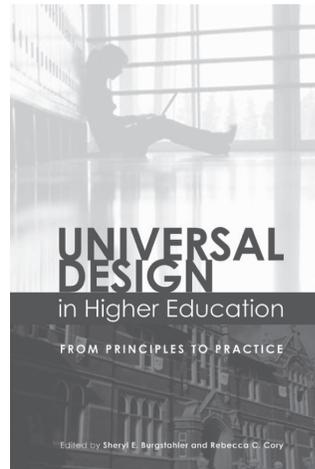
- *The Faculty Room* at <http://www.washington.edu/doit/Faculty/Strategies/Academic/Webpages/>

University of Washington		DO-IT Home		Site Map Search Glossary	
Accommodations and Universal Design		Rights and Responsibilities	Faculty Resources	Faculty Presentations	Resources for Trainers, Staff, and Administrators
		<p><b>The Faculty Room</b></p> <p>The Faculty Room is a space for faculty and administrators at postsecondary institutions to learn about how to create classroom environments and academic activities that maximize the learning of all students, including those with disabilities. Much of the content is duplicated in other publications, training materials, and web pages published by DO-IT. It includes six primary areas that address issues faced by postsecondary educators:</p> <ul style="list-style-type: none"> <li><a href="#">Accommodations and Universal Design</a> Strategies for creating (universal design) and modifying (accommodations) academic environments and activities to maximize the learning of students with a wide range of abilities and disabilities.</li> <li><a href="#">Rights and Responsibilities</a> The rights and responsibilities of faculty, campus services, and students with disabilities regarding academic accommodations.</li> <li><a href="#">Faculty Resources</a> Resources to help instructors more fully include students with disabilities in course activities.</li> <li><a href="#">Faculty Presentations</a> Video, publications, and interactive presentations designed especially for postsecondary educators.</li> <li><a href="#">Resources for Trainers, Staff, and Administrators</a> Resources for staff and administrators who support faculty in making their academic offerings accessible to students with disabilities.</li> <li><a href="#">Searchable Knowledge Base</a> A searchable database of frequently asked questions, case studies, and promising practices related to how postsecondary faculty can fully include students with disabilities in their courses.</li> </ul>			
Search Knowledge Base					
Knowledge Base Index					
About The Faculty Room project					
Enter Board Room, Center for Universal Design in Education Conference Room, or Student Lounge					
Evaluate this site:					

- *The Center for Universal Design in Higher Education* at <http://www.washington.edu/doit/CUDE/>

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<p><b>DID YOU KNOW?</b></p> <p>Listening to a video product without viewing it simulates content access to a person who is blind.</p>		<p><b>The Center for Universal Design in Education</b></p> <p>The Center for Universal Design in Education (CUDE) develops and collects Web-based resources to help educators apply universal design to all aspects of the educational experience:</p> <ul style="list-style-type: none"> <li>• instruction;</li> <li>• student services;</li> <li>• information technology; and</li> <li>• physical spaces.</li> </ul> <p>The Center is directed by DO-IT at the University of Washington and funded by the U.S. Department of Education (grant #P333A050084) and the National Science Foundation (award #HSD-0227899 and HSD-0633064). Consult the following resources for an introduction to and applications of UDE.</p>			
Search Knowledge Base		<p><b>Introduction to Universal Design</b></p> <p>Definition, principles, and processes of universal design and examples of applications in educational settings.</p>			
Knowledge Base Index		<p><b>Postsecondary Education</b></p> <p>Specific ways that universal design can enhance the postsecondary experience for all students.</p>			
Promising Practices		<p><b>Elementary/Secondary Education</b></p> <p>How universal design can increase the inclusion and success of all students, including those with disabilities, at the precollege level.</p>			
About The AccessCollege project		<p><b>Projects, Exhibits, Conferences</b></p> <p>How projects, exhibits, and presentations can assure access to all participants, including those with disabilities.</p>			
Enter Conference Room, Faculty Room, Board Room, Student Lounge		<p><b>Resources and Training</b></p> <p>Materials for learning more about and delivering training on applications of universal design in education.</p>			
		<p><b>Search the Knowledge Base</b></p> <p>Search for questions and answers, case studies, and promising practices about universal design.</p>			
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- *Universal Design in Higher Education: From Principles to Practice* published by Harvard Education Press, 2008.





## Sample Script

Show slide # 63.



Today we'll be discussing the universal design of websites to allow access to information for all people, regardless of their abilities or disabilities.

Show slide # 64.



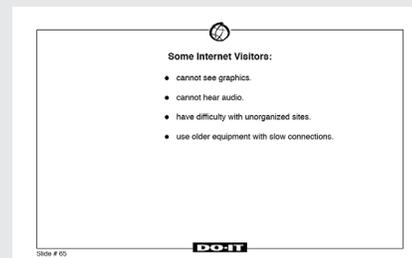
The objectives of today's presentation are to

- list potential barriers to accessing information on webpages for students with disabilities.
- describe the institution's legal responsibility to ensure access to information presented on webpages.
- describe universal design guidelines for developing accessible webpages.

The Internet is a popular tool for educators. Faculty members can post syllabi and other course materials on websites. They can also provide links to useful resources

for students. Much of the Internet's power comes from the fact that it presents information in a variety of formats while also cataloging information in a searchable manner. Unfortunately, due to the multimedia nature of the web, combined with the poor design of some websites, many students and other web users cannot use the full range of resources this revolutionary tool provides.

Show slide # 65.



For example, some visitors cannot see graphics because of visual impairments or cannot hear audio because of hearing impairments. Some users have difficulty navigating sites that are poorly organized with unclear directions because they have learning disabilities, speak English as a second language, or are younger than the average user. Other visitors use older equipment or slow connections or modems that limit access to multimedia features.

Some students use adaptive (or assistive) technology with their computer to access the web. For example, a student who is blind may use a speech output system to read aloud text that is presented on the screen. This system may be composed of screen reading software and a voice synthesizer. A person with a mobility impairment may not be able to use a mouse and therefore relies on the keyboard for web browsing.



We will now view a video in which individuals discuss various ways that they access computers, some using adaptive technology.

Show video,  
*Computer Access: In Our Own Words*  
(10 minutes).

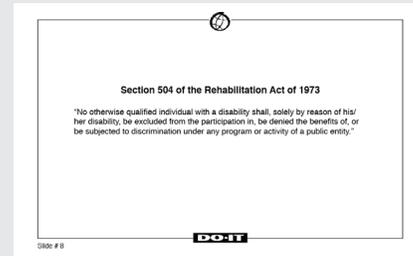
It is important to keep in mind that the people in this video might be accessing your website. To create resources that can be used by the widest spectrum of potential visitors rather than an idealized average, website designers should apply universal design principles. They should consider the special needs of individuals with disabilities, individuals older or younger than the average user, people for whom English is a second language, and those using outdated hardware and software.

### Legal Issues

Ensuring that individuals with disabilities have access to computing resources can be argued on ethical grounds. Some simply consider it to be the right thing to do. Others are more responsive to legal mandates.

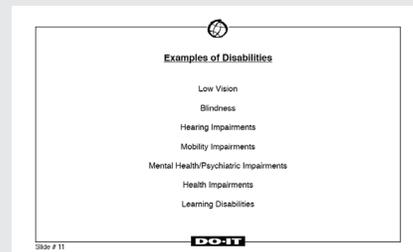
The Americans with Disabilities Act (ADA) of 1990 requires that people with disabilities be given the same access to public programs and services, including educational programs, that are offered to people without disabilities.

Show slide # 8.



The ADA is civil rights legislation that reinforces and extends the requirement of Section 504 of the Rehabilitation Act of 1973 that “no otherwise qualified individuals with disabilities shall, solely by reason of their disabilities, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination in any program or activity of a public entity.” When people think of the ADA, they often think of elevators in buildings, reserved spaces in parking lots, and lifts on busses. However, the ADA accessibility requirements apply to people with all types of disabilities and to all programs and resources offered at our institutions, including those offered using computers and the Internet.

Show slide # 11.



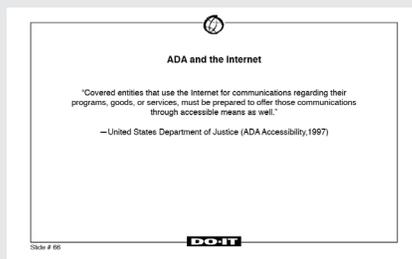
Disabilities covered by legislation include, but are not limited to, spinal cord injuries, loss of limbs, multiple sclerosis, muscular dystrophy, cerebral palsy, hearing impairments, visual impairments, speech



impairments, learning disabilities, head injuries, psychiatric disorders, diabetes, cancer, and AIDS. The conditions listed may limit people's abilities to perform specific tasks. Some of these conditions are readily apparent; some are invisible. Some affect computer use; some do not.

Additionally, some students who have the same diagnosis may have very different abilities when it comes to performing specific tasks. For example, one student who has cerebral palsy may have difficulty walking. For another student, cerebral palsy may result in no functional use of his or her hands or voice. Ultimately, a student who has a disability requires accommodations only when faced with a task that requires a skill that his or her disability precludes. This may include computer access.

### Show slide # 66.



The Department of Justice has clarified that the ADA applies to Internet resources in that, "covered entities that use the Internet for communications regarding their programs, goods, or services, must be prepared to offer those communications through accessible means as well."

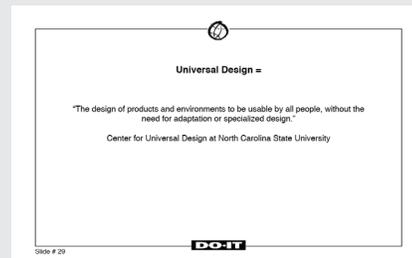
As more information is delivered using network technologies, postsecondary faculty and administrators play an increasingly important role in ensuring that everyone has access to resources provided via the Internet.

A good place to begin discussing accessible web design is with the principles of universal design.

### Universal Design

Designing a product or service involves the consideration of myriad factors that include aesthetics, engineering options, environmental issues, safety concerns, and cost. One issue that designers often overlook is that of universal design.

### Show slide # 29.



In general, universal design means designing products and services that can be used by people with a range of characteristics, abilities, and disabilities.

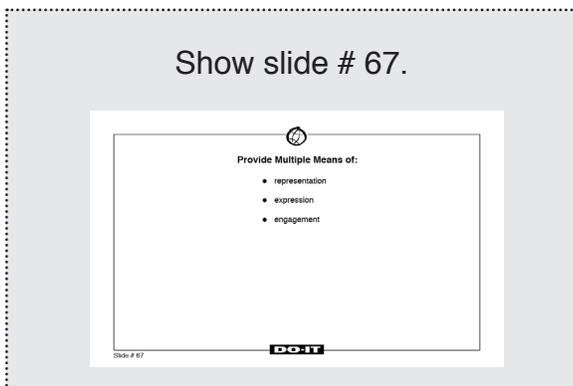
Universal design is defined by the Center for Universal Design at North Carolina State University as "the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design." At the center, a group of architects, product designers, engineers, and environmental design researchers collaborated to establish a set of principles of universal design to provide guidance in the design of environments, communications, and products.

General principles of universal design require that the design is useful and marketable to people with diverse abilities;



the design accommodates a wide range of individual preferences and abilities; the design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities; the design can be used efficiently and comfortably, and with a minimum of fatigue; and appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

Electronic resources that are universally designed provide multiple means of representation, expression, and engagement.

