Basic Elements of Accessible Formatting

There are some [basic formatting practices](https://www.pcc.edu/instructional-support/accessibility/) that are simple to use when creating or editing digital content. Even if they don’t seem significant, these small modifications are essential for some students and beneficial for all.

Headings and Columns

Headings in a document or web page provide a quick overview of the topics covered, aid in navigation to specific information, and can auto-generate a table of contents for you. However, if you create your headings only by editing the font size/color, the text is still tagged in the app as “Normal” text. This is a “faux” heading, meaning that it looks like a heading, but doesn’t function like one. The same is true for columns that are created using tabs instead of true columns.

Simple Solution: Use the one-click formatting options for Headings from your app’s toolbar to automatically tag the text as a heading and change font size/color in the same step. Use the column feature to automatically create the number and size of columns desired. This allows assistive technologies to read columns in their correct order, as well as read only the Headings on a page, allowing users to also benefit from that “at-a-glance” view of the topics and the ability to quickly navigate to the section they need without having to read the entire document first.

Watch the video demonstration  [‘Why Use Accessible Headings?’](https://youtu.be/Q7hTVxmZ6UE) to learn more.

Lists

As with Headings, a similar tagging principle applies to formatting lists. If you simply type 1 enter, 2 enter, 3 enter, etc. to create a list, there are no tags for assistive technology to differentiate it as being separate from normal text. So again, it may look like a list, but it doesn’t function like one.

Simple Solution: Use the app’s list tool instead of typing plain text to automatically tag and format your list with the bullets of your choice, indents, and spacing in the same step. This allows assistive technology to notify a user that there is a list with “x” number of items, as well as which item the user is on, but unfortunately it does not allow a user to navigate directly to a specific item as headings do. If you organize documents in outline form or have very long lists, consider converting your top-level items to headings instead to allow your reader to quickly jump to the section they need.

Watch the video demonstration ['Why Use Accessible Lists?'](https://youtu.be/QsKXKQF7Ybw) to learn more.

Meaningful Links

Linking directly to a website, article, or document is a convenient and effective way to point users to additional information and resources. However, pasting lengthy URLs or using “click here” offers very little meaningful information about where the link will navigate to. This is especially cumbersome when using assistive technology, as it will read the entire gibberish URL as text or “click here” when searching for a link within a document or webpage.

Simple Solution: Instead of copy/pasting the URL, insert the link using an “insert link” tool and give the link a clearly descriptive label, preferably the name of the website, article, or document.

Watch the video demonstration ['Why Use Descriptive Links?'](https://youtu.be/9rgI-kLvelc) to learn more.

Alternative Text

Images need some sort of alternative text to help individuals who have visual impairments and/or who use a screen reader to understand them. Without Alt Text, they will only know they've reached a picture without knowing what the picture shows.

Simple Solution: Add alternative text to images; it is easy to do and probably faster than removing the images and reformatting your document. Alt Text should be very brief, no more than 100 characters. Different types of images will require different approaches.  For example:

* If the image is purely decorative and adds no value to the content, then simply write “decorative.” Some applications give you the option to check a box if the image is decorative or ask if you want to automatically generate Alt Text when inserting an image or clip art.
* If the image provides a visual illustration of a process, diagram, or model that supplements the existing text explanation, then something as simple as “illustration of the [process]” or “screenshot of adding alt-text to an image” may be all that is necessary!
* If you need to use complex images like pie charts or bar graphs, include the description under the chart or include a data table with the information.
* If the image is of a table, convert it to an actual table (see Tables for more information). Otherwise, you will need to write out all that information in a long description as Alt Text.

Watch the video demonstration ['Why Use Accessible Images?'](https://youtu.be/KlqqoFFX0Es) or check out [PCC’s Complex Image Accessibility page](https://www.pcc.edu/instructional-support/accessibility/images/) to learn more.

Color

There are many ways that visual impairments can impact the way a person sees (or does not see) color. Some colors can appear to be grayed out or may be very difficult to distinguish without enough contrast between similar hues or foreground and background. Because of this, it is important to not use color alone to convey information.

Simple Solution: Use at least one other distinguishing characteristic to help differentiate between important colors. Use varying textures or shapes in images (e.g. stripes vs dots in bar graphs; dashed vs solid lines in charts), and use additional formatting (e.g. bold, italics, underline, asterisk, etc.) when using colored or highlighted text for emphasis. Check for adequate color contrast between background and text or image colors with an accessibility checker, such as Blackboard Ally.

Tables

Tables need to have column headers and/or row headers (not to be confused with section Headings to organize normal text, as the tags serve different functions). Without these headers, assistive technology simply reads the table from left to right, top to bottom with generally no indication of which column you might be in—an issue that can quickly negate the usefulness of the table if it has more than just a few columns. Blank cells are read as ‘blank’.

Simple Solution: Use the app’s table tool to create the table and check the box to mark your header row, which will automatically tag and format the text within those cells in the same step. This allows assistive technology to tell the user what row they are in, what column, the name of the column, and then the information that is in the selected cell. Also, be mindful of blank cells and consider merging them when appropriate.

Watch the video demonstration ['Why Use Accessible Tables?'](https://youtu.be/fk93e93PtW8) to learn more.

Equations

Math and science notation is not accessible to screen reader users unless it is written in MathML or MathType (in MS Word). Some things to consider when creating math/science content:

* Images of equations should be converted to MathML or MathType as well.
* When making a video, remember to read out all the equations and notations instead of saying “this equation here.”
* If you have handwritten answer keys, they will also need to be converted to a format that can be read by a screen reader when an accommodation arises.

Watch the video demonstration ['Why Make Math Accessible?'](https://youtu.be/fDZ1aIDsaY0) to learn more.

