Universal Design:

Making Classroom and Online Materials Accessible to All

Tip Sheet

This tip sheet is intended to distribute information regarding accessible classroom and online materials to instructors and departments. Our goal is to further educate everyone on the importance of Universal Design. <u>Being proactive, rather than reactive</u>, and incorporating Universal Design during the creation process of classroom and online materials is more time and cost efficient. By doing so, students who receive accommodations through Accessibility and Testing will receive accessible classroom and online content at the same time as their peers.

For further information, please contact Accessible Media.

Accessible Media

alternatemediateam@cscc.edu

614-287-5910

Table of Contents

General Accessibility Information

- Incorporating the information below into the original document creation process will assist in making content is as accessible as possible.
- Blackboard and the MyLab platforms- the BB site itself is structured in a way that is accessible to students using screen readers. Students can navigate the site using keyboard commands. Issues arise when the content added to BB is not accessible. Similar issues can arise in MyLab. The site is accessible, but the content and questions added may or may not be. Look for an "ear" symbol in the question lists to ensure the problems can be read with a screen reader.
- Keeping your original Word document or text file when creating materials is important. Even if the preferred end-format is PDF, having the originals can ensure all students have access to the materials.
- Think outside the box. A math instructor once said there was no way to represent shapes for a blind student in class, which resulted in the student dropping the course. The next time the student took the same course, a new instructor thought creatively and found 3D models of the shapes that would be discussed in class. When the topic came up, the instructor would hand the 3D model of the shape to the student who was then able to fully participate. Just a few extra minutes of the instructor's time made a significant impact on the success of the student.

- Consider this… You pass out or post a study guide to your class on a Thursday afternoon for a test the following Tuesday. Most students can get right to work studying and have the entire weekend to work on it. The accommodated student must drop off the materials to A&T after class on Thursday afternoon. Materials take 48 business hours to be processed. That means this student will not receive their materials until Monday and now have less than 24 hours to study and prep for their test. Everyone else had around 5 days to prepare. Take into account that it may take the student extra time to even read the materials; this has seriously impacted the student's ability to study for their test. If the instructor had kept their original Word document of the study guide, the student could have received the materials on Thursday afternoon, had plenty of time to study, and would have had a better opportunity to succeed on the test.
- Be aware that setting Permissions (password protection) on your documents could prevent a student from being able to use the document with assistive technology. While we are aware that intellectual property is important, a student using a screen reader needs to have access to their materials for the course and password protection could prevent them from accessing the content.
- Supplemental materials added to BB or passed out in class must also be accessible. Just because it may not be mandatory to view or read does not mean it should be posted in an inaccessible format. For instance, an extra credit quiz or assignment, even though optional, should be available to everyone enrolled in the course. Be sure that ALL materials that could be utilized in a course are available to ALL students.

- Students requiring braille items for class can contact A&T to request materials. A&T may contact the instructor or department for digital copies of the material to process into braille.
- Creating accessible math is a more complex process and requires specific software. We have the technology to produce this specialized file format and can also provide the software, training, and information to instructors.

Microsoft Word Documents

Word documents are the best way to create and store text that is accessible to all students. Even if the end format is PDF, PowerPoint, or another type of document, saving your Word documents will allow for accessibility if a student will be using a screen reader or magnifier. You can choose to provide it to everyone or just send it to the student who will be using assistive technology. Keeping this document will allow the student to access their materials at the same time as the rest of the class. Typically, an A&T student will need to bring their handouts, classroom materials and Blackboard materials to the AM staff and wait approximately 48 business hours for them to be processed. This processing time can put the student behind if materials are not received in advance.

Below are the steps an instructor can take to create an accessible Word document:

WebAIM Article Contents

Microsoft Word - Creating Accessible Documents

1. [Introduction](#)
2. [Headings](#)

- Using official heading styles, instead of just bolding titles, allows for better readability. This can be done by highlighting the text and clicking on one of the "Styles" on the "Home" tab.
- Images must have alt text included if it is not already described in the text or a caption. Stock photos do not need a description (but should be marked as decorative), only images that provide learning content to the student.
- Do not insert textboxes. Screen readers cannot "see" that there is text inside an inserted textbox.