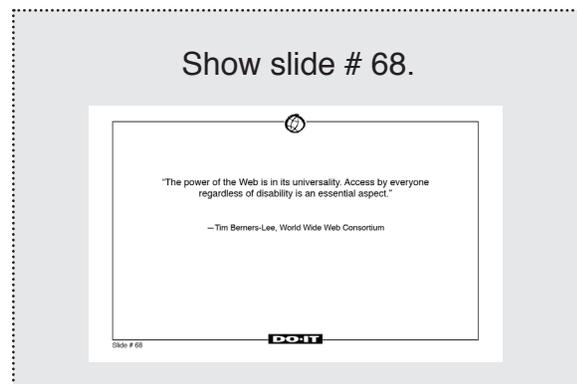


When designers apply these principles, their products meet the needs of potential users with a wide variety of characteristics. Disability is just one of these characteristics. For example, one person could be male, tall, fifteen years old, a poor reader, and blind. All of these characteristics, including blindness, should be considered when developing a product he might use.

Universal design techniques can be applied in the design of packaging, software, appliances, transportation systems, physical spaces, and many other products, services, and environments. Examples of universal design in architecture are ramps, automatic door openers, and Braille labels on elevator control buttons. Following universal design

principles in creating a website provides access to all users regardless of their abilities, their disabilities, or the limitations of their equipment and software.

### Accessible Website Design



When universal design principles are applied to the design of webpages, people using a wide range of adaptive technology can access them. The World Wide Web Consortium (W3C), an industry group founded in 1994 that develops common protocols which enhance interoperability and guide the evolution of the web, has taken a leadership role in this area. The W3C is committed to promoting the full potential of the Internet to ensure a high degree of usability by people with disabilities.

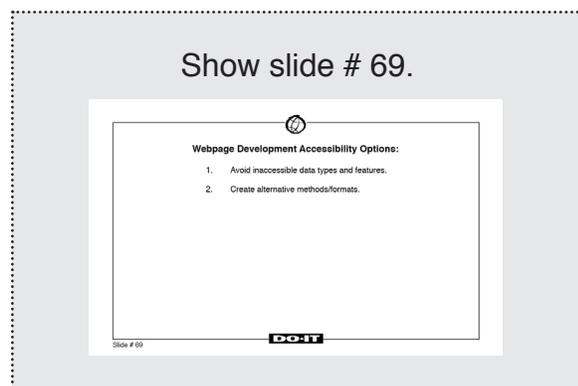
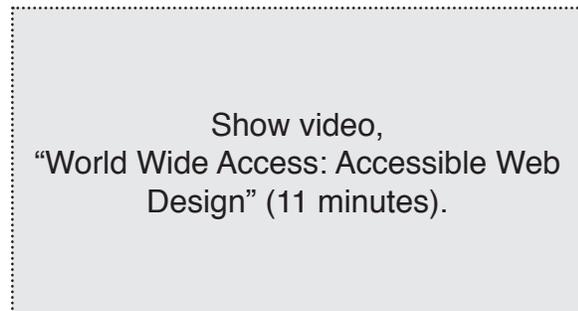
As stated by Tim Berners-Lee, W3C Director and inventor of the World Wide Web, "The power of the web is in its universality. Access by everyone regardless of disability is an essential aspect." The Web Accessibility Initiative (WAI) coordinates W3C's efforts with organizations worldwide to promote accessibility. Its *Web Content Accessibility Guidelines* tell how to design webpages that are accessible to people with a wide variety of disabilities.

In response to Section 508 of the Rehabilitation Act, the Architectural and



Transportation Barriers Compliance Board has established standards for the procurement, development, and use of technology by federal agencies. One section establishes standards for designing accessible websites. Although the legislation applies directly to federal agencies, the standards are being used as guidelines by many institutions who want to ensure that they are compliant with the ADA.

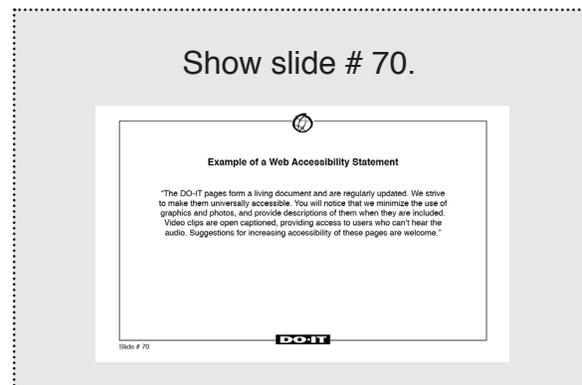
Now we'll watch a video presentation, *World Wide Access: Accessible Web Design*. This presentation shares access issues and solutions for people with disabilities. The content of this presentation is included in your handout with the same title.



To create pages that are accessible, website developers must either avoid certain types of data and features or create alternative methods for carrying out the functions or accessing the content that is provided using the inaccessible feature or format.

When it is not possible to use an accessible technology, an alternative version of the content should be provided. However, webpage designers should resort to separate, accessible pages only when other solutions fail. Maintaining a separate page is time consuming. Alternative pages tend to be updated less frequently than “primary” pages and, therefore, often provide outdated information to the site visitors using them.

Besides practicing universal design guidelines in developing your websites, encourage feedback about accessibility from web visitors.

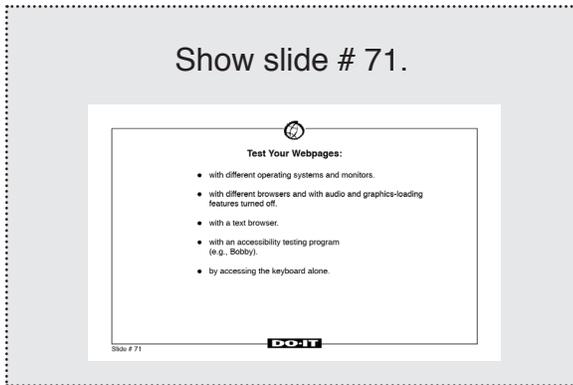


Notify your website visitors that you are concerned about accessibility by including a statement about accessibility on your page. Encourage your users to notify you with their accessibility concerns. For example, the DO-IT home page includes this statement:

“The DO-IT pages form a living document and are regularly updated. We strive to make them universally accessible. We minimize the use of graphics and photos, and provide descriptions of them when they are included. Video clips are open captioned, providing access to users who can't hear the audio, and audio described for those who cannot see the visual display. Suggestions for



increasing the accessibility of these pages are welcome.”



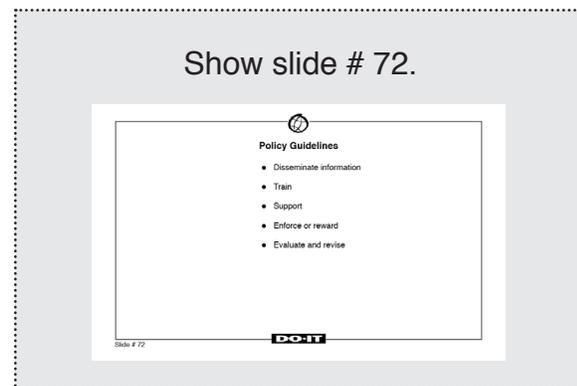
Test your website with as many web browsers as you can, and always test your website with at least one text-based browser, such as Lynx, and with the audio- graphics-loading of a multimedia browser turned off. This way, you will see your web resources from the perspectives of people with sensory impairments.

Test your website with accessibility testing programs. These programs provide a report of accessibility barriers to your site. Several are referenced in your handout. Finally, test your website using the keyboard alone to determine if you have full access to the information.

### Benefits to Everyone

If universal design principles are employed in website development, other people besides individuals with disabilities will also benefit from the design. They include people working 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 equipment; and individuals using monochrome monitors.

The Internet is just one example of an electronic resource that students with disabilities may need to access for their courses. When purchasing and designing other electronic resources, such as software and indexes, consider whether these resources will be accessible to students utilizing adaptive technology.



### Policies and Procedures

Instructional and administrative websites should be developed with universal access as a goal. Accessibility guidelines should be incorporated into general campus website guidelines or standards.

The standards your campus adopts could be those developed by the WAI of the W3C, those used by the federal government in response to Section 508 legislation, or a list tailored to your campus. When choosing standards or guidelines it is best to gain high level support and include all key stakeholders (including students with disabilities, faculty, administrators, and web designers) in the process.

A task force can then draft policy and select guidelines. They can develop dissemination plans and recommendations for the provision of training and support. They can also recommend how the policy might be enforced and how compliant sites will be rewarded. Policies and procedures should be evaluated and revised on a regular basis.



### Discussion Questions

[Ask participants the following or similar questions for discussion.]

- What are the ethical and legal issues related to providing students with disabilities access to instructional webpages?
- How would you respond to administrative concerns related to the added costs involved in making departmental webpages accessible to people with disabilities?
- In our institution, who should be responsible for ensuring that institutional, departmental, and faculty webpages are accessible to individuals with disabilities?
- What are the benefits of employing universal design principles rather than focusing only on disability issues?

### Case Study

[Consider discussing a case study from the *Presentation Tips* section of this notebook. Case #6 on page 73 would be appropriate.]

### Conclusion

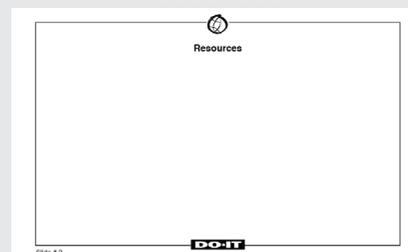
As our program comes to an end, what was the most significant insight or question you had today? Please feel free to share a brief comment with the group.

I hope this program has given you a clear understanding of the impact that the combination of computers, adaptive technology, and electronic resources can have on the lives of people with disabilities. Faculty and administrators have a legal responsibility to ensure equitable access to resources and services. The information

provided in this program should have given you tools to begin implementing universal design principles when developing and updating websites. Applying these guidelines will help level the playing field for people with disabilities.

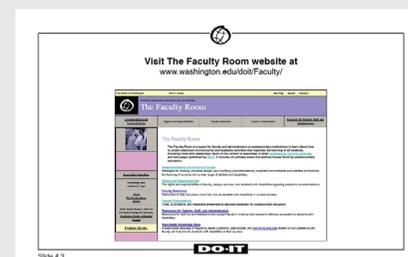
### Resources

Show slide # 2 with your campus resources.



Here are some resources that might be useful to you as you work to increase the accessibility of your web content. [Elaborate.]

Show slide # 3.



For comprehensive information on accommodations, a wide range of case studies, frequently asked questions, and general resources, visit *The Faculty Room* at <http://www.washington.edu/doit/Faculty/>. This resource was developed at the University of Washington as part of a nationwide project to provide resources to faculty and administrators so that they can make their courses and programs accessible to all



students. You can link to this resource from \_\_\_\_\_. [Arrange to provide a link from your campus' disabled student services website before the presentation.] Consider linking to this website from your department's faculty website.

Thank you for your time today and for your interest in finding ways to ensure that all of the students in our programs have equal opportunities to learn, explore interests, and express ideas.

# Making Distance Learning Accessible to Everyone



## Purpose

After this presentation, faculty and administrators will be able to

- list potential barriers to distance learning courses for students with disabilities,
- summarize their institution's legal responsibilities for ensuring equal access to online courses, and
- discuss universal design guidelines for developing accessible distance learning courses.

## Length

Approximately 60 minutes.