Captioning

Closed captioning and audio transcripts are essential for those who are deaf and hard of hearing, but they can also help non-native English speakers, those who are unfamiliar with vocabulary, viewers with some learning disabilities, or those in a noisy environment. Another form of captioning is called audio description, which involves adding auditory descriptions to media when the information conveyed by visual elements (e.g. graphs, images, charts, etc.) are not fully verbalized.

Simple Solution: Use the automatic captioning and transcript features available in apps like YouTube and Kaltura, or choose content that has already been captioned. Remember to include auditory descriptions of necessary visual information rather than simply saying “…and over here, you can see…” or “…in this equation, start by…”.

Watch this video demonstration of [how to caption on youtube](https://www.youtube.com/watch?v=tvp-FCc8Rys&feature=youtu.be), look at WebAIM’s article about [Captions, Transcripts, and Audio Descriptions](https://webaim.org/techniques/captions/), or review the [VDRDC's list of video description resources](http://www.vdrdc.org/resources) to learn more.

Files and Documents

No matter what application or software you use to create your content, there are many built in tools and checkers to ensure that your content meets accessibility requirements. If you need to convert files from one format to another, Blackboard Ally has a free tool for this <https://ally.ac/covid19/>. Blackboard Ally will also automatically generate alternative formats to files uploaded to your courses in Blackboard Learn, but the quality is only as good as the original (looking at you, scanned PDFs!). Here are some further resources to help you, including tutorials, templates, and accessibility guidelines.

General

* The [NCDAE](http://www.ncdae.org/) has provided a comprehensive list of short “[cheatsheets](http://ncdae.org/resources/cheatsheets/)” by software and other resources geared specifically toward faculty and staff.
* [AccessDL](https://www.washington.edu/doit/programs/accessdl) shares a wealth of [resources for making distance learning accessible](https://www.washington.edu/doit/programs/accessdl/resources-making-distance-learning-accessible) and has a searchable [knowledge base](https://www.washington.edu/doit/programs/accessdl/knowledge-base).
* [Explore Access](https://exploreaccess.org/) provides an excellent toolkit [removing barriers for accessible online courses](https://exploreaccess.org/accessible-online-course/).
* There are many free [recorded webinars](https://www.3playmedia.com/resources/recorded-webinars/) offered by 3playmedia about a variety of accessibility topics, including some specific to higher education and online courses. You can browse by category or search by keyword.
* Portland Community College has many instructional support resources, including free [recorded workshops](https://www.pcc.edu/instructional-support/recorded-workshops/) and additional [resources](https://www.pcc.edu/instructional-support/accessibility/images/).
* [WebAIM](https://webaim.org/intro/) provides a good [Introduction to Web Accessibility](https://webaim.org/intro/) , in addition to many other [resources and tools](https://webaim.org/resources/) .
* The [WC3 Web Accessibility Initiative](https://www.w3.org/WAI/) has many resources, tips, tutorials, and free training courses, as well as a customizable [WCAG 2.1 Quick Reference Guide](https://www.w3.org/WAI/WCAG21/quickref/).
* The University of Arkansas has compiled a great [guide to accessibility with Blackboard Ally](https://tips.uark.edu/blackboard-ally-getting-started-with-accessibility/).

Microsoft Office

Word

* [Microsoft Support guide to accessible Word documents](https://support.microsoft.com/en-us/office/make-your-word-documents-accessible-to-people-with-disabilities-d9bf3683-87ac-47ea-b91a-78dcacb3c66d#picktab=windows)
* [WebAIM guide to accessible Word documents](https://webaim.org/techniques/word/)

PowerPoint

* [Microsoft Support guide to accessible PowerPoint presentations](https://support.microsoft.com/en-us/office/make-your-powerpoint-presentations-accessible-to-people-with-disabilities-6f7772b2-2f33-4bd2-8ca7-dae3b2b3ef25?ui=en-us&rs=en-us&ad=us)
* [WebAIM guide to accessible PowerPoint presentations](https://webaim.org/techniques/powerpoint/)

Excel

* [Microsoft Support guide to accessible Excel documents](https://support.microsoft.com/en-us/office/make-your-excel-documents-accessible-to-people-with-disabilities-6cc05fc5-1314-48b5-8eb3-683e49b3e593?ui=en-us&rs=en-us&ad=us)

Additional Microsoft Office Resources

* [Microsoft Support guide to adding Alt Text in Office documents](https://support.microsoft.com/en-us/office/add-alternative-text-to-a-shape-picture-chart-smartart-graphic-or-other-object-44989b2a-903c-4d9a-b742-6a75b451c669)
* [Microsoft Support guide to using the built-in Accessibility Checker for Outlook email and Office documents](https://support.microsoft.com/en-us/office/improve-accessibility-with-the-accessibility-checker-a16f6de0-2f39-4a2b-8bd8-5ad801426c7f?ui=en-us&rs=en-us&ad=us)
* [Accessible templates for Microsoft Word, Excel, and PowerPoint](https://support.microsoft.com/en-us/office/get-accessible-templates-for-office-ca086caa-2bd2-4ac8-8c12-4cd495bd4d76)

PDF

* [Adobe' step-by-step guide to creating and verifying PDF accessibility](https://helpx.adobe.com/acrobat/using/create-verify-pdf-accessibility.html#make_PDFs_accessible)
* [WebAIM guide to accessible PDF documents](https://webaim.org/techniques/acrobat/)
* [NCDAE cheatsheet for accessible PDFs](http://ncdae.org/resources/cheatsheets/acrobat-xi.php)

Google Docs

* [Google Support guide to accessible Google Docs](https://support.google.com/docs/answer/6199477?hl=en)
* [PCC's guide to accessible Google Docs](https://www.pcc.edu/instructional-support/accessibility/googledocs/#tab-images)



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