Accessibility for the Visually Impaired Legal Writing Student: More to it than I thought!

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In Summer 2023, I was scheduled to teach Legal Analysis, Research, and Writing I (LARW I) asynchronously online for the summer start students. One week before summer semester started, I was told I would have a visually impaired student in my class. I learned that the textbook I used for class was accessible, and the student could read online text using a Jaws screen reader.[1] Between Jaws and the accessible course book, I thought that the accessibility issues were solved, but I quickly found out that that was not the case. I had five main problems: 1. PDFs were inaccessible; 2. Word documents and PowerPoints contained inaccessible images; 3. the course page had navigation issues; 4. research videos were not always clear for the visually impaired; and 5. databases had some interactivity problems with Jaws. Then in my LARW II persuasive writing class in the Fall, a sixth problem arose: How could the student access notes quickly during oral arguments?

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[1] Jaws screen reader captures information from a computer screen and translates it into synthetic speech. Jaws reads the text as the user navigates through the screen. Additional information is available on the Jaws website. *Jaws*, FREEDOM SCIENTIFIC (Sept. 29, 2023), https://www.freedomscientific.com/products/software/jaws. To get an idea of how Jaws works with a research database, watch this video: Denise M. Robinson, *JSTOR Database with Jaws Screen Reader and Braille Display= College*, YOUTUBE (Feb. 22, 2022), https://www.youtube.com/watch?v=bQGIvTfrqJA.

Problem #1: Inaccessible PDFs

PDFs created as images or that include information in incorrect reading order are not accessible. I tried using the Accessibility Tool on Adobe Acrobat Pro, but that was not doing the trick. My student, Lisa, suggested I put everything in Microsoft Word format. She had some experience with online classes as an undergraduate, and I was grateful that she quickly told me of any problems she experienced.

I used Adobe Acrobat Pro to convert the pdf documents to Word. This led to two sets of problems—one for Lisa and one for the other students in the class. As far as accessibility for Lisa, born digital documents easily converted from PDF to Word. But if I started with a document scanned in from a book, the results were less than ideal. The optical character recognition was not perfect, so I had to proofread and correct the document for missing and misspelled words. There were dark patches on the edges of the document and in the middle where the book was bound, and Lisa's screen reader was picking up the dark patches as images. So, I either tried to make a cleaner copy or I just jettisoned that particular reading. To make cleaner copies, I used the old-school method of putting blank paper on the edges of the book and pressing down hard on the lid of the copier to get rid of dark space. I also tried setting the scan area to copy just one page at a time. Using the GeniusScan App on my phone was another way to quickly scan each page.[2] One could also use a specially designed book scanner to alleviate this problem or use software to get rid of the dark areas in a document.[3]

The problem for the other students in the class occurred because some of the PDF documents converted to Word had odd formatting when viewed within our course management software, Brightspace. The other students in the class would have to download the document instead of just viewing it from within the course page. While it is easy enough to simply download the document, it does require an extra step. So, I decided to put both the PDF and word versions on the course page, making sure to indicate that they were the same thing in two different formats.

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[2] *Genius Scan – PDF Scanner*, GOOGLE PLAY (Nov. 21, 2023), https://play.google.com/store/apps/details?id=com.thegrizzlylabs.geniusscan.free&hl=en_US&gl=US&pli=1. There are similar apps available, such as Adobe Scan. *Digitizing Books: How to Scan a Book to PDF*, ADOBE (Nov. 21, 2023), https://www.adobe.com/acrobat/hub/scan-digitize-textbooks.html.

[3] Paul Royster, *The Art of Scanning*, DIG. COMMONS@UNIV. NEB. AT LINCOLN 67 (Jan. 5, 2011), https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1097&context=ir_information (describes a batch process for cleaning up book scans). You can also use Photoshop to make batch edits by setting page parameters.

Problem #2: Inaccessible Images in Word Documents and PowerPoints

Once I converted all my PDFs to Word, I congratulated myself on the accessibility of my course page. But congratulations were premature because I had forgotten that both my Word documents and PowerPoints contained inaccessible images. Research exercises in Word format sometimes contained screenshots from Lexis and Westlaw. The Word documents also contained screenshots from writing samples. These screenshots were especially tricky because they often visually looked like text, not images.

