Accommodating and Modifying for Special Populations

Increase Accessibility Through Color & Multimedia

COLOR USAGE
Use both colors AND symbols

Students that are **colorblind** are able to see colors; however, they may experience challenges **differentiating between colors** (such as red and green, blue and yellow, violet and red, and blue and green). Consider **design considerations** when creating materials such as charts and graphics. Check images using **Colblindor's online color blindness simulator**.

> **5 Design Considerations**
> 1. Use both colors and symbols
> 2. Minimize number of colors utilized
> 3. Use patterns and textures for contrast
> 4. Be cautious of contrasting colors and hues
> 5. Avoid bad color combos

CLOSED CAPTIONS
Use CC and transcripts

Many technologies have increased their integration of Closed Captioning. Teachers can integrate **closed captioning** for synchronous and asynchronous audio and video instruction. Review each technology **tool's guide** for specific directions on enabling closed captions and for editing associated transcripts.

> **Enhancing Accurate Captions**
> 1. **Communication & Proximity:** Speak clearly, slowly, and directly into the microphone. As distance from the microphone increases, captions may become less accurate.
> 2. **Background:** Select locations with minimal background noise.
> 3. **Co-presenters:** Avoid having multiple persons speak at the same time.

PORTABLE DOCUMENTS
Use OCR for screen readers

Screen readers are useful for increasing accessibility to all learning materials. Be aware, not all information can be read by screen readers. Teachers can use Adobe's feature (**Make PDFs Accessible**) to make manual fixes to their PDFs. In cases where the PDF is of low quality, educators can use **optical character recognition (OCR)** within Adobe Acrobat Pro prior to making the materials available for students.

> **Steps to Perform an OCR within Adobe Acrobat Pro**
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> 1– **Legible Text:** Avoid utilizing PDFs and resources that have blurry or blacked out text because they will likely result in inaccurate results.
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> 2– **Highlighting:** Do a quick check to see if the PDF recognizes the text by highlighting the information with the cursor.
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> 3– **Test Accuracy:** Copy the text into another document. If it copies without issues, it is a PDF with quality OCR. However, if it includes misspelled words or symbols, it is inaccurate and will pose issues with text-to-speech software.
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> 4– **Adobe Acrobat Tools:** Open the tools sidebar, click on the ***Recognize Text*** tab, and launch the OCR by clicking on the ***In This File*** option.
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> 5– **Non-users of Adobe Acrobat Pro:** Use free web applications
> a. https://easypdf.com
> b. https://www.newocr.com
> c. https://ocr.space/

References:
- McGill. (n.d.). *Making PDF files work with screen readers*. Office for Students with Disabilities. https://www.mcgill.ca/osd/faculty-staff/resources/udl-documents/screen-readers-and-pdf-files
- Rose, R. (n.d.). *Access and equity for all learners in blended and online education*. International Association for K-12 Online Learning (iNACOL). https://aurora-institute.org/wp-content/uploads/iNACOL-Access-and-Equity-for-All-Learners-in-Blended-and-Online-Education-Oct2014.pdf
- Microsoft Teams. (n.d.). *Use live captions in a Teams meeting*. https://support.microsoft.com/en-us/office/use-live-captions-in-a-teams-meeting-4be2d304-f675-4b57-8347-cbd000a21260

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Project TIME
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