Accessibility in Online Courses – Trends, Tips & Tools

Current trends that may affect access to online courses

Online courses are incorporating more complex pieces of multimedia than ever before. The use of multimedia presents a challenge at times
for accessibility and it is recommended that faculty members make their materials accessible as they are designing and creating them. For example, videos, lecture capture, and screencasts should be captioned. Narrated PowerPoints should be captioned or the audio portion can be transcribed and placed in the notes section.

Below is a list of some of current trends impacting online courses in higher education:

1. Increased use of Complex Media/Software
    a. Narrated PowerPoint Presentations
    b. Video Lecture Capture (e.g., Adobe Connect, Blackboard Collaborate, Tegrity)
    c. Screencasting software (e.g., Camtasia, Captivate)
    d. Video (e.g.,YouTube, Vimeo)
2. Increased trends in course delivery methods include:
    a. MOOCs
    b. Flipped Classrooms
3. Increased use of Mobile Technology
    a. Mobile Smart Phones (e.g., iPhone, Android, Windows Phone)
    b. Wearables (e.g., Google glasses, smart watches)
    c. Tablet Computers (e.g., iPad, Android, Windows Surface)
    d. E-book Readers (e.g., Kindle, Nook)

Future trends that may affect access to online courses

Although the following items may not be regarded as especially new technology, there is a trend in higher education to require students to use these tools such as social media and adaptive learning products in order to complete course activities or assignments. Since there is no current federal legislation requiring companies to create accessible products, it falls on the institution to take the initiative to investigate the product prior to using or purchasing it. This does not mean that institutions should shy away from using such technologies. In fact, the U.S. Department of Education and the Department of Justice have made it clear that "ensuring equal access to emerging technology in university and college classrooms is a means to the goal of full integration and equal educational opportunity for this nation's students with disabilities" (Office of Civil Rights - Dear Colleague Letter: Electronic Book Readers: http://www2.ed.gov/about/offices/list/ocr/letters/colleague-20100629.html).

Below is a list of some of future trends impacting online courses in higher education:

1. Increased use of Social Media (e.g., Facebook, Twitter, LinkedIn, YouTube) as a course requirement
2. Cloud Programs (e.g., Google Apps, Microsoft Office 365)
3. With the renewed focus on competency-based learning and personalized learning, adaptive learning products (e.g., RealizeIT, Knewton, LEAP, Adapt Courseware, ALEKS, etc.) are growing in numbers and finding their way into mainstream education.

Tips and Strategies for Building Accessible Courses

The following list includes tips and strategies for some of the most common items faculty are currently adding to their courses:
1. Create Accessible Online Course Pages
   a. The most accessible documents include:
      i. HTML – follow the WCAG 2.0 guidelines to create accessible HTML pages
      ii. MSWord – follow the Microsoft Of f ice's accessibility guide to create accessible MSWord documents
      iii. PDF documents (add sparingly). Follow the Adobe's guide for creating accessible PDFs
2. Add/Create Accessible Media
   a. PowerPoint
      i. Add alternative text to graphs, photos, other images
      ii. Use Microsoft's Accessibility Checker to check for accessibility issues in Word, Excel, and PowerPoint
   b. Narrated PowerPoints
      i. Transcribe audio
      ii. Add transcription to PowerPoint Notes section or caption using accessible screencast software (e.g., Camtasia or Captivate)
   c. Screencasts

   i. Create transcripts to add captions.

   ii. Use programs such as Camtasia or Captivate to create accessible screencasts

  d. Video Lecture Capture

   i. Caption live (e.g., Adobe Connect)

   ii. Caption later (e.g., Tegrity)

3. Captioning Tools

  a. Do-It-Yourself Caption Systems

   i. YouTube: Add subtitles and closed captions to your YouTube videos (must have a YouTube account): https://support.google.com/youtube/answer/2734796?hl=en

   ii. Amara http://amara.org/en/YouTube Automatic Captions

   iii. http://teach.ucf.edu/resources/accessibility-tips/#audio

4. Self-Created Videos

  a. Create transcripts

   i. Ensures important points are covered

   ii. Easier to make updates/edits from semester to semester

   iii. Easier to add captions

5. Other Video Sources

  a. Search for videos with captions

  b. Seek textbook publishers who offer captioned content

  c. Request textbook publishers caption non-captioned items

Table 1 below contains general strategies for both faculty and students and assistive technologies that may benefit more than one type of student.