## Presenter

Department chair, faculty, staff, TA, student, or other department member who has an understanding of technology used by students who have disabilities and of key elements of online courses. This presentation may be co-presented by a staff member of a campus unit responsible for providing academic accommodations for students with disabilities and a website developer.

## Preparation

- Select the presenter(s).
- Develop presentation outline and activities using the "Sample Script" provided in this section and the ideas listed in the *Presentation Tips* section of this notebook.
- Create presentation slides from provided templates.

- Add the contact information for campus resources to the "Resources" slide and to printed publications as appropriate.
- Photocopy the handout templates *Real Connections: Making Distance Learning Accessible to Everyone*, *Equal Access: Universal Design of Distance Learning*, and *World Wide Access: Accessible Web Design*. Create alternative formats as necessary.
- Photocopy the presentation evaluation instrument to distribute at the end of the session (see pages 189-191 for examples) or create your own.
- Add a link on your department's website to *The Faculty Room* at <http://www.washington.edu/doit/Faculty/> and to *The Center for Universal Design in Higher Education* at <http://www.washington.edu/doit/CUDE/>.

## Equipment and Tools

- DVD player and monitor
- video projector, computer, and presentation slides; Internet connection (optional)
- videos (open captioned and audio-described version of *Real Connections: Making Distance Learning Accessible to Everyone* and *World Wide Access: Accessible Web Design*)
- handout (*Real Connections: Making Distance Learning Accessible to Everyone*, *Equal Access: Universal Design of Distance Learning*, and *World Wide Access: Accessible Web Design*)



# Building the Team

- presentation evaluation instrument (pages 189-191)

## Presentation Outline

1. Distribute handouts.
2. Introductions.
3. Begin presentation.
4. Discuss accommodations and universal design.
5. Introduce and play videos as noted in the script.
6. Discuss distance learning tools.
7. Discuss department or campus issues.
8. Note campus resources.
9. Distribute and collect completed evaluation instruments.

## Resources

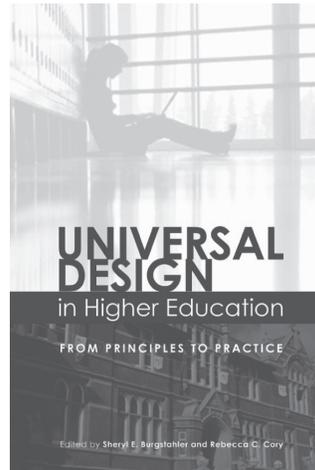
For further preparation resources for this presentation, consult

- *The Faculty Room* at <http://www.washington.edu/doi/Faculty/Strategies/Academic/Distancelearning/>

- *AccessDL* at <http://www.washington.edu/doi/Resources/accessdl.html>

The screenshot shows the AccessDL website with a navigation bar at the top containing links for 'UW Home', 'UWIN', 'DO-IT', 'Search', 'Directories', and 'Reference Tools'. Below the navigation bar, there are links for 'DO-IT resources', 'DO-IT programs', 'DO-IT search', and 'DO-IT home page'. The main content area is titled 'AccessDL' and includes a description of the center, a 'Discussion Lists' section with a link to the 'AccessDL Discussion List', a 'Distance Learning Program Accessibility Indicators' section with a link to 'Ten Indicators of Distance Learning Program Accessibility', a 'Resources on Accessible Distance Learning' section with a link to 'Ten Indicators of Distance Learning Program Accessibility', and an 'Overview Publications and Streaming Video Presentations' section with a list of publications and presentations.

- *Universal Design in Higher Education: From Principles to Practice* published by Harvard Education Press, 2008.

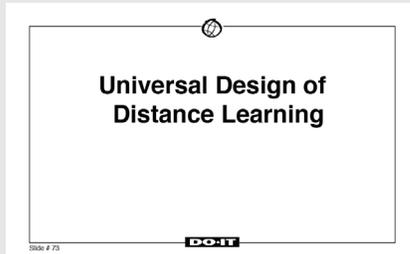


The screenshot shows the 'The Faculty Room' website. At the top, there is a navigation bar with links for 'University of Washington', 'DO-IT Home', 'Site Map', 'Search', and 'Glossary'. Below the navigation bar, there is a header section with the title 'The Faculty Room' and a sub-header 'Disabilities, Opportunities, Interworkings, and Technology'. The main content area is divided into a navigation menu on the left and a main text area on the right. The navigation menu includes links for 'Accommodations and Universal Design', 'Rights and Responsibilities', 'Faculty Resources', 'Faculty Presentations', and 'Resources for Trainers, Staff, and Administrators'. The main text area contains the title 'The Faculty Room' and a paragraph of introductory text: 'The Faculty Room is a space for faculty and administrators at postsecondary institutions to learn about how to create classroom environments and academic activities that maximize the learning of all students, including those with disabilities. Much of the content is duplicated in other publications, training materials, and web pages published by DO-IT. It includes six primary areas that address issues faced by postsecondary educators: Accommodations and Universal Design, Rights and Responsibilities, Faculty Resources, Faculty Presentations, Resources for Trainers, Staff, and Administrators, and Searchable Knowledge Base.' Below this text, there are links for 'Searchable Knowledge Base', 'Rights and Responsibilities', 'Faculty Resources', 'Faculty Presentations', 'Resources for Trainers, Staff, and Administrators', and 'Searchable Knowledge Base'.



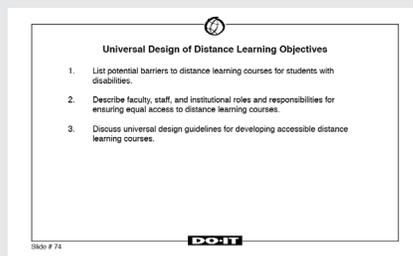
## Sample Script

Show slide # 73.



Today we'll be discussing how to make distance learning accessible to everyone.

Show slide # 74.



The objectives of today's presentation is to

- list potential barriers to distance learning courses for students with disabilities.
- describe faculty, staff, and institutional roles and responsibilities for ensuring equal access to distance learning courses.
- discuss universal design guidelines for developing accessible distance learning courses.

Increasing numbers of postsecondary courses are online. Reaching out to larger audiences and offering anytime, anywhere learning options are common arguments for developing online distance learning courses. However, rarely do these arguments

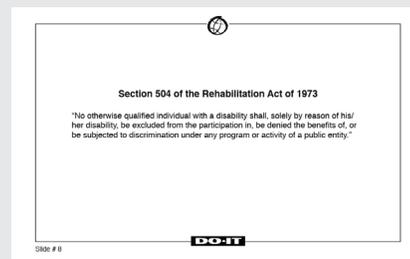
explicitly address access issues for students with disabilities.

### Legal Issues

Ensuring that individuals with disabilities have access to computing resources can be argued on ethical grounds. Some simply consider it to be the right thing to do; others are more responsive to legal mandates.

The Americans with Disabilities Act (ADA) of 1990 requires that people with disabilities be given the same access to public programs and services, including educational programs that are offered to people without disabilities.

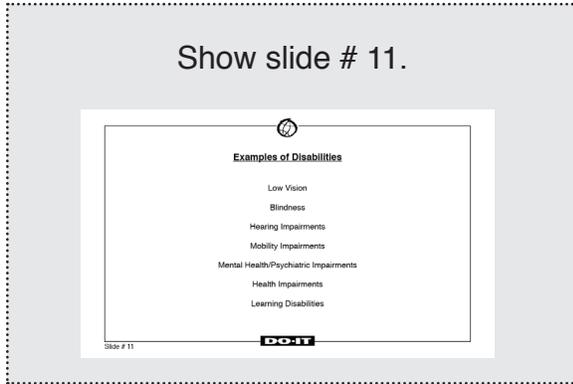
Show slide # 8.



The ADA is civil rights legislation that reinforces and extends the requirements of Section 504 of the Rehabilitation Act of 1973 that "no otherwise qualified individuals with disabilities shall, solely by reason of their disabilities, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination in any program or activity of a public entity." When people think of the ADA, they often think of elevators in buildings, reserved spaces in parking lots, and lifts on busses. However, the ADA accessibility requirements apply to people with all types of disabilities and to all programs and resources offered at our institutions,

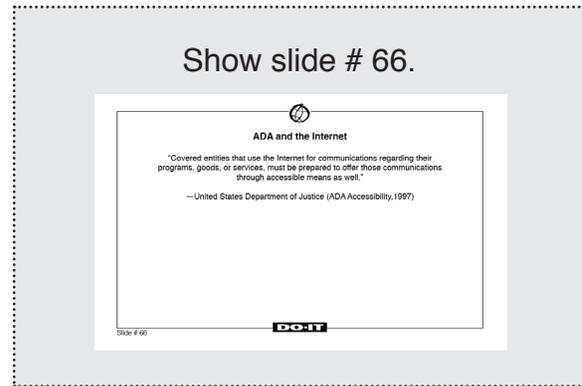


including those offered using computers and the Internet.

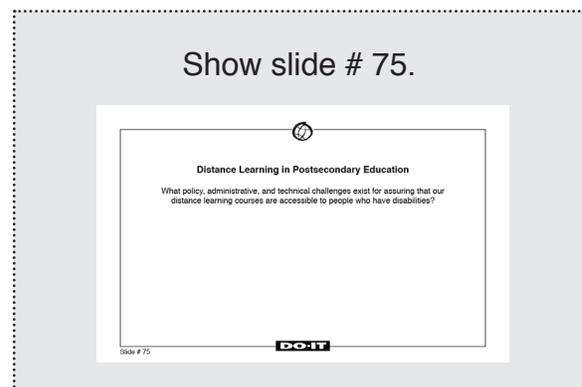


Disabilities covered by legislation include, but are not limited to, spinal cord injuries, loss of limbs, multiple sclerosis, muscular dystrophy, cerebral palsy, hearing impairments, visual impairments, speech impairments, specific learning disabilities, head injuries, psychiatric disorders, diabetes, cancer, and AIDS. The conditions listed may limit people's abilities to perform specific tasks. Some of these conditions are readily apparent; some are invisible. Some affect computer use; some do not.

Additionally, some students who have the same diagnosis may have very different abilities when it comes to performing specific tasks. For example, one student who has cerebral palsy may have difficulty walking. For another student, cerebral palsy may result in no functional use of his or her hands or voice. Ultimately, a student who has a disability requires accommodations only when faced with a task that requires a skill that his or her disability precludes. This may include computer access.



The ADA accessibility requirements also apply to programs offered on the Internet. As the United States Department of Justice clarifies, "Covered entities that use the Internet for communications regarding their programs, goods, or services must be prepared to offer those communications through accessible means as well." Specifically, if a qualified person with a disability enrolls in a distance learning course offered via the Internet, the course must be made available to her or him.

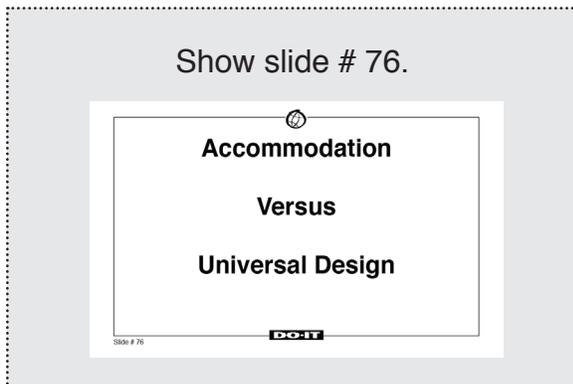


Some technical requirements for ensuring that a distance learning class is accessible to people who have disabilities have already been resolved for many students before they enrolled in the course. Their own computer systems provide whatever accommodations they need in this area. Email communication 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 course syllabus, lessons, assignments, and reminders. Guest speakers with disabilities can also join the email-based course discussions. Students can also turn in their assignments and tests using this accessible tool.

