Making Distance Learning Courses Accessible to Students with Disabilities

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

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

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

Accommodations

- Alternative computer input
- Electronic text
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
  (Disabilities, Opportunities, Internetworking, and Technology Program)

- List of instructional strategies and design elements to facilitate online learning for students with disabilities:

- Web Accessibility Initiative
  - [http://www.w3.org/WAI/](http://www.w3.org/WAI/)

- Accessibility in Distance Education
  - [http://www.umuc.edu/ade/](http://www.umuc.edu/ade/)
The End