Preparing Now for Accommodations and Assistive Technology in College

Steven Bianco, Florida SouthWestern State College, Coordinator of Accessibility & LMS Administration,
Office of Information Technology

Disclosure

The software and websites linked within does not indicate an endorsement and is provided for informational purposes. Do not install any software without first running a virus scanner, software may require an administrator to install or implement, read the terms for any copyright information and licensing requirements.

All information is provided on an as-is basis for the purposes of education and research direction. As with any informational source your discretion is advised.

Presenter Information

Steven Bianco

- Canvas course content accessibility
- Document accessibility
- Vendor Voluntary Product Accessibility (VPAT™) review
- Website accessibility

Overview

- Assistive Technologies
    - Graphic Organizers
    - Note Taking
    - Speech to Text
    - Text to Speech (TTS)
- Universal Design for Learning
    - Multiple Means of Engagement
    - Multiple Means of Representation
    - Multiple Means of Action and Expression
- Quick Takeaways
- Questions?

Assistive Technologies

Assistive technology (AT) is any item, piece of equipment, software program, or product system that is used to increase, maintain, or improve the functional capabilities of persons with disabilities. (Young & MacCormack, 2014).

Graphic Organizers

"A graphic organizer is a visual display or chart that shows the relationship between ideas, facts, and information" (Alber, 2016).

The use of graphic organizers relates to the Universal Design for Learning framework for checkpoints 3.2, 3.3, and 6.3. There are many free tools to create graphic organizers, notably within Microsoft Office (version 2007 and up) there is [SmartArt](#).

SmartArt transforms bulleted list contents into visually appealing process maps and other visual representations of relationships.

The major consideration when selecting a software (program-based or web-based) is the ability to create and disseminate accessible formats. Basic considerations are text-to-speech optimization, keyboard accessibility, and the ability to transition to a different format.

Note Taking

- Free or Low Cost
  - [OneNote](#)
  - [Pen and Paper with Microsoft Office Lens](#)
- High Cost
  - [Livescribe Pens](#)
  - [Sonocent](#)

Speech to Text

- Free or Low Cost
  - [Dictation in Microsoft Office](#)
  - [Google Drive](#)
  - [Microsoft Teams Live Transcription](#)
  - [Web Captioner](#)
- High Cost
  - [Dragon Speech Recognition](#)
  - [Otter.ai Transcription](#)
  - [Verbit.ai Transcription](#)
  - [Zoom Live Transcription](#)

Text to Speech (TTS)

- Free or Low Cost
  - [Balabolka](#)
  - Built-in Screen Readers
  - [Microsoft Edge Browser](#)
  - [Microsoft Immersive Reader](#)
  - [Non-Visual Desktop Access (NVDA)](#)
- High Cost

- Job Access with Speech (JAWS)
- Kurzweil 3000
- Read&Write
- Scanning Pens

Universal Design for Learning

CAST. (2018). *Universal design for learning guidelines, version 2.2*. Center for Applied Special Technology (CAST).

Multiple Means of Engagement

- Provide options for Recruiting Interest:
  - Minimize threats and distractions (7.3).
- Provide options for Sustaining Effort and Persistence:
  - Heighten salience of goals and objectives (8.1).
  - Vary demands and resources to optimize challenge (8.2).
  - Increase mastery-oriented feedback (8.4).
- Provide options for Self Regulation:
  - Promote expectations and beliefs that optimize motivation (9.1).
  - Facilitate personal coping skills and strategies (9.2).
  - Develop self-assessment and reflection (9.3).

Multiple Means of Representation

- Provide options for Perception:
  - Offer ways of customizing the display of information (1.1).
  - Offer alternatives for auditory information (1.2).
  - Offer alternatives for visual information (1.3).
- Provide options for Language and Symbols:
  - Clarify vocabulary and symbols (2.1).
  - Clarify syntax and structure (2.2).
  - Support decoding of text, mathematical notation, and symbols (2.3).
  - Illustrate through multiple media (2.5).
- Provide options for Comprehension:
  - Activate or supply background knowledge (3.1).
  - Highlight patterns, critical features, big ideas, and relationships (3.2).
  - Guide information processing and visualization (3.3).
  - Maximize transfer and generalization (3.4).

Multiple Means of Action and Expression

- Provide options for Physical Action:
  - Vary the methods for response and navigation (4.1).
  - Optimize access to tools and assistive technologies (4.2).

- Provide options for Expression and Communication:
  - [Use multiple media for communication (5.1).](#)
  - [Use multiple tools for construction and composition (5.2).](#)
  - [Build fluencies with graduated levels of support for practice and performance (5.3).](#)
- Provide options for Executive Functions:
  - [Guide appropriate goal-setting (6.1).](#)
  - [Support planning and strategy development (6.2).](#)
  - [Facilitate managing information and resources (6.3).](#)
  - [Enhance capacity for monitoring progress (6.4).](#)

Quick Takeaways

Easy Things to Implement

- Help users understand what things are and how to use them.
- Help users find what they need.
- Use clear content (text, images and media).
- Help users avoid mistakes.
- Help users focus.
- Ensure processes do not rely on memory.
- Provide help and support.
- Support adaption and personalization.

Questions?

Please use the next five (5) to ten (10) minutes to ask questions and discuss with the presenter.

References

Alber, R. (2016, October 13). *Using graphic organizers correctly*. Edutopia.

CAST. (2018). *Universal design for learning guidelines, version 2.2*. Center for Applied Special Technology (CAST).

Seeman-Horwitz, L., Montgomery, R., Lee, S., Ran, R. (eds.). (2021, April 29). *Making content usable for people with cognitive and learning disabilities*. W3C.

Young, G., MacCormack, J. (2014, June 10). *Assistive technology for students with learning disabilities*. Learning Disabilities Association of Ontario.

Thank You!

Please contact Steven Bianco by email at sbianco@fsw.edu **or** [connect with him on LinkedIn.](#)