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ABSTRACT

This guide is designed to assist postsecondary disability service providers and others in conducting a Curriculum Transformation and Disability (CTAD) faculty development workshop intended to make classrooms more accessible to all students, including those with disabilities. The CTAD workshop uses the model of universal instructional design, which encourages faculty to provide alternatives in their curricula. The guide to the 10.5 hour workshop includes 8 CTAD workshop sections, each with a brief overview, learning objectives, and list of materials needed; information on facilitator preparation; instructions to the facilitator; and material to be read to the participants. Sections address: (1) disability and higher education; (2) student experiences; (3) universal instructional design; (4) applying universal instructional design, Part 1 (designing an accessible course); (5) using assistive technology; (6) accessing local resources; (7) applying universal instructional design, Part 2 (teaching and learning); and (8) creating an action plan. Sixteen appendices provide samples and handouts such as a sample invitation for a faculty focus group, a sample invitation for a student focus group, a sample CTAD workshop recruitment letter, a worksheet for applying universal instructional design, an essential components case scenario, a sample action plan, and a workshop evaluation form. Two videotapes, "Assistive Technology: Applications in Postsecondary Education" (written and hosted by Jennifer Dunnam) and "Uncertain Welcome: Student Perspectives on Disability and Postsecondary Education" (produced by Rich Reardon) are included as well as an accompanying CD-ROM containing digital versions of both videos and all PowerPoint presentations. (DB)

CURRICULUM TRANSFORMATION AND DISABILITY (CTAD)

Workshop Facilitator's Guide

Helping postsecondary faculty make their classes more accessible to *all* students

Includes:

- complete instructions for planning and presenting the workshop
- handouts for participants
- a CD-ROM with PowerPoint presentations and two open-captioned videos

General College

UNIVERSITY OF MINNESOTA

Disability Services

Office of the Associate Vice President for Multicultural and Academic Affairs

INTRODUCTION

An electronic version of this Guide is available at www.gen.umn.edu/research/ctad.

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We also thank all those who contributed to the production of this *Guide* and the accompanying videos and CD-ROM, as follows:

For this *Guide*, Laura Weber and Karen Bencke for their invaluable editorial and production assistance. Cover photos by Tom Foley.

For "Assistive Technology: Applications in Postsecondary Education," enormous thanks to writer and host Jennifer Dunnam; camera, Juli Manser; audio, Brian Dehler; graphic design, Karen Bencke; Phil Kragnes of the University of Minnesota's Computer Accomodations Program; captioning, Armour Captioning; and especially to Rich Reardon, who served as the video's producer, director, and editor, and who taught us all about media production with patience and good humor.

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We served as Executive Producers for both videos.

Judith A. Fox and Donna Johnson, co-editors

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INTRODUCTION

Curriculum Transformation and Disability

The population of students with disabilities on college campuses has increased significantly in the last 10 years. Today, 9.2 percent of first-year college students report having a disability. Yet despite these gains in access, students with disabilities still are less likely than their nondisabled peers to complete their education[1].

This disparity troubles many faculty and administrators, who long have recognized the importance of improving student retention rates. Most faculty and administrators welcome the opportunity to learn more about diverse student populations; many, however, lack sufficient training, information, and resources to effectively teach students with disabilities.

In response to this pressing need, the University of Minnesota's General College and Disability Services partnered to create Curriculum Transformation and Disability (CTAD), a project funded by the U.S. Department of Education. CTAD staff field-tested the curriculum provided in this *Guide* with 125 faculty and administrators from the University of Minnesota's Twin Cities, Crookston, Duluth, and Morris campuses, Minneapolis Community and Technical College and Columbus State Community College, Ohio. This *Guide* reflects their thoughtful feedback.

Inclusive Curricula Through Universal Instructional Design

CTAD is designed to teach faculty and administrators how to better serve all of their students by creating more inclusive curricula. Participants in CTAD workshops learn how to ensure their curricula is made accessible to a wide range of students by applying principles of Universal Instructional Design (UID), a model that stresses the need for curricula that is flexible and customizable. Research has shown that many of the strategies used to successfully teach students with disabilities work well for *all* students, regardless of their disability status. Think of it this way: a curb cut makes it easier for a person using a wheelchair to get from the street to the sidewalk—but that same curb cut is also used by people pushing strollers, rollerbladers, older people, or people pulling luggage. It's a design feature that is universal in its approach to access.

Now apply that idea of universal design to the classroom. Putting course materials on the Web, for example, creates an "academic curb cut." Suddenly, course materials are accessible to a blind student who uses a screen reader or downloads the text to be brailled. A student with a learning disability or attention deficit hyperactivity disorder benefits from using voice output technology to simultaneously listen to and read text, increasing her comprehension of the material. Nondisabled students benefit as well. Those who find it difficult to participate in class because of language or cultural barriers appreciate the ability to participate in an alternative, on-line class discussion, and everyone enjoys the convenience of accessing the materials anytime, anywhere, or using embedded links to conduct further research.

Of course, using technology is only one solution. Transforming teaching is the real challenge. That's what CTAD is all about.

How to Use this Guide

This *Guide* was designed to assist postsecondary Disability Services providers, faculty, and others in conducting a Curriculum Transformation and Disability (CTAD) faculty development workshop. The goal of the CTAD workshop is to help postsecondary faculty to make their classrooms more accessible to all students, including students with disabilities. The CTAD workshop uses the model of Universal Instructional Design, which encourages faculty to provide alternatives in their curricula that will make it accessible to a wide range of students from a variety of backgrounds[2]. For more information on Universal Instructional Design, please refer to the CTAD Annotated Bibliography (http://www.gen.umn.edu/research/ctad). For examples of faculty implementation of Universal Instructional Design, refer to *Curriculum Transformation and Disability: Implementing Universal Design in Higher Education* (http://www.gen.umn.edu/research/crdeul/publications.htm).

This *Guide* includes the following: introductory materials of use to workshop facilitators as they prepare to conduct a CTAD workshop; eight CTAD workshop sections, representing different parts of the CTAD workshop, each with a brief overview, learning objectives, and list of materials needed; information on facilitator preparation, instructions to the facilitator, and material to be read to the participants; and appendices that may be copied and distributed as handouts to workshop participants. The accompanying CD-ROM contains digital versions of both videos and all PowerPoint presentations. Consult the "Read Me" file on the CD-ROM for further information and instructions on use.

The entire CTAD workshop takes approximately 10-1/2 hours to complete. Because of time and resources constraints, many facilitators may choose to conduct only part of the workshop. The following section descriptions should provide facilitators with a brief overview of each section. Please see page 9 for ideas on creating shorter workshops.

An electronic version of this Guide is available at www.gen.umn.edu/research/ctad.

An Overview of the CTAD Workshop

Section 1: Disability and Higher Education

This foundational section provides a brief introduction to general issues of higher education and disability, with a special emphasis on understanding hidden disabilities. Facilitators introduce the concept of the "interactional model" of disability[3]. They also engage participants in a discussion of Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and the Individuals with Disabilities Education Act (IDEA) (1994), the three major laws affecting postsecondary educators. The discussion includes the legal definitions of disability, reasonable accommodations, mandated services, and appropriate accommodations. This section takes approximately 1 hour and 15 minutes.

Section 2: Student Experiences

The purpose of this section is to allow participants to learn about issues on their home campus and the experiences of college students with disabilities from the students themselves. When gathering a panel of students isn't feasible, facilitators may show the video

"Uncertain Welcome: Students Perspectives on Disability and Postsecondary Education", which appears on the accompanying CD-ROM, and then follow with a discussion of the issues. This section takes from 30 to 60 minutes, depending on time availability.

Section 3: Universal Instructional Design

This section is designed to introduce participants to the model of Universal Design as it applies to the built environment and to show how some of the features of Universal Design may be applied to the educational environment to create the model of Universal Instructional Design. Facilitators introduce a set of principles to help guide the discussion. This section takes approximately 60 minutes.

Section 4: Applying Universal Instructional Design, Part I– Designing an Accessible Course

In this section, participants have an extended opportunity to apply specific principles of Universal Instructional Design related to their own courses. This interactive section takes approximately two hours.

Section 5: Using Assistive Technology

The facilitator of this section shows a digital video demonstration of a range of low-tech and high-tech assistive technologies relevant to students with disabilities in postsecondary education. If it is feasible, the facilitator may invite a student who uses assistive technology, or a specialist in assistive technology, to demonstrate a range of assistive technologies. This section runs a minimum of 30 minutes and may easily be extended to 60 minutes, if time permits.

Section 6: Accessing Local Resources

This section provides information on how to access disability services locally. The facilitator describes eligibility for services, common disabilities served, and how accommodations are determined. This section works best as a question-and-answer session with the local Disability Services provider. This section takes approximately 45 minutes.

Section 7: Applying Universal Instructional Design, Part II— Teaching and Learning

Participants learn to apply additional principles of Universal Instructional Design that will assist them in reconsidering their own teaching and their students' learning. This section provides ample opportunity for participants to share ideas with each other. This section takes approximately 1 hour and 30 minutes to complete.

Section 8: Creating an Action Plan

In this final section, participants define for themselves some specific next steps. Facilitators provide information on additional resources. This section takes approximately 15 minutes.

Suggested Agenda for the Complete 1½ Day CTAD Workshop

Day 1

Welcome	9:00-9:15
Disability and Higher Education	9:15-10:30
Break	10:30-10:45
Student Experiences	10:45-11:45
Lunch	11:45-12:45
Universal Instructional Design	12:45-1:45
Break	1:45-2:00
Applying UID, Part I–Designing an Accessible Course	2:00-4:00

Day 2

Using Assistive Technology	9:00-9:30
Accessing Local Resources	9:30-10:15
Break	10:15-10:30
Applying UID, Part II–Teaching and Learning	10:30-12:00
Creating an Action Plan	12:00-12:15

Suggested Agendas for Shorter Workshops

In order to use the information in the sections effectively, take time to determine the needs of your audience and select sections accordingly. Following are some examples of shorter workshops aimed at specific audiences. You may choose to adapt the workshop in other ways to suit the needs of your particular audience.

Sample Agenda for Faculty/Instructional Staff (4 hours, 15 minutes)

Disability and Higher Education	1 hour, 15 minutes
Universal Instructional Design	1 hour
Applying UID, Part I—Designing an Accessible Course	2 hours

Sample Agenda For Faculty/Instructional Staff (3 hours)

Universal Instructional Design	1 hour
Student Experiences	30 minutes
Applying UID, Part II—Teaching and Learning	1 hour, 30 minutes

Sample Agenda For Administrators (2 hours, 30 minutes)

Disability and Higher Education	1 hour, 15 minutes
Student Experiences	30 minutes
Accessing Local Resources	45 minutes

Sample Agenda For General Audiences (2 hours, 45 minutes)

Disability and Higher Education	1 hour, 15 minutes
Student Experiences	30 minutes
Universal Instructional Design	1 hour

Sample Agenda for General Audiences (2 hours, 15 minutes)

Universal Instructional Design	1 hour
Using Assistive Technology	30 minutes
Accessing Local Resources	45 minutes

Recruiting and Working with Participants Before the Workshop

Introduction

An ambitious recruitment plan will make your workshops more successful, so plan on investing both time and effort in this process up front. With a strong recruiting effort, you'll get both buy-in and support for the workshop from the administration, disability services staff, faculty, and students.

Goals for Recruitment

- To establish a partnership with all parties at your institution.
- To get buy-in from administrators, faculty, disability services staff, and students.
- To build top-down support with key administrators (i.e., a vice chancellor of academic affairs).
- To recruit a diverse pool of applicants for the workshop.

The Recruitment Process

Even if you're planning to hold only one workshop at your home campus, it's a good idea to meet with administrators, faculty, and students to get their buy-in. Do this several months in advance of the planned workshop so that you'll have plenty of time to recruit workshop participants. Remember that the majority of faculty and staff are not on contract over the summer months, so work at least a semester in advance. For example, if you hope to hold a workshop during the fall semester, conduct all your recruitment activities the previous spring.

Good planning is vital to successful recruitment. Plan on meeting with key administrators, and, if possible, plan on conducting focus groups with faculty and with students with disabilities, and holding informational sessions for interested faculty. (See Appendices A-G for information on conducting focus groups.) The information you glean from the focus groups and other meetings will allow you to modify the workshop to address the specific needs of participants at your particular institution, which will be key to the success of the workshop.

Be sure to follow your institution's Institutional Review Board protocol for informed consent and protection of research subjects when recruiting participants for focus groups and workshops.

Meeting with Key Administrators

Set up a meeting with a key administrator, such as a dean, vice chancellor or provost, to discuss the workshop and its potential benefits for your institution. If possible, send the administrator some information in advance, but take with you brochures, sample recruitment language and a sample application, a sample agenda, or any other material that would help explain the workshop succintly. Prepare a 10 minute presentation detailing the workshop, its

potential benefits, and the process of recruitment. At this point, you should know enough about the workshop to be able to answer the administrator's questions comfortably. Your goal in this meeting is to obtain administrative buy-in for the workshop.

Recruiting Faculty for the Workshop

Begin recruiting workshop participants several months before the actual workshop. Again, keep in mind that many faculty and administrators will not be on contract over the summer and will be difficult to reach during that time.

Whether you decide to conduct focus groups or not, consider holding an informational session about the workshop and invite all interested faculty and administrators. Talk about the purpose of the workshop, the process of recruitment, and what the workshop will look like. Be sure to allow time for questions.

Develop appropriate recruitment language and share it with key administrators to get their feedback. They may want to adapt the language to make it more suitable for your particular institution. Consult with them about the following procedures:

- Decide on your recruitment pool. Will you target all faculty at the institution? Faculty from only one department? A mix of faculty and administrators? Will you include nonfaculty instructional staff? Even before you send the initial recruitment letter, decide on a set of criteria for accepting participants to ensure a fair shot for everyone who applies. You may decide to aim for a mix of disciplines, gender, length of service, etc.
- Once you agree on common recruitment language and acceptance criteria, send the recruitment letter. If possible, send the letter out on the letterhead of a top administrator (such as a provost or vice-chancellor) with his/her signature and a note attached. If it's appropriate, send an e-mail to the target recruitment pool. Otherwise, send a hard copy letter. The letter should explain the workshop, what's required of participants, the criteria for acceptance, how to apply, and the deadline for application. (See Appendix H.)
- Make applications available to interested parties, either in hard copy or electronic form. The application should include space for all contact information, including summer addresses and phone numbers, if appropriate, as well as space for applicants to answer some open-ended questions. (See Appendix I). Once you have established the participant list, share this information with all of your workshop facilitators. It is invaluable background information that should help your facilitators better understand their audience, which will allow them to tailor the workshop to the needs and desires of that particular group.
- After the deadline passes, review all the applications and select the participants based on the previously defined acceptance criteria. Send acceptance and rejection letters as appropriate. Include in the acceptance letter the date, time and location of the workshop, directions, what food will be provided, and your own contact information. *Be sure to include a statement inviting participants to request disability-related accommodations for the workshop.* Participants should receive this letter at least three weeks in advance of the workshop.