To fix the problem, I used the Check Accessibility feature in the Review toolbar on Word. Check Accessibility generates a list of errors, including missing image descriptions, missing slide titles, and possible reading order problems. Clicking on each error walks you through the steps to fix each problem. This feature identified images and allowed me to add alternative text. The screenshots from Lexis and Westlaw had to be replaced with text describing the process and steps that the screenshot was trying to show. The screenshots that were writing examples had to have the words from the screenshot typed into the Word document. I found the accessibility tips on the Microsoft Support website particularly helpful during this process.[4]

My PowerPoints also contained screenshots from databases and writing samples. Luckily for me, PowerPoint also has a Check Accessibility feature in the Review toolbar that identified images and other accessibility problems. I tried to avoid the temptation to label many of the images as "decorative" (which prompts the Check Accessibility feature to skip over that image) and instead provided an actual text description. Even if there was a fun picture or cartoon, if it added to the lesson at all, I tried to describe it. Lisa needed to have the same materials as the other students in the class to the fullest extent possible. For arrows on PowerPoints, I included alternative text stating that the image was an arrow and indicating where the arrow was pointing. Check Accessibility also pointed out where I was missing headings on a slide. The headings make the PowerPoints easier to comprehend for someone using a screen reader.

Problem #3: Navigation Issues with the Course Page

After I began posting the class materials, Lisa emailed me to say that she was having trouble navigating the course page and figuring out what was due each

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[4] *Make your Word Documents Accessible to People with Disabilities*, MICROSOFT SUPPORT (Sept. 29, 2023), https://support.microsoft.com/en-gb/office/make-your-word-documents-accessible-to-people-with-disabilities-d9bf3683-87ac-47ea-b91a-78dcacb3c66d.

week. Of course, this is especially a problem in an online asynchronous class. I made an appointment to talk to someone at the University Online Learning Services department. The instructional designer gave me some really good tips to make the course page accessible. The following tips are useful no matter what learning management system you are using:

1. Use a **uniform structure** for each module.
2. When inserting text onto a page, be sure to use **heading levels**, because Jaws can skip between headings using a keyboard shortcut. A logical hierarchical arrangement will help the reader understand how the content is organized. It's important to note that making text larger or bold will make it look like a heading, but the screen reader will not recognize it as a heading.[5]
3. When creating **a list**, be sure to use bullet points or numbering, so the screen reader will indicate that it is a list. Do not just type in a dash on each line.
4. To **emphasize certain words or phrases**, use bold, italics, and underlining. While screen readers recognize that bold, italics, and underlining add emphasis, they will not recognize emphasis added through a larger font or a different color.
5. If **words are hyperlinked**, make sure to use descriptive wording for the links, and not just "click here."[6]

For others using the Brightspace LMS, the instructional designer also recommended using the **checklist** feature to clarify what assignments are due each week and suggested avoiding many layers of submodules on Brightspace.

Problem #4: Hard to Follow Videos

Like most online legal writing classes, my course page contained short lecture videos I created, as well as instructional videos created by research database vendors and others. These videos sometimes assumed the user could see what was on the screen and did not provide descriptive information to make the videos useful for the visually impaired. Additionally, visually impaired students cannot navigate videos by sight and must use closed-captioning via their screen readers to find timestamps and navigate backwards and forwards in the video.[7]

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[5] Sheryl Burgstahler, *A Tutorial for Making Online Learning Accessible to Students with Disabilities*, DoIt (2020), https://www.washington.edu/doit/tutorial-making-online-learning-accessible-students-disabilities.

[6] *Id.*

[7] *The Importance of Captioning*, AccessibilityOz (March 2020), https://www.accessibil-ityoz.com/2020/03/the-importance-of-captioning/.

First, I worked on making sure the videos I created were accessible. I used Panapto to make videos, and it did a good job of creating captions. University Accessibility Services also offered to help me caption the videos I created. I improved my videos by verbalizing what I was doing, what I was clicking on, and describing its location on the webpage. I tried to say things like, "I am clicking on the History link in the upper left," instead of "I am going to click here." Posting the Power-Points on the course page also helped Lisa navigate and understand my videos.

Second, I needed to improve the accessibility of videos created by others. The University Office of Accessibility informed me that if database vendor videos lacked captions or had clarity problems, it was the vendor's responsibility to fix the video. I found that most database vendors were very responsive and helpful in making instructional materials accessible. I would also recommend speaking with your University Accessibility Office to see what help they can provide with your videos and with contacting vendors.

