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ADA Compliance in Online Courses: Free Tools and Resources for Creating an Inclusive Environment for Both Students and Instructors

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Online courses must be accessible to students with disabilities, yet instructor training in accessible design is often an afterthought, leading to legal vulnerability and a breakdown in the learning partnership between student and instructor. Based on feedback from faculty members who shared their familiarity with expectations from the American Disabilities Association (ADA) and Section 508 of the Workforce Rehabilitation Act, as well as challenges and perceived barriers, this session demonstrated free tools, practical suggestions, and important design tips for bringing all courses into compliance, even for those instructors with less than sophisticated technological expertise.

Introduction

As more and more colleges and universities witness extraordinary growth in their online offerings, both by choice and by circumstance, one area of frequent oversight is the accessibility of the classes for students with disabilities. Accessibility in online courses means making it possible for all students, regardless of developmental or physical impairment, to use all tools and course materials. A course is considered “accessible” when every student can get to, perceive, and navigate course content and assignments; submit assignments; and successfully use all course resources. The training of instructors in accessible design has often been lagging, however, and web-based courses can become a legal vulnerability as well as a source of diminished instructional quality.

Institutional and Program Context

Our dedication to this topic first emerged out of our committee roles that deal with quality assurance for online and hybrid courses. With over 35% of students taking at least one online course (Institute of Education Sciences, 2019), a figure that does not take into account all of the web-based, non-traditional instruction that has arisen from the ongoing pandemic, it frankly becomes very easy to focus

primarily on the initial responsibility of getting the classes online and creating course materials to deliver content for a nonspecific population of students. This urgency, coupled with the need to compete with other institutions for tuition dollars, often gets ahead of thoughtful contemplation. Admittedly, we were lax in prioritizing the fact that many individuals with hearing impairment rely upon captioning when watching video presentations, and students with vision impairment utilize assistive technologies such as voice recognition software and screen readers. So, apart from the obvious desire to meet legal expectations, we are now committed to making content comfortable, effective, and easily accessible for all students who wish to take a course.

To this end, we sought initial feedback in the form of a campus-wide digital survey to gauge the current extent of our faculty's familiarity with the rights, responsibilities, and resources pertaining to the Americans with Disabilities Act (ADA) and Section 508 of the Workforce Rehabilitation Act. We asked about the resources employed in courses (Word, PDF, videos, audio files, screen captures, images, etc.) and what tools (transcripts, closed captioning, alt. text) instructors utilized in their materials. We hoped that the questionnaire and subsequent data collection would serve as a "conversation starter" to promote awareness and prompt faculty to examine how their web-based courses were adhering to accessible design, thus leading to continuous improvement in how our courses are designed and ultimately delivered.

The 92 respondents expressed a general lack of preparedness in their online courses for students with visual or hearing impairments, thereby leading to content that was incompatible with assistive devices, such as screen readers, screen magnification software, Braille output systems, and adapted keyboards. The absence of transcripts or closed captioning for videos within courses was also noted. Instructors were likewise unaware about alt. tags for images and the accessibility checkers within Word and Adobe, which told us that faculty members were not taking advantage of tools already embedded in programs they likely use on a regular basis. They enumerated the factors they perceive as barriers to achieving accessibility such as time, ambiguity as to who should be responsible, and general lack of knowledge and expertise.

Overview of Strategy

Such feedback allowed us to bring a focused response to our instructors in the form of several initiatives such as one-on-one and group trainings, along with recorded tutorials that addressed the most common ADA errors or omissions and

how to best correct them. While we initially undertook these efforts to improve our own practice and the practices of colleagues, we thought those beyond our campus may find this faculty information useful for their own accessibility and online endeavors in similar higher education settings, thus leading to the content of the Pedagogicon presentation.

Our approach to online accessibility is consistent with the work of Moore (1989) who articulated the three types of interaction that are integral to a web-based classroom: learner–learner, learner–instructor, and learner–content. Hillman, Willis and Gunawardena (1994) pointed out the importance of a fourth component, learner-interface, or the interaction that occurs between the learner and the technologies used to deliver instruction. It is within that learner-interface realm that ADA compliance errors are often most flagrant. Accordingly, our inquiry was inspired by the Web Accessibility Integration Model, championed by Lazar, Dudley-Sponaugle, and Greenidge (2004), which insists that accessible web sites must be sufficiently flexible to be used by assistive technologies. The ultimate objective is to assess whether delivery software applications and online curriculum content meet accessibility requirements and adhere to the principles of legislative compliance.

Accessibility in Learner Management Systems

The first level of guidance we brought to faculty was to remind them that tools that check for compliance are frequently embedded (or can be embedded) in most learner management systems (LMS). For example, Ally, common in Blackboard, Canvas, and versions of Moodle, automatically checks course materials against WCAG 2.0 accessibility standards, delivers guidance to instructors to improve accessibility of their course content, and provides students with accessible alternative formats such as audio and electronic Braille. If an institution does not have Ally as part of its learner management package, most systems have their own accessibility checker, which can be extremely useful, even if it is not always 100% comprehensive. The Universal Design Online Content Inspection Tool (UDOIT) is an inspection plugin that can work in conjunction with the LMS accessibility checker to provide an instructor with a scan of courses, which will identify common universal design and accessibility issues. A report is generated from the scan that indicates errors needing revision and includes suggestions for improvement.