Preparing for the Workshop

Attending to workshop logistics will create an environment conducive to learning and model a welcoming classroom environment. Use the following checklist as a guide to help you create a welcoming environment:

- Arrange for additional presenters if you don't want to facilitate the workshop alone. Consider bringing in another facilitator whose knowledge and skills complement your own.
- Reserve a room with sufficient space and appropriate tables and chairs. *Be sure your physical space is accessible to all participants*. Do this even if you don't think you will have any participants with mobility impairments—it models good practice.
- Arrange for equipment, such as a computer and LCD projector (if you plan to use PowerPoint slides or show a digital video) or an overhead projector (if you plan to use transparencies). Get the name and phone number of a technical support person who will be available to help you on the day of the workshop, in case you run into problems.
- If you have the budget, arrange for morning snacks, coffe, and/or lunch so your participants won't have to leave the area in search of something to eat.
- If you plan on using a live student panel rather than the videotaped version, begin recruiting students at least one month in advance. Offering students a small payment, or perhaps a gift certificate to the bookstore, is an appropriate way to demonstrate your respect for their time and effort.
- Create workshop notebooks for all your participants. These should include agendas, copies of any handouts you plan to use, printouts of PowerPoint slides, worksheets, contact information for all the presenters and for the workshop participants, and any other information you think necessary. *If requested, arrange for all materials to be available in appropriate alternate formats.*
- Rehearse and time your presentation. Prioritize activities so parts may be deleted if necessary.
- Compile your participants' answers to the open-ended questions included in the application and share this information with all of your workshop facilitators. It is invaluable background information that should help your facilitators better understand their audience, which will allow them to tailor the workshop to the needs and desires of that particular group.
- One week before the scheduled workshop, send an e-mail (or hard copy) reminder to all participants reminding them of the workshop date, time, and location, plus information on parking and what food will (or will not) be provided.

Conducting the Workshop[4, 5, 6]

On the day of the workshop, be sure to arrive early to allow adequate time for setting up the room. Arrange seating to accommodate the size of the group and the intent of the workshop. If at all possible, arrange seating so participants can see each other. *Be sure your physical space is accessible to all participants*. Test all your equipment. Check to see you have all the necessary materials. Suggested materials include the following:

- a list of participants' names
- name tags
- workshop notebooks for participants, including an agenda, printouts of PowerPoint slides, handouts, a list of participants, and other relevant materials
- a computer and LCD projector OR an overhead projector and transparencies
- a remote control
- pens and pencils
- a watch or clock (to keep track of time)
- a chalkboard or dry erase board and/or an easel, with markers
- index cards (for the exercise in Section 1)

Adaptations for Persons with Disabilities

Any participation activities and audiovisual aids should be designed so that all can participate.

Be sensitive and flexible to the needs of persons with varying communication and mobility needs. Solicit feedback from the person with the disability regarding what, if any, type of accommodation is needed.

For persons who are blind or visually disabled:

- Keep the entire audience alert by varying the tone and level of your voice and the pace of your delivery.
- Make available Braille, large print, and taped copies of the presentation materials.
- Accompany visual aids with an oral narrative. Describe in detail the information that is being presented.
- Repeat all questions or statements from the audience. Try to have one person speak at a time, and try to identify the speaker so the listeners know who is talking.

For persons who are deaf or hard of hearing:

- Make sure there is a place available where they can clearly see both the speaker and the interpreter, if one is being used. The interpreter should be standing close to the speaker or within a direct sight line to allow viewing both speakers and interpreters within a quick glance. Interpreters will generally interpret significant environmental sounds, such as laughing, as well as various directions and cues.
- Speak at a normal rate.
- Arrange for volunteer notetakers, if appropriate. (This is also true for those with mobility and learning disabilities).
- Allow extra time when pointing out the location of materials or giving other instructions because the listener must look, then return attention for further information.

For persons who have mobility impairments:

- Keep front seats and rear of room clear for persons who may be using wheelchairs, canes, crutches, or motorized vehicles.

Presentation Tips for New Facilitators

- Create a relaxed and friendly atmosphere by greeting people as they enter and by providing name tags.
- Start and end the workshop on time.
- Make participants comfortable. Share with them they are free to move about the room as they need to. Point out the restrooms and telephones.
- Introduce all people serving as workshop facilitators. Ask all participants to briefly introduce themselves.
- Ask participants if there are questions before you begin the workshop.
- Use your judgment when facilitating the workshop. While the *Guide* provides materials you may read directly to the audience, try to paraphrase whenever possible. Too much reading aloud may disrupt the flow of the presentation and restrict the amount of interaction with the audience.
- Maintain good eye contact.
- Use examples from your own personal experiences and the experiences of others. (Avoid singling out any participants with disabilities by asking them to serve in "spokesperson" roles.)
- Encourage participation. Ask open-ended questions and provide positive feedback when people participate.
- Adjust the workshop as needed. Request feedback and watch for nonverbal responses such as signs of boredom, frowns, questioning looks, etc.
- Provide an effective closing. Summarize the presentation simply and concisely.
- Thank the participants for their time and their contributions.

End Notes

[1] Blackorby, J., & Wagner, M. (1996). Longitudinal postschool outcomes of youth with disabilities: Findings from the National Longitudinal Transition Study. *Exceptional Children, 72,* 399-413.

[2] Center for Applied Special Technology. (2001). Universal design for learning. [Online.] Available: www.cast.org

[3] Gill, C. (1987). A new social perspective on disability and its implication for rehabilitation. In F.S. Cromwell (Ed.), *Sociocultural implications in treatment planning in occupational therapy.* (pp. 49-55). New York: Haworth Press.

[4] "Suggestions for AHSSPPE Conference Speakers," Association on Higher Education and Disability (AHEAD) and the American Society of Association Executives.

[5] Falkman, S. (1989). The Twelve Most Common Delivery Problems and Their Solutions. University of Minnesota: Training and Development Research Center.

[6] Aune, E.A. and Ness, J. (1991). Conducting the Workshop. Part of the Handicapped Initiative funded by the Minnesota State Board of Technical Colleges, in cooperation with the University of Minnesota's General College.

THE CTAD WORKSHOP CURRICULUM

SECTION 1

DISABILITY AND HIGHER EDUCATION

Overview

This section provides a rationale for using Universal Instructional Design to meet the instructional needs of all students, including students with disabilities. It also provides a brief description of disability types, especially hidden disabilities and their educational ramifications, as well as information on creating meaningful access for students with disabilities. This section also will give participants a very brief overview of the laws that grant people with disabilities the right to an accessible education.

This section takes approximately 1 hour and 15 minutes to complete.

Learning Objectives

- To learn about general issues of disability and higher education
- To understand what constitutes meaningful access
- To understand the rationale behind Universal Instructional Design
- To learn about relevant legislation

Materials

- Computer, LCD projector and PowerPoint presentation
- OR overhead projector and transparencies
- Handouts of PowerPoint presentation slides for participants
- 3 x 5 blank notecards
- pens

Preparation

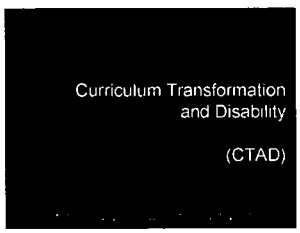
Participants who want more information about specific disabilities should be referred to their own institution's disability services office and/or national consumer and advocacy organizations, such as The National Alliance for the Mentally Ill (www.nami.org) or the Learning Disabilities Association (www.ldanatl.org), for descriptive material.

Facilitators may also consider distributing the Association on Higher Education and Disability (AHEAD) brochures on Section 504 of the Rehabilitation Act and the

Americans with Disabilities Act. These brochures may be purchased by contacting AHEAD at www.ahead.org.

This section is *not* intended to provide detailed information about the laws or to give participants an opportunity to bring up individual cases they have heard or read about. It is important to stress that an in-depth discussion or examination of the laws is beyond the scope of this workshop, both in terms of time and the legal expertise of most presenters. If you determine that the audience is seeking in-depth knowledge of the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, ask an attorney from the institution's legal office to present this information.

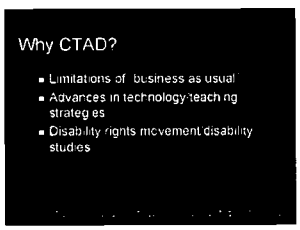
"Instructions" indicates instructions to the facilitator. "Read to Participants" indicates text that should be either read aloud or paraphrased to the participants.



Show Slide #1: Curriculum Transformation and Disability

Instructions

Welcome the participants to the workshop. Let them know the purpose of the workshop is to assist faculty and administrators in making their classrooms more accessible to all students, including students with disabilities. Review the day's agenda, explain logistics such as number and time of breaks, location of bathrooms, telephones, etc. Distribute handouts of the PowerPoint presentation.



Show Slide #2: Why CTAD?

Instructions

Ask the audience: What are some of the limitations of conducting business as usual when implementing disability-related accommodations in the classroom? Try to elicit as many of the following responses from participants as possible. It may be helpful to write the responses on a flip chart. Listed below are some possible responses you might share if the audience does not state them.

- Implementing disability-related accommodations needs to be the responsibility of the whole institution, not just disability services providers.
- Business as usual creates a system that sets the student with a disability apart from other students. This method of service delivery promotes the idea that the problem resides in the student, not necessarily in the way course material is taught.
- Students are required to disclose private information in order to get an education. Sometimes their disability is made evident to their classmates (e.g., an instructor singles a student out in class as needing to leave to take his/her test in another location).
- Arranging for accommodations often takes students an inordinate amount of time.[1]

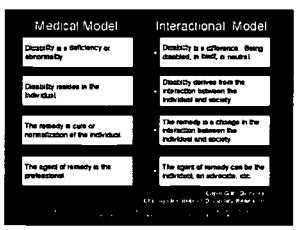
- Accommodations sometimes are not implemented in a timely manner and students end up dropping the class in which they have not been accommodated.
- A perception of unfairness on the part of other students sometimes leads to backlash against the student with a disability and/or faculty member.

It is important to stress that the need for individual accommodations never will be entirely eliminated. However, by implementing Universal Instructional Design, the need for individual accommodations may be significantly reduced.

Instructions

Ask the audience: What are some of the advances in technology and teaching which have resulted in greater access to the curriculum by students with disabilities? Try to elicit as many of the following responses from participants as possible. It may be helpful to write the responses on a flip chart. Listed below are some possible responses you may share if the audience does not state them.

- Putting information on-line and using assistive computer technology (voice input and output, Braille printouts, etc.) to make information accessible to more students.
- Using a cooperative learning model and teaching to different modalities are also examples of how teaching is changing to meet the needs of more students, including students with disabilities.[2,3]
- Disability studies and the disability rights movement have created a different model for how disability is viewed and have encouraged students with disabilities to expect to be treated as part of the mainstream.



Show Slide #3: Medical/Interactional Models

Read to Participants

Historically, people with disabilities have been treated as different from mainstream society. As a result, people with disabilities were encouraged to "fix" their differences through medical interventions. Researchers Harlan Hahn [4,5] and Carol Gill[6] call this the medical model.

As a reaction to the medical model in which disability is viewed as a "sickness," leaders in the field of disability studies and disabled activists have adopted, instead, an interactional model.

According to Carol Gill, director of the Chicago Institute of Disability Research, the interactional model argues that disability derives from the interaction between the individual and society and that the remedy for disability-related problems is a change in the interaction between the individual and society.

Instructions

Review the two models ("interactional" and "medical") carefully, and allow plenty of time for participants to digest this information and share their reactions to it. For many people, seeing disability in a neutral light will be a new experience. It is important to acknowledge that participants who have had firsthand experience with a disability, either personally or with a loved one, may not see it as neutral. Stress that the interactional model does not discount the impact of the personal experience; rather, it is an attempt to get society to think about disability in general in a new way.

Read to Participants

According to the medical model:

- Disability is seen as a functional impairment, a negative deviation from normal. The disability is located within the individual, and therefore, it is the person's problem.
- The individual is then "fixed" through corrective therapy.
- Medical and rehabilitation professionals are responsible for "fixing" the individual.

People with disabilities are challenging this model. They believe from their experience that disability-related problems are no longer solely the arena of the health care industry but may also be affected by peer support, political activism, and self-help. The interactional model promotes the idea that individuals would not need to be "fixed" if society were physically and programmatically accessible.[7]

Instructions

In assisting participants to understand the concepts of disability as neutral and disability as deriving from the interaction between the individual and society, or the environment, it is especially helpful to include illustrations from *Everyone Here Spoke Sign Language: Hereditary Deafness on Martha's Vineyard,* by Nora Ellen Groce.[8]

Read to Participants

For example, in *Everyone Here Spoke Sign Language*, an account of the treatment of deaf people on Martha's Vineyard in the early 20th century, the author points out that because there was such a large deaf population and most of the hearing residents knew sign language, the deaf Vineyarders participated freely in all aspects of life as did their hearing relatives, friends, and neighbors. Because the communication barrier that ordinarily separates deaf people from the non-signing society did not exist, what is normally regarded as a profound disability garnered little attention. The book has many illustrative quotes from interviews with the islanders. The following are representative:

Author: Do you know anything similar about Isaiah and David?

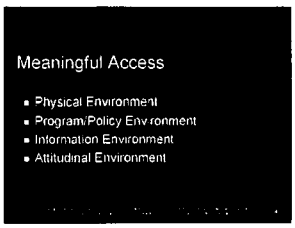
Islander: Oh yes! They both were very good fishermen, very good indeed.

Author: Weren't they both deaf?

Islander: Yes, come to think of it, I guess they both were. I'd forgotten about that.

Author: What about the islanders who were handicapped by deafness?

Islander: Oh, those people weren't handicapped. They were just deaf.



Show Slide #4: Meaningful Access

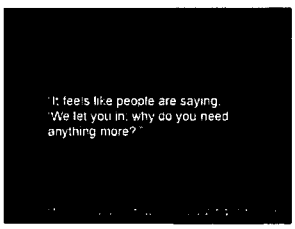
Read to Participants

While it has become widely accepted that students must be able to physically access their education (most institutions no longer balk at installing a ramp or lowering a lab table), simply getting in the classroom door is not enough. Equally important is access to the other kinds of environments shown on this slide.

Program/Policy Environment. Examples are priority registration and reduced credit load requirements for student employment and financial aid.

Information Environment. Obviously access to course materials is important, but equally important is access to institutional materials such as admissions, financial aid, and registration materials.

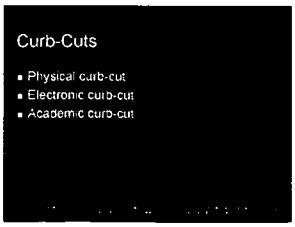
Attitudinal Environment.This area of access may be the most difficult to monitor. Many people have preconceived ideas about people with disabilities. It is important that faculty, staff, and other students not assume that they know what is best for the student with a disability. The student should have an opportunity to demonstrate his or her abilities.



Show Slide #5: "It feels like people are saying..."

Instructions

Read the quote aloud, noting that it captures the difficulties students with disabilities have in gaining attitudinal access.[9]



Show Slide #6: Curb-Cuts

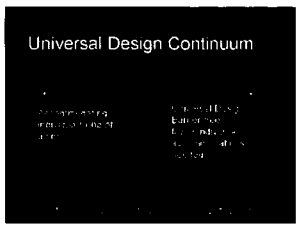
Read to Participants

Although this workshop focuses primarily on programmatic, informational, and attitudinal access, consider this physical metaphor–the curb-cut. While the need for physical and even technological curb-cuts is fairly well-accepted (even if not always

easy to accomplish), the concept of an academic curb-cut is newer and often more difficult to operationalize.[10]

Instructions

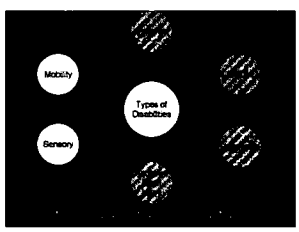
Ask participants: What are some ways in which people use curb-cuts? (Typical answers include bicyclists, roller-bladers, parents with strollers, etc.) What are some ways in which people use electronic curb-cuts? (Typical answers include voice output, speech recognition software.)



