Designing accessible online course materials

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Workshop Overview:

- Building an accessible content framework for creating and selecting course materials
- Searchable documents and PDF’s. How-to and why it matters
- Best strategies for video captioning success
- How multiple formats can help minimize screen fatigue, address network limitations, and support individual learning strengths
Accessibility v. Accommodations

- **Accessibility** -- allows a broad continuum of users with/without disabilities to access course materials and activities. Students with diverse needs may participate outright. (i.e. No one is restricted from using curb cuts and automatic door openers, yet it meets the needs of individuals whose mobility may be affected such as a person using a wheelchair.)

- **Accommodations** -- are provided to address that which is not accessible.
What does accessibility mean?

A person with a disability is afforded the opportunity to:
- acquire the same information,
- engage in the same interactions,
- and enjoy the same services as a person without a disability
- in an equally effective,
- equally integrated manner,
- with substantially equivalent ease of use.

A person with a disability must be able to obtain the information
- as fully,
- equally,
- and independently
- as a person without a disability.

(Reformatted from Resolution Agreement South Carolina Technical College System, OCR Compliance Review No. 11-11-6002, Feb. 2013)
Consider the following when designing course materials and activities: “What If’ ….

- a person has no vision, limited vision or is color blind?
- a person has limited hearing, is deaf (or has another language barrier, i.e. ESL)?
- a person has a mobility impairment that impacts dexterity and the ability to use a keyboard/mouse, kiosk/touchscreen or hold a book, program, menu, etc.?
- a person has a cognitive impairment (including reading/processing) that make it difficult to understand complex or technical language, remember or follow a multiple step process, or navigate a busy “cluttered” website or PowerPoint or printed poster/flyer/brochure?
What is a “print disability”

**Functional definition**— "A condition related to blindness, visual impairment, specific learning disability or other physical condition in which the student needs an alternative or specialized format in order to access and gain information from conventional printed materials.“ (i.e., Braille, large print, audio, digital text)

[Maine AIM Community of Practice](https://maineaim.org)

- k-4th grade  → we “learn to read”
- 5th grade +  → we “read to learn”
What is “reading”?

Information delivery in education is still very “print” based!!! However, “digital text” allows the end-user/student to decide how best to engage with the content (braille, audio, magnification).

- “Eye reading”—scanning words on the printed page.
- “Finger reading” – braille, tactile access to words on the page.
- “Ear reading” – audio books and text-to-speech
Dyslexic Reading simulation:

- Read the following paragraphs as best you can and be prepared to answer 2 questions about the reading.

- Note: The simulation demonstrates some common dyslexic symptoms. The letters in this paragraph are reversed, inverted, transposed and spelling is inconsistent.
"Moud a text-ouly sight bee ideale for soweoue mith a reabing bisorber? Harblee. Iwages are uot dab for accessabilledea. They actuallly iucreese cowqreheusiu aub nsadilite for wost anbieuces.

Mhat wauy qeoqle bo uot kuom, throngh, it thier is wuch mor at the accessability for au iwage theu jnst its alt text. Sowe qeople mroughly aasnwe that iwages are dab for accessedilite, siuce alt text essentually reqlaces the iwage mith a text-ouly versiou of that iwage."

bye Panl Bohwau
Questions about the reading:

1) Why are images good for Web accessibility?

2) Who would be negatively impacted by a text-only site?
The Unmodified Paragraph

"Would a text-only site be ideal for someone with a reading disorder? Hardly. Images are not bad for accessibility. They actually increase comprehension and usability for most audiences.

What many people do not know, though, is there is much more to the accessibility of an image than just its alt text. Some people wrongly assume that images are bad for accessibility, since alt text essentially replaces the image with a text-only version of that image."

by Paul Bohman
Text-to-Speech Demonstration
Read & Write PDF Aloud
Text-to-Speech Demonstration
iOS Speak Screen

How to Follow along while your device reads
Text-to-speech tools and apps:

- UNH has a site license -- any faculty/staff/student can download to their personal computer (Win/Mac) [http://www.unh.edu/sas/readwrite](http://www.unh.edu/sas/readwrite)

- Built-in to operating systems:
  - Windows OS, Mac OS, iOS devices/phones, Android devices/phones

- Voice Dream Reader iPad app:
  - Allows the user to customize the font size, spacing, color to find an optimal view for maximize fluency and speed.

- More info at: [http://www.unh.edu/sas/apps](http://www.unh.edu/sas/apps)
Good vs. Bad PDF’s

This was a scanned printed webpage. Note you cannot select text in the document.

This was saved as a PDF from the webpage and the text is selectable/searchable.
PDF Best Practices:

- Find a searchable PDF file (utilize UNH Library databases and resources)

- If you need to Scan from a print copy or book:
  - Avoid color scanning (b/w or grayscale is best)
  - 300 dpi (can be set on the copier/scanner)
  - Avoid 2-page scans
  - Avoid scanning content with highlighting, underlining, margin notes, etc.

- Quality of Text Recognition is DEPENDENT on source image quality
If your PDF’s look like this - Replace them
Convert an image PDF to searchable

- Utilized the e-Reserves Services at the Library
- Use the Book Scanning stations in the Library to scan a book chapter or article and choose the “searchable PDF” option.
- Use Read&Write to convert an image to searchable PDF. (instructional video available via the software Help menu). [http://www.unh.edu/sas/readwrite](http://www.unh.edu/sas/readwrite)
- Use Adobe Acrobat Pro
  ([https://td.unh.edu/TDClient/Requests/ServiceDet?ID=396](https://td.unh.edu/TDClient/Requests/ServiceDet?ID=396) $121/yr.)
Questions?
PowerPoint Accessibility

- Utilize Themes vs. text boxes
- Contrast matters -- Avoid Red/Blue combo
- PPT should include Text not images of Text
Printing PPT vs. PDFs

- PPT vs PDF on Canvas
  - Issues with printing (colors, layout)
  - PPT allows the student more flexibility/control in how they print out the slides including multiple slides per page and changing or removing background
Benefits of Captioning Videos

- Accessibility for hard of hearing
- Better comprehension
- Flexibility to view in sound-sensitive environments
- Searchable
- Benefits non-native English speakers
- May be translated to other languages

80% Of people who use captions aren’t deaf or hard of hearing

48 Million Americans with hearing loss
Types of Videos

- Lecture Capture -- Kaltura Capture or Zoom
- DVD’s or streaming content
- 3rd party videos

Sources for captioned videos:
- TEDTalks, Khan Academy
- Kanopy, Alexander Street (UNH video streaming)
- Many major networks and educational video producers (PBS, ABC, NBC, CBS, FOX etc.)
YouTube videos:
(review CC’s for accuracy!)
Let’s look at Kaltura and captioning process
Questions:

- See our SAS → Faculty → Creating Access page for more details and resources. [https://www.unh.edu/sas/creating-access](https://www.unh.edu/sas/creating-access)

- Thank you!