Problem # 5: Database and Software Accessibility

Lisa and I ran into problems with the interaction between third-party databases used for the class and her Jaws screen reader. For example, Lisa needed additional help in learning to use Lexis and Westlaw with Jaws. Some issues with the other software used in the class occurred, such as with Lexis Citation Station, Procertas, and Core Grammar for Lawyers.

It was challenging for Lisa to learn to research using Lexis and Westlaw with the Jaws screen reader. Lexis and Westlaw have many layers and columns of information, so navigating these databases with Jaws can take some getting used to.[8] A few database features did not seem to work well with the version of Jaws Lisa was using. I contacted our school's Lexis and Westlaw representatives, as well as the Lexis accessibility department. Lexis and Westlaw arranged for Lisa to have one-on-one Zoom sessions with folks at their organization who were familiar with using Jaws. The Lexis and Westlaw representatives also recommended alternative videos or training documents in Word format. Lexis even had a List of Hot Keys for Jaws.[9]

I also had a one-on-one research training session with Lisa remotely via Teams. Lisa shared her screen so I could see how Jaws was interacting with Lexis and

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[8] Susan David DeMaine, *Framing Accessibility: Disability to Usability*, *in* INTRODUCTION TO LAW LIBRARIANSHIP 19 (Zanada Joyner & Cas Laskowski eds., Pressbooks 2020), https://pressbooks.pub/lawlibrarianship/chapter/chapter-3-accessibility/.

[9] *Keyboard Shortcuts for Lexis+ Full Text Documents*, LEXISNEXIS SUPPORT CENTER, https://supportcenter.lexisnexis.com/app/answers/answer_view/a_id/1124307/~/keyboard-shortcuts-for-lexis%2B-full-text-documents (last visited Sept. 29, 2023).

Westlaw. I tried to go over the layout of each system, went through the steps of doing some research, and answered Lisa's questions.

Besides Lexis and Westlaw, my online class also utilized Lexis Citation Station, Procertas, and Core Grammar for Lawyers, among other software. While all these products could be used with screen readers, accessibility problems or questions did arise. In hindsight, I should have let Lisa know ahead of time what software would be used, so she could test it out for problems. We were able to resolve problems by contacting tech support, or the vendor contacts that the law library maintains. I would recommend reaching out to those vendors as early as possible, and preferably before the start of the semester, to work through accessibility issues.

Problem #6: Oral Argument Notes

After successfully completing LARW I in the summer, Lisa started my LARW II Persuasive Writing Class in the fall. One issue that cropped up in the persuasive writing class was how Lisa would access an outline and notes for oral argument. Lisa did not use Braille, so she would have to use Jaws to read notes, and it would read out loud, line by line, which is time consuming. Lisa said she could memorize everything, but asked if the school could come up with some accommodation.

Of course, any student can be asked about a case or a page in the record they do not remember. The student can ask the judge to give a brief run-down of the case – sort of turning it into a hypothetical. And there is always the fallback response: "I will submit a supplemental brief with that information." However, to really be on par with the other students who were able to reference their notes during the oral argument, Lisa would need some form of access to her notes as well. After discussing the best solution, we decided to stop the clock if Lisa had to look through notes (although, as it turned out, Lisa did not need to consult her notes during the oral argument).

I received some other useful suggestions for oral argument from the LWI Listserv. It turns out that at least seven legal writing professors have had a visually impaired student in their class. One suggestion was to have an assistant available who could whisper Lisa's notes to her. Additionally, the LWI discussion raised the issue of making the visually impaired student aware of the time remaining. One professor suggested that the bailiff read the time remaining out loud instead of holding up cards. Another professor communicated the time remaining by touching the back of the student's hand and other prearranged signals (which isn't an option for my online oral arguments, but may be a useful option for in-person arguments).

Conclusion

While it was time consuming and challenging, I am glad I had the chance to learn about accessibility. My hope is that legal writing faculty reading this article will have a better idea what needs to be done to improve accessibility for their own students and can possibly plan ahead to accommodate them. I was lucky that Lisa and I were able to establish frequent communications about accessibility problems and solutions. I also greatly appreciated all the support I had from the University of Akron Accessibility Services, University of Akron Online Learning Services, from database vendors, and of course, from the LWI Listserv.

If you have a visually impaired student in your class, be sure to communicate with the student early and often and have the student test out the software used in the class before the semester begins. Also, contact IT, accessