Creating and Evaluating Accessible OER

CSCU OER Summit, Oct 6, 2020
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Poll: Please type into the chat

In one word

Why does Accessibility matter to you?
Poll: Please type into the chat

What percentage of US postsecondary students have a disability?

- A: 20%
- B: 3%
- C: 35%
- D: 9%
Poll

• What percentage of US postsecondary students have a disability?
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• Reported disability
• Unreported?
Accessibility

• What does "Accessible" mean?
  • Individuals with disabilities can independently acquire the same information, engage in the same interactions, and enjoy the same services within the same timeframe as individuals without disabilities, with substantially equivalent ease of use.

• Key Issues when Designing and/or Evaluating
  • How users with disabilities access electronic information.
  • How content designers, developers, and authors produce content that functions with assistive devices used by individuals with disabilities.
Accessing Accessible Material

- Nearly 20% of the American population report having some type of disability. When using the web or online management systems, many people:
  - Cannot operate a mouse
  - Cannot see text
  - Cannot see graphics
  - Cannot hear audio
  - Cannot easily understand content

- In order to interact with content, they use assistive technology
  - Key tabs
  - Text to speech (screen readers)
  - Audio Descriptions
  - Captions
Importance?

• Increased number of students
• Emphasis on using technology
• Educational products are not always accessible
• Benefits everyone
• Federal Legislation
  • Equal access
  • Legal and Regulatory Compliance (Section 504 of the Rehabilitation Act of 1973 & Americans with Disabilities Act)
  • Standards Compliance (Section 508 & Web Content Accessibility Guidelines (WCAG) 2.0)
  • Requires – Accessible software, websites, video and multimedia materials, documents, etc.
Universal Design for Learning (UDL)

- Universal Design for Learning (UDL) is a flexible, research-based framework that aims to develop curriculum that meets the needs of students with a variety of learning preferences and differences.

- UDL is a set of principles for curriculum development that give all individuals equal opportunity to learn.

- UDL provides a blueprint for creating instructional goals, methods, materials, and assessments that work for everyone – not a single, one-size-fits-all solution but rather flexible approaches that can be customized for individual needs.

- UDL will not eliminate all accommodation requests.
Creating Accessible OER

Things you make or revise/adapt
5 Areas to Focus On

1. Videos
   • Captions (required) - [Sample Captioned Video](#)
     • If correcting, remove ums, etc., identify different speakers, add punctuation.
     • How to create captions: Kaltura
   • Transcripts (recommended)
     • Text based.
     • Provide audio as well as sound effects in transcript.
   • Audio Description (required) – [Sample Video with Audio Descriptions](#)
     • Narrator who explains visual information verbally to convey visual information.
   • [How to create audio descriptions](https://www.w3.org/WAI/media/av:description/)
YouTube Help: Add your own subtitles & closed captions (https://support.google.com/youtube/answer/2734796?hl=en)
Transcriptions


Brad: Yeah. Th-then the other thing I did, actually, was sort of local outreach, uh, with local magazines and newspapers and whatnot, and I got a couple of mentions that way that led to my first "real" clients. You know, like ... [clears throat] Not that they weren't real before, but sometimes when they're your friends it kind of feels like they're doing a favor, you know?

And yeah, and I did actually have some luck also with networking and meetup groups and stuff like that — you know, local — but, uh, I'm actually a bit of an introvert, so it took me a while to get around to it. [laughs]

Steve: No way. I don't believe it. Do you have a Twitter?

Brad: Yeah, I have a Twitter. [laughs] "A Twitter." But, uh, I don't think I've ever posted a tweet. I can't even remember my password. I'm too old for that stuff, Steve. I'm pushing 50 next month.

Steve: [laughs]

Brad: Well, Steve, you know what they say. Nothing beats good old-fashioned PR for a local business. I don't know who "they" are.

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5 Areas to Focus On Cont.

2. **Alternate Text for Images** (https://webaim.org/techniques/alttext)
5 Areas to Focus On Cont.

3. **Document Structure** (https://webaim.org/techniques/word/)
   - Styles, headings, etc
   - Tables: use to organize information, not format. Add table headers.
     - **Creating accessible tables in Word**
   - Sample Document

4. **Hyperlinks and Display text** (https://usability.yale.edu/web-accessibility/articles/links)
   - Use unique text where possible to describe the link embedded.
5 Areas to Focus On Cont.

5. Visual elements to be aware of

- **Color Contrast** (https://webaim.org/resources/contrastchecker)
  - Large Text: Contrast ratio of at least 3:1
  - Informational Text: Contrast ratio of 4.5:1
  - Incidental: Text or images that are part of an inactive user interface, that are pure decoration have no contract requirement.
  - Logotypes: Text that is part of a logo or brand has no contract requirements

- Use of Color
  - Accessibility requirements prohibit the use of color alone to present important information or instructions.

