Introduction

Over the past decade the number of instructors using online articles, course readers, YouTube videos and other rich media to accommodate multi-modal learning has increased exponentially. Whether teaching an online, hybrid, or blended course these digital course materials are often distributed to students using a Courses Management System such as Moodle. During the 2015 Spring Semester, 1198 of College of Marin’s Moodle courses were accessed by students and faculty.

Regardless of whether faculty use Moodle once per semester to post course syllabi or use Moodle actively to teach an online course, all are required by law to follow accessibility standards.

Section 508 of the Rehabilitation Act requires learning materials, including web interfaces, images, sounds, multimedia elements, and all other forms of information, must be made available for use by anyone, regardless of disability. This includes materials uploaded or created in Moodle which must comply with web accessibility guidelines.
According to the U.S Department of Education,

"Requiring use of an emerging technology in a classroom environment when the technology is inaccessible to an entire population of individuals with disabilities...is discrimination prohibited by the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973 (Section 504) unless those individuals are provided accommodations or modifications that permit them to receive all the educational benefits provided by the technology in an equally effective and equally integrated manner."

Adhering to web accessibility guidelines and universal design principles while developing the online components of your course will benefit all students including those with visual, hearing, mobility and learning disabilities.

**Common Accessibility Barriers**

Online content may pose accessibility barriers, particularly if the content creator is not familiar with producing accessible materials. Examples of common barriers include:

- Creating titles and subtitles by centering, adding bold or color text, and increasing the font size. These methods will not be accessible to screen reader users.
- Failing to use alternative text or descriptors when inserting images
- Using uncaptioned videos or audio content without an accompanying transcript
- Uploading files and documents such as scanned articles, Word documents, or PDFs that do not meet accessibility standards

Creating an accessible course may seem an overwhelming task, but by following a few simple universal design principles, all students will benefit from increased readability of the material and prevent accessibility barriers to learning.

**Using the Text Editor to Create Accessible Pages**

The text editor, also called an HTML editor, is the screen within Moodle that is used to enter typed text on to a Moodle content page, create an assignment or quiz, enter a discussion post, etc. Moodle 2.7 introduced the Atto HTML Text Editor which replaced the Tiny MCE Text Editor as the default text editor. The Atto text editor brings with it new features such as an accessibility checker, math equation editor, and a screenreader helper, but also limits options for color and font selection. The Atto text editor was designed to work specifically with Moodle and ensure the accessibility of Moodle content. Both text editors are still available as options within a user’s profile.

To view all available options within the text editor, click the “show more buttons” icon.
Headings and Subheadings
Heading and subheadings are important since they become the map to your document and also serve as an announcement to assistive software about the content that lies ahead. In the Moodle text editor, the heading styles are accessed by clicking the paragraph styles icon.

The paragraph style options include: large, medium, small, pre-formatted, and paragraph styles. The headings are equivalent to Word heading 3, heading 4, and heading 5, respectively (Note: Headings 1 and 2 are used automatically by Moodle for the title of your page or assignment).

Font Options
You will notice the Moodle Atto text editor does not have an option to change the font. This is to ensure the text remains consistent with the selected Moodle theme and the fonts displayed elsewhere in the course such as navigation panes and blocks. The
default font family for the selected theme is Helvetica, Arial, sans-serif. Sans-serif fonts are one of the most common fonts used in web design because of their readability.¹

**Color Options**
The Atto text editor, by default, does not include color options other than black text. The use of color in text areas should be limited because it can create two types of conflicts. First, colored text may conflict with the theme or site branding and create a visually unappealing display. Second, a combination of colors may produce text that is hard to read for people with visual impairments or color vision deficiency. If you feel it necessary to use color for aesthetics, four primary color options have been installed for your convenience.

**Using the Accessibility Checker**
The Atto text editor comes with a built-in accessibility checker which will indicate areas of your page that may have conflicts with screen readers. To run the accessibility checker, click the “eye” icon found on the text editor menu.

Although not as robust as accessibility tools in Word or Adobe, the accessibility checker will indicate that need to make adjustments due to color issues in the background and foreground as shown in the image below.

Inserting Images
All images should be inserted with a title and alternative text (ALT text) descriptions. The ALT text is read by assistive software which indicates to the viewer the context of the chosen image. When inserting images into the text editor, you will be unable to save the image without providing alternative text. However, there is an option to mark that a description is not necessary. Examples of when alternative text would not be necessary are when captions are provided below an image or the image is explained in detail.

Hyperlinks Tips and Best Practices
Typically, linking to materials or resources outside the course is accomplished through the use of hyperlinks. Whether embedding a link into text (hypertext) or pasting a URL to an external site it is important to write meaningful text to describe the link’s destination. Doing so helps users and assistive software navigate to the page quickly and easily. Using hypertext is preferable to pasting a lengthy URL which can be difficult for assistive software to navigate. When adding links, avoid linking phrases such as “click here” or “read more.”

Consider the following examples:

To learn more about links and hypertext, click here.
Visit the WebAIM website to learn more about links and hypertext.

To insert a hyperlink in the Moodle text editor, copy the destination URL and then highlight the desired destination text. Click the Link button on the text editor menu.
The *Create link* pop-up box will appear. Paste the URL into the field provided. It is also good practice to check the *Open in new window* option. When this option is selected, a new tab will open in the user’s browser. Accessing the link in a new tab prevents the user from leaving the course to view the new information.

### Audio and Visual Media

The use of multimedia such as video and podcasts provide beneficial multimodal experiences for learners. However, they can pose difficulties for some students. When using audio or video to enhance your course, captions or transcripts must be provided to ensure all learners can access the content. Videos from sites such as YouTube or Vimeo, may already provide captions, however, the automated captions used by these sites are often fraught with errors and mispronunciations. Creating captions or transcripts for lectures and screencasts can also be a time-consuming process.

To ensure your videos are appropriately captioned and transcripts contain all of the required information, talk to the Assistive Technologist on campus who can assist you with compiling your media to be transcribed through the DECT (Distance Education Captioning & Transcription) Grant provided for the CCCs.

You can also request to have your video’s, screencasts, and podcasts captioned by completing the Captioning Request Form found here: [http://goo.gl/forms/CaxvmxzaFi](http://goo.gl/forms/CaxvmxzaFi).

### Uploading Documents and Resources

Maintaining an accessible course relies upon not only the content developed within Moodle, but also the uploaded documents and resources such as Word documents, course readers, PowerPoint presentations, and Adobe PDFs. For more information on creating accessible documents and materials visit the campus Assistive Technologist and view the additional resources at the end of this article.
Assistance, Reading, and Resources

Resources at COM
Questions about accessibility can be directed to the Student Accessibility Office at sas@marin.edu. Visit the Student Accessibility Services website for additional resources and services available to students and faculty.

Questions about Distance Education can be directed to Stacey Lince at slince@marin.edu or MoodleHelp@marin.edu. For information regarding faculty support services visit the Distance Education website.

Recommended Readings and Resources
@ONE Project: http://www.onefortraining.org/

Center for Applied Special Technology (CAST): http://www.cast.org/udl/

Distance Education: Accessibility Guidelines for Students with Disabilities from the Chancellor’s Office California Community Colleges:
http://www.htctu.net/dlguidelines/2011%20Distance%20Education%20Accessibility%20Guidelines%20FINAL.pdf

Foothill College Accessibility and Universal Design:
http://www.foothill.edu/fga/accessibility.php

National Center on Universal Design for Learning: http://www.udlcenter.org/


World Wide Web Consortium (W3C):
http://www.w3.org/standards/webdesign/accessibility