Accessibility in online course design

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Abstract:

When designing online instruction, whether it's a course for K–12 or higher education, a webinar, a YouTube video for education, or professional development training, accessibility is crucial to the conversation. In chapter 3 of *Library Technology Reports* (vol. 55, no. 4), "Librarians as Online Course Designers and Instructors," readers will learn about designing online instruction with an eye toward accessibility, assuring that instruction is available for all participants. Highlights will include accessible design, captioning, and other considerations for participants, patrons, and students regardless of ability.

Keywords: accessibility | Universal Design for Learning | UDL | online instruction

Article:

*****Note: Full text of article below**

Chapter 3

Accessibility in Online Course Design

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As online instruction continues to grow in popularity, addressing the needs of all participants becomes crucial. Whether the online instruction is a full course for K–12 or higher instruction, a YouTube educational video, professional development training, or a webinar, it is imperative to design teaching for all learners. The Universal Design for Learning (UDL) framework was developed to offer equal learning opportunities for students in face-to-face courses. The framework looks at how learners experience, interact, and engage with course content. The idea of UDL has now been adapted for a wide range of learning situations in face-to-face, online, and hybrid environments.[1] Online instruction offers a variety of learning opportunities to students, but there can be challenges if the course designer fails to include all learners in the instructional design.[2] This chapter will address accessibility in online course design. We will look at techniques, tips, technologies, and rubrics for designing an accessible, universally designed course.

Background

Offering courses or instruction online eliminates barriers to education such as location, transportation, and social environments, to name a few.[3] By providing accommodations, online learning creates learning paths to accessibility. Options include closed captioning for students who are deaf or who have hearing impairments, alternative text (alt-text) offering descriptions for images and graphics in presentations, and documents available in PDF and Word formats for screen readers. According to United States Census data, fifty million people, or one in five, have a disability. One in seven people has a learning disability or learning difference.[4] Learning differences represent the largest group of students with disabilities. Proactively engaging in accessible course design addresses the needs of students with disabilities.[5]

Designing an Accessible Course

Overall Design

Choice is important for students, professional development attendees, and a learning community. When putting together an accessible course, know you have options available to aid you in making your course accessible for all. It is central to think through the course. How will this course, webinar, instruction, or professional development be delivered? The first thing to remember is consistency. Having similar page structures, layouts, and design makes for continuity for students. Consistency sets up a standard for the course layout and lets students know there will be few surprises throughout the semester. If students are visually impaired, they will know that headings, videos, instructions, assignments, and so on will always be in the same places. Those who have hearing impairments will know where videos are located and that these are closed captioned.

Documents

A document is a page or item read independently from a course management system (e.g., Blackboard, Moodle). The key to documents is also consistency. Use

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uniform headings and titles. As you build documents in Google and Microsoft Word, check accessibility throughout (see the next section, "Tools for Accessibility"). If your documents include images, charts, or graphs, include alt-text. Alt-text is simply alternative text that provides short descriptions of images—think of it like Twitter posts. There isn't a standard length for descriptions, but make sure image descriptions are comprehensive for your students. Think through what is in the picture when you write the alt-text. If longer descriptions are needed—for example, for charts and graphs—include descriptive text in the document below the image, figure, or chart.

Presentations

Presentations are slides in programs like PowerPoint and Google Slides. The key to accessibility in presentations is alt-text. As with documents, make sure to check the accessibility of your presentation as you are creating it. Images need to have alt-text embedded into the presentation so that screen readers can present the information to students with visual impairments. Charts and graphs that require longer descriptions will need the textual information included in the slides or within the narration of a recorded class talk or lecture.

Videos

With videos, it is often about captioning. If you are not keen on captioning, you can provide transcriptions of your videos. There are a variety of tools and services to aid in video captioning and transcriptions. YouTube (see the next section, "Tools for Accessibility") will caption videos for you, but typically the captions must be edited. Subscription services such as Rev and 3 Play Media can aid with transcriptions. Final note on videos: provide recordings of any video. If you teach synchronously, record for those who might miss your class or for those who like to return and review content. If you teach asynchronously, your videos are already recorded for students to review, rewind, and return to as needed.