- Web links should be re-named because the URL may be just a string of letters and numbers that may not make any sense to the reader. However, if the document needs to be printed, leave the URL as is AND type in the description or title.
- Use true columns and tables. Do not use the Tab key to space items by eye.
- Be consistent with fonts and do not choose something too difficult to read. A sans-serif font (at least 12pt) is best for on-line viewing (Ex. Arial or Verdana). Not all students using a screen reader will be visually impaired.
- Screen readers, for the most part, will not identify formatting such as bold, underline, font color, italics, etc. Some screen readers may be able to convey this information, but the student must use a tedious and time-consuming way of using the program to access the information.
- Microsoft Word has a built-in Accessibility Checker. It is an excellent resource to assist in identifying and repairing accessibility issues. The Accessibility Checker identifies potential problems in your document, tells you why it is important to fix it, as well as provides you with solutions on how to fix it.

Microsoft PowerPoint Presentations

PowerPoint (PPT) is a widely used method for delivering presentations, both in class and online. PPT's can be fully accessible to screen reader users if created properly. Typically, an accommodated student will need to bring their handouts, classroom materials and Blackboard materials to the AM staff and wait approximately 48 business hours for them to be processed. However, if a PPT is accessible from the start, the student will obtain their

materials at the same time as the rest of the class. Using text copied from a well-prepared Word document can also increase the chances of having an accessible PPT. Keeping a PPT simple can help ensure accessibility as well.

WebAIM Article Contents

1. [Introduction](#)
2. [Templates and Themes](#)
3. [Slide Layouts](#)
4. [Slide Reading Order](#)
5. [Alternative Text for Images](#)
6. [Tables](#)
7. [Links](#)
8. [Check Accessibility](#)
9. [Other Accessibility Principles](#)
10. [Convert PowerPoint to PDF](#)

Use the following suggestions to create a PPT presentation that incorporates accessibility and Universal Design:

- Use the "Slide Layout" pane instead of creating each slide by hand. This is the only way to ensure accessibility.
- Use clear and descriptive titles. Vague wording may make it difficult for a screen reader user to know what information will follow.
- Keep slide information to a minimum (approx. 6 points per slide.)
- "Speakers Notes" added to clarify visual elements can be accessed by a screen reader. However, if the PPT is saved into another document type, such as a PDF, this info will not transfer.
- Keep a high contrast between the background and text colors.

- Using at least a 12pt., sans-serif font is best.
- Reviewing a PPT to make sure all text is accessible can be done by checking the Outline panel. It will show, in plain text format, the text that is on each slide. If text is visible on a slide, but not on the outline, that indicates the text was part of an image. If the text is missing from the outline, it will not read using a screen reader. Enter alt text or type the information directly into the slide.
- Add alt text for any images that convey information. Stock photos do not need a description, only images that provide learning content to the student.
- Web links
    - Web links should be re-named because the URL may be just a string of letters and numbers that may not make any sense to the reader.
    - However, if the document needs to be printed, leave the URL as is AND type in the description or title.
- PowerPoint has a built-in Accessibility Checker. It is an excellent resource to assist in identifying and repairing accessibility issues. The Accessibility Checker identifies potential problems in your document, tells you why it is important to fix it, as well as provides you with solutions on how to fix it. A panel will open to the right listing the issues found. The issues listed are not automatically fixed and must be done manually.

Portable Document Format (PDF) Files

PDF files are the most common file type that instructors upload to Blackboard. Additionally, when requesting digital versions of textbooks for students with disabilities, most of the textbooks we receive from publishers are saved as PDFs. PDFs are not typically created in Adobe Acrobat. They are usually created in another program and *converted* to PDF. Most of the PDF files on the web were probably created in Microsoft Word. Of course, the accessibility of the PDF depends on the accessibility of the original document.

