

Tools and Resources for Making Courses Accessible for Students with Disabilities

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Daily Use of Technology

- Technology use at work?
- At home?
- On-line bill paying or banking?
- Smartphones?
- What features do you use:
Voice texting? Online music programs such as Pandora? Social networking e.g., Facebook, Yammer, twitter?

- Unusable to you, immediately?
- How would you feel?
- What would you do about it?
- How would your life as you know it change?
- Could you handle the change?

Why is Accessibility Important?

- "For most of us, technology makes things easier. For a person with a disability, it makes things possible." -Judy Heumann, Assistant Secretary, U.S. Department of Education.
- Accessibility and usability are similar concepts which affect every user.
- Web Accessibility and Universal Design: [Universal Design video link:](http://www.youtube.com/watch?v=zYFrCXATXLI&feature=related)
<http://www.youtube.com/watch?v=zYFrCXATXLI&feature=related>

Why is it Important?

- More usable by all (loading time, navigation, better search engines).
- Bad publicity and bad press means potential loss of revenue.
- More compatible with emerging technologies.
- Reduction in complaints and litigation.
- Shows commitment to diverse populations.
- Research grant and accreditation processes.
- Universally designing Web sites, technology and courses works better for everyone.

Student Use of Technology

- **38% of students surveyed said they could not go 10 minutes without switching on some sort of electronic device.**
- **98% of college students own a digital device.**
- **3 of 4 students say they would not be able to study without technology.**
- **46% said they would be more likely to read an assignment in a digital format.**
- **82% use electronic devices to write papers; 81% use them for research; 70 % use them for taking notes in class and 65% use them for making class presentations.**
- **Nearly three-fourth of students who own tablets prefer them to traditional textbooks.**

[Onlineeducation.net](http://edudemic.com/2011/08/students-technology-stats/) shows how students use technology. <http://edudemic.com/2011/08/students-technology-stats/>

Brief Legal Overview

- ❖ **The Rehabilitation Act, 1973** (Section 504) and the **Americans with Disabilities Act, 1990** (A.D.A.).
- ❖ An **individual with a disability** is one who has a physical or emotional impairment that substantially limits one or more major life activities (e.g. learning).
- ❖ **Americans with Disabilities Act Amendments Act of 2008 (A.D.A.A.A.)**. Broader coverage, same definition.
- ❖ **Section 508 of the Rehabilitation Act** specifically covers access to electronic and information technology for individuals with disabilities comparable to persons without disabilities.

NFB Complaint

- November 2010, National Federation for the Blind (N.F.B.) filed a complaint against Penn State.
- N.F.B. contends a variety of technologies are inaccessible to individuals who are blind at P.S.U., including courses.
- Included Web sites, Angel, classroom clickers, Bank A.T.M.'s, smart podiums, library search engines and databases, and all electronic and information technology.
- **October 2011**, agreement to resolve the complaint includes timelines for the next three years.
- No later than **October 15, 2014**, all pages hosted on University's public Web sites that have been published or updated after August 1, 2009 shall be accessible to blind users. Other pages made accessible upon request.
- Action plans necessary for resolution of complaint.

- The NFB agreement indicates that “accessible” means fully and equally accessible to and independently usable by blind individuals so that blind students are able to acquire the same information ...with substantially equivalent ease of use.
- Daniel F. Goldstein, an outside counsel to the federation, said he hoped that Penn State and the Education Department would develop a template for accessible technology that could be adopted by other colleges.
- The idea of just providing an accommodation rather than creating equally effective technologies may no longer be acceptable and may result in a complaint by a student with a disability (see Department of Justice letter for further information on this topic at:
[Department of Justice Letter link:
http://www2.ed.gov/about/offices/list/ocr/letters/college-20100629.html](http://www2.ed.gov/about/offices/list/ocr/letters/college-20100629.html)

Penn State’s Web Accessibility Policy AD-69

- August 1, 2011 new policy at PSU.
- AD-69 replaced AD-54 as the University policy.
- Requires compliance with W3C WCAG 2.0 level AA. [Policy AD-69 link:
http://guru.psu.edu/policies/AD69.html](http://guru.psu.edu/policies/AD69.html)
- Pages less than 2 years old must comply.
- Older pages must be made accessible by unit-determined date, or by request for accommodation.