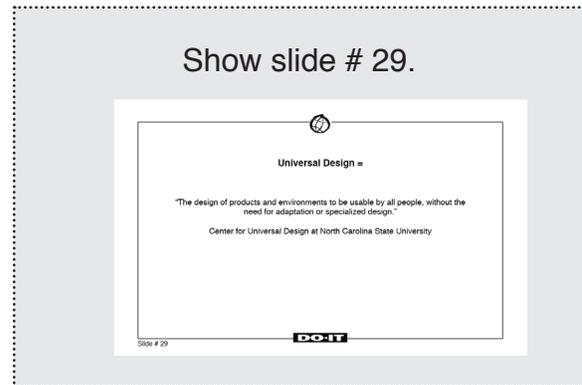
### Accommodation vs. Universal Design



Usually, when we think of providing access to a service for a person with a disability, we think about providing appropriate accommodations. In contrast, universal design means that we consider the broad range of students who might enroll in a course at the design phase.

An example of an accommodation for a person who uses a wheelchair to open a door is to provide a wheelchair-height, large button for them to press in order to activate the automatic door opener; the solution does not work for a wheelchair user with no functional arm use; this solution is appropriate only for a narrow range of the population and is an “add on” to an existing product, the standard door. An example of a solution that employs the principles of universal design is a supermarket door that opens when it senses an individual in front of the door. A person can roll a wheelchair to the sensor, regardless of ability to use his or her hands; so can a person using a walker;

so can a person who walks; so can a small child or a large adult. It is the standard way to enter the building, not an add-on to the standard.



Universal design has been defined by the Center for Universal Design at North Carolina State University as “the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.” At the center, a group of architects, product designers, engineers, and environmental design researchers collaborated to establish a set of principles of universal design to provide guidance in the design of environments, communications, and products.

When designers apply these 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. Others include height, age, race, ethnicity, gender, and native language. All of these characteristics, including disability, should be considered when developing a distance learning course.

When universal design principles are applied to the design of distance learning courses, students and instructors with a wide range of characteristics can fully

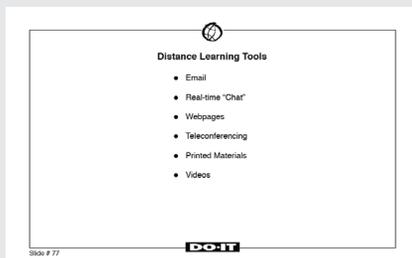


participate. Now we'll watch a video that tells us how to design an accessible distance learning course.

Show video,  
*Real Connections: Making Distance Learning Accessible to Everyone*  
(12 minutes).

Let's discuss further some of the tools typically used in a distance learning course and how they can be made universally accessible. These tools might include email, websites, social networking tools, chat, teleconferencing, print materials, and videos.

Show slide # 77.



### Asynchronous Communication

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 course syllabus, lessons, assignments, and reminders. Guest speakers with disabilities can also join the email-based course discussions. Students can also turn in their assignments and tests using this accessible tool.

Other asynchronous communication tools include blogs and social networking sites, like Facebook. The accessibility issues discussed in the next video apply these tools when used in a distance learning class.

### Synchronous Communication

Some distance learning courses employ online chat and other synchronous communication in their courses. In this case, students communicate synchronously (at the same time). 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 or 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 provide an alternate, equivalent assignment for those who cannot fully participate.

### Websites

The most common tool used in distance learning classes is the Internet. We will now watch a short video, *World Wide Access: Accessible Web Design*, which demonstrates web access challenges that people with disabilities face and solutions for meeting these challenges. Guidelines for making webpages accessible to everyone are included in your handout of the same title.



Show video,  
*World Wide Access: Accessible Web  
Design* (11 minutes).

Your webpages should be designed to be device-independent. Device-independence means that a person may interact with webpages using a wide variety of input and output devices (e.g., mouse, keyboard, voice). If, for example, a selection can only be made with a mouse or other pointing device, someone who is using speech input or a keyboard alone will not be able to activate the function. Following this guideline benefits people with a variety of system configurations.

Webpages used in a distance learning class should be tested with a variety of monitors, computer platforms, and web browsers. One of the test browsers should be text-only, such as Lynx. If a webpage makes sense with Lynx, then most people with sensory impairments can read it, too. Another good accessibility test is to determine if all functions at a website can be accessed using a keyboard alone. A website can also be tested for accessibility using the HTML validator programs listed in your handout.

If, in some cases, it is not possible to make a specific feature of your website accessible, be sure to develop an accommodation strategy. For example, provide text-only information for a student who is blind if a particular part of your website cannot be made accessible to him or her. The key is to assure that the student has full access to the content of your course.

If universal design principles are employed in webpage development, people with characteristics other than disabilities will also benefit from the design. They include people working 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.

### **Teleconferencing**

Sometimes, online courses include teleconferencing opportunities for students to communicate in small groups. This mode of communication creates scheduling and access 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 or give all students an alternative assignment if appropriate (for example, to conduct the discussion online.) Or, a student who is deaf can participate by using a relay system, where someone translates his or her printed input via TTY into speech. Consult with the student about the best option.

### **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 online may provide the best solution. You can also contact the campus disabled student services office to discuss options for obtaining printed materials in alternative formats [include campus-specific information here].



### Videos

Ideally, if a video is one of the course materials, captioning is available for those who have hearing impairments and audio description (which aurally describes the visual content) is provided for those who are blind. If the publisher does not make these access 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 to describe visual material to a blind student or sign audio material for a student who is deaf. Or you could work with the publisher to provide, in accessible format, a transcription of the content.

When universal design features are employed in developing and applying tools used in distance learning courses, you will minimize the number of special accommodations that will be needed by students with disabilities who enroll in your class.

### Discussion Questions

[Ask participants the following or similar questions for discussion.]

1. What are the ethical and legal issues related to providing students with disabilities access to distance learning courses?
2. In our institution, who should be responsible for ensuring that distance learning courses are accessible to individuals with disabilities?
3. What are the benefits of employing universal design principles in distance education rather than focusing only on disability issues?

### Case Study

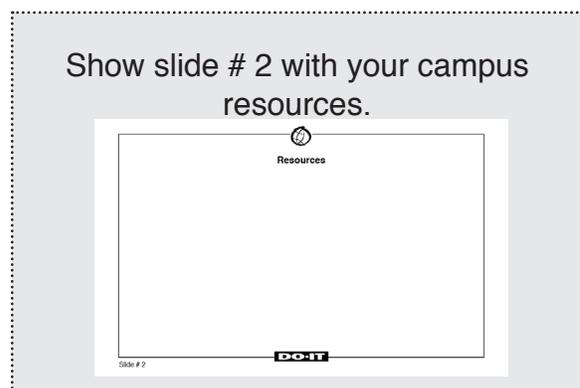
[Consider discussing a case study from the *Presentation Tips* section of this notebook. Case #6 on page 73 would be appropriate.]

### Conclusion

As our program comes to an end, what was the most significant insight or question you had today? Please feel free to share a brief comment with the group.

I hope this program has given you a clear understanding of the impact that the combination of computers, adaptive technology, and electronic resources can have on the lives of people with disabilities. Faculty and administrators have a legal responsibility to ensure equitable access to resources and services. The information provided in this program gave you tools to begin implementing universal design principles in developing and updating your distance learning courses. Applying these guidelines will help level the playing field for people with disabilities.

### Resources



Here are some resources that might be useful to you as you work to maximize the accessibility of your distance learning courses. [Elaborate.]



### Show slide # 3.



Thank you for your time today and for your interest in finding ways to ensure that all of the students in our programs have equal opportunities to learn, explore interests, and express ideas.

For comprehensive information on accommodations, a wide range of case studies, frequently asked questions, and general resources, visit *The Faculty Room* at <http://www.washington.edu/doit/Faculty/>. This resource was developed at the University of Washington as part of a nationwide project to provide resources to faculty and administrators so that they can make their courses and programs accessible to all students. You can link to this resource from \_\_\_\_\_. [Arrange to provide a link from your campus' disabled student services website before the presentation.] Consider linking to this website from your department's faculty website.

### Show slide # 96.



A website specifically for content related to making distance learning courses and programs accessible to students and instructors with disabilities is *AccessDL* at <http://www.washington.edu/doit/Resources/accessdl.html>.



## Building the Team



## Purpose

After this presentation, faculty and administrators will be able to

- list challenges in gaining and demonstrating knowledge of students with disabilities in science, technology, engineering, and mathematics (STEM) classes;
- discuss accommodations for students with various types of disabilities in STEM courses; and
- describe a process for selecting appropriate accommodations.

## Length

Approximately 45 minutes.

## Presenter

The disabled student services coordinator or counselor would be responsible for coordinating the presentation. This program may be co-presented with a staff member or student on campus who has experience with people with disabilities in STEM.

## Preparation

- Select the presenter(s).
- Develop presentation outline and activities using the “Sample Script” provided in this section and the ideas listed in the *Presentation Tips* section of this notebook.
- Create presentation slides from provided templates.
- Add the contact information for campus resources to the “Resources” slide and to printed publications as appropriate.

- Photocopy the handout templates *Working Together: Science Teachers and Students with Disabilities and Equal Access: Science and Students with Sensory Impairments*. Create alternative formats as necessary.
- Photocopy the presentation evaluation instrument to distribute at the end of the session (see pages 189-191 for examples) or create your own.
- Add a link on your department’s website to *The Faculty Room* at <http://www.washington.edu/doit/Faculty/>.

## Equipment and Tools

- DVD player and monitor
- video projector, computer, and presentation slides; Internet connection (optional)
- video (open captioned and audio described version of *Working Together: Science Teachers and Students with Disabilities*)
- handouts (*Working Together: Science Teachers and Students with Disabilities and Equal Access: Science and Students with Sensory Impairments*)
- presentation evaluation instrument (pages 189-191)



## Presentation Outline

1. Distribute handouts.
2. Introductions.
3. Begin presentation.
4. Introduce and play video as noted in the script.
5. Discuss possible accommodation strategies.
6. Discuss department or campus issues.
7. Note campus resources.
8. Distribute and collect completed evaluation instruments.

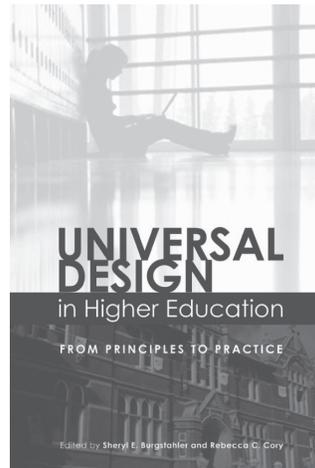
## Resources

For further preparation resources for this presentation, consult

- *The Faculty Room* at <http://www.washington.edu/doit/Faculty/Strategies/Academic/Science/>

The screenshot shows the 'The Faculty Room' website. At the top, it says 'University of Washington' and 'DO-IT Home'. Below that is a navigation menu with categories: 'Accommodations and Universal Design', 'Rights and Responsibilities', 'Faculty Resources', 'Faculty Presentations', and 'Resources for Trainers, Staff, and Administrators'. The main content area is titled 'The Faculty Room' and contains a description: 'The Faculty Room is a space for faculty and administrators at postsecondary institutions to learn about how to create classroom environments and academic activities that maximize the learning of all students, including those with disabilities. Much of the content is duplicated in other publications, training materials, and web pages published by DO-IT. It includes six primary areas that address issues faced by postsecondary educators: Accommodations and Universal Design, Rights and Responsibilities, Faculty Resources, Faculty Presentations, and Resources for Trainers, Staff, and Administrators.' Each area has a brief description of its content.