- Flashing images
  - Flashes or flickers can trigger seizures in susceptible individuals. Try to avoid.
Accessibility Tools

• Accessible Word Documents: [Word Guide](#)
• Accessible PDF Documents: [PDF Guide](#)
• Accessible PowerPoint Presentations: [PowerPoint Guide](#)
• Website Accessibility Checker: [WAVE web accessibility evaluation tool](#)
• Blackboard Ally: [Ally Quick Start Guide](#) (also available for Canvas and D2L)
• How to check MS Office Documents? - [Microsoft Accessibility Checker](#)
• CSCU Accessibility Checklist: [Accessibility Checklist for Course Content](#)
• Caption Key: [Overview of Captioning](#)
• YouTube caption resources: [Translate videos & captions](#)
Evaluating Accessibility of OER

Things you find
OER encompasses textbooks, and

"the myriad of learning resources (William and Flora Hewlett Foundation)

"digitized materials...learning content, software tools to develop, use, and distribute content (OECD)

"teaching, learning and research materials in any medium" (UNESCO)

"educational resources (lesson plans, quizzes, syllabi, instructional modules, simulations, etc.)" (wikieducator)

OER Definitions (https://wiki.creativecommons.org/wiki/What_is_OER)
"many – if not most – open educational resources (OER) are not designed with digital accessibility in mind. Materials advertised as “open access” and “freely accessible” may give the impression that OER are universally accessible, but many users still face inequitable barriers to access."

**Improving the Digital Accessibility of OER: A Reflective Guide.** Katy Anastasi, June 11, 2020

https://openoregon.org/digital-accessibility-guide/
General guidance

• Make accessibility one of your initial selection criteria

• Familiarize yourself with the most common accessibility issues and how to identify them

• Select open (of course!) BUT do not assume open means accessible

• Look/Ask for accessibility statements/508 compliance/VPATs
  • Voluntary Product Accessibility Template (VPAT)
  • National Center on Educational Material. Understanding the VPAT®
    (http://aem.cast.org/navigating/understanding-the-vpat.html#.XLSIrBNKh0s)
More general guidance

• Use checking tools

• Issues? Fix and share it back to the community

• Not accessible and can't be fixed? Move on! (or use [Acknowledging Known Accessibility Issues in Your Accessibility Statement](#))

• Seek out expertise and assistance.
What to look for when evaluating OER
Multimedia - 1

• Video
  • Choose videos with captions
  • Caption accuracy
  • Adding captions or a transcript for things you find?

• Audio
  • Spoken word, requires a transcript.
  • Music with lyrics
Multimedia - 2

- Images
  - Alt text and Image descriptions.

  **WebAim techniques alttext**
  - Within the alt attribute of the img element.
  - Within the context or surroundings of the image itself.

- Animations
  - Need text description
  - Audio needs captions
  - Avoid animated gifs, automatic looping, and blinking
  - Additional guidance [Penn State Acessibility - Animations](#)
Files/Documents

• Files
  • PDF, PPTs, Excel, Word, Google Docs, etc.

• Math
  • Creating Accessible Math with MathML
  • "MathML is a markup language used to display equations and other mathematical expressions on the web and in other formats ... allows equations to be stored as structured text rather than images." (National Center for Accessible Educational Materials)
Lessons, Courses, Games/Simulations

• Are the elements accessible? Is there overall structure that helps to make the lesson perceivable and understandable?

• Use a checklist to evaluate it

• Test with a screenreader. (NVDA free software (Windows)).

• Look for accessibility statements

• Games Accessibility Guidelines (http://gameaccessibilityguidelines.com/)
  • Motor (Control / mobility)
  • Cognitive (Thought/memory/processing info)
  • Vision
  • Hearing
  • Speech
Platforms, Websites

• Websites
  • Put the URL into an accessibility checker
  • There are also several browser plugs-ins

• Platforms, Textbooks/Ebooks
  • Look/Ask for a VPAT or Accessibility Statements
  • Differentiate the site accessibility with the item accessibility
  • OpenStax – web version preferred (WCAG 2.1 AA compliant)
  • Question publishers (Evaluating Publisher Content for Accessibility)
Activity and Demo

Checking and fixing a Word document, then exporting to PDF format (and checking again).

First, what are the elements that you would look more deeply into when evaluating this document?
Create Test and Quizzes

Attached Files:
- Question Types in Blackboard.pdf (577.886 KB)
- Assessment Creation in Bb.docx (249.135 KB)
- Setting up Test Options in Blackboard 2020.pdf (1.427 MB)

Video Tutorial
Click here for a video tutorial on how to create this type of question in Blackboard.
Example: Merlot resource
"...experience with improving the accessibility of OER has been an iterative, messy, non-linear process."

"conceptualize accessibility work as existing across an expansive spectrum instead of a checklist. I now think of this work as an ongoing process rather than a project with a definitive end-goal."

Katy Anastasi, June 11, 2020
https://openoregon.org/digital-accessibility-guide/
Additional Resources

• CAST. Creating Accessible Open Educational Resources (http://udloncampus.cast.org/page/media_oer_creating)


• CUNY. Accessibility Toolkit for Open Educational Resources (OER) (https://guides.cuny.edu/accessibility)

• Phinney, J. (October 23, 2018). Evaluating Publisher Content for Accessibility (https://www.angelo.edu/content/blogs/26-evaluating-publisher-content-for-accessibility)


• Iowa State University. Accessibility for OER (https://www.oer.iastate.edu/accessibility-oer)

• Khan Academy. Tota11y: an accessibility visualization toolkit. tota11y helps visualize how your site performs with assistive technologies.

• NV Access. NVDA free screenreading software (Windows).
Thank you! Get in touch!

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