Embedding Links

When adding a link, don't paste the URL directly onto your course, page, or course management program (e.g., Canvas, Edmodo, Blackboard). Instead, attach the link and use words to describe the link's destination. This concept helps all students and users regardless of ability, and it is more attractive to the eye. For videos, you have the option to embed these into your course or link to them with the descriptions, or you can do both. Whichever way you choose to offer your videos, remain consistent throughout the course.

Tools for Accessibility

YouTube

If you have a Gmail account, you already have a YouTube account. Videos for instructional purposes can be housed in your YouTube account. This is particularly useful for asynchronous, not-in-real-time viewing. For accessibility purposes, YouTube offers automatic captioning once video files are loaded. The automatic captioning can contain mistakes. However, it is easy for an instructor to go in and edit the captions, a process much simpler than creating original captions and transcripts. If you are concerned about privacy for your educational content, know that YouTube videos can be posted as public, unlisted, or private. Depending on the type of instruction delivered, you can also select from options for Creative Commons licensing, downloading permissions, and embedding permissions.

Google Accessibility

When you visit the site for Google Accessibility, you are offered a list of links, products, and features offered to users throughout the Google universe. This list is continuously growing and changing as Google adds accessibility features. Some examples include accessibility features in the Chrome browser (e.g., keyboard shortcuts, low-vision features), buttons as text, screen reader aid in a variety of Google tools, Braille support in Google drawings, videos instead of text for using Google Tools, and voice and video chat help within Google Hangouts. Keep this accessibility list in your favorite bookmarking tool to track regular updates and additions.

Google Docs

Creating, linking, and editing Google documents for online instruction is simple. There are a variety of accessibility features in Google Docs as well, including screen reader and keyboard shortcuts. A personal accessibility tool in Google Docs is voice typing. When opening a new Google document, click on Tools > Voice Typing, and a microphone will appear. When you are ready to talk, click on the microphone. While you talk, the words will be typed out, including punctuation. This is a handy tool for dictation, typing, note taking, and much more.

Adobe

It is important to provide information, instructions, and documents for any online course in an accessible format. Adobe offers tools through Acrobat Pro Suite to help make documents accessible and check on the accessibility of existing documents. To make

a PDF accessible, choose Tools > Action Wizard, and from the Action List, click Make Accessible. If you are checking on the accessibility of a document, choose Tools > Accessibility and then click Full Check. Offering course, webinar, and other instructional documents in both Adobe and Microsoft Word is best to allow for choice when it comes to screen readers used by visually impaired students.[6]

Microsoft

For presentations and documents, Microsoft offers a wide range of options for accessibility. Choices include alternative text for images, built-in headings and styles for screen readers, an accessibility checker of documents once work is done, and recommendations for better accessibility options within the document.

Evaluation of Course Accessibility

There are a variety of ways to assess the effectiveness of accessibility within an online course or instruction. Some instructors look toward the tenets of the UDL framework, while some universities create their own rubrics.[7] One of the most popular rubrics for accessibility in online instruction is the Quality Matters framework.[8] This particular rubric is designed for those who teach predominantly online and provides eight general standards. With Quality Matters, instructors can review their courses in full. The eight standards are Course Introduction, Learning Objectives, Assessment, Instructional Materials, Learning Activities, Technology, Learner Support, and Accessibility. Quality Matters is a fully comprehensive rubric available in multiple languages to aid professors, instructors, and their students in having well-designed, accessible online instruction. Please note that Quality Matters is a product available for purchase and is not open source.

Conclusion

When designing online instruction, whether it's a course for K–12 or higher education, a webinar, a YouTube video for education, or professional development training, accessibility is crucial to the conversation. Not only does accessibility open your content to all students, but it also opens communication. Through captioning, alt-text, transcriptions, embedded links, and more, you are making sure all students and users of your course content have access. No one is being left out. Coming into an online learning environment with a plan is always a good idea. Knowing the tools and methods for making a course accessible is also critical. Online learning environments provide a wealth of opportunities for our students regardless of their location. Making their learning experience fully accessible and universally designed creates a user-friendly learning environment where all students can grow.

Notes

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