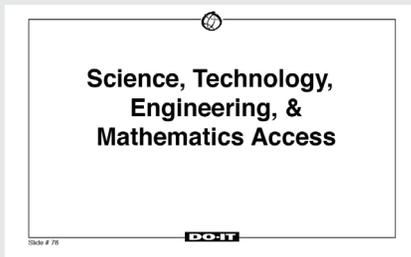
- *Universal Design in Higher Education: From Principles to Practice* published by Harvard Education Press, 2008.





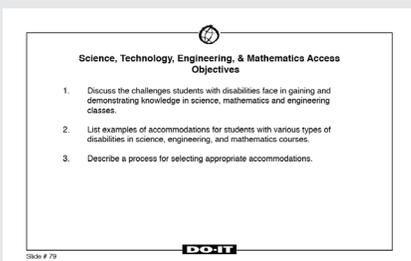
## Sample Script

Show slide # 78.



Today we will be discussing how to provide full access to science, technology, engineering, and mathematics (STEM) classes for students with disabilities.

Show slide # 79.



The objectives of today's presentation are to

- discuss the challenges students with disabilities face in gaining and demonstrating knowledge in STEM classes.
- list examples of accommodations for students with various types of disabilities in STEM courses.
- describe a process for selecting appropriate accommodations.

As scientific fields make increasing use of technology, new opportunities emerge for people with a variety of abilities and

disabilities. When students with disabilities and teachers form learning partnerships, the possibilities for academic and career success multiply.

Some conditions of students with disabilities are visible; some are invisible. Since each person's situation is unique, the best solutions for maximizing participation arise when the student and teacher work together to develop creative alternatives to challenges faced by students with disabilities. Such challenges occur when gaining and demonstrating knowledge. In most cases, it takes just a little creativity, patience, and common sense to make it possible for everyone to participate and learn.

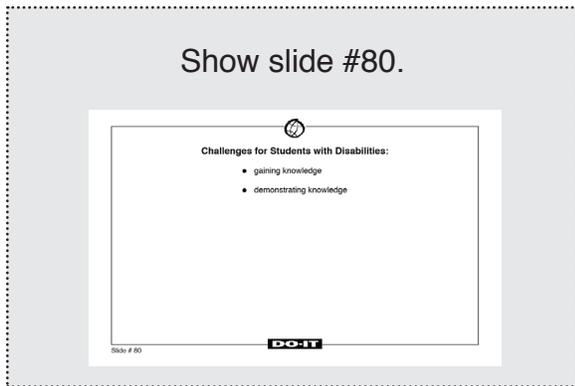
We will view a video in which college-bound and postsecondary students with disabilities share their access challenges and accommodation needs in science courses.

Show video,  
*Working Together: Science Teachers and Students with Disabilities*  
(13 minutes).

The students in this presentation shared their experiences in the science classroom. Let's discuss some of their solutions to the challenges they encountered. This information is summarized in your handout entitled *Working Together: Science Teachers and Students with Disabilities*. Imagine having these students enrolled in a freshman science course at our institution. Their challenges can be broken down into two areas: gaining knowledge and demonstrating knowledge.



[Discuss the access challenges and solutions that follow and those that can be found in the handout. Encourage comments, suggestions, and experiences from the participants.]



### Gaining Knowledge

Many students with disabilities face challenges gaining knowledge. Examples of specific challenges and accommodations follow:

- The student who has difficulty reading standard text or graphics due to a visual impairment can benefit from materials in large print or Braille, an electronic format, or enlarged or tactile drawings. Provide access to adaptive technology that creates content in these formats.
- The student who cannot see materials on a blackboard or in a slide presentation due to visual impairment can benefit from binoculars, verbalization of the content, and oral descriptions of all visually displayed materials.
- For a student who cannot read output from standard equipment because of a visual impairment, you can interface lab equipment with a computer and provide large print or speech output; utilize scientific equipment with Braille and large print markings.
- A student with difficulty hearing a presentation or instruction may use an FM system, interpreter, and printed materials. In addition, the instructor can face the student for lip-reading and use presentation slides or a blackboard.
- A student who cannot hear multimedia presentations can be accommodated by captioned presentations or an interpreter.
- Students unable to participate in class discussions due to a hearing or speech impairment may be accommodated with electronic communications (e.g., Internet or online chat); where the ability to hear or speak is required, a portable computer with speech output can be used.
- Visual, aural, and tactile demonstrations can be incorporated into instruction for students with trouble understanding concepts due to a specific learning disability.
- A student experiencing reading difficulties due to a learning disability may benefit from extra time and access to materials via a computer equipped with speech and large print output and Internet access.
- Students unable to take notes in class because of a mobility or visual impairment can benefit from in-class access to a computer with adaptive technology and word processing.
- Some accommodations for students experiencing problems operating lab equipment and conducting lab experiments due to a mobility impairment may include accessible



facility, adjustable-height tables, lab partner, scribe, computer-controlled lab equipment with alternative input devices (e.g., speech, Morse code, alternative keyboard), or modified scientific equipment.

- A student who has difficulty seeing demonstrations or viewing lab experiments while seated in a wheelchair can benefit from adjustable height tables and flexible seating arrangements.
- Flexible scheduling arrangements may assist students with difficulties completing assignments or labs due to a health impairment.
- Information accessible on computers with adaptive technology can accommodate students who have problems doing research.

### **Demonstrating Knowledge**

Some students with disabilities cannot demonstrate mastery of a subject by writing, speaking, or by working through a problem in a lab. Many of the accommodations for gaining knowledge can help the student demonstrate mastery of a subject as well. Examples of other accommodations follow:

- The student who has difficulty completing and submitting worksheets and tests because of a visual impairment or a specific learning disability can be accommodated by worksheets and tests in large print, Braille, on tape, or in an electronic format. Access to adaptive technology that provides enlarged text, voice, or Braille as well as standard print output may be necessary.
- For students experiencing trouble completing a test or assignment because of a disability that affects the speed at which it can be completed, the instructor can schedule extra time for the test or make alternative testing arrangements for the students.
- In-class access to a computer with alternative input (e.g., Morse code, speech, alternative keyboard) devices can benefit students who cannot complete a test or assignment due to a physical impairment.

### **Case Study**

[Consider having participants discuss a case study. Case #2 on page 65 in the *Presentation Tips* section of this notebook would be appropriate.]

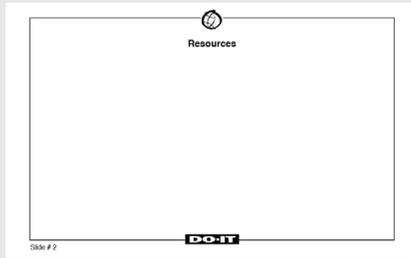
### **Conclusion**

A common perception is that accommodations for students with disabilities are complex and expensive. However, most accommodations are inexpensive and simply require creative problem-solving on the part of the students, instructors, and disability services staff.



### Resources

Show slide # 2 with your campus resources.



Thank you for your time today and for your interest in finding ways to ensure that all of the students in our programs have equal opportunities to learn, explore interests, and express ideas.

Here are some resources that might be useful to you as you work to maximize effective communication with all students in your STEM classes. [Elaborate.]

Show slide # 3.



For comprehensive information on accommodations, a wide range of case studies, frequently asked questions, and general resources, visit *The Faculty Room* at <http://www.washington.edu/doit/Faculty/>. This resource was developed at the University of Washington as part of a nationwide project to provide resources to faculty and administrators so that they can make their courses and programs accessible to all students. You can link to this resource from \_\_\_\_\_. [Arrange to provide a link from your campus' disabled student services website before the presentation.] Consider linking to this website from your department's faculty website.

# Accommodating Students with Learning Disabilities



## Purpose

After this presentation faculty and administrators will be more aware of

- types of learning disabilities and how they impact learning, participation, and demonstration of knowledge in class;
- typical accommodation strategies for students with learning disabilities; and
- how technology can be used to help students with learning disabilities achieve academic and career success.

## Length

Approximately 60 minutes.

## Presenter

The disabled student services coordinator or counselor would be responsible for coordinating the presentation. This program can be co-presented with a staff member who has experience with people with disabilities or a student on campus with a learning disability.

## Preparation

- Select the presenter(s).
- Develop presentation outline and activities using the “Sample Script” provided in this section and the ideas listed in the *Presentation Tips* section of this notebook.
- Create presentation slides from provided templates.
- Add the contact information for campus resources to the “Resources” slide and to printed publications as appropriate.

- Photocopy handout templates *Academic Accommodations for Students with Learning Disabilities* and *Invisible Disabilities and Postsecondary Education*. Create alternative formats as necessary.
- Photocopy the presentation evaluation instrument to distribute at the end of the session (see pages 189-191 for examples) or create your own.
- Add a link on your department’s website to *The Faculty Room* at <http://www.washington.edu/doi/Faculty/>.

## Equipment and Tools

- DVD player and monitor
- video projector, computer, and presentation slides; Internet connection (optional)
- video (open captioned and audio described version of *Invisible Disabilities and Postsecondary Education*)
- handouts (*Academic Accommodations for Students with Learning Disabilities* and *Invisible Disabilities and Postsecondary Education*)
- presentation evaluation instrument (pages 189-191)

## Presentation Outline

1. Distribute handouts.
2. Introductions.
3. Begin presentation.
4. Introduce and play video as noted in the script.



## Building the Team

5. Discuss accommodation strategies for students with specific learning disabilities.
6. Discuss department or campus issues.
7. Note campus resources.
8. Distribute and collect completed evaluation instruments.