Show Slide #7: Universal Design Continuum

Read to Participants

It is not expected that the need for individual accommodations will ever be totally eliminated. It is hoped that by moving to a more barrier-free environment through Universal Instructional Design, the number of individual accommodations requested by students will be greatly reduced. The goal of implementing Universal Instructional Design is to move beyond the letter of the law (e.g., American with Disabilities Act) to its spirit.



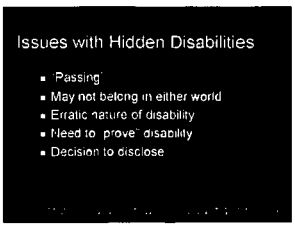
Show Slide #8: Types of Disabilities

Instructions

Briefly review the types of disability listed on the slide, using the information below to provide examples of each type. Note that the last four groups are shaded to convey the idea that these are generally hidden disabilities (although sensory disabilities, such as a hearing impairment, can be kept hidden as well).

- Mobility – such as the use of a wheelchair, crutches or cane, or impaired hand coordination
- Sensory – such as limited vision or hearing
- Systemic – includes chronic illnesses such as diabetes and epilepsy
- Learning – affects the manner in which individuals take in information, retain it and express the knowledge they possess, and attention deficit/hyperactivity disorder, which affects an individual's ability to concentrate for long periods of time
- Psychiatric – such as bipolar disorder, depression, personality disorders, and schizophrenia
- Acquired brain injury – may affect one or more of the following areas: speed of thinking, memory, communication, motor, sensory, physical, and psychosocial abilities

It is important here to refer participants to their disability services office materials for more detailed information on each disability. Also, this is a good place to reiterate that the focus of this workshop is on understanding the concepts of Universal Instructional Design, no matter what the disability.



Show Slide #9: Issues with Hidden Disabilities

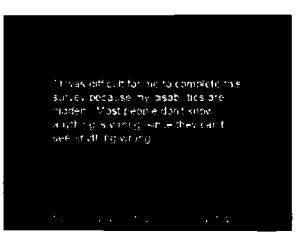
Instructions

Review the bullet points, using your own experiences with students with hidden disabilities to expand on the following information.

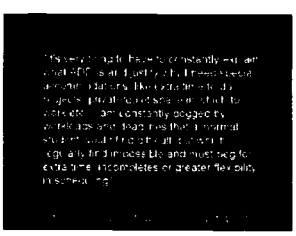
- "Passing" – may cause discomfort and anxiety associated with having to keep a secret.
- May not belong in either world – e.g., students with hidden disabilities do not look disabled, but still need academic accommodations.
- Erratic nature of disability – e.g., teachers of students with learning disabilities often report that students one day seem to "get it all" and the next day, it's as if they had never seen the material. This causes great frustration for both the student and the teacher.
- Need to "prove" disability – too often people with hidden disabilities hear, "But you don't look disabled."
- Decision to disclose – discuss the stereotypes associated with labels – if possible, give an example from your own experience of how a student has been discounted or underestimated because of a label.

Instructions

Note that the following quotes[9] illustrate the problems students face, especially those with hidden disabilities, when asking for accommodations. Review each slide, stressing terms such as "good students," "double life," and "jeopardizing my credibility."



Show Slide#10: "It was difficult for me to complete the survey..."



Show Slide #11: "It's very tiring to constantly explain..."

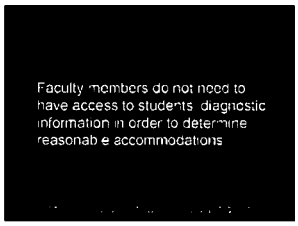
Show Slide #12: Myth or Fact?

Read to Participants

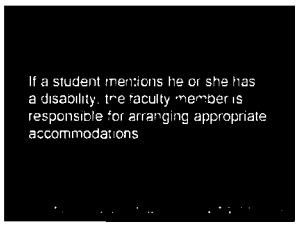
In the next section, you'll be introduced to the laws governing disability and higher education. Before we begin, however, I'm going to ask you to do a quick exercise that will give all of us a quick assessment of what you already know about these laws. Then, after we review the legislation, I'll share the correct answers with you.

Instructions

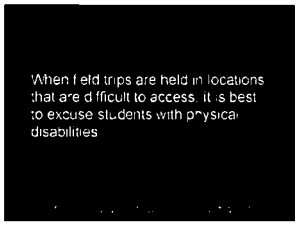
Hand out markers and one 3 x 5 note card to all participants and ask them to print a large M (for myth) on one side of the card and F (for fact) on the other. Then show each of the following statements and have participants hold up the side of the card that they believe correctly categorizes the statement. It is best to arrange this so that each participant's response cannot be seen by the others. It has been the authors' experience that most of the participants do not feel threatened but are able to laugh about their knowledge, or lack thereof, when completing this exercise.



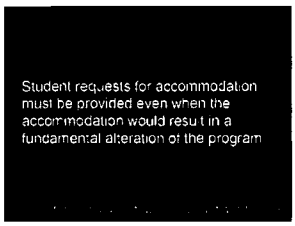
Show Slide #13: "Faculty members do not need to have access..."



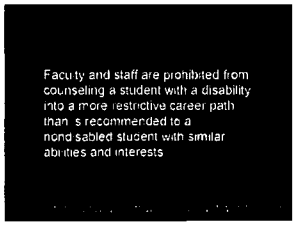
Show Slide #14: "If a student mentions..."



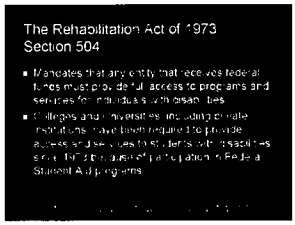
Show Slide #15: "When field trips are held in locations..."



Show Slide #16: "Student requests for accommodation..."



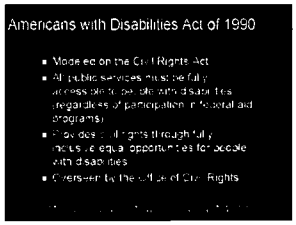
Show Slide #17: "Faculty and staff are prohibited..."



Show Slide #18: The Rehabilitation Act of 1973, Section 504[11]

Instructions

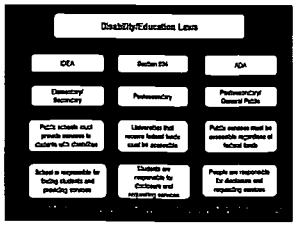
Review the text on the slide. Be sure to note that services and programs as well as classes must be accessible, and that the law applies even to private schools if their students receive federal financial aid.



Show Slide #19: Americans with Disabilities Act of 1990[12]

Read to Participants

The ADA is modeled after the Civil Rights Act and subsequent laws that protect against discrimination on the basis of national origin, race, religion, gender, and age. While the ADA mostly reinforces the protections for students that already existed under Section 504, the publicity that has surrounded its passage and implementation has brought new attention to the responsibilities of postsecondary institutions. It also extends these protections into the area of employment.



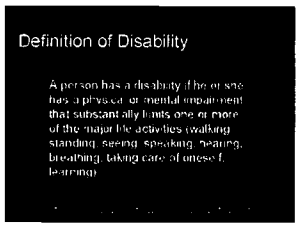
Show Slide #20: Disability/Education Laws

Read to Participants

This slide demonstrates how the three laws that provide protections for students with disabilities compare. The IDEA, or Individuals with Disabilities Education Act–some of you may remember it as the old Public Law 94-142–is the law that governs pre-kindergarten, elementary, and secondary education. The most important difference

between this law and the postsecondary laws for the purpose of discussion here is the last point about who is responsible for identifying students with disabilities. Under IDEA, the *school* must conduct a "child find" and actively seek to identify and serve all students in need of special education, whereas under Section 504 and the ADA, the *student* must self-identify and provide documentation of his or her disability.

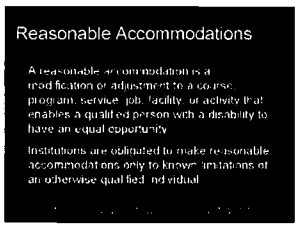
There is another important difference, however, that is not illustrated on this slide, and that is the role of the parent. In elementary and secondary education, the parent is considered an integral part of the process and, by law, is included in planning the student's educational program. At the postsecondary level, students with disabilities must sign a release of information in order for disability services staff to discuss the student's status with his or her parents or faculty.[13, 14, 15]



Show Slide #21: Definition of Disability

Read to Participants

Review the text on the slide. This definition comes directly from the Americans with Disabilities Act. As with much of the ADA, some terms are somewhat vague with the idea that they will be further defined by case law. "Substantially limits" is one of those terms.

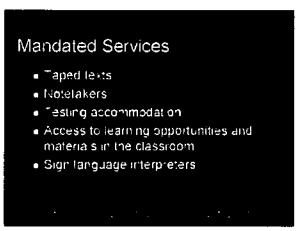


Show Slide #22: Reasonable Accommodations

Read to Participants

Review the text on the slide. It is important to stress here that accommodations need be made only for known limitations. If a faculty member or advisor has not been given verification of a student's disability, he/she is not obligated to make an accommodation.

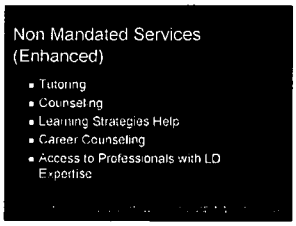
Also, note the term "otherwise qualified." For example, a tone-deaf student will probably not be able to become a professional singer no matter what accommodations are made.



Show Slide #23: Mandated Services

Read to Participants

Mandated services have been determined by court cases; they are not spelled out in the law. Consequently, this list probably will continue to evolve.



Show Slide #24: Non-Mandated Services

Read to Participants

Non-mandated, or enhanced, services include services such as tutoring, counseling, learning strategies help, career counseling, or access to professionals with learning disabilities expertise. Institutions may charge for these services.

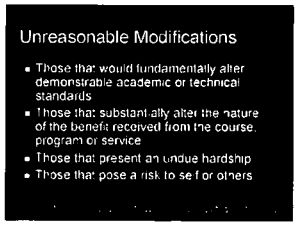
Show Slide #25: Appropriate Academic Accommodations/ Modifications

Instructions

Review the text on the slide. As opposed to the above services, which are usually provided by the institution and often arranged through a disability services office, these accommodations and modifications involve either changes in policy or faculty practices. Most of the bullets are self-explanatory, but it may be useful to spend more time talking about course substitutions.

Read to Participants

The whole area of course substitutions is complex because it is difficult to identify which students might qualify for a substitution. It is standard practice in many institutions to allow course substitutions, such as a German culture class for a German language class, or a logic class for a math course, rather than waiving a requirement altogether.



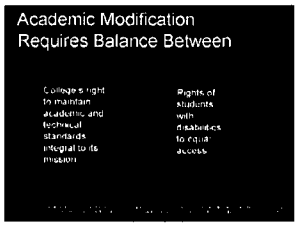
Show Slide #26: Unreasonable Modifications

Read to Participants

Unreasonable modifications are modifications that compromise or "water down" the curriculum or standards of the institution. These types of modifications are not acceptable, providing that the standards are reasonable and defensible. For example, it would be hard to defend a standard that requires students to type 30 words a minute in an English class, but it would probably be a defensible standard in a medical secretary course.

An example of a modification that could alter the nature of the benefit received from the course would be to excuse a mobility-impaired student from an important field trip because it is difficult to arrange transportation.

An example of an undue hardship would be requiring extensive renovation to a building in order to make a classroom accessible when the course could be moved to another accessible location appropriate to the course.



Show Slide #27: Academic Modification Requires Balance

Read to Participants

Academic modification requires balance between the institution's right to maintain academic and technical standards integral to its mission and the rights of students with disabilities to equal access.

Instructions

Show each myth-fact slide again and elicit correct answers from participants, based on what they learned in the preceding discussion.

Slide 13–**Fact.** Faculty members should have access only to the information they need to develop appropriate accommodations.

Slide #14–**Myth**. Only if a student has a documented disability is the faculty member responsible for arranging for accommodations.

Slide #15–**Myth.** Always talk with the student with the disability about how you might make the field trip more accessible. Also, consider reevaluating what is essential about the field trip experience. Are there other alternative learning experiences that might serve the same function and be accessible to all your students?

Slide #16–**Myth.** Accommodations should not fundamentally alter a program.

Slide #17–**Fact.** Faculty and staff are often not aware of all possible reasonable accommodations and/or adaptive technology that would enable a student to perform the essential elements of a job. Faculty and staff may certainly encourage a student with a disability to explore an internship or informational interviews as they would with any student whom they felt may be unaware of the job expectations within certain fields.

End Notes

[1] Seymour, E., & Hunter, A.B. (1998). *Talking about disability: The education and work experience of graduates and undergraduates with disabilities in science, mathematics and engineering majors.* Boulder, CO: The University of Colorado.

[2] Wlodkowski, R.J. & Ginsberg, M.B. (1995). *Diversity & motivation: Culturally responsive teaching.* San Francisco, CA: Jossey-Bass.

[3] Higbee, J.L., Ginter, E.J., & Taylor, W.D. (1991). Enhancing academic performance: Seven perceptual styles of learning. *Research and Teaching in Developmental Education, 7*(2), 5-10.

[4] Hahn, H. (1985). Toward a politics of disability: Definitions, disciplines and policies. *The Social Science Journal, 22*(4), 87-105.

[5] Hahn, H. (1988). The politics of physical differences: Disability and discrimination. *Journal of Social Issues, 44*(1), 39-47.

[6] Gill, C. (1987). A new social perspective on disability and its implication for rehabilitation. In F.S. Cromwell (Ed.), *Sociocultural implications in treatment planning in occupational therapy.* (pp. 49-55). New York: Haworth Press.

[7] Robertson, B.A. (1994). *Disability culture, community and pride.* Unpublished manuscript. Minneapolis, MN: Project L.E.E.D.S. (Leadership Education to Empower Disabled Students), University of Minnesota.

[8] Groce, N. (1985). *Everyone here spoke sign language: Hereditary deafness on Martha's Vineyard.* Cambridge, MA: Harvard University Press.

[9] Johnson, D.; Stockdill, S.; Chelberg, G.; Harbour, W.; Egan, E.; & Lorsung, T. (1998). Engage: Disability Access to Student Life. University of Minnesota.

[10] Center for Applied Special Technology (2001). *Universal Design for learning.* [Online]. Available: www.cast.org

[11] Rehabilitation Act of 1973. P.L. 193-112. Section 504.

[12] Americans with Disabilities Act (ADA) of 1990, P.L.101-336, 42 US CA. 12, 101-12, 213, (West Supp. 1991).

[13] Dalke, C., & Schmitt, S. (1987). Meeting the transition needs of college-bound students with learning disabilities. *Journal of Learning Disabilities, 20*, 176-180.

[14] Ness, J.E. (1989). The high jump: transition issues of learning disabled students and their parents. *Academic Therapy, 25*(1), 33-40.

[15] Van Reusen, A.K., Bos, C.S., Schumaker, J.B., & Deschler, D.D. (1994). *The self-advocacy strategy for education and transition planning.* Lawrence, KS: Edge Enterprises.

SECTION 2

STUDENT EXPERIENCES

Overview

The purpose of this section is to allow participants to learn about issues on campus and the experiences of college students with disabilities from the students themselves. Facilitators will recruit students with disabilities to present an interactive students' panel that first addresses questions from a panel moderator and then fields questions from the audience. If unable to recruit students for a panel, the facilitator may present the digital video "Uncertain Welcome: Student Perspectives on Disability and Postsecondary Education" (included on the accompanying CD-ROM), followed by a discussion with participants.