Checking Documents for Accessibility

Our hands-on demonstrations began with Word and Adobe. Faculty members are certainly aware that Microsoft Word is a widely used tool for word processing and document creation, but less mindful it can also be a helpful tool for viewing ADA issues. Microsoft Word has a built-in accessibility checker that alerts the user to concerns found within any document. On a Mac, this tool can be found under “Tools,” and then “Check Accessibility.” On a PC, this will be found under “File,” “Info,” “Check for Issues.” This will produce inspection results which will alert the user to any concerns or recommended fixes. These would include unclear hyperlinks, images without alternative text, blank spaces, and more. By clicking on the warnings displayed in the inspection results, Word will take the user to the place in the document where the issue is found. This serves as a huge help in not only showing users where there are issues but educating and informing them on the types of items a screen reader would have trouble speaking. Like Word, Adobe Acrobat Pro has a built-in accessibility checker to aid in identifying and correcting issues within your PDF file. Using Adobe Pro, the user can navigate to “Tools,” and then “Accessibility.” By running a full check, the tool will return with results regarding the document’s accessibility. Like Word, the tool will alert the user to issues with Alt Tags, spacing with tables, unclear hyperlinks, and more. The built-in accessibility tool is essential for faculty who use PDFs to post content to their students. Having the PDF created in an accessible way will ensure no issues when a screen reader is used.

Creating Transcripts for Videos and Podcasts

Because the task of developing transcripts for videos and screen captures can be quite burdensome for instructors, we particularly wanted to direct our colleagues toward tools that are open-source, readily available, and straightforward. While most faculty members know that YouTube creates closed captioning for uploaded videos, they may not be as familiar with the option of editing and making changes to those automatic closed captions if inaccuracies are detected in the conversion of various words or phrases. YouTube saves the automatic closed captioning file to the video, and the owner of the video can edit words or entire sections of the file. Once the video is uploaded and the automatic closed captioning is complete, the edit option will become available. The owner of the video must first be logged on and then choose to view the video. As the owner, a “CC” button will be visible below the video. Clicking that button will take the user to a “Manage Subtitles and Closed Captions” area. From here the owner can choose to edit the automatic closed captioning that was created. This allows the user the opportunity to correct

any mistakes or issues that might have occurred during the closed captioning process. Using this editing feature allows the instructor to take advantage of the automatic closed captioning, while ensuring better accuracy for students.

VidReader is an auxiliary tool that generates English transcripts for YouTube videos utilizing the captions already available in the video. By entering the URL for a YouTube video, instructors can use Vidreader to create interactive transcripts for classroom videos. By clicking on individual sentences or segments of the transcript, users can go straight to the part of the video they need. Instructors can search the transcript for topics that are relevant to a course or lesson and students can search it for specific content on which they need to focus. The transcript can be downloaded for students to read offline and it can be used to create captions.

Voice typing with Google Docs is available through Chrome for desktop, as well as the Docs apps for Apple iOS and Android. If initiating a new podcast or transcript, Google Docs has a very helpful feature that will allow the user to generate a transcript as content is spoken. A microphone is required to use this tool. While using Google Chrome, Google Docs has a built-in feature located under “Tools” called “Voice Typing.” When starting a new document, simply choose to start Voice Typing. The program will recognize the microphone, and as the user begins speaking, it will type the text that it hears spoken. It also recognizes punctuation commands such as “comma,” “period,” “new line,” and “new paragraph.” Additionally, it understands editing commands such as “select all,” “cut,” “copy,” “delete last word,” and “insert header.” Likewise, Dictation.io is another free tool available for instructors that transcribes speech to text in real time. One can add paragraphs, punctuation, and even smiley faces through voice commands. Dictation.io. can be accessed on the web or downloaded as an app.

Alt Text in Documents and Presentations

We point out that instructors may unknowingly overlook accessibility within an uploaded PowerPoint, but such presentations frequently contain graphics, animation, and pasted images, which require text equivalents and text transcripts if audio is embedded. The absence of alternative text (alt text), which refers to descriptive text that conveys the meaning and context of a visual item, was another error that is easily correctable by faculty. Images, of course, may also appear on web pages and in Word or PDF files.

Analysis/Assessment

When we collected follow-up data from faculty in 2019, we saw some encouraging forward progress, with comments from 52 individual instructors such as: “I double check that my video lectures which are uploaded to YouTube have appropriate closed captions” and “I began using build-in headers for all Word documents that I created. Also, I use ALT tags for images in PowerPoint.” Unfortunately, many instructors held firm to a perception that creating accessibility compliance in a course is attempted *after* a student with a disability enrolls in the course and requests accommodations as opposed to a proactive endeavor that precedes the debut of the class. They were reluctant to invest the time and energy needed to adapt courses when there was not a clear need for adaptation “I have never received an ADA letter from the disabilities office for any of my students in online courses” was a frequent response. In the midst of the pandemic and the abrupt move to online instruction, however, it became abundantly clear that courses and materials needed to be ready for all students. For this reason, we implore faculty members, after receiving appropriate training and resources, to take control of those elements of accessibility that are within their authority, knowledge, and influence. In this way, the task of making online courses accessible becomes considerably less overwhelming

Considerations

Faculty members are indeed considered “the missing piece” in the attainment of web accessibility in higher education (Smith et al., 2016). While achieving full accessibility compliance within online courses is an ongoing endeavor, it is crucial that instructors continually familiarize themselves with the requisite expectations and the readily available tools at their disposal, so they can begin to chip away at the task and have courses that are not merely “online,” but courses that provide fully accessible and student-friendly environments where all students can learn and succeed.

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