General Guidelines for Creating Accessible Materials

- The **Web Content Accessibility Guidelines** developed by the Worldwide Web Consortium (W3C).
 - Based on four principles:
 - **Perceivable:** Available to the senses (vision and hearing primarily) either through the browser or through assistive technologies (e.g. screen readers, screen enlargers, etc.)
 - **Operable:** Users can interact using either the mouse, keyboard, or an assistive device.
 - **Understandable:** Content is clear and limits confusion and ambiguity.
 - **Robust:** A wide range of technologies can access the content.

Simple Changes, Big Impact!

Penn State has developed a Web site that provides information all in one place for accessible information and technology:

[Accessibility Web Site:](http://accessibility.psu.edu/)
<http://accessibility.psu.edu/>

Overview of Users who are Visually Impaired

- Users who are visually impaired typically use screen magnifiers such as **ZoomText** <http://www.aisquared.com/zoomtext> or **MAGic**.
- **Common Barriers for screen magnifiers:**
 - Graphics that contain text become fuzzy when enlarged.
 - Text Enlarged versus text within a graphic:

Helen Keller

- Sites with low contrast can be difficult to read or bad color combinations such as **blue inks** on black backgrounds.
- Use **true text** format rather than graphics.

General Rule: Make everything configurable.

Excerpts from WebAIM: <http://webaim.org/articles/visual/lowvision>

Other Disability Specific Difficulties

Hearing Impairments:

Demo:

http://www.youtube.com/watch?v=QmKnQjBf8wM&feature=player_embedded#!

Therefore:

- Provide synchronous captioning for videos within a course, even You Tube videos should be captioned.

Excerpts from WebAIM:

<http://webaim.org/articles/visual/blind>

Suggestions for Video or Audio files in Courses

- Captioning videos and audio files benefits everyone, not just individuals with disabilities.
- [Video Captions and Audio Transcripts link:](http://www.accessibility.psu.edu/video)
<http://www.accessibility.psu.edu/video>
- Purchase only captioned videos for courses.
- Good practice to have transcripts ready if a request does come in.
- Have a plan available if you choose not to caption all videos, especially if link out to third-party videos (e.g., You Tube).

Other Disability Specific Issues

Motor or Mobility Impairments:

Operable: Not everyone can use a mouse to click on small links or operate dynamic elements effectively due to limited use of upper mobility or hands.

- Do not use technology that relies solely on mouse clicks

Cognitive Disorders

May include individuals with learning disabilities, traumatic brain injuries, autism spectrum, or attention disorders.

Understandable:

- Avoid lengthy interactive processes
- Provide structure and organization to documents
- Utilize clear unambiguous phrases
- Avoid sarcasm, parody, and metaphors
- Provide information in multiple formats for enhanced understanding and different learning modalities.

Disability Services at Penn State

At every Penn State campus, there is a designated office or individual that provides services to students with disabilities.

- ❖ Students must **self-disclose** their need for accommodations to the appropriate person or office.
- ❖ Accommodation determination is done on a case-by-case and course-by-course basis.
- ❖ Instructors or faculty may be consulted about the accommodation plan for their particular course.
- ❖ The documentation submitted by the student must support a particular need for accommodations.
- ❖ Know who your disability contact is at your P.S.U. Campus.