Table 1 General Strategies and Assistive Technology for Faculty and Students

Category	Definition	Online Strategies for Faculty	Online Strategies for Students	Assistive Technology
Cognitive Differences • Learning Disabilities • Attention Deficit Disorder • Autism Spectrum Disorder (ASD) • Traumatic Brain Injuries • Psychological	• May have oral/language/ processing differences • May take longer to complete activities than usual	• Provide estimated times required to complete each assignment. • Chunk and divide content into small sections so it is easier for your students to absorb and it requires less scrolling for easier content navigation. • Provide clearly written assignments and instructions. • Consider providing alternate ways to complete some assignments (e.g., video vs. PowerPoint vs. short paper).	• Self-advocacy Plan ahead • Take short, frequent breaks • Learn & practice time management strategies • Consider taking a smaller course load • Consider a peer mentor Consider registering with the • student disabilities services office	• Organizational software (e.g., Read & Write Gold) • Visual mapping software (e.g., Inspiration) • Ask what is available on your campus

Category	Definition	Online Strategies for Faculty	Online Strategies for Students	Assistive Technology
Hearing Differences	• Deaf: unable to hear • Hearing Impaired/Hard of Hearing: those who have some hearing	• Provide captions for any videos or • other audio-type online course materials (e.g., narrated PPT)	• Self-advocacy • Plan ahead • Consider peer support • Consider registering with the student disabilities services office on campus	• Communication Access Realtime Translation (CART) transcription and signing service • (refer to student disabilities office) • Assistive Listening Devices
Visual Differences • Blindness • Low Vision • Color Blindness	• Blindness: loss of • useful vision • Low Vision: has some useful vision	• Explain all images, charts, and graphs • in descriptive text • Low Vision/Colorblind: black text on white background is generally best; use care when including color; check for color accessibility	• Self-advocacy • Plan ahead • Consider peer support Consider registering with the • student disabilities services office on • campus	• Screen reading software (e.g., JAWS, NVDA, Window Eyes) • Braille Keyboard • Talking Feedback Calculator • Screen Magnification Software (e,g., Zoom Text)
Language Differences • ESOL (English for Speakers of Other Languages)	ESOL: the use or study of English by speakers of other languages	• Provide estimated times required to complete each assignment. • Chunk and divide content into small sections so it is easier for your students to absorb and it requires less scrolling for easier content navigation. • Provide clearly written assignments and instructions. • Provide captions to video and other transcripts for audio-only	• Consider registering with the • student disabilities services office on campus	

Reference: http://webaim.org/intro/; http://accessproject.colostate.edu/disability/

Some of our favorite accessibility tools.

The following list contains some tools that can be used to check web pages for accessibility, color contrast, and interactive resources for
UDL.

1. WebAIM Web Accessibility Evaluation Tool http://wave.webaim.org/
2. WebAIM Contrast Checker http://webaim.org/resources/contrastchecker/
3. UDL Wheel http://udlwheel.mdonlinegrants.org
4. DO IT Washington http://www.washington.edu/doit/Brochures/Academics/equal_access_udi.html

Some of our favorite accessibility related organizations and resources.

- WebAIM (will add descriptions)
  - http://webaim.org
  - http://webaim.org/blog/motivating-accessibility-change/
  - http://webaim.org/articles/tools/
- DO-IT- Distance Learning
  - http://www.washington.edu/doit/Faculty/Strategies/Academic/Distancelearning
  - http://www.washington.edu/doit/Resources/accessdl.html
  - http://www.washington.edu/doit/Brochures/Academics/ud_edu.html
- DO-IT - Universal Design in Higher Ed
  - http://www.washington.edu/doit/UDHE-promising-practices/toc.html
  - http://www.washington.edu/doit/Brochures/Technology/equal_access_uddl.html
  - http://www.washington.edu/doit/Brochures/Academics/equal_access_udi.html
  - http://www.washington.edu/doit/CUDE/ude_onlinetut.html
- CAST (Center for Applied Special Technology)
  - http://cast.org
- UDL Guidelines Version 2.0
  - http://www.udlcenter.org/aboutudl/udlguidelines
- UDL-Universe: A Comprehensive Universal Design for Learning Faculty Development Guide
  - http://enact.sonoma.edu/content.php?pid=218878&sid=2032318
- Project CanNECT: How-To Guide for Creating Accessible Online Learning Content
  - http://projectone.cannect.org/
- CANnect: Accessibility Tips

- o http://www.cannect.org/accessibility-tips
  - o http://projectone.cannect.org/universal-design/seven-principles.php
- Web Content Accessibility Guidelines (WCAG) 2.0
  - o http://www.w3.org/TR/WCAG20
- Microsoft Ease of Access
  - o http://windows.microsoft.com/en-us/windows/what-accessibility-features-windows-offer#1TC=windows-7
- Apple iOS Accessibility Resources
  - o https://www.apple.com/accessibility/ios/
- EnACT UDL Syllabus Rubric
  - o http://enact.sonoma.edu/content.php?pid=218878&sid=2032318
- Free Tools for Captioning YouTube Videos
  - o http://terrillthompson.com/blog/15

August 2014

Authors

Kathleen Bastedo and Nancy Swenson are instructional designers for the Center for Distributed Learning at the University of Central Florida.

Kathleen Bastedo   Nancy Swenson