The live student panel, which includes time for discussion with the participants, runs for approximately 60 minutes.

The digital video runs for approximately 30 minutes and should be followed by a discussion of between 15-30 minutes, time permitting.

Learning Objectives

- To inform faculty practice through student input
- To provide a forum for reflection on successful and failed classroom practices as voiced by students
- To tap student knowledge of their learning needs

Materials (if you choose to show the video)

- Computer, LCD projector, and digital video "Uncertain Welcome: Student Perspectives on Disability and Postsecondary Education," available on accompanying CD-ROM

Preparation for Live Student Panel

To recruit students, facilitators may want to work with their Disability Services office. For example, students may be recruited by sending out notices to all identified students with disabilities on campus or through personal referrals from disability specialists. It is essential that students have good communication skills and be willing to discuss how their disability affects them in the classroom.

Interviewing students to find out why they are interested in presenting on a panel and what they hope to gain from the experience is an effective way to screen students and helps avoid unrealistic expectations regarding the panel experience.

It is also helpful to brief the student panelists on the purpose of the workshop and provide them with information regarding workshop participants, if possible. Also, provide them with the following list of questions prior to the workshop so the students have an opportunity to consider possible responses before the actual panel discussion. Below are some sample questions to consider using when facilitating a student panel.

Sample Questions for Student Experiences Panel

1. Please briefly tell us about yourself (e.g., year in college, major).
2. Please describe how your disability affects you in the classroom.
3. Do you generally disclose your disability to faculty? If so, how? Under what circumstances?
4. Do you generally disclose your disability to fellow students? Under what circumstances?
5. Please tell us about a course that you have taken that stands out as a successful and positive experience. What made it so positive? Were all aspects of the course accessible to you (materials, methods of presentation, tests, papers, access to information in the library, on the Internet)?
6. What, if any, accommodations did you use in the course?
7. Is there a course that you have taken that you remember as particularly difficult because of the way the material was presented? What made the course difficult? How was the material presented? Did you have trouble accessing the same information or materials as the other students in the class?
8. Did you work with the professor to resolve the difficulties you were having?
9. How could the material have been presented differently?
10. What advice would you give to faculty members here today to make their courses accessible to all students?

Preparation for Presentation of Digital Video "Uncertain Welcome: Student Perspectives on Disability and Postsecondary Education" and Discussion

Overview

For facilitators who are unable to recruit student panel participants, the authors have developed a captioned, digital video of University of Minnesota students with disabilities who discuss effective teaching strategies, disability disclosure, and campus climate. It is intended to provide an overview of the issues and will assist facilitators in the presentation of the "Student Experiences" section of the Curriculum Transformation and Disability faculty development workshop. This video should not replace consultation with an institution's

Disability Services office. For information on the services available at your institution, please contact your administrator or your Disability Services office.

Instructions

This video is intended to be used a training tool. Its primary intended audience is postsecondary faculty and instructional staff. **Any facilitator who uses this video should be prepared to lead a meaningful discussion about the issues presented.** Without some general knowledge of disability issues, it is doubtful a facilitator could respond appropriately to questions and comments generated by the viewing audience. An appropriate facilitator might be a disability services provider or a faculty member who is familiar with general issues of disability.

Following is a list of discussion questions that will assist facilitators in leading a meaningful discussion about the issues presented. Facilitators may direct viewers to the Curriculum Transformation and Disability Web site at www.gen.umn.edu/research/ctad for a list of additional resources, as well as for an annotated bibliography on the subject of Universal Instructional Design and postsecondary education.

The video runs for approximately 29 minutes and addresses six general topic areas. If you choose to view only a part of this video, consult the following times:

Segment	Begins at
Ordinary People	1:01
Disclosure	2:52
In the Classroom	8:45
A Chilly Campus Climate	18:49
What You Can Do	22:27
A Level Playing Field	27:25

Instructions

Use the following questions to guide a discussion after viewers have seen the video. After each question, be sure to ask the audience members for their ideas before offering the suggestions included below.

1. What was your initial reaction to the video?
2. Are there student issues different from or similar to the issues in your work environment?
3. Many of the students on the video talked about how difficult it is for them to disclose their disabilities. What steps might you take to invite more disclosure, earlier in the term?

[Some possible answers are including an appropriate syllabus statement regarding disability issues, verbally highlighting this statement early in the semester, and making yourself available to talk one-on-one with students.]

4. How would you describe the climate on your campus for students with disabilities? What might you do to make *all* students feel more welcome?

   [Some possible answers include ensuring that students with disabilities are included in all class activities and discussions, setting ground rules for class discussions that emphasize respect for all students, seeing to all students' physical comfort (such as pointing out where the bathrooms are and inviting students to move around the room if they need to), including works by scholars with disabilities in your course, and avoiding singling out students who receive accommodations.]

5. What accommodations do you provide to students with disabilities that might be helpful to *all* students?

   [Examples include providing copies of class notes, putting course materials on the Web, varying teaching styles, and allowing students to demonstrate their knowledge in a variety of ways.]

6. When you learn you have a student with a disability in your class, what concerns do you have about working with that student?

   [Listen to the participants' concerns and offer support and available options, such as additional training, students as paid presenters offering an "expert" perspective, etc.]

7. What is your role in the accommodation process at your institution?

   [At the University of Minnesota—Twin Cities campus, faculty, Disability Services staff, and students each play an important role in determining and implementing accommodations. Faculty roles include participating in the process to determine and implement reasonable accommodations, identifying essential course components, and requesting assistance from Disability Services. Contact your institution's Disability Services office for more specific information.]

SECTION 3

UNIVERSAL INSTRUCTIONAL DESIGN

Overview

The purposes of this section are (1) to introduce participants to the model of Universal Design as it applies to the built environment and (2) to show how some of the features of Universal Design may be applied to the field of education to create the model of Universal Instructional Design. In this section, participants have an opportunity to practice identifying universally designed features in a series of photos and in their own environment through a kinesthetic exercise. Participants then have the opportunity to learn the similarities and differences between Universal Design and Universal Instructional Design. The section then introduces the principles of Universal Instructional Design and provides an opportunity for discussion.

The principles for applying Universal Instructional Design were compiled by merging Chickering and Gamson's "Seven Principles for Good Practice in Undergraduate Education"[1] and North Carolina State University's Center for Universal Design's "Seven Principles for Universal Design."[2]

This module takes approximately 1 hour and 15 minutes to complete.

Learning Objectives

- To learn about Universal Design as it applies to the built environment
- To understand how Universal Design applies to the educational environment to create Universal Instructional Design
- To learn about the Principles of Universal Instructional Design

Materials

- Computer, LCD projector, and PowerPoint presentation
- OR overhead projector and transparencies
- Handouts of PowerPoint presentation slides for participants
- Copies of Appendix P, "Practicing the Principles of Universal Instructional Design in an Art Course" for participants

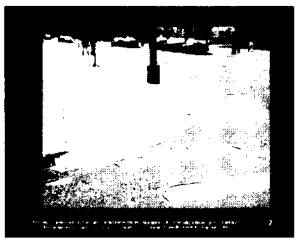
Preparation

Please note that this module does *not* provide the necessary background information for facilitators who are unfamiliar with the concepts of Universal Design and Universal Instructional Design. For more information on Universal Design, facilitators should refer to North Carolina State University's Center for Universal Design's Web site at

www.design.ncsu.edu/cud/index.htm. For more information on Universal Instructional Design, facilitators should refer to the Center for Applied Special Technology (CAST) Web site at www.cast.org.[3] The Curriculum Transformation and Disability (CTAD) Web site at www.gen.umn.edu/research/ctad/default.htm also provides an annotated bibliography of research articles and publications on Universal Design and Universal Instructional Design.[4] It is imperative that facilitators become familiar with these concepts before attempting to facilitate this section.

"Instructions" indicates instructions to the facilitator. "Read to Participants" indicates text that either should be read aloud or paraphrased to participants.

Show Slide #1: Universal Instructional Design



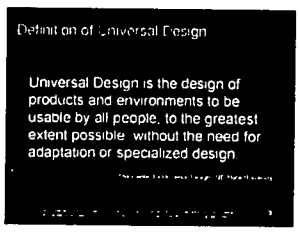
Show Slide #2: Photo of Curb Cut

Read to Participants

The curb cut is a familiar example of Universal Design in the built environment. Although it was originally designed to allow people who use wheelchairs to get from the sidewalk to the street and back, in reality, the curb cut is used by all kinds of people.

Instructions

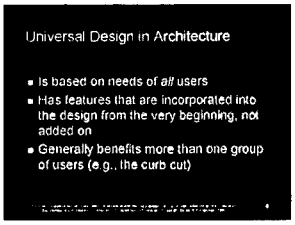
Ask the audience: Who uses curb cuts? Try to elicit as many answers as possible. Share the following examples if the participants do not: rollerbladers, people pushing strollers or pulling luggage, bicyclists etc. Note that the curb cut is a good example of a feature that was designed for people with disabilities but is universal in its usage.[5]



Show Slide #3: Definition of Universal Design

Read to Participants

As defined by researchers at the Center for Universal Design at North Carolina State University, Universal Design is "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."[6]



Show Slide #4: Universal Design in Architecture

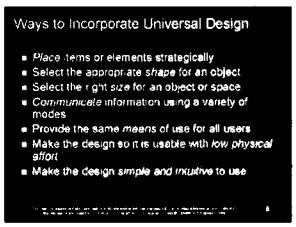
Instructions

Review the text on the slide.

Read to Participants

For example, think about the ramps that are built onto the side or back of older buildings to make them wheelchair accessible and then compare them to a new a building that features one central accessible entrance designed for all. The ramp, although useful, stands out from the rest of the building and usually forces users toward a side or back entrance, while an accessible front entrance welcomes all users in a respectful way, while maintaining the design of the building.

So how do we learn to identify and apply features of Universal Design in our every-day environments? The following slide shares some ways.



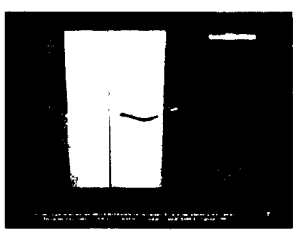
Show Slide #5: Ways to Incorporate Universal Design

Instructions

Review the text on the slide, which was adapted from principles developed by the Center for Universal Design at North Carolina State University.[7] Ask the participants to keep in mind these ideas as you show them a series of pictures and ask them to identify features of Universal Design in the pictures. Possible answers are provided under each Slide heading below.

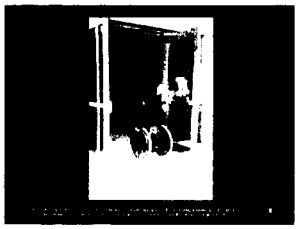
Show Slide #6: Women's Restroom Sign

- Simple and intuitive use. Easy to understand, uses international symbols.
- Communicates information in a variety of modes, including verbal, visual, and tactile. It is also legible, with high contrast white symbols on a brown back-ground.



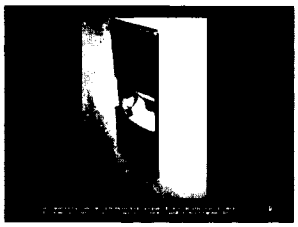
Show Slide #7: Door Lever

- Appropriate size and space (accommodates variations in hand and grip size)
- Provides same means for all users
- Low physical effort



Show Slide #8: Power Assist Front Door

- Provides same means for all users (shows respect for all)
- Simple, intuitive design
- Low physical effort

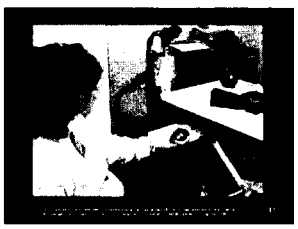


Show Slide #9: Paper Towel Dispenser

- Same means for all users
- Strategically placed
- Has an aesthetic design appealing to all users

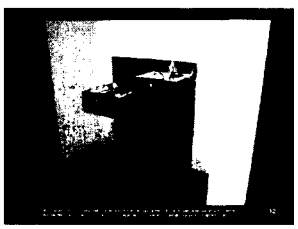
Show Slide #10: Brochure Rack

- Strategically placed (can be reached by people of short stature, people using wheelchairs, etc.)



Show Slide #11: Track Ball

- The larger track ball is similar to an upside-down mouse and provides easier use for a person with limited hand mobility. This example is an appropriate size for an object.

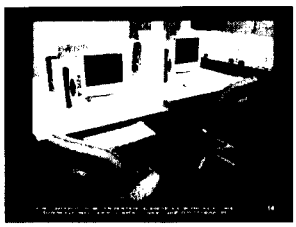


Show Slide #12: Water Fountains

- Equivalent means of use (as opposed to identical usage, such as in the power assist front door example. Identical usage is ideal, but some situations call for equivalent usage.)

Show Slide #13: Reception Desk

- Appropriate size and shape
- Equivalent use



Show Slide #14: Classroom Tables

- Appropriate size and shape (The professor who uses this classroom reports that the adjustable table is very popular with athletes, who tend to be too big to fit comfortably under the regular tables. This is another good example of Universal Design and similar to how curb cuts are used.)
- Equivalent use

Show Slide #15: Universal Design Creates Inclusive Environments

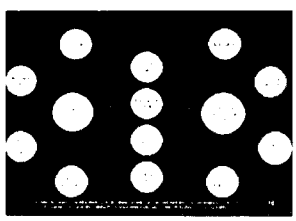
Read to Participants

To sum up, the purpose of Universal Design is make the built environment a more inclusive one.

Instructions

Tell participants you're going to give them an opportunity to find some additional examples of Universal Design in the building in which you are holding the workshop. Put them in pairs or small groups and have them move around the building and look for at least three examples of features they think are universally designed. (Or examples of things that *should* be universally designed.) Remind them to look at entrances, hallways, classrooms, offices, signage, public spaces and elevators. Give participants 10-15 minutes to complete this exercise and return to the room. Tell them to write down what they find and be prepared to talk about it with the group.

When all have returned, ask the group what they have discovered. Facilitate the discussion by asking participants to talk about examples of Universal Design where Universal Design is present and examples of where Universal Design is absent. Try to get each person to share at least one example.

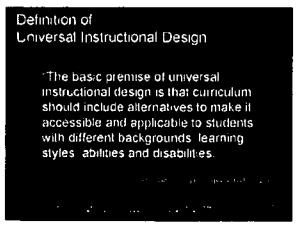


Show Slide #16: Bubble Chart

Read to Participants

As we move toward the educational environment, let's look at the commonalities between Universal Design, which focuses on architecture and product design, and Universal Instructional Design, which focuses on teaching and learning.

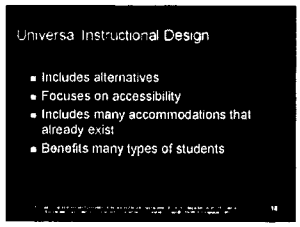
- Both models aim to benefit many people, not just a few.
- Both models aim to create a respectful climate.
- Both models provide alternatives for users.
- Both models require some upfront planning.



Show Slide #17: Definition of Universal Instructional Design

Read to Participants

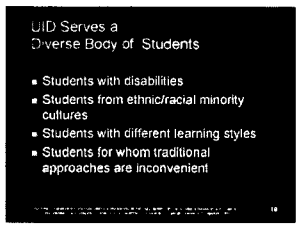
According to the Center for Applied Special Technology (CAST), "The basic premise of Universal Instructional Design is that curriculum should include alternatives to make it accessible and applicable to students with different backgrounds, learning styles, abilities and disabilities.[8]"



Show Slide #18: Universal Instructional Design includes alternatives

Instructions

Review the text on the slide.



Show Slide #19: UID Serves a Diverse Body of Students

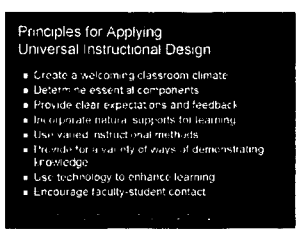
Read to Participants

The student population is becoming more diverse. Research indicates that colleges and universities are admitting more women, students of color, and nontraditional-age students than ever before. With diversity comes a need for teaching and learning methods which address the needs of all students.

Show Slide #20: One Size Does Not Fit All

Read to Participants

The "universal" in Universal Design does not imply that one size fits all; instead, it stresses the "need for flexible, customizable content, assignments and activities.[9]"



Show Slide #21: Principles for Applying UID

Instructions

Review each principle briefly. Make it clear that this list is *not* definitive–it is merely a set of guidelines to get people thinking. More than anything else, the principles are about good teaching. Invite questions or comments from the audience as you have time. Distribute Appendix P as an example of how one faculty member incorporates principles of Universal Instructional Design.

Create a welcoming classroom climate

Setting a welcoming tone up front allows students an opportunity to tell you what their needs are. Examples include developing an inclusive syllabus statement regarding disability accommodations, attending to all students' physical needs, and establishing ground rules for class discussion.

Determine the essential components of the course

If you identify the essential outcomes you can expect *all* students in your course to demonstrate, you can fairly evaluate all students and not have to worry about "watering down" the course.

Provide clear expectations and feedback

Having expectations clearly laid out in the syllabus and providing students with regular feedback on their performance are just two examples of ways to provide clear expectations and feedback.

Explore ways to incorporate natural supports for learning

Natural supports are nonaccommodation-based strategies that are built into a course. They benefit *all* students. For example, study guides, discussion groups, and practice tests may benefit all students, not just students with disabilities.

Provide varied instructional methods

Providing students with different ways to access material creates an accessible environment for all students. Some students thrive in lectures; others obtain information effectively from text, while still others learn best through visual media such as diagrams, illustrations, charts, or video.

Provide a variety of ways for students to demonstrate knowledge

Just as no single mode of presentation suits all learners, neither does one single mode for demonstrating knowledge. Providing students with choices in demonstration of knowledge, such as allowing students to choose between writing a paper, presenting a speech, or conducting a multimedia project allows students to show what they know in a manner that works for them. However, you must always make sure that providing choices in demonstration of knowledge does not conflict with the course's essential components.

Use technology to enhance learning opportunities

Technology may be the key to increasing flexibility in your courses. Putting materials on-line, arranging for course listservs, and selecting software that is compatible with screen readers may assist all students in accessing materials in their own time in a manner that is accessible to them. The key is to not exclude students by using technology that is not accessible.

Encourage faculty-student contact

Faculty-student contact is one of the strongest indicators for student retention. Strong evidence reported in Astin's study "What Matters in College?"[10] supports the view that faculty involvement with students and active self-directed learning by students contribute more than anything else to measurable student success.

End Notes

[1] Chickering, A.W., & Gamson, Z.F. (1987, March). Seven principles for good practice in undergraduate education. *AAHE Bulletin,* 3-7.

[2] The Center for Universal Design. (1997). *The Principles of Universal Design.* (Version 2.0) [Brochure]. Raleigh, NC: North Carolina State University.

[3] Center for Applied Special Technology. (2001). Universal design for learning. [Online.] Available: www.cast.org

[4] Curriculum Transformation and Disability (CTAD) Web site. Available: www.gen.umn.edu/research/ctad/default.htm

[5] Rose, D. and Meyer, A. (2001). Universal design for learning. *Journal of Special Education Technology ejournal*. Retrieved November 30, 2001 from www.cast.org

[6] The Center for Universal Design. (1997). *The Principles of Universal Design.* (Version 2.0) [Brochure]. Raleigh, NC: North Carolina State University.

[7] The Center for Universal Design. (1997). *The Principles of Universal Design.* (Version 2.0) [Brochure]. Raleigh, NC: North Carolina State University.

[8] Center for Applied Special Technology. (2001). Universal design for learning. [Online.] Available: www.cast.org

[9] Rose, D. and Meyer, A. (2001). Universal design for learning. *Journal of Special Education Technology ejournal*. Retrieved November 30, 2001 from www.cast.org

[10] Astin, A. (1993).What Matters in College. *Liberal Education, 79*(4), 4-15.

SECTION 4

APPLYING UNIVERSAL INSTRUCTIONAL DESIGN, PART I—DESIGNING AN ACCESSIBLE COURSE

Overview

The purpose of this section is to give participants an extended opportunity to discuss specific ways in which they can make their classes more accessible to all students, including students with disabilities. Participants will learn to apply four of the principles of Universal Instructional Design: create a welcoming classroom climate; encourage faculty-student contact; provide clear expectations and feedback; and determine essential components. (These principles were derived from Chickering and Gamson's "Seven Principles of Good Practice for Undergraduate Education"[1] and North Carolina State University's Principles of Universal Design.[2])

This section takes approximately two hours to complete.

Learning Objectives

- To learn about specific ways to design an accessible course
- To apply principles of Universal Instructional Design to participants' own courses

Materials

- Worksheet for Applying Universal Instructional Design, Part I (See Appendix J)
- Essential Components Case Scenario (See Appendix K)
- Practicing the Principles of UID in an Art Course (Appendix P)

Preparation

Facilitators should read through this section carefully before presenting it. Those facilitators who have had no experience in the classroom may wish to invite an instructor or faculty member to co-present this section, as participants likely will have specific questions about how these principles apply to classroom teaching.

"Instructions" indicates instructions to the facilitator. "Read to Participants" indicates text that should be either read aloud or paraphrased to the participants.

Show Slide #1: Applying Universal Instructional Design, Part I—Designing an Accessible Course

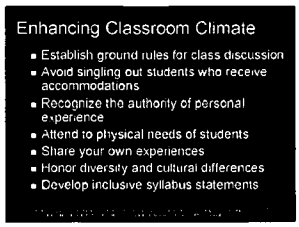
Instructions

Share with participants that the purpose of this module is to introduce them to specific ways that will help them design more accessible classes.

Show Slide #2: Create a Welcoming Classroom Climate

Read to Participants

Creating a welcoming classroom climate is one important step in creating an accessible class for all students.



Show Slide #3: Enhancing Classroom Climate

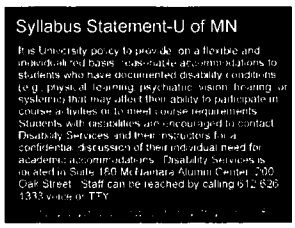
Instructions

This slide lists a number of specific ways in which participants might enhance classroom climate. Briefly review each bullet point on the slide, adding examples below as time permits.

- Establish ground rules. Students with hidden disabilities, especially psychiatric disabilities, often are okay with having the instructor know about their disability, but they are afraid of being harassed by their peers. A good way to create ground rules is to elicit them from the class.
- Avoid singling out. Students report faculty comments like, "Oh, Suzie, I forgot, you need to take your test in another room." One strategy for avoiding this would be to have the student meet you at the alternative test site prior to the start of class.
- Recognize the authority of personal experience. Know that the student with the disability is usually the one who best understands the disability and how it impacts learning.
- Attend to the physical needs of all students. Telling them where the bathrooms are and allowing occasional breaks in longer classes lets them know that you have an interest in their comfort.
- Share your own experiences. As much as your comfort level allows, let students see that you are vulnerable. Vulnerability is a quality that students with disabilities have identified as important in people they decide to trust.
- Honor diversity and cultural differences.
- Develop inclusive syllabus statements. This is a powerful way to communicate to students with disabilities that a class will be accessible to them.

Instructions

If time permits, ask participants to share additional ideas for enhancing classroom climate.



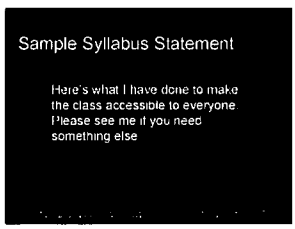
Show Slide #4: Sample Syllabus Statement--U of MN

Instructions

Be sure to check with your institution's policy on syllabus statements before presenting this section. Many institutions require very specific wording.

Read to Participants

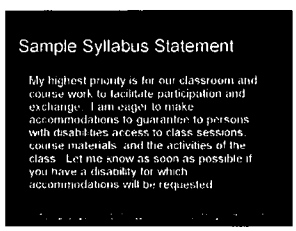
The following three slides represent sample syllabus statements and should give you some idea of the range of possible statements. The first statement is the standard statement recommended by the University of Minnesota and is probably the most conservative of the sample statements.



Show Slide #5: Sample Syllabus Statement

Read to Participants

This statement comes from Simi Linton, a leader in disability studies, who uses it in her classroom after she has delineated the things she has done to make the classroom accessible. This is a very open-ended statement. To use it, you need to be comfortable in setting boundaries, because you never know what you may be asked to do.



Show Slide #6: Sample Syllabus Statement

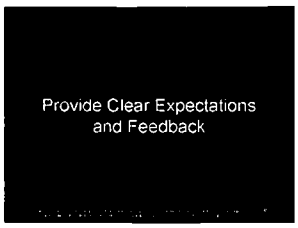
Instructions

Review the text on the slide and ask participants if they have comments or questions about this sample statement, which was developed by a faculty member who participated in a CTAD workshop. Then have them complete Question 1 on the Worksheet for Applying Universal Instructional Design, Part I. If time permits, ask them to share statements with a partner or the group as a whole.

Show Slide #7: Encourage Faculty-Student Contact

Instructions

Ask participants to share how they encourage meaningful contact with students.



Show Slide #8: Provide Clear Expectations and Feedback

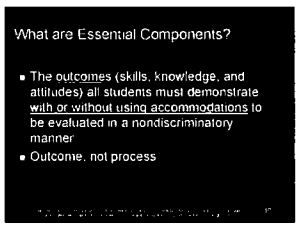
Instructions

Ask participants how they communicate to students what they must do to succeed in a particular class.

Show Slide #9: Determine Essential Components

Instructions

The discussion about essential components likely will be new information to most participants. Take your time presenting the information that follows and be sure to allow time for questions and discussion. Before you begin, inform participants that they will have an opportunity to clarify essential components for their own courses at the end of this section.



Show Slide #10: What are Essential Components?

Read to Participants

Essential components are the *outcomes* (including skills, knowledge, and attitudes) all students must demonstrate *with or without using accommodations* to be evaluated in a nondiscriminatory manner.[3] In other words, some students might use accommodations and some might not, but *all* students must achieve the same outcomes. Process is important, of course, but not necessarily essential. Focusing on your course outcomes will help you to define your course's essential components.

The difference between essential and nonessential course components is similar to the difference between "essential" and "preferred" skills commonly listed in job descriptions. As an employer, you may want to see *both* sets of skills, but only the essential skills are an absolute requirement of employment. Similarly, in your courses, you can articulate essential outcomes that all students *must* demonstrate in order to successfully complete the course, as well as preferred outcomes you *hope* students will be able to demonstrate.[4]

As one researcher notes, "The purpose of defining these essential requirements is to establish a nondiscriminatory baseline of course content, methods, and expectations that are required of all students and form the essence of the course."[5]

Instructions

Ask who in the audience has already determined the essential components of a course. Frequently, those faculty who teach commonly taught "feeder" courses have essential components defined by their departments. Those who teach courses leading to licensure or board exams, or those who have completed an institutional change, such as a merger or a conversion from quarters to semes-

ters, may have this information at hand. Frequent use of examples included in this text, as well as examples from the participants, will go a long way to explaining this difficult topic.

Read to Participants

Allow some flexibility in getting to the outcomes. For example, a student who has the use of only one hand may still give a patient an injection, although he or she might need to use different procedures to achieve this outcome. Similarly, a student with a panic disorder may be unable to give a class presentation but may give the presentation privately to the instructor. The accommodation in this example is the private nature of the presentation; the essential component, the presentation, remains.

Show Slide #11: Articulating the Essential Components of your course allows you to:

Instructions

Review the text on the slide.

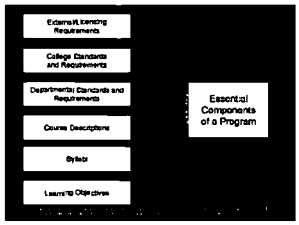
Read to Participants

Faculty should be clear about the essential components of their courses so they can respond appropriately if student grievances develop. There are issues of legality here. For example, as one researcher points out, according to federal regulations, "Postsecondary institutions are not required to compromise on requirements that are essential to the program or course of instruction or that are directly related to licensing requirements". However, she notes that institutions "must be prepared to support why requirements are essential and how this determination was reached."[6]

Providing reasonable accommodations for students with documented disabilities *will not* compromise the essential components of your course. Faculty members should never feel they are "watering down" their courses. Nor should they see this as an infringement on academic freedom. As a matter of fact, some argue that requiring faculty to define their essential components actually *preserves* principles of academic freedom by allowing faculty to determine what is most important, while still allowing access for students with disabilities.[7]

Instructions

If participants are concerned about giving unfair advantage to some students, have them consider how they would treat a student who suddenly experiences a complicated pregnancy during the semester. If they feel comfortable making modifications for this student, then why not for a student with a psychiatric disability who experiences a sudden flare-up of symptoms? Try to elicit other examples from the audience, if they seem inclined to share their own experiences.



Show Slide #12: Essential Components of a Program

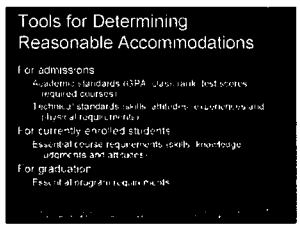
Read to Participants

The essential components of any particular program will be influenced by a variety of factors and may be determined by an individual faculty member, an academic department, or a departmental chair. Some courses, such as commonly taught freshman courses that serve as "feeder" courses to upper division courses, may have very well-defined essential components; faculty who teach more stand-alone courses may never have been asked to clearly articulate essential components.

What happens in a particular class relates to its program. Instructors may need to respond to external requirements (such as licensing requirements, like the Nursing Board exam), as well as college and departmental requirements.

Instructions

Review the boxes on the slide, pointing out that some or all of these factors may influence the essential components of a particular course. Ask participants if they have additions to this list.



Show Slide #13: Tools for Determining Reasonable Accommodations

Read to Participants

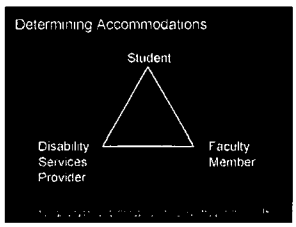
Remember that students with disabilities may receive accommodations other than in the context of a classroom. Accommodations can occur at three different points for students: during admission, enrollment, or graduation. As a result, it is important for departments and individual faculty to understand the difference between technical standards, academic standards, and essential components.

In the *admissions* process, accommodations may occur around academic standards (grade point average, class rank, test scores, required courses) or technical standards (skills, attitudes, experiences and physical requirements). Technical standards are skills the students bring into the program, such as physical requirements. These are the foundation skills students need to bring with them. Students will not learn these skills in the program. For example, a student may have strong ACT scores (using testing accommodations) but moderate or low overall grade point average. As an accommodation, the student may request that the admissions department looks at grades from the last two years of high school when she began using accommodations, rather than her overall grade point average.

For *currently enrolled* students, accommodations may occur around essential course requirements, including skills, knowledge, judgments, and attitudes. To fairly deter-

mine reasonable accommodations for currently enrolled students, instructors need to be able to articulate the rationale for deciding which outcomes are essential for all students to demonstrate. For example, some faculty identify attendance as essential but are unclear about the rationale behind it. While attendance may indeed be essential in some circumstances, in many cases the real essential component is the completion of required tasks, whether they are completed in class, or not.

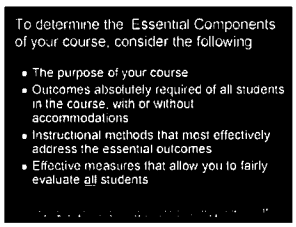
For *graduation*, accommodations may occur around essential program requirements. For example, at some institutions, College of Liberal Arts students are expected to complete two years of a second language and pass a proficiency exam. A student with a learning disability that affects auditory and verbal processing might have difficulty fulfilling this requirement. An appropriate accommodation for this student might be to gain familiarity with another culture by completing two years of culturally-related courses in one concentration.



Show Slide #14: Determining Accommodations

Read to Participants

Determining what accommodations are appropriate can be done in a collaborative way: the faculty member brings knowledge of the course content, methods, and essential components; the Disability Services provider understands what accommodations are possible; and the student understands his or her own needs. Faculty members should feel a part of the discussion around accommodations and should feel comfortable contacting the Disability Services provider with questions, especially when they think the accommodations may compromise the essential components of the class.



Show Slide #15: To determine the Essential Components of your course, consider the following

Instructions

Briefly review the bullet points and let participants know they will have a chance to answer these questions for themselves after they work through a brief case scenario.

Next, introduce the essential components case scenario exercise, which appears below and as Appendix K. Distribute copies of the scenario. Ask participants to break into groups of three or four and assign each group one of the two scenarios. Give the groups about 10 minutes to discuss their scenario and then bring all the groups together to discuss their responses. Expect to spend another 10-15 minutes in discussion. Some common responses appear below.

Scenario 1—Carol

Carol, a student in your "Principles of Diagnostic Microbiology" course, is eight months pregnant and informs you that she is having some difficulty with her pregnancy that has led her to miss at least one out of three class sessions each week. You have offered her a lot of flexibility, but she is still behind and has been unable to complete the last two laboratory exams. You are in the 12th week of the semester and feel you do not have enough on which to grade her and suggest that she take an incomplete in your course. Carol is very upset with your suggestion, since she had hoped to complete all of her courses before the arrival of her new baby. She suggests that you scale down the number of exams she must complete so she can finish your course.

How do you sort out what is essential for her to complete and still maintain the integrity of the course?

Instructions

Allow the participants to guide discussion of this question. If they have difficulty, pose questions such as the following. What are the lab exams designed to evaluate? Is there another way to evaluate the materials covered in the lab exam? What percent of the grade do the lab exams constitute? Does the student want to be graded with this omitted from the grade?

Scenario 2—Mark

Mark, a student in your composition course, has provided you with a letter from Disability Services requesting reasonable accommodations of extra time on exams and a separate testing environment due to a chronic health condition that affects his concentration and causes fatigue. You notice that Mark has missed the past three classes, and your syllabus indicates that a student's grade will be reduced after three absences. Mark has submitted good work in your course, but you feel that you need to lower his grade due to your policy on attendance stated in the syllabus. When you return to your office, you have a voice message from Mark's disability specialist indicating that she would like to discuss Mark's situation with you. She also informs you that Mark's illness has flared up and he is worried about your attendance policy and an anticipated lower grade.

How do you determine if attendance is an essential component of your course?

Instructions

You can expect the issue of attendance to cause some heated debate. Ask the participants to explore the issue of attendance in this scenario and question whether it is an essential component, or more of a requirement. While it is certainly possible that for some courses attendance may be essential, there must be some rationale behind it. For example, students who are completing a practicum, or those participating in a group counseling course, may expect attendance to be considered essential, as much of the work is completed during classtime. The important question is, what makes attendance essential? Are there licensing requirements requiring students to complete a required number of hours? Is there classroom process involved?

Share the following example if you feel participants are struggling with this concept. Due to a flare-up of symptoms, a student with a psychiatric disability found it very difficult to discuss a draft of his composition paper with a classmate. As an accommodation, the student instead discussed the paper privately with his professor. In this example, attendance was preferred, but not essential.

Instructions

After the participants have discussed the case scenarios, ask them to work either alone or in pairs to answer questions 2, 3, 4, and 5 on the Worksheet for Applying Universal Instructional Design, Part I, which should give them some guidance in determining essential components for their own courses. Give them approximately 10 minutes to work on the questions. Bring the group back together and ask participants to share some of what they learned from the exercise. Use these questions to guide the discussion: What surprised them? What about essential components still might be unclear? Based on what they have learned about Essential Components, what one change might they make?

End Notes

[1] Chickering, A.W., & Gamson, Z.F. (1987, March). Seven principles for good practice in undergraduate education. *AAHE Bulletin,* 3-7.

[2] The Center for Universal Design. (1997). *The Principles of Universal Design.* (Version 2.0) [Brochure]. Raleigh, NC: North Carolina State University.

[3] Anderson, P.L. (1999). Developing Essential Components and Technical Standards. Presentation at AHEAD Regional Training Workshops. Chanhassen, MN.

[4] Blacklock, B. (1999). Handout. Considerations in Determining Essential Course/ Program Requirements. University of Minnesota.

[5] Scott, S. (1997). Accommodating College Students with Learning Disabilities: How Much is Enough? *Innovative Higher Education, 22*, 85-99.

[6] Scott, S. (1994). Determining Reasonable Academic Adjustments for College Students with Learning Disabilities. *Journal of Learning Disabilities, 27*, 403-412.

[7] Scott, S. (1990). Coming to Terms with the "Otherwise Qualified" Student with a Learning Disability. *Journal of Learning Disabilities, 23*, 398-405.

SECTION 5

USING ASSISTIVE TECHNOLOGY

Overview

This section is intended to provide a brief overview of assistive technology applications relevant to postsecondary education. Facitators may choose to show the digital video entitled "Assistive Technology: Applications in Postsecondary Education," or they may choose to demonstrate assistive technologies available to them locally. This section pairs well with Section 7, "Accessing Local Resources."

This section takes a minimum of 30 minutes to complete. (The video runs for approximately 25 minutes.) If time permits, you can extend this section to an hour by allowing extended time for demonstrations and allowing additional time for questions.

Learning Objectives

- To gain an overview of assistive technology and its applications in postsecondary education
- To learn about assistive technology resources available locally

Materials (if you choose to show the video)

- Computer, LCD Projector, and digital video "Assistive Technology: Applications in Postsecondary Education"
- Appendix L: Hardware/Software Shown in the Video, and Sample Assistive Technology Resources
- A list of technology resources at your institution, as well as contact information

Preparation

If at all possible, facilitators should consider complementing the video presentation with a live demonstration of assistive technology and with a list of assistive technology resources available locally. Students with disabilities who use assistive technology may be eager to demonstrate their uses for faculty.

Instructions

Introduce and show the video or introduce the students you have selected to demonstrate the technologies they use. The appendices listed under "Materials" above detail many of the resources presented in the video. Facilitators should copy and distribute these resources to participants before beginning this section.

SECTION 6

ACCESSING LOCAL RESOURCES

Overview

This section provides information on how to access disability services on your campus. Because each campus may employ different policies and procedures when serving students with disabilities, no script is provided for this section, although the information below should assist facilitators in developing an effective presentation. The facilitator should be prepared to field questions from the audience.

This section takes approximately 60 minutes to complete.

Learning Objectives

- To familiarize participants with the services provided by the local Disability Services office
- To provide participants with an opportunity to ask specific, detailed questions about working with students with disabilities

Materials

- Informational materials from the institution's Disability Services office, such as a sample letter to faculty requesting accommodations for a student, services provided, contact information, etc.

Preparation

The facilitator of this section should be prepared to present information describing the following:

- the role of the institution's Disability Services office
- services provided by the Disability Services office
- information for faculty on working with students with disabilities
- the type and frequency of disabilities represented at the institution
- how to work with the Disability Services office

No PowerPoint slides are included in this section as the information presented should be determined by local concerns. If you are not very familiar with the policies and procedures of your institution's Disability Services office, consider asking a staff member from that office to co-facilitate this section with you, as participants frequently have very specific, local questions. This section works best as an informal discussion between the facilitator and the participants.

SECTION 7

APPLYING UNIVERSAL INSTRUCTIONAL DESIGN, PART II–TEACHING AND LEARNING

Overview

In this section, participants will discuss ways of applying principles of Universal Instructional Design to their teaching and students' learning in order to make classes as accessible as possible. This section is entirely discussion-based. Facilitators should be prepared to use this *Guide* and the slides as a starting point for a more wide-ranging discussion of teaching and learning. Facilitators also should be prepared to respond to questions specific to the local institutional setting. This section of the workshop provides participants with the opportunity to apply what they're learning to the revision of their practice in the classroom.

The Principles for Applying Universal Instructional Design were compiled by merging Chickering and Gamson's "Seven Principles for Good Practice in Undergraduate Education"[1] and North Carolina State University's Center for Universal Design's "Seven Principles for Universal Design."[2] The Principles are informed by work on Universal Instructional Design developed by the Center for Applied Special Technology (CAST).[3]

This section takes approximately 1 hour and 30 minutes to complete.

Learning Objectives

- To explore common instructional strategies, classroom supports, and methods of student evaluation through discussion with other participants
- To apply specific principles of Universal Instructional Design to participants' teaching and students' learning

Materials

- Computer, LCD projector, and PowerPoint presentation
- OR overhead projector and transparencies
- Worksheet for Applying Universal Instructional Design, Part II–Teaching and Learning (Appendix M)
- Handouts of PowerPoint presentation slides for participants
- Practicing the Principles of UID in an Art Course (Appendix P)

Preparation

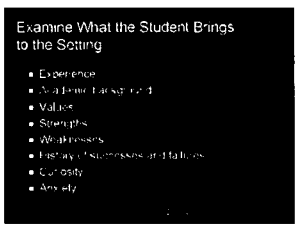
Facilitators who have no classroom teaching experience are strongly advised to co-present this section with a teaching faculty member. Print, copy, and distribute handouts listed above.

"Instructions" indicates instructions to the facilitator. "Read to Participants" indicates text that should be either read aloud or paraphrased to the participants.

Show Slide #1: Applying Universal Instructional Design, Part II–Teaching and Learning

Instructions

Strongly encourage participants to offer examples from their own experiences throughout this section. Let them know their participation is valuable to this discussion, as are very local applications.

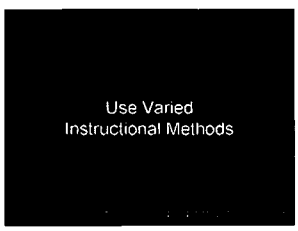


Show Slide #2: Examine What the Student Brings to the Setting

Instructions

Review the text on the slide. Ask faculty members to give additional examples of how they assess what students bring to their classroom settings. Share the following examples if they are short on ideas.

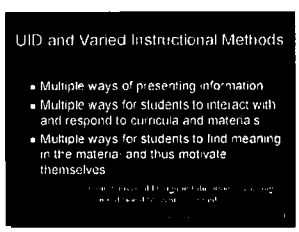
- Ask all students to write about their strengths and weaknesses. (Assure students of the privacy of their responses.)
- Ask all students to put information on a data card and to write whatever they want about themselves. (Assure students of the privacy of their responses.)



Show Slide #3: Use Varied Instructional Methods

Instructions

Review the text on the slide, noting that this is one of the principles of Universal Instructional Design. In your presentation, you may want to blend in the phrase "multimodal instructional methods," as some faculty may be more familiar with this term.



Show Slide #4: Universal Instructional Design and Varied Instructional Methods

Instructions

Review the text on the slide. Note that in *Universal Design in Education: Teaching Nontraditional Students,*[4] Frank Bowe emphasizes that by using Universal Design you can meet the needs of the majority of your students without making alterations to your curriculum and instructional style for each student. He emphasizes that by universally designing your curriculum you are, in fact, making it accessible to all students.

Read to Participants

Consider what range of instructional strategies or methods might be available to you. (Remember that what is possible is determined by such factors as class size, available technology, your course's place in a sequence of courses, etc.)

If, for example, you teach an art history class and have always used slides to show art from the different periods, who in your class might you be excluding from participation? What can be done to make the material more inclusive by representing the art in multiple or varied ways?

Instructions

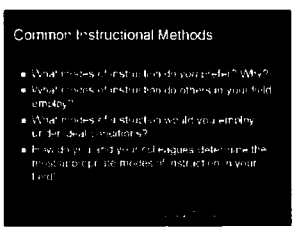
Invite discussion, which might move to putting the slides on a Web site. This would allow students with low vision to better access them with screen enlarging software, allow all students, regardless of disability status, to look at the slides as many times as they'd like, allow students to link from the slides to other parts of the site or the Web, with further explanation of the art, etc.

Read to Participants

Or, for example, if you teach a soils science laboratory, to what extent must each student manipulate all measurement devices to satisfy course requirements? Are there alternatives to individual manual manipulation which are consistent with course goals?

Instructions

Invite discussion, which might move to collaborative laboratory groups, or to a mix of demonstration and manipulation in laboratory settings, and virtual labs. The goal is to raise the question of whether students with visual disabilities or limits on dexterity can participate fully and meaningfully in courses where lab is essential.



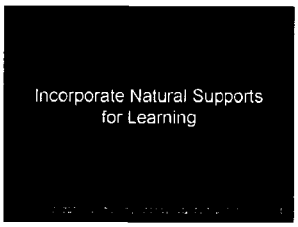
Show Slide #5: Common Instructional Methods

Instructions

Now that the participants have begun to consider instructional methods, ask them to spend a few minutes on their own answering the questions that appear on this slide and as questions 1-4 on the Worksheet for Applying Universal Instructional Design–Part II. When they are done, make an inventory of the varied, common instructional practices represented in the group. Be sure to capture this list on a board or flip chart, as it will provide a basis for further

discussion and for building on practices already familiar to participants. You might add the following items if participants do not mention them:

- case method
- lecture
- PowerPoint presentation of key ideas
- Web supports such as archived lecture notes
- discussion (face-to-face and technology mediated)
- collaborative strategies
- group editing
- group problem-solving
- active lab in combination with demonstration or virtual lab



Show Slide #6: Incorporate Natural Supports for Learning

Read to Participants

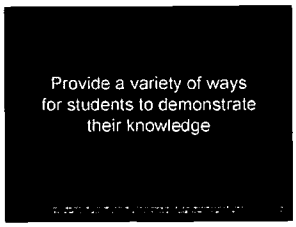
Natural supports are nonaccommodation-based supports that are built into a course to promote more universal access to key course components. Using natural supports will make a course accessible to all students, disabled or nondisabled.

Instructions

If you distributed a handout of PowerPoint slides to participants at the start of the session, point out that this is a natural support and is useful to those with limited hand mobility, to those who find it difficult to write down information and attend to the discussion simultaneously, and to those whose handwriting is poor.

With the participants, build a list of other natural supports they employ. Share the following additional examples of natural supports if needed:

- Creating electronic archives of lecture notes makes participation by students with visual disabilities, hearing impairments, sick children, or unreasonable bosses more fully possible.
- Instructions for important assignments can be included in the print syllabus, explained orally, and reinforced individually to ensure that all students' strongest sensory mode is addressed.
- Key course concepts can be taught by lecture, discussion, reading, and group work, to accommodate a range of learning styles.
- Office hours can be held face-to-face, as is traditional, but also through e-mail, phone, or real time on-line chat.