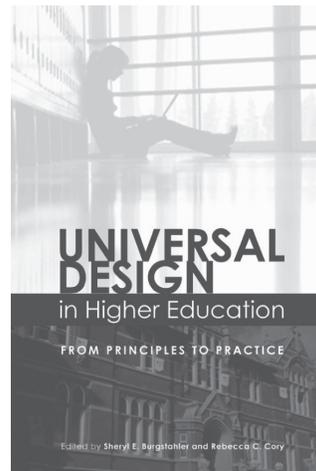
## Resources

For further preparation resources for this presentation, consult

- *The Faculty Room at <http://www.washington.edu/doit/Faculty/Strategies/Disability/LD/>*

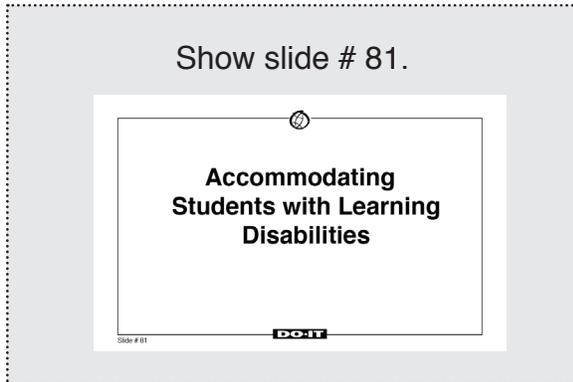
University of Washington		DO-IT Home		Site Map Search Glossary	
Disabilities, Orientation, Interpersonal, and Technology		The Faculty Room			
Accommodations and Universal Design	Rights and Responsibilities	Faculty Resources	Faculty Presentations	Resources for Trainers, Staff, and Administrators	
		<p><b>The Faculty Room</b></p> <p>The Faculty Room is a space for faculty and administrators at postsecondary institutions to learn about how to create classroom environments and academic activities that maximize the learning of all students, including those with disabilities. Much of the content is duplicated in other <a href="#">publications</a>, <a href="#">training materials</a>, and web pages published by <a href="#">DO-IT</a>. It includes six primary areas that address issues faced by postsecondary educators:</p>			
<p><a href="#">Search Knowledge Base</a></p>		<p><a href="#">Accommodations and Universal Design</a> Strategies for creating (universal design) and modifying (accommodations) academic environments and activities to maximize the learning of students with a wide range of abilities and disabilities.</p>			
<p><a href="#">Knowledge Base Articles by Topic</a></p>		<p><a href="#">Rights and Responsibilities</a> The rights and responsibilities of faculty, campus services, and students with disabilities regarding academic accommodations.</p>			
<p><a href="#">About The Faculty Room project</a></p>		<p><a href="#">Faculty Resources</a> Resources to help instructors more fully include students with disabilities in course activities.</p>			
<p><a href="#">Enter Board Room, Center for Universal Design in Education, Conference Room, or Student Lounge</a></p>		<p><a href="#">Faculty Presentations</a> Video, publications, and interactive presentations designed especially for postsecondary educators.</p>			
<p><a href="#">Evaluate this site</a></p>		<p><a href="#">Resources for Trainers, Staff, and Administrators</a> Resources for staff and administrators who support faculty in making their academic offerings accessible to students with disabilities.</p>			
		<p><a href="#">Searchable Knowledge Base</a> A searchable database of frequently asked questions, case studies, and <a href="#">promising practices</a> related to how postsecondary faculty can fully include students with disabilities in their courses.</p>			

- *Universal Design in Higher Education: From Principles to Practice* published by Harvard Education Press, 2008.

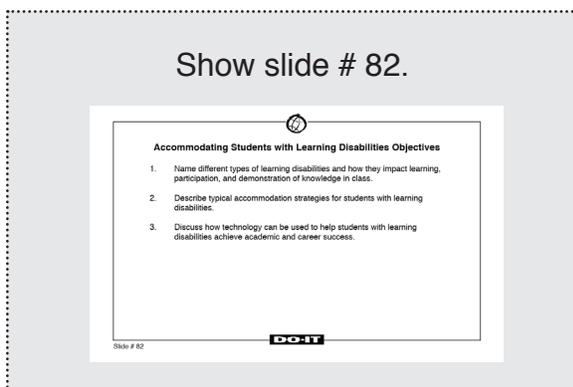




Sample Script

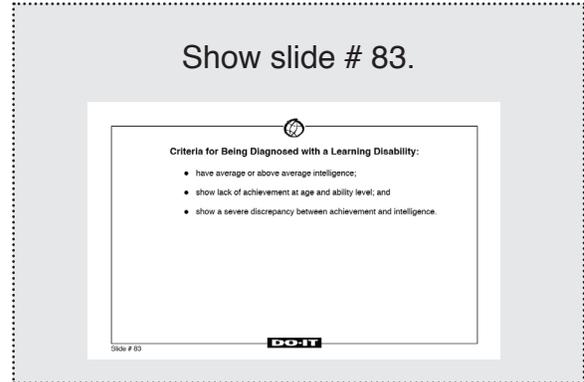


Today we will be discussing how to provide full access to college courses for students with learning disabilities.



The objectives for today's presentation are to

- name different types of learning disabilities and how they impact learning, participation, and demonstration of knowledge in class.
- describe typical accommodation strategies for students with learning disabilities.
- discuss how technology can be used to help students with learning disabilities achieve academic and career success.



What is a Learning Disability?

Learning disabilities refer to a group of disorders manifested by significant difficulties in listening, speaking, reading, writing, reasoning, or mathematical abilities. A specific learning disability in most situations is a invisible disability. There are no outward signs of a disability, such as a white cane or wheelchair. A learning disability is unique to the individual and impacts learning in a variety of ways.

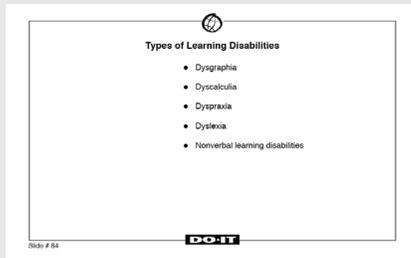
Generally speaking, someone may be diagnosed with a learning disability if he or she is of average or above-average intelligence and there is

- a lack of achievement at age and ability level, and
- a severe discrepancy between achievement and intellectual ability.

An untrained observer may conclude that a person with a learning disability is lazy or just not trying hard enough. He or she may have a difficult time understanding the large discrepancy between reading comprehension and verbal skills. The observer sees only the input and output, not the processing of the information.



Show slide # 84.



Learning disabilities usually fall within four broad categories: spoken language, which affects listening and speaking; written language, which affects reading, writing, and spelling; arithmetic which affects calculation and concepts; and reasoning, which impacts organization and integration of ideas and thoughts.

A person with a learning disability may have discrepancies in one or all of these categories. The effects of a learning disability range from mild to severe. Learning disabilities may also be present along with other disabilities, such as mobility or sensory impairments. Often people with Attention Deficit Disorder / Attention Deficit Hyperactivity Disorder, although usually not classified as a learning disability itself, also have learning disabilities.

There are specific types of learning disabilities:

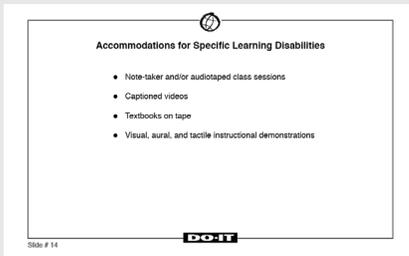
- An individual with **dysgraphia** has a difficult time with the physical task of forming letters and words using a pen and paper and has difficulty producing legible handwriting.
- A person with **dyscalculia** has difficulty understanding and using math concepts and symbols.
- Language comprehension of a person with **dyspraxia** does not match language production. She or he may mix up words and sentences while talking.
- An individual with **dyslexia** may mix up letters within words and words within sentences while reading. He or she may also have difficulty spelling words correctly while writing; letter reversals are common. Some individuals with dyslexia may also have a difficult time with navigating and route-finding using relative directions (right, left, forward, backward, up, and down) or cardinal directions (north, south, east, and west).
- A **nonverbal learning disorder** is demonstrated by below-average motor coordination, visual-spatial organization, and social skills.

### Accommodations

Students with specific learning disabilities may have difficulties acquiring or demonstrating knowledge. For a student who has a learning disability, auditory, visual, or tactile information can become jumbled at any point when it is transmitted, received, processed, or retransmitted. It may take longer for some students who have learning disabilities to process written information, making lengthy reading or writing assignments or tests difficult to complete in a standard amount of time. Some students who have learning disabilities may find it difficult to process and digest oral instruction and lectures. Some students who have learning disabilities may be able to organize and communicate their thoughts in a one-on-one conversation, but may find it difficult to articulate those same ideas in a noisy classroom.

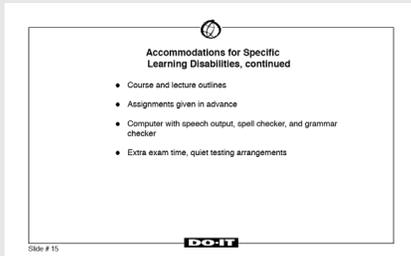


Show slide # 14.



Examples of accommodations for students with learning disabilities include notetakers and scribes; visual, aural, and tactile demonstrations incorporated into directions; computers with speech output, spelling checker, and grammar checker; course and lecture outlines; and extra time or alternate testing arrangements.

Show slide # 15.



Audio or video recorded class sessions, audio textbooks, and assignments in advance are also common accommodations for students with learning disabilities.

**Technology and Learning Disabilities**

Technology can play a role in helping people with learning disabilities find success in academics and careers. Technology tools do not cure a specific learning disability; rather, they compensate for the disability. With appropriate strategies, the person with a learning disability can apply his or her intelligence and demonstrate his or her knowledge using computer and

adaptive technology. Trial and error may be required to find a set of appropriate tools and techniques for a specific individual. The person with the disability should help to determine what works and what does not. Once basic tools and strategies are selected, they can be test-driven, discarded, adapted, or refined.

Next, we will view a short video in which college students with learning and other invisible disabilities discuss their challenges and how technology plays a role in their success in school. Your handouts summarize the content of this video presentation.

Show video, *Invisible Disabilities and Postsecondary Education* (19 minutes).

**Discussion Questions**

[Facilitate a discussion using the questions below or other relevant questions.]

- Does anyone have examples of how you have effectively (or not effectively) worked with students with specific learning disabilities?
- What challenges did you encounter? Which accommodations were successful? Which were unsuccessful?
- What questions do you have about accommodating students with learning disabilities on our campus?



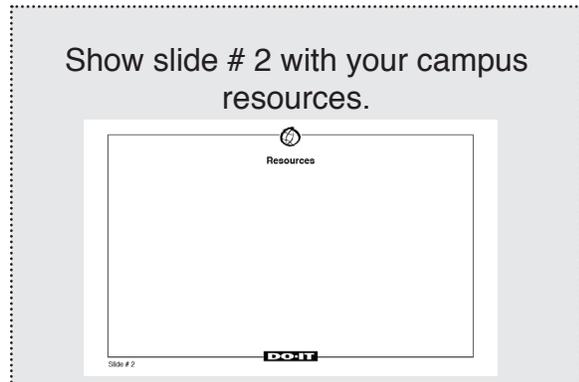
### Case Study

[Consider having participants discuss a case study. Case #1 on page 63 in the *Presentation Tips* section of this notebook would be appropriate.]

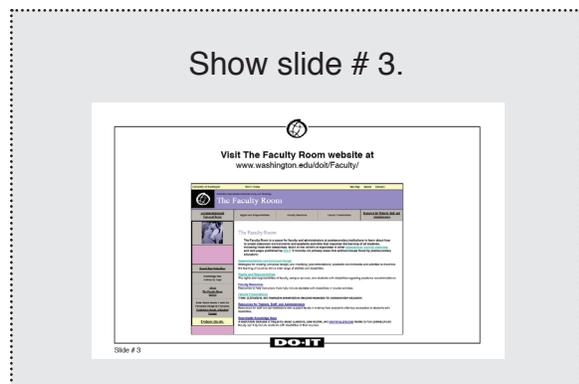
### Conclusion

Most students with learning disabilities are bright and motivated to learn. However, academic failures can lead to low self-esteem and reduced motivation. Students, technology staff, and instructors can work together to develop appropriate accommodations, including the use of technology, that will lead to positive postsecondary and career outcomes for students with learning disabilities.

### Resources



Here are some resources that might be useful to you as you work to maximize effective communication with all students in your classes. [Elaborate.]



For comprehensive information on accommodations, a wide range of case studies, frequently asked questions, and general resources, visit *The Faculty Room* at <http://www.washington.edu/doit/Faculty/>. This resource was developed at the University of Washington as part of a nationwide project to provide resources to faculty and administrators so that they can make their courses and programs accessible to all students. You can link to this resource from \_\_\_\_\_. [Arrange to provide a link from your campus' disabled student services website before the presentation.] Consider linking to this website from your department's faculty website.

Thank you for your time today and for your interest in finding ways to ensure that all of the students in our programs have equal opportunities to learn, explore interests, and express ideas.

# Accommodating Students with Psychiatric Disabilities



## Purpose

After this presentation faculty and administrators will be able to

- list types of psychiatric disabilities and how they affect learning,
- discuss functional limitations resulting from psychiatric disabilities, and
- list typical accommodations for students who have a psychiatric disability.

## Length

Approximately 45 minutes.

## Presenter

The disabled student services coordinator or other staff member who has experience with individuals with psychiatric disabilities; a student with a psychiatric disability could deliver some of the presentation or participate in discussions.

## Preparation

- Select the presenter(s).
- Develop presentation outline and activities using the “Sample Script” provided in this section and the ideas listed in the *Presentation Tips* section of this notebook.
- Create presentation slides from provided templates.
- Add the contact information for campus resources to the “Resources” slide and to printed publications as appropriate.
- Photocopy the handout template

*Academic Accommodations for Students with Psychiatric Disabilities*. Create alternative formats as necessary.

- Photocopy the presentation evaluation instrument to distribute at the end of the session (see pages 189-191 for examples) or create your own.
- Add a link on your department’s website to *The Faculty Room* at <http://www.washington.edu/doi/Faculty/>.

## Equipment and Tools

- Video projector, computer and presentation slides; Internet connection (optional)
- handout (*Academic Accommodations for Students with Psychiatric Disabilities*)
- presentation evaluation instrument (pages 189-191)

## Presentation Outline

1. Distribute handout.
2. Introductions.
3. Begin presentation.
4. Discuss possible accommodation strategies.
5. Discuss department or campus issues.
6. Note campus resources.
7. Distribute and collect completed evaluation instruments.



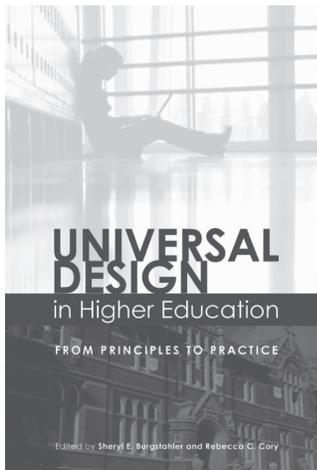
## Resources

For further preparation resources for this presentation, consult

- *The Faculty Room* at <http://www.washington.edu/doi/Faculty/Strategies/Disability/Psych/>

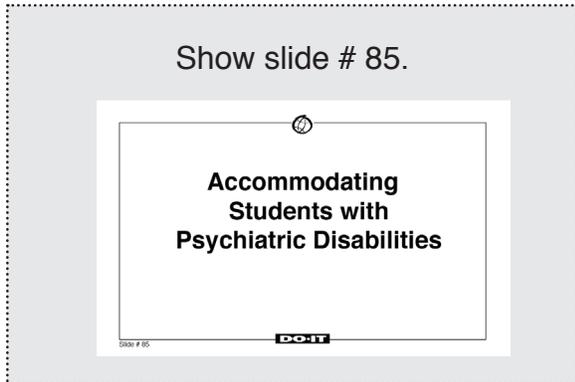
University of Washington				
DO-IT Home				
Site Map Search Glossary				
Disabilities, Opportunities, Internetworking, and Technology				
The Faculty Room				
Accommodations and Universal Design	Rights and Responsibilities	Faculty Resources	Faculty Presentations	Resources for Trainers, Staff, and Administrators
	<p><b>The Faculty Room</b></p> <p>The Faculty Room is a space for faculty and administrators at postsecondary institutions to learn about how to create classroom environments and academic activities that maximize the learning of all students, including those with disabilities. Much of the content is duplicated in other <a href="#">publications</a>, <a href="#">training materials</a>, and web pages published by <a href="#">DO-IT</a>. It includes six primary areas that address issues faced by postsecondary educators:</p> <p><a href="#">Accommodations and Universal Design</a> Strategies for creating (universal design) and modifying (accommodations) academic environments and activities to maximize the learning of students with a wide range of abilities and disabilities.</p> <p><a href="#">Rights and Responsibilities</a> The rights and responsibilities of faculty, campus services, and students with disabilities regarding academic accommodations.</p> <p><a href="#">Faculty Resources</a> Resources to help instructors more fully include students with disabilities in course activities.</p> <p><a href="#">Faculty Presentations</a> Video, publications, and interactive presentations designed especially for postsecondary educators.</p> <p><a href="#">Resources for Trainers, Staff, and Administrators</a> Resources for staff and administrators who support faculty in making their academic offerings accessible to students with disabilities.</p> <p><a href="#">Searchable Knowledge Base</a> A searchable database of frequently asked questions, case studies, and <a href="#">promising practices</a> related to how postsecondary faculty can fully include students with disabilities in their courses.</p>			
Search Knowledge Base				
Knowledge Base articles by topic				
About The Faculty Room project				
Faculty Room, Center for Universal Design in Education, Conference Room, or Student Lounge				
Evaluate this site				

- *Universal Design in Higher Education: From Principles to Practice* published by Harvard Education Press, 2008.

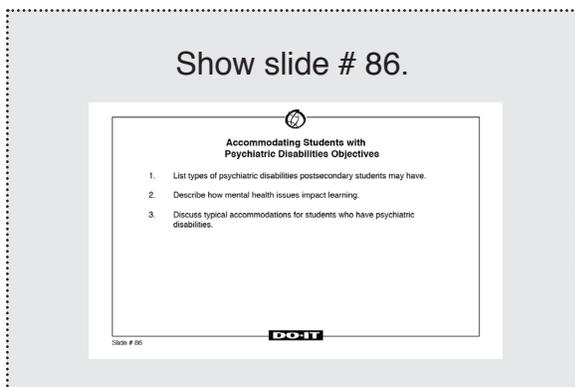




Sample Script

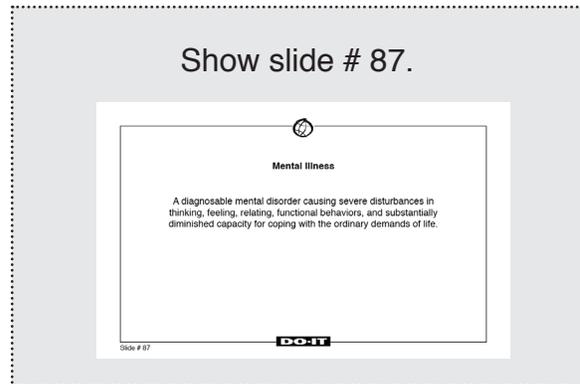


Today we will be discussing how to accommodate students with psychiatric disabilities for full inclusion in your courses.



The objectives of today’s presentation are to

- list types of psychiatric disabilities postsecondary students may have.
- describe how mental health issues impact learning.
- discuss typical accommodations for students who have psychiatric disabilities.



What is a Psychiatric Disability?

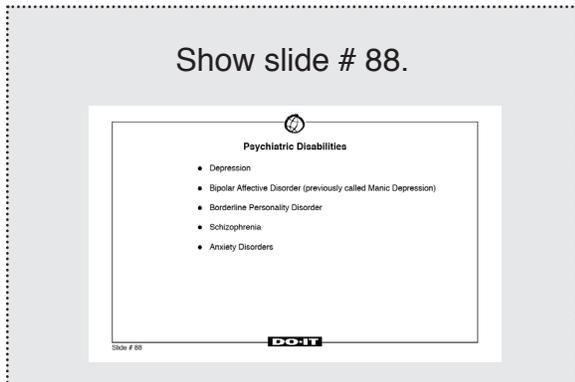
A person with a psychiatric disability has a diagnosable mental illness causing severe disturbances in thinking, feeling, relating, or functional behaviors that results in a substantially diminished capacity to cope with the demands of daily life (<http://www2.bu.edu/cpr/reasaccom/whatis-psych.html>).

A psychiatric disability is an invisible disability; it is typically not apparent to others. However, students with psychiatric disabilities may experience symptoms that interfere with their educational goals, which may include, yet are not limited to:

- heightened anxieties, fears, suspicions, or blaming others;
- marked personality change over time;
- confused or disorganized thinking;
- strange or grandiose ideas;
- difficulty concentrating, making decisions, or remembering things;
- extreme highs and lows in mood;
- denial of obvious problems or a strong resistance to offers of help; and
- thinking or talking about suicide.



## Psychiatric Diagnosis



These diagnoses are defined by the American Psychiatric Association.

### Depression

This is a mood disorder that can begin at any age. Major depression may be characterized by a depressed mood most of each day, a lack of pleasure in previously enjoyed activities, thoughts of suicide, insomnia, and consistent feelings of worthlessness or guilt.

### Bipolar Affective Disorder (BAD, formerly Manic Depressive Disorder)

BAD is a mood disorder with revolving periods of mania and depression. In the manic phase, a person might experience inflated self-esteem, high work and creative productivity, and a decreased need to sleep. In the depressed phase, the person experiences the symptoms of depression.

### Borderline Personality Disorder (BPD)

BPD is a personality disorder that includes both mood disorder and thought disorder symptoms. This diagnosis has both biological and environmental determinants. Individuals diagnosed with BPD may have experienced childhood abuse and family dysfunction. They may experience mood fluctuations, insecurities and mistrust, distortion of perceptions, dissociations,

difficulty with interpersonal relationships, and limited coping skills.

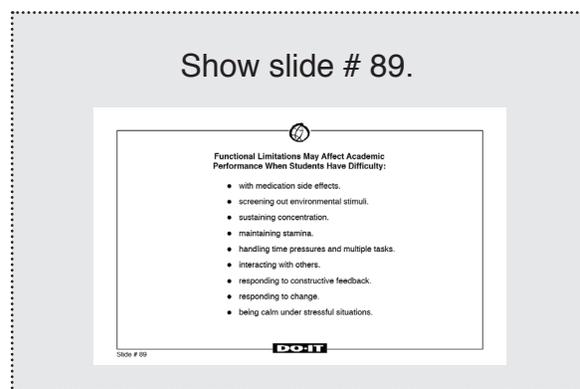
### Schizophrenia

This is a thought disorder that can cause a person to experience delusions, hallucinations, and paranoia. Schizophrenic individuals typically demonstrate concrete thought processing and appreciate structure and routines.

### Anxiety Disorders

These are mood disorders in which the individual responds to thoughts, situations, environments, or people with fear and anxiety. Anxiety symptoms can disrupt a person’s ability to concentrate and focus on tasks at hand. Symptoms may be in response to real or imagined fears. Specific anxiety disorders include generalized anxiety disorder, obsessive-compulsive disorder, panic disorder, social and specific phobias, and post-traumatic stress disorder.

### Functional Limitations



The following functional limitations related to psychiatric disabilities may affect academic performance and may require accommodations (Center for Psychiatric Rehabilitation, 1997):

- **Difficulty with medication side effects:** Side effects of psychiatric medications

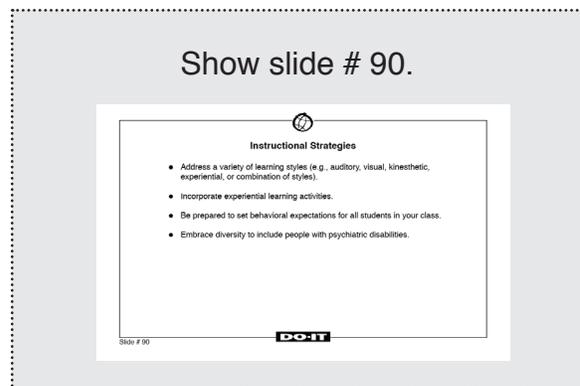


that may affect academic performance include drowsiness, fatigue, dry mouth, thirst, blurred vision, hand tremors, slowed response time, and difficulty initiating interpersonal contact.