WebAIM Article Contents

Defining PDF Accessibility

1. [PDF Tags](#)
2. [Adobe, Acrobat, and PDF](#)
3. [Converting Documents to PDFs](#)
4. [Acrobat and Accessibility](#)
5. [Accessible Forms in Acrobat](#)

Below are some basic guidelines and tips for creating PDFs that will help ensure accessibility:

- Starting with a Word document or PowerPoint presentation that is properly prepared (i.e., alt text for images, proper headings, appropriate link text, etc.) increases the chances of an accessible PDF.
- IMPORTANT: The file must be exported properly. Do NOT use the "Print to PDF" feature or take a snapshot of the document; it will not likely create an accessible PDF.

- When securing a PDF via password protection, be sure to select the "Enable text access for screen reader devices for the visually impaired" option.
- Editing PDFs that you did not create yourself is a bit more difficult. If you can get the original Word document and re-save it as a PDF, it will save you time!

Assistive Technology and Screen Readers

Many students will use Assistive Technology during class or while testing to access their materials. While the proper settings depend on the student's needs, they also need to be appropriate for the situation. Screen readers are a widely used assistive technology and allow for properly formatted text to be read aloud to the student. This audio feature is what makes properly formatted documents or web pages accessible.

Listed below are the assistive technology programs that CSCC offers for student use:

Fusion Software Suite

Fusion

Available for student download at
https://portal.freedomscientific.com/HomeUse/HigherEd.

Fusion is a combination of the screen reading/audio features of JAWS and the magnification features of ZoomText. An at-home Fusion license is available to students, faculty, and staff. Please contact Accessibility and Testing for more information.

JAWS (Job Access With Speech)

Available for student download at
https://portal.freedomscientific.com/HomeUse/HigherEd.

JAWS was developed for computer users whose vision prevents them from seeing the screen or navigating with a mouse. JAWS provides speech and braille output for PC users. Students using JAWS would almost always require their materials in a Word document. An at-home JAWS license is available to students, faculty, and staff. Please contact Accessibility and Testing for more information.

ZoomText

Available for student download at
https://portal.freedomscientific.com/HomeUse/HigherEd.

ZoomText is a magnification and screen reading software for individuals who have low vision. The program enlarges, enhances, and reads most items on the computer screen. An at-home ZoomText license is available to students, faculty, and staff. Please contact Accessibility and Testing for more information.

Read&Write and Equatio

Available for anyone with a CSCC email address to download at
texthelp.com.

Students, faculty and staff can pick up a free copy of Read&Write and Equatio by visiting texthelp.com and signing up for a free trial. When prompted, use your 'cscc.edu' email address to obtain the full version. An instruction sheet detailing how to install and use both programs can be found on the Accessible Media webpage. There are both PC and Mac versions and additional training for students registered with A&T is available upon request.

Read&Write

A customizable toolbar that allows sighted users to access a screen reader for text. Read&Write also provides reading, writing, studying, & researching support tools and works with other common applications used by students (i.e., Adobe Reader, Word, Google Docs, IE, Chrome, Firefox, etc.).

Equatio

A customizable toolbar that allows sighted users to access a screen reader for math content. Equatio also provides other support tools and works with other common applications used by students (i.e., Adobe Reader, Word, Google Docs, IE, Chrome, Firefox, etc.).

Dragon Naturally Speaking

*Only available in Accessibility and Testing

Dragon Naturally Speaking (referred to as Dragon or DNS) is a voice/speech recognition software program that allows for complete control of a computer via speech. Students can use it to take exams or to write papers. It not only provides an alternative input method for students with physical disabilities, but it has also been shown to help students with learning disabilities make significant advances in the areas of reading, writing, and spelling. This can be useful for students with Mobility/orthopedic, fine motor skill, and history of using Dragon Naturally Speaking. If the student is proficient in Dragon, it can be much faster than typing. It allows students to focus on the content rather than the writing process itself. It even supports some degree of automation to perform daily repetitive tasks.