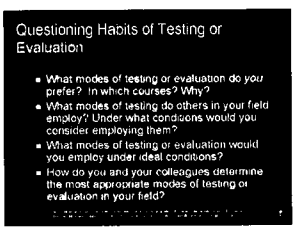


Show Slide #7: Provide a variety of ways for students to demonstrate their knowledge

Instructions

Different instructional settings have traditionally led faculty to employ a range of methods when evaluating student learning for purposes of assigning grades or providing summative feedback. It will be important to ask faculty to discuss the variety of assessment and evaluation tools already in their repertoire, but which are sometimes entrenched in habit. For example, we routinely assess graduate students through papers, presentations, and quality of discussion. Yet seldom would we consider using this range of tools for students enrolled in large introductory "lecture" courses. The goal here is to help faculty think creatively about how they might use trusted evaluation methods in a greater range of course settings. Courses that employ Universal Instructional Design will logically look for ways to use multiple, varied, and broadly accessible approaches to testing and other modes of assessing learning.

Review the text on the slide, noting that this is another of the principles of Universal Instructional Design.



Show Slide #8: Questioning Habits of Testing or Evaluation

Instructions

Now that the participants have begun to consider testing or evaluation methods, ask them to spend a few minutes (either on their own or in small groups) answering the questions that appear on this slide and as questions 5-8 on the Worksheet for Applying Universal Instructional Design, Part II. When they have finished, ask participants to share their answers, and invite discussion whenever appropriate.

Show Slide #9: Pull It All Together

Instructions

In the final section of the workshop, participants will develop an action plan for their own context in their own courses. As a transition to that activity, it might be useful to review and reinforce the principles of Universal Instructional Design from the workshop sections you have presented so that they are fresh and available to participants as they begin to synthesize all they have learned.

Finally, if time allows, invite comments and discussion of any of the ideas presented.

End Notes

[1] Chickering A.W., & Gamson, Z.F. (1987, March). Seven principles for good practice in undergraduate education. *AAHE Bulletin,* 3-7.

[2] The Center for Universal Design. (1997). The Principles of Universal Design. (Version 2.0) [Brochure]. Raleigh, NC: North Carolina State University.

[3] Center for Applied Special Technology. (2001). Universal design for learning. [Online.] Available: www.cast.org

[4] Bowe, F. (2000). *Universal design in education*. Westport, CT: Bergin & Garvey.

SECTION 8

CREATING AN ACTION PLAN

Overview

The action plan, the final activity of the workshop, allows participants to leave with some definite next steps. Participants might work on this activity either alone or in pairs. If time allows, participants should then report back to the entire group to share one next step, which may give others new ideas.

Note that the action plan is *not* the same as the workshop evaluation. The purpose of the action plan is to provide participants with a record of their ideas and plans for incorporating information learned from the workshop. The workshop evaluation gives them an opportunity to comment on the quality and usefulness of the information presented in the workshop.

This section takes approximately 15 minutes to complete.

Learning Objective

- To provide participants with an opportunity to briefly review their ideas and record a series of next steps

Materials

- Action Plan (Appendix N)
- Workshop Evaluation (Appendix O)

Preparation

Copy and have ready to distribute the Action Plan (Appendix N) and Workshop Evaluation (Appendix O).

Instructions

Let participants know that you want them to identify some clear next steps as they leave the workshop. Ask them to take a few moments to reflect on everything they have talked about during this workshop and begin to think how they will apply these ideas, given their particular circumstances.

Distribute copies of the action plan and ask participants to take a few moments, while the workshop is still fresh in their minds, to fill it out. Let them know that you'll ask each of them to share at least one item with the group. Briefly review the questions below and then give participants adequate time (perhaps 10-15 minutes) to complete them.

The questions included in the action plan are as follows:

1. What are the three most important changes reflecting Universal Instructional Design Principles I can make? Review your notes and application worksheets for ideas.
2. What are my next steps regarding my involvement with this project? (Request follow-up technical assistance, explore dissemination options, read annotated bibliography online, make changes in instructional methods, etc.) *Note regarding question 2: think about what kinds of resources you and your institution may reasonably offer to participants in the way of follow-up. If your institution's time, money and expertise are limited, don't invite participants to contact you for one-on-one technical assistance. Instead, consider pointing participants to more general resources available on your campus, online, etc.*
3. How might I disseminate what I have learned to a broader audience? With whom in my immediate environment could I collaborate?
4. What barriers or impediments in my environment might there be that would affect how well I can incorporate what I have learned? (Inaccessible classrooms, lack of resources or time, etc.)

Instructions

When participants have answered the questions, ask each person to share at least one item from their action plan. Invite conversation if it is appropriate. Participants should keep their action plans for future reference.

If you choose to do so, have participants complete the workshop evaluation (Appendix O) and return it to you.

Be sure to thank participants very much for their time.

APPENDICES

APPENDIX A

CONDUCTING FOCUS GROUPS WITH FACULTY

Holding a focus group with a representative sample of faculty is a terrific way to gather "best practices" and determine the culture of your institution. The information you gain from this focus group can help you tailor your workshop to the particular needs of your institution. For example, you may learn in a focus group that faculty are particularly concerned that the institution's cutting edge use of technology may negatively affect students with disabilities. With this information, you could develop case scenarios around the issue, look for relevant readings to recommend, or tailor the assistive technology presentation to address some of these issues.

Try to recruit six to ten faculty members, preferably from a range of departments, for the focus group. You also may want to include some administrators in the focus group, as they tend to have a broader perspective on the institution, as well as the ability to effect broader institutional change. *In accordance with your institution's Institutional Review Board protocol for informed consent and protection of research subjects when recruiting participants for focus groups and workshops,* prepare a recruitment letter detailing the workshop and the reason for the focus group. (See Appendix B.) Sending the recruitment message via a faculty e-mail group list generally is the easiest method, although you may prefer to send hard copy letters in place of, or in addition to, the e-mail message.

Arrange for a room, refreshments, and a tape recorder for the focus group. If you're unfamiliar with how to run a focus group, please refer to Appendix C for tips on running an effective focus group and for sample focus group questions. *In accordance with your institution's Institutional Review Board protocol for informed consent and protection of research subjects*, be sure all focus group participants read and sign the consent form (see Appendix D) before the start of the focus group. For confidentiality reasons, only you and the focus group participants should be present during the focus group.

When the focus group is over, transcribe the tape and look for broad themes in the data. Be sure to maintain confidentiality by not attaching names to individual comments. Use the information gleaned from the focus group to help you tailor the workshop to your particular institution.

Appendix B

Sample Invitation for a Faculty Focus Group

This is an invitation to participate in a research focus group meant to explore issues of disability, academic accommodation, and effective instructional strategies. Refreshments provided!

The information we gather in these focus groups is extremely important because it will help us determine content for faculty workshops. Specifically, the purpose of the focus groups is to help us identify best practices in effective instructional strategies and in accommodating students with disabilities in the classroom. We also want to learn more about the kinds of barriers both students and faculty face around the use of academic accommodations. The goal of the workshop is to build faculty's capacity to effectively teach and accommodate students with disabilities. Faculty participating in the workshop will receive formal training during which they will review their curricula and begin to make adjustments to improve accessibility.

The focus group will be run by **[include description of staff]**. The focus group will take from 60 to 90 minutes, during which a facilitator will ask a series of open-ended questions. There are no right or wrong answers to these questions—we're looking for your ideas and opinions about the issues, whether positive or negative. Focus group participants are not expected to be experts in the areas to be discussed, nor will they be required to participate in the actual project. All information will be kept confidential and will be used without reference to name or affiliation in any formal or informal presentations/publications. Focus group participation is voluntary. Your decision whether or not to participate will not affect your current or future relations with **[name of your institution]**. If you decide to participate, you are free to withdraw at any time without affecting these relationships. Focus group participants will not receive a stipend of any kind.

[Add info on whom to contact to participate...]

APPENDIX C

FACULTY FOCUS GROUP INTERVIEW PROTOCOL

I. Introduction

Moderator: My name is...,

II. Review consent form

III. Rules: Speak loudly enough to be recorded. Say what you want to say. Let others speak in turn. Relax and enjoy the conversation.

[**Useful neutral probes**: Can you say more about that? Would you explain further? I don't understand. Could you say that in a different way? Say "I understand," not "Yes" or "Very Good."]

To get started, I'd like to ask each of you to tell me your name, your department, and a little bit about your experiences with disability in the classroom.

1. How often do students with disabilities enroll in your courses? What types of disabilities do you have the most experience with?
2. How do you allow for students with disabilities to inform you of their needs? (e.g., use of disclosure statements)?
3. Are there ways you would suggest to improve the process?
4. What barriers exist for students with disabilities in the classroom? (PROBE: If no response, then, "Are there any barriers to students with disabilities?")
5. What academic accommodations do you have the most difficulty implementing? Please explain.
6. What has worked, or not worked, in the process of accommodating students with disabilities?
7. What teaching methods have you found to be effective for students with disabilities (e.g., use of various learning modalities)?
8. Why have these methods been effective?
9. Are you satisfied with the quality of disability-oriented information you receive when students with disabilities are enrolled in your courses? Explain.
10. What changes should there be in terms of information/training you receive in working with students with disabilities?

Thank you for your time and cooperation. Your comments are very valuable to us.

Appendix D

Sample Focus Group Consent Form

Thank you for coming to the focus group today. We would like to start out by discussing our purpose for being here, and how the focus group will proceed.

The focus groups we are conducting will inform the faculty workshop we are planning for this campus. The goal of the workshop is to build faculty's capacity to effectively teach and accommodate students with disabilities.

The purpose of this focus group is to help us identify best practices in accommodating students with disabilities in the classroom, effective instructional strategies, and barriers to providing academic accommodations.

The focus group will take from 60 to 90 minutes, during which the facilitator will ask a series of open-ended questions about your classroom experiences accommodating and interacting with disabled students. There are no right or wrong answers to these questions—we're looking for your ideas and opinions about the issues, whether positive or negative. You are not expected to be experts in the areas to be discussed. The group discussion will be tape-recorded in order to facilitate future report writing. All information will be kept confidential and stored in a secured environment. We will not include your name, affiliation, or any other personal identifiers in reports produced from this focus group proceeding.

The information we gather in these focus groups is extremely important because it will help us determine content for workshops that will prepare faculty to better meet the needs of students with disabilities. You are a valuable resource in helping us to identify useful workshop content.

Your decision whether or not to participate will not affect your current or future relations with **[name of the institution]**. If you decide to participate, you are free to withdraw at any time without affecting those relationships.

You may ask any questions you have now. If you have questions later, feel free to contact **[name, phone number and e-mail address of the contact person]**.

We can give you a copy of this form to keep for your records upon your request.

Statement of Consent:

I understand the above information. I have asked any questions that I have and received satisfactory answers. I consent to participate in the study.

Signature of Participant _____

Date _____

Signature of Facilitator _____

Date _____

APPENDIX E

CONDUCTING FOCUS GROUPS WITH STUDENTS WITH DISABILITIES

In addition to the faculty focus group, also hold a focus group with a representative sample of students with disabilities to determine the particular issues at your institution. The information you gain from the student focus group can also help you tailor your workshop to your institution's particular needs. *In accordance with your institution's Institutional Review Board protocol for informed consent and protection of research subjects when recruiting participants for focus groups and workshops,* prepare a recruitment letter detailing the workshop and the reason for the focus group. (See Appendix F.) If you do not have access to the confidential listing of students with disabilities, forward the recruitment message to someone who does. Sending the recruitment message via an e-mail group list generally is the easiest method, although you may prefer to send hard copy letters in place of, or in addition to, the e-mail message.

Arrange for a room, refreshments, and a tape recorder for the focus group. If you're unfamiliar with how to run a focus group, please refer to Appendix G for tips on running an effective focus group and for sample focus group questions. Be sure all focus group participants read and sign the consent form (see Appendix D) before the start of the focus group. For confidentiality reasons, only you and the focus group participants should be present during the focus group.

When the focus group is over, transcribe the tape and look for broad themes in the data. Be sure to maintain confidentiality by not attaching names to individual comments. Use the information gleaned from the focus group to help you tailor the workshop to your particular institution.

Appendix F

Sample Invitation for a Student Focus Group

This is an invitation to participate in a research focus group meant to explore issues of disability, academic accommodation, and effective instructional strategies. Refreshments provided!

The information we gather in these focus groups is extremely important because it will help us determine content for faculty workshops. Specifically, the purpose of the focus groups is to help us identify best practices in effective instructional strategies and in accommodating students with disabilities in the classroom. We also want to learn more about the kinds of barriers both students and faculty face around the use of academic accommodations. The goal of the workshop is to build faculty's capacity to effectively teach and accommodate students with disabilities. Faculty participating in the workshop will receive formal training during which they will review their curricula and begin to make adjustments to improve accessibility.

The focus group will be run by **[include description of staff]**. The focus group will take from 60 to 90 minutes, during which a facilitator will ask a series of open-ended questions. There are no right or wrong answers to these questions—we're looking for your ideas and opinions about the issues, whether positive or negative. Focus group participants are not expected to be experts in the areas to be discussed, nor will they be required to participate in the actual project. All information will be kept confidential and will be used without reference to name or affiliation in any formal or informal presentations/publications. Focus group participation is voluntary. Your decision whether or not to participate will not affect your current or future relations with **[name of your institution]**. If you decide to participate, you are free to withdraw at any time without affecting these relationships. Focus group participants will not receive a stipend of any kind.

[**Add info on whom to contact to participate...**]

APPENDIX G

SAMPLE STUDENT FOCUS GROUP INTERVIEW PROTOCOL

I. Introduction

Moderator: My name is...,

II. Review the consent form.

III. Review Rules: Speak loudly enough to be recorded. Say what you want to say. Let others speak in turn. Relax and enjoy the conversation.

[**Useful neutral probes**: Can you say more about that? Would you explain further? I don't understand. Could you say that in a different way? Say "I understand," not "Yes" or "Very Good."]

To get started, I'd like to ask each of you to tell me your name and a little bit about your experiences with disability in the classroom.

1. Let's go around the room now and I would like each person in the group to say your first name and to describe how long you've been using disability accommodations in the classroom.
2. What barriers in the classroom exist for students with disabilities? (PROBE: If no response, then, "Are there any barriers to students with disabilities?")
3. Do you feel faculty and staff are invested in your learning? How so?
4. What specific experiences help you that faculty are invested in your learning? What specific behaviors would indicate that faculty are invested in your learning?
5. What specific experiences behaviors would indicate that faculty are not invested in your learning?
6. Are you satisfied with the quality of instruction or implementation of classroom accommodations by faculty and staff on campus? How so?
7. What changes should there be in terms of instructional strategies or implementation of classroom accommodations by faculty and staff on campus?
8. What efforts have faculty and staff on this campus taken to improve teaching strategies and classroom environment for students with disabilities on campus?
9. What efforts have been the most successful? Why were they successful?
10. What efforts to involve students with disabilities haven't been successful? Why weren't these efforts successful?

Thank you for your time and cooperation. Your comments are very valuable to us.

APPENDIX H

SAMPLE CTAD WORKSHOP RECRUITMENT LETTER

DATE

MEMORANDUM

To: **ADDRESSES**

From: **NAME**

Subject: Curriculum Transformation and Disability

You are invited to apply to participate in Curriculum Transformation and Disability (CTAD), a program that offers an exciting opportunity to explore ways to make your curriculum more accessible for students with disabilities and more inclusive for the diverse needs of all students.