- **Screening out environmental stimuli:** An inability to block out sounds, sights, or odors that interfere with focusing on tasks. Limited ability to tolerate noise and crowds.
- **Sustaining concentration:** Restlessness, shortened attention span, distraction, and difficulty understanding or remembering verbal directions.
- **Maintaining stamina:** Difficulty sustaining enough energy to attend a whole day of classes on campus; combating drowsiness due to medications.
- **Handling time pressures and multiple tasks:** Difficulty managing assignments, prioritizing tasks, and meeting deadlines. Inability to multi-task.
- **Interacting with others:** Difficulty getting along, fitting in, contributing to group work, and reading social cues.
- **Fear of authority figures:** Difficulty approaching instructors or teaching assistants.
- **Responding to negative feedback:** Difficulty understanding and correctly interpreting criticism or poor grades. May not be able to separate person from task (personalization or defensiveness due to low self-esteem).

- **Responding to change:** Difficulty coping with unexpected changes in coursework, such as changes in the assignments, due dates, or instructors. Limited ability to tolerate interruptions.
- **Severe test anxiety:** Anxiety to the extent that the individual is rendered emotionally and physically unable to take the exam.

### Instructional Strategies



Students with a history of psychiatric disabilities can be intelligent, sensitive, creative, and interesting. You can employ strategies that will promote their success in your class. For example:

- Address a variety of learning styles (e.g., auditory, visual, kinesthetic, experiential, or combination of styles).
- Incorporate experiential learning activities.
- Be prepared to set behavioral expectations for all students in your class.
- Embrace diversity to include people with psychiatric disabilities.



### Reasonable Accommodations

Show slide # 91.

**Accommodation =  
the removal of barriers  
to participation**

Slide # 91

Some students with psychiatric disabilities may require accommodations to allow them equal access to classes, programs, and coursework. An accommodation is the removal of a barrier to full participation and learning. The emphasis is on access, not on outcome. This is done by providing the student with a disability equal access to the content and activities of a course, but not ensuring success.

Each student with a disability is encouraged to register with their campus office that supports students with disabilities in order to receive accommodations. Personnel from this office typically send instructors a letter documenting specific accommodations required for the student with the disability. It is the responsibility of the instructor to provide the accommodations. It is the student's responsibility to fulfill the academic requirements of the course. The best solutions result when the instructor, student, and disability support service professional work cooperatively. Meeting as a group may facilitate problem-solving alternatives. Respecting the privacy of the student by not discussing his or her disability or accommodations with others outside of this meeting is essential. Review accommodations periodically with the student to assess effectiveness and adjust to changing needs.

### Classroom Accommodations

Show slide # 92.

**Possible Classroom Accommodations**

- Preferential seating (e.g., near the door to allow leaving class for breaks).
- Prearranged or frequent breaks.
- Permit beverages in class.
- Use of tape recorder.
- Assign a classmate to be a volunteer assistant.
- Note-taker or photocopy of student's notes.
- Syllabus and text books available early.
- Textbooks and other course materials available in alternative formats.
- Personal and private feedback on academic performance.

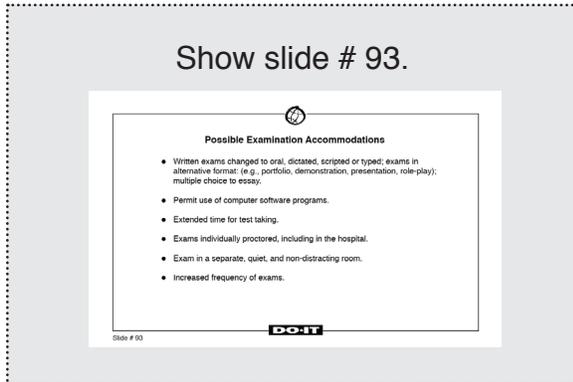
Slide # 92

Typical classroom, exam, and assignment accommodations that may be recommended by the disabled student service professional for a student with a psychiatric disability include the following:

- preferential seating, especially near the door, to allow the student to leave class for breaks;
- prearranged or frequent breaks;
- beverages permitted in class;
- audio or video recorder use;
- assigned classmate as a volunteer assistant;
- notetaker or photocopies of another's notes;
- early availability of syllabus and text books;
- availability of course materials (lectures, handouts) in alternative formats; and
- private feedback on academic performance.



## Examination Accommodations



Typical accommodations for students with psychiatric disabilities taking exams include the following:

- exams in alternative format (e.g., multiple choice, essay, oral, presentation, role-play, or portfolio);
- use of adaptive computer software (e.g. optical character recognition, allowing scanned text to be read aloud by the computer’s sound card; or speech recognition for converting the spoken word to printed word on the computer screen);
- extended time for test taking;
- exams individually proctored, including in the hospital;
- exam in a separate, quiet, and non-distracting room; and
- increased frequency of exams.

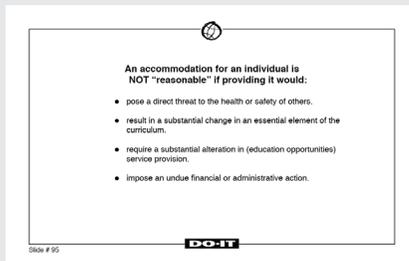
## Assignment Accommodations

Typical assignment accommodations for students with disabilities include the following:

- substitute assignments in specific circumstances;
- advance notice of assignments;
- permission to submit assignments handwritten rather than typed (if possible);
- written assignments in lieu of oral presentations, or vice versa;
- assignments completed in dramatic formats (e.g. demonstration, role-play, and sculpture);
- assignment assistance during hospitalization; and
- extended time to complete assignments.



Show slide # 95.



Not all requested accommodations are reasonable. An accommodation is not reasonable if it would:

- pose a direct threat to the health or safety of others;
- result in substantial change in an essential element of the curriculum;
- require a substantial alteration in the manner in which educational opportunities are provided; or
- pose an undue financial or administrative burden to the institution.

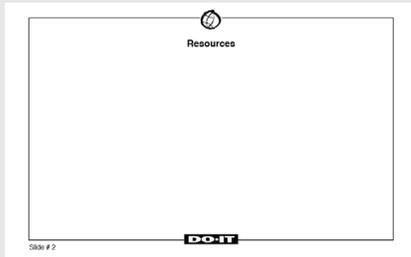
### Conclusion

On most campuses, a student with a disability must register with the disabled student services office to receive accommodations. Personnel from this office typically send instructors a letter documenting specific accommodations required for the student. It is often helpful to schedule a three-way meeting with the student, instructor, and disability counselor. Review accommodations periodically with the student to assess effectiveness. Respect the privacy of the student by not discussing his or her disability or accommodations with others. It is important that the instructor provides the accommodations required; it is the student's responsibility to fulfill the academic requirements of the course.



Resources

Show slide # 2 with your campus resources.



Thank you for your time today and for your interest in finding ways to ensure that all of the students in our programs have equal opportunities to learn, explore interests, and express ideas.

Here are some resources that might be useful to you as you work to maximize effective communication with all students in your classes. [Elaborate.]

Show slide # 3.



For comprehensive information on accommodations, a wide range of case studies, frequently asked questions, and general resources, visit *The Faculty Room* at <http://www.washington.edu/doit/Faculty/>. This resource was developed at the University of Washington as part of a nationwide project to provide resources to faculty and administrators so that they can make their courses and programs accessible to all students. You can link to this resource from \_\_\_\_\_. [Arrange to provide a link from your campus' disabled student services website before the presentation.] Consider linking to this website from your department's faculty website.



## Building the Team



**DO-IT**

## Presentation Evaluation

Part One: Help us know what you learned as a result of this presentation. Please indicate your agreement or disagreement with these statements where 1= Strongly Disagree, 5= Strongly Agree, and N/A = Not Applicable.

	<u>Strongly Disagree</u>			<u>Strongly Agree</u>			
	1	2	3	4	5		N/A
1. I am better able to find resources on my campus to accommodate students with disabilities.							
2. I gained knowledge about legal obligations relating to students with disabilities.							
3. I gained knowledge about specific accommodations for students with disabilities.							
4. I gained knowledge about technology available to support students with disabilities.							

Please answer the following questions with responses based on today's presentation (as opposed to what you already knew). Describe one thing you learned today about each of the following:

1. Legal issues affecting students with disabilities:
  
2. Campus services for students with disabilities:
  
3. Accommodations that can be used for students with disabilities in classes or labs:

Describe additional information you would like to have in order to more fully include students with disabilities in your courses.

Part Two: Please provide input to help us improve our professional development offerings. Please indicate your agreement or disagreement where 1 = Strongly Disagree and 5 = Strongly Agree with the following statements. N/A = Not Applicable.

	<u>Strongly</u> <u>Disagree</u>			<u>Strongly</u> <u>Agree</u>		
■ The facility for this presentation was appropriate.	1	2	3	4	5	N/A
■ The presenter(s) was (were) well prepared.	1	2	3	4	5	N/A
■ Overall, the information presented was useful.	1	2	3	4	5	N/A
■ The pace of the presentation was appropriate.	1	2	3	4	5	N/A
■ The question and answer time was useful.	1	2	3	4	5	N/A
■ The handouts will be useful.	1	2	3	4	5	N/A

1. Which part of the presentation/material was the most useful to you and why?

2. Describe what could make the presentation more useful.

3. To whom would you recommend a workshop on this topic (check all that apply)?

- Faculty
- Teaching Assistants
- Administrators
- Other (please specify): \_\_\_\_\_

4. The length of the presentation was: about right  too short  too long   
 The amount of material was: about right  not enough  too much

Part Three: Please tell us about yourself:

- Male  Female
- Faculty  Administrator
- Teaching Assistant  Other

Have you ever provided an accommodation to a student with a disability? Yes  No   
 If yes, please give an example:



## Presentation Evaluation

Please indicate your agreement or disagreement with these statements where 1= Strongly Disagree, 5= Strongly Agree, and N/A= Not Applicable.

	<u>Strongly Disagree</u>				<u>Strongly Agree</u>		
■ I am better able to find resources on my campus to accommodate students with disabilities.	1	2	3	4	5	N/A	
■ I gained knowledge about legal obligations relating to students with disabilities.	1	2	3	4	5	N/A	
■ I gained knowledge about specific accommodations for students with disabilities.	1	2	3	4	5	N/A	
■ I gained knowledge about technology available to support students with disabilities.	1	2	3	4	5	N/A	
■ The presenter(s) was (were) well prepared.	1	2	3	4	5	N/A	
■ Overall, the information presented was useful.	1	2	3	4	5	N/A	
■ The handouts will be useful.	1	2	3	4	5	N/A	

1. The length of the presentation was:    about right \_\_\_\_ too short \_\_\_\_ too long \_\_\_\_

2. The amount of material was:            about right \_\_\_\_ not enough \_\_\_\_ too much \_\_\_\_

3. Please tell us about yourself:

- |   |  |
|---|--|
| <input type="checkbox"/> Male               | <input type="checkbox"/> Female        |
| <input type="checkbox"/> Faculty            | <input type="checkbox"/> Administrator |
| <input type="checkbox"/> Teaching Assistant | <input type="checkbox"/> Other         |

Please make specific comments about this presentation on the back of this form.