

Making Distance Learning Courses Accessible to Students with Disabilities

Presented By
Adam Tanners

University of Hawai'i

Overview of today's presentation

- ❖ Background
- ❖ Legal mandates
- ❖ Four scenarios
- ❖ In conclusion:

What does this mean for us as Distance Learning practitioners?

Our Four Students

- ❖ Mathew
- ❖ Marlee
- ❖ Albert
- ❖ Steven

Mathew

is blind:



❖ Unable to read printed materials



❖ Unable to see icons, images or videos

Marlee

is Deaf:



❖ Unable to hear audio podcasts



❖ Unable to hear videos



❖ Cannot hear or speak during synchronous audio conferences

Albert

has a learning disability:



❖ Difficulty reading and understanding large blocks of text



❖ Easily overwhelmed by too much information at once

Steven



has a physical disability which limits his use of his arms and legs:



❖ Unable to use a standard mouse



❖ Unable to use a standard keyboard



❖ Voice is soft and hard to understand

What is assistive technology?

Any item, piece of equipment or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities.

Assistive Technology & Universal Design

Tools include:

- ❖ Built in tools on computers
- ❖ Specialized software for purchase

Instructional Methods

- ❖ Addressing diverse learning styles
- ❖ Considering alternate means of presentation and evaluation

Which Laws Apply

Law	Application	Mandates
IDEA	K-12 Schools, all children, birth - 21	Guarantees free, appropriate public education in the least restrictive environment
Americans with Disabilities Act – Title II	Public entities	Equal information access, including print and computer-based information
Rehabilitation Act- Section 504	Anyone receiving federal funds	Opportunity for disabled students to participate must be as effective as that provided to others
Rehabilitation Act-Section 508	- All Federal entities - States receiving funds under the “Assistive Technology Act State (ATA) Grant Program”	Provide disabled students access to electronic and information technology

Guaranteed Access

- ❖ A ruling by the Office for Civil Rights (OCR) stated;

The issue is not whether a student with the disability is merely provided access, but the issue is rather **the extent to which the communication is actually as effective as that provided to others.**

Our Scenario: The Online Course

Course Delivery:

- ❖ ASYNCHRONOUS:

Content Management System
(i.e WebCT, Blackboard, Moodle, Sakai)

- ❖ SYNCHRONOUS:

Web-conferencing technology
(i.e Elluminate Live!, Breeze, WebEx)

Our Scenario: The Online Course

- ❖ Text-based files *uploaded to Content Management System*



- ❖ Threaded discussions *on Content Management System*



- ❖ Video files and audio podcasts *disseminated on CD*



- ❖ Interactive online class meetings *via web-conferencing system*



Our Scenario: Four Students

- ❖ Mathew (Blind)
- ❖ Marlee (Deaf)
- ❖ Albert (LD)
- ❖ Steven (Physical Disability)

Mathew

❖ Limitations

- ❖ Reading and inputting text on screen
- ❖ Seeing graphics and video images

❖ Accommodations

- ❖ Screen reader
- ❖ Refreshable Braille display
- ❖ Braille text



Mathew

Tips

- ❖ Create textual content in HTML, text, or accessible PDF
- ❖ Create alternative text for all graphical content
- ❖ Create descriptive audio for videos
i.e. have an aide or classmate describe video

Marlee

❖ Limitations

- ❖ Hearing audio content
- ❖ Hearing and speaking during synchronous meetings

❖ Accommodations

- ❖ Captioning
- ❖ Text alternative for audio
- ❖ Video conferencing



Marlee

Tips

- ❖ Select pre-made videos with captioning
- ❖ Caption videos that you create for the course
- ❖ Provide the script for narrated presentations and podcasts

Albert

❖ Limitations

- ❖ Scanning, reading and comprehending large blocks of text
- ❖ Assimilating information which is presented too "densely"

❖ Accommodations

- ❖ Text-to-Speech software



Albert

Tips

- ❖ Create textual content in HTML, text, or accessible PDF
- ❖ Provide a course site which takes into account design considerations

Steven

❖ Limitations

- ❖ Inputting information to computer using keyboard or mouse
- ❖ Turning pages (for printed text materials)

❖ Accommodations

- ❖ Alternative computer input
- ❖ Electronic text



Photo from AP Photo by John Raoux

Steven

❖ Tips

- ❖ Provide a well-designed course site
- ❖ Provide an electronic version of all reading materials, including textbook

Quick Tips

- ❖ Contact Disability Support Services (DSS) office
- ❖ Accessible Web Design
 - ❖ W3C guidelines (www.w3c.org/wai)
- ❖ Presentations
 - ❖ Don't JUST read the PowerPoint
- ❖ Multimedia
 - ❖ Include transcripts, and descriptions

Sharing Conclusions

- ❖ Audience comments?
- ❖ What does this mean for us as practitioners?

References

- ❖ DO-IT Program at the University of Washington
<http://www.washington.edu/doit/>
(Disabilities, Opportunities, Internetworking, and Technology Program)
- ❖ List of instructional strategies and design elements to facilitate online learning for students with disabilities:
Weir, L. (2005). Raising the Awareness of Online Accessibility. *T H E Journal*. 32 (10), 30-33.
- ❖ Web Accessibility Initiative
 - ❖ <http://www.w3.org/WAI/>
- ❖ Accessibility in Distance Education
 - ❖ <http://www.umuc.edu/ade/>

The End