The Project

CTAD, tested and developed as part of a three-year collaborative project of the University of Minnesota's General College and Disability Services, aims to help faculty and administrators more effectively teach students with disabilities by increasing faculty understanding of disability issues and ensuring inclusive curricula. The workshop encourages the use of Universal Instructional Design, a model that stresses the need for curricula and policies that are flexible and customizable. Major objectives of CTAD include increased accessibility of curricula, improvement in the quality of classroom experience for students with disabilities, improvement in interactions between students with disabilities and faculty and administrators, and increased retention rates of students with disabilities.

Workshops

A CTAD workshop will be offered at **LOCATION AND DATES AND TIMES**. Faculty and administrator participants will participate in a [**LENGTH OF WORKSHOP**]. The workshops will be led by specialists in **[disability issues, or other...]**. We hope to attract **[NUMBER]** faculty and administrator participants for this workshop.

How to Participate

You can pick up an application from **NAME, ADDRESS**. Return completed applications to **NAME** by **DATE.** For questions about the workshop, please contact **NAME, ADDRESS, PHONE.**

I encourage you to take advantage of this important opportunity to improve the quality of education for all students.

APPENDIX I

SAMPLE CURRICULUM TRANSFORMATION AND DISABILITY (CTAD) WORKSHOP APPLICATION

*The CTAD Workshop on the **NAME** campus will take place on **DATE, DAYS, TIMES**. Exact location to be announced.*

Name

Title

College/Department

University

Office Address

Office phone

E-mail address

Fax

Home Address

Home e-mail (if different)

So that we can ensure a good mix of participants, we would like to know some more about you. Please take a moment to answer the following questions.

a) Circle one: I am a faculty member/ administrator/other employee (please explain).

b) Briefly describe your major job duties. How long have you been in your present position?

c) What previous experience, if any, have you had with students with disabilities?

d) What barriers do you believe exist for students with disabilities in the classroom?

e) What do you hope to gain from participating in this workshop?

f) How might your participation add to the workshop?

By completing this application I agree to:

1) Participate in the entire workshop.

2) Provide feedback on the workshop.

3) Implement changes in my curricula/policies.

4) Share in the dissemination process. **[IF REQUIRED]**

I understand that I will receive **[no compensation]** for my participation.

_____

Signature and Date

****

Return completed applications to NAME, ADDRESS, PHONE NUMBER, by DATE.

For questions about the workshop, please contact **NAME** at the address below.

CONTACT INFORMATION

Appendix J

Worksheet for Applying Universal Instructional Design, Part I– Designing an Accessible Course

1. Write a syllabus statement regarding accommodations.

2. What is the purpose of the course? (Consider the course in the context of the larger program purpose and requirements.)

3. What are the course outcomes (skills, knowledge, and/or attitudes) that are absolutely required of all participants, with or without accommodations? What level of performance is required?

4. What methods of instruction are you currently using to help students achieve the essential outcomes listed in the question above? Are there other effective instructional methods you might use?

5. What methods of assessing outcomes are you currently using? Are there other effective measures you might use that would allow you to fairly evaluate *all* students?

APPENDIX K

ESSENTIAL COMPONENTS CASE SCENARIO

Scenario 1—Carol

Carol, a student in your "Principles of Diagnostic Microbiology" course, is eight months pregnant and informs you that she is having some difficulty with her pregnancy that has led her to miss at least one out of three class sessions each week. You have offered her a lot of flexibility, but she is still behind and has been unable to complete the last two laboratory exams. You are in the 12th week of the semester and feel you do not have enough on which to grade her and suggest that she take an incomplete in your course. Carol is very upset with your suggestion, since she had hoped to complete all of her courses before the arrival of her new baby. She suggests that you scale down the number of exams she must complete so she can finish your course.

How do you sort out what is essential for her to complete and still maintain the integrity of the course?

Scenario 2—Mark

Mark, a student in your composition course, has provided you with a letter from Disability Services requesting reasonable accommodations of extra time on exams and a separate testing environment due to a chronic health condition that affects his concentration and causes fatigue. You notice that Mark has missed the past three classes, and your syllabus indicates that a student's grade will be reduced after three absences. Mark has submitted good work in your course, but you feel that you need to lower his grade due to your policy on attendance stated in the syllabus. When you return to your office, you have a voice message from Mark's disability specialist indicating that she would like to discuss Mark's situation with you. She also informs you that Mark's illness has flared up and he is worried about your attendance policy and an anticipated lower grade.

How do you determine if attendance is an essential component of your course?

Appendix L

Hardware/Software Shown in the Videotape, "Assistive Technology: Applications in Postsecondary Education"

(Please note–The videotape and list below reflect our knowledge of the field in 2003. Please supplement this information with more current resources, as appropriate.)

Braille Display

In this technology, a screen reader translates on-screen text into the raised patterns on the braille touchpad. It is especially useful in jobs that require a high degree of accuracy, particularly with numbers. Braille displays are also essential for computer access for people who are deaf *and* blind.

Brailler Embosser

Like a printer, except that it produces braille on the paper rather than print.

Closed-Caption Encoders

Televisions manufactured after July 1993 have closed-caption encoders that enable them to display a text version of the television audio.

Closed-Circuit Television (CCTV)

Self-contained monitor and camera system used to display enlarged black and white images of print materials and other small objects. Built-in controls are available for image size, brightness, contrast, focus and normal/reverse video modes.

Dragon Dictate & NaturallySpeaking by Dragon Systems, Inc.

Voice recognition technologies that make it possible to control a computer and enter data without touching the keyboard or the mouse. A person who is unable to use her hands or who must limit her use can move cursors and pointers, perform keystrokes, carry out system functions and create documents using only her voice.

FM System

A device used to amplify speech in a classroom or meeting environment for a person who is hard of hearing.

JAWS For Windows (JFW) by Henter-Joyce, Inc.

Synthesized speech technology that makes it possible for a Windows-based computer to speak the information being displayed on the monitor. Key combinations provide access to reading, navigational, and system controls for individuals with visual, learning, and other impairments.

Kurzweil 3000 by Lernout & Hauspie, Inc.

Reads scanned or electronic text aloud using human sounding synthetic speech. Words are highlighted as they are spoken. This auditory and visual presentation of information helps increase reading accuracy, speed, and comprehension.

OCR (Optical Character Recognition Software)

Converts the scanned image into a text or word processor file. The file then can be used to make a braille or large print copy, it can be read aloud by computer software known as a screen reader, it can be downloaded to a portable reading device called a Road Runner, or it can be used with software that has enhanced study tools for people with learning disabilities.

outSPOKEN for Macintosh by ALVA Access Group, Inc.

Synthesized speech technology for Macintosh computers that converts the words on a computer screen into speech. Navigational tools provide access to most applications for individuals with visual, learning, and other impairments.

Road Runner

A portable device that speaks aloud text files generated by a computer. Its portability gives it the advantages of reading a book on tape without the disadvantages of multiple tapes and cumbersome tape shuttling to find precise points.

Scanner

Scanning hardware used to create digital images of print materials to be processed by the computer. The attached document feeder allows automated continuous scanning of up to 20 unbound pages at a time.

Screen Reader

Software that converts the words on a computer screen into speech. JAWS for Windows and OutSPOKEN for Macintosh are examples of screen readers.

Slate and Stylus

A device that is the equivalent of a pen and pencil for a blind student.

Tactile Image Enhancer

A piece of equipment that produces raised-line, and thus tactile, diagrams for math, science, or other uses. Tactile image enhancers require a special kind of paper for the heating process that produces the raised images.

Trackball

A piece of equipment that resembles an upside-down mouse and can be used by people with motor disabilities to better access computers. Trackballs encourage natural hand positioning and reduce arm, shoulder and wrist movement.

Sample Assistive Technology Web Resources

Bobby–A web-based "first step" in testing the accessibility of a Web site. <http://www.cast.org/bobby/>

Center for Applied Special Technology (CAST)–Provides a wealth of information about education and technology for people with disabilities, Universal Design, etc. <http://www.cast.org>

Equal Access to Software and Information (EASI)–Offers information on a wide range of access technology for people with disabilities, online workshops, and more. <http://www.rit.edu/~easi/>

World Wide Web Consortium (Wc3)–Complete Web Accessibility Guidelines as well as checkpoints and quick tips. <http://www.w3.org/TR/WAI-WEBCONTENT>

Appendix M

Worksheet for Applying Universal Instructional Design, Part II– Teaching and Learning

1. What modes of instruction do you prefer? Why?

2. What modes of instruction do others in your field employ?

3. What modes of instruction would you employ under ideal conditions?

4. How do you and your colleagues determine the most appropriate modes of instruction in your field?

5. What modes of testing or evaluation do you prefer? In which courses? Why?

6. What modes of testing do others in your field employ? Under what conditions would you consider employing them?

7. What modes of testing or evaluation would you employ under ideal conditions?

8. How do you and your colleagues determine the most appropriate modes of testing or evaluation in your field?

Appendix N

Action Plan

1. What are the three most important changes reflecting Universal Instructional Design principles I can make? (Review your notes and worksheets for ideas.)

2. What are my next steps regarding my involvement with CTAD? (Request follow-up/technical assistance, read annotated bibliography, make changes in instructional methods, etc.)

3. How could I disseminate what I have learned? With whom in my immediate environment could I collaborate?

4. What barriers or impediments in my environment might there be that would affect how well I can incorporate what I have learned? (Inaccessible classrooms, lack of resources or time, etc.)

APPENDIX O

WORKSHOP EVALUATION

Reactions to your CTAD workshop experience are valuable to us. Please express your degree of agreement with each statement using the scales below.

1- Strongly Agree 2 - Agree 3 - Uncertain 4 - Disagree 5 - Strongly Disagree

1.	Participation in the workshop was valuable for me.	1	2	3	4	5
2.	Presentation of material was appropriately balanced with application activities, discussion, and lecture.	1	2	3	4	5
3.	The presentation was clear and easy to follow.	1	2	3	4	5
4.	The information presented was relevant to my needs.	1	2	3	4	5
5.	Interacting with other participants made the workshop more valuable.	1	2	3	4	5

6. What aspects of the workshop did you find most beneficial?

7. What aspects of the workshop did you find least beneficial? Please provide suggestions you might have for improving these aspects.

8. What additional information would you suggest we include in future workshops?

Appendix P

Practicing the Principles of Universal Instructional Design in an Art Course

Pat James
Assistant Professor, University of Minnesota

When I meet the students in my introductory-level General Art class on the first day of the semester, I observe a number of differences among them, but I anticipate that there will be an even greater range of intellectual, emotional, physical, and social abilities that I cannot know at first glance. Rather than responding to hidden differences on a case-by-case basis as they emerge over the semester, I try to design instruction that deals openly with students' diverse abilities and that uses their diversity as a vital resource for teaching and learning. The Principles of Universal Instructional Design provide a valuable framework for making decisions about how to teach my course in ways that make course content more accessible and more meaningful to students. The following overview describes how I use the Principles of Universal Instructional Design to teach first- and second-year students to think about 20th century works of art.

Identifying Essential Components

Throughout the semester, students encounter a variety of works of art though slides, prints, and visits to local museums. Therefore, students need to be able to really *look* at a work of art, to be receptive to it, and to begin to ask questions about it. Too often, however, students are accustomed to a barrage of visual imagery in popular culture, and they are not used to studying visual images for aesthetic pleasure and meaning. They also tend to make fast judgments about artwork rather than keeping an open mind and considering many aspects of the work. In order to learn new concepts about art, students will need to know how to perceive the physical and formal characteristics of a work and how to look beyond obvious subject matter to interpret deeper meanings in what they see. In addition, students will need to know how to be adventurous and open-minded about unfamiliar ideas and experiences, how to seek insight rather than make fast judgments, how to deal with complexity and ambiguity, and how to use their personal and cultural knowledge as resources.

Instead of assuming that students already know how to do these processes, I have to ask the question: "What concepts and processes are students likely to have trouble with, and how can I introduce them in ways that makes sense to all of the students, regardless of their previous education or abilities?" In addition to providing opportunities for students to actively practice these concepts and processes, I have to help students understand the theoretical underpinnings of these activities and to provide ways for students to reflect about what they do.

Using Varied Instructional Methods

To enable all of my students to understand the cognitive and affective aspects of thinking about art, I use a number of in-class activities that employ visual, verbal, and aural modes of learning. These ungraded activities provide students with diverse ways to work with the concepts they are reading and hearing about, and

they provide students with a foundation for writing graded papers about works of art. These activities address diverse learning styles and abilities and teach concepts through multiple symbolic systems, and they give students opportunities to demonstrate their knowledge in diverse ways. Some of these activities are described in the following section.

Creating a Welcoming Classroom Climate

As students engage in multimodal instructional methods, I ask them to alternate among individual, partnered, small group, and all-class levels of involvement, interspersed with my mini-lectures. Since class participation is an intimidating process for many students, these many levels of participation create bridges for students to feel confident in their own ideas and to risk sharing their thinking with classmates. This supportive classroom environment also promotes a deeper understanding of art, for students are able to hear multiple perspectives to art and different approaches to learning. In the process of doing this, we build a shared sense of excitement about exploring works of art. We use the following kinds of social interaction throughout the semester:

Individual. By doing expressive writing about a work of visual art, students make immediate connections between the artwork and their own thoughts and feelings. One particularly effective exercise is "I am" writing, in which students write as if they are inside the work of art. This expressive writing helps students understand the metaphoric nature of art and promotes open-ended empathy with the work rather than judgmental closure. Individual activities, such as sketching the work of art and brainstorming lists and questions about it, help students concentrate on their own perceptions before sharing their ideas with other students. In this way, introverted students make their ideas concrete before they talk with other students, and extroverted students slow down and identify their own perceptions before becoming socially engaged.

Partners. By reading their expressive writing to a partner, students practice using their voices in class and making their ideas public in a less threatening way than small group or all-class discussions. Working one-on-one promotes empathy with their classmates and helps students understand that their thoughts and feelings are not unique or wrong. Reflecting with a partner about what it was like to do an activity helps students to better understand their own thinking processes and to learn about other approaches.

Small group. By working in small groups, students articulate their own points of view, hear multiple perspectives, and help each other learn difficult concepts. For example, by studying works of art in small groups, students are able to see more aspects of the work. Doing matrixes and cognitive maps together helps students put order to their multiple perceptions.

All-class discussions. I often ask students to engage in an all-class "interpretive chorus," in which they circle key words in their individual expressive writing and each person says them out loud, one after another. In this way, students hear 40 different interpretations. We also do focused looking at slides, and students contribute their perceptions about the work in response to my questions. During class discussions, I explain students' different approaches and talk about why each is valuable to a more comprehensive understanding of the work of art.

Mini-lectures. At various times during a class session, I stop to clarify concepts and to tell students the theories behind what they are learning and doing. I also model aesthetic perception and formal analysis by pointing to specific areas of a slide as I talk about the concepts and ways of seeing. In addition, I draw cognitive maps and categorize students' comments on the board. Overhead projections and handouts augment this information.

Working with Diverse Abilities

When students engage in the activities described above, they gain confidence in thinking about art in their preferred learning style, but they also practice approaches that may be uncomfortable for them and which stretch their repertoire of ways to learn. For example, students who are particularly verbal practice visual thinking, and visual thinkers translate visual information into verbal language. Students who prefer an open-ended approach to learning are able to construct multiple ways of thinking about one thing, but they also practice list-making, mapping, and other ways to structure their thinking. Students who prefer structure have opportunities to work in organized ways, but they also experience open-ended expressive writing and hear multiple interpretations. In addition, students of different cultures have contributed alternative ways of looking at and thinking about works of art. By keeping the principles of Universal Instructional Design in mind as I teach, I am able to use multiple ways to work with students' diverse abilities. Equally important, students' diversity adds complexity and richness to their learning about art.

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