World Campus Accessibility

Staff positions with accessibility responsibilities

- ❖ Manager of Access, hired July 2008 – Anita Colyer Graham
- ❖ Accessibility Information Technologist, hired as an intern Feb. 2009, full-time in Dec. 2009 (currently hiring a second, similar position) – Michael Brooks
- ❖ Disability Contact Liaison, imbedded within World Campus, hired Dec. 2011 (transitioned tasks from Keith Jervis, located in the ODS office) – Terry Watson

World Campus Accessibility

Accommodations

- ❖ Number of students receiving accommodations in World Campus sections: Fall 2010 – 18 students; Spring 2012 – 37 students (more than doubled in a few semesters)
- ❖ Most common accommodations: extended time to take exams and quizzes (2/3 of students receiving this); consideration for extensions to complete assignments
- ❖ Individual students who are deaf or blind, Spring 2012
6 students who are hearing-impaired, 4 who are deaf
3 students who are blind

World Campus Accessibility

Efforts Toward Greater Accessibility, 1 of 3

- World Campus accessibility team, with cross-functional reps
- Training for designers on accessibility

<https://courses.worldcampus.psu.edu/welcome/acc100/001/>

- Course design quality assurance includes accessibility
- JAWS purchased for use in course reviews
- Investigation of accessibility of emerging technologies
- Accessibility and user control built into templates used for publishing course content
- Statement on World Campus Web site about how to obtain consideration for accommodations
- Standard syllabus statement about accommodations

World Campus Accessibility

Efforts Toward Greater Accessibility, 2 of 3

- Captioning videos by third-party vendor, 3PlayMedia
- Captioning real-time online interactions by an external captioner, IBSU (Bill Courtland)
- Learning Management System pilot testing leadership and coordination
- New software systems reviewed for accessibility; vendors provided with feedback, asked for a timeline for implementing fixes prior to contract signing
- Weblearning site includes info on accessibility issues relevant to online courses:

<http://weblearning.psu.edu/world-campus/accessibility>

World Campus Accessibility

Efforts Toward Greater Accessibility, 3 of 3

- Deaf student blogger on the World Campus student blog, the Corner of College and Allen
- Faculty development module on accessibility in development for Summer 2012 rollout
- Faculty development module on issues specific to military students will include components that address TBI and PTSD
- Involvement in many University-wide accessibility committees and training events
- Leadership on University-wide quality initiative to establish agreed-upon standards and priorities for accessibility across online course design shops at PSU

Suggestions for Faculty

- ❖ Include a syllabus statement about how to obtain disability services at your PSU campus.
- ❖ Clearly state course requirements, such as: timed quizzes/tests; format of tests/quizzes; social interaction required (face –to- face or social media); types of audio or video interactions; speeches required; special software or computer skills necessary; essay or written papers etc.
- ❖ Make sure that the syllabus is available for students to review prior to enrolling in the course, with clearly stated course requirements. Resist the temptation to ADD new requirements, media, texts, software after publishing the syllabus.

Suggestions for Faculty

It is suggested that, early in the semester, instructors make a general announcement in class, post an announcement on Angel, or through e-mail:

“ Penn State University welcomes students with disabilities into the University's educational programs. If anyone in this course has a disability, please contact the Office for Disability Services. If you have further questions regarding this announcement, please make an appointment during my office hours or set up a specific time to meet through other means.”

- For more detailed information go to the ODS Faculty Handbook located on the ODS Web site at:
<http://equity.psu.edu/ods/faculty/overview.asp>

Suggestions for Faculty

- Students must provide their instructors with a letter from the Office for Disability Services that lists the appropriate accommodations for each of their courses.
- Students should meet or discuss with the instructor their specific accommodation needs in a course.
- Check in/solicit feedback from students.
- Consider assessments and time limits.
- Plan for accessibility of audio interactions.
- Be aware when hosting third-party materials, linking to other Web sites, and selecting texts that you may become accountable, upon request, for making these items accessible if the rights holder who originally created the item did not do so (same goes for technology tools!)

Faculty Resources:

- The ODS Faculty Handbook
www.equity.psu.edu/ods/faculty/overview.asp
- Faculty Tipsheets:
 - <http://www.netac.rit.edu/publication/tipsheet/ADA.html>
- The Faculty Room (DO-IT):
 - <http://www.washington.edu/doi/Faculty/>
- Facultyware Website from UConn
 - <http://www.facultyware.uconn.edu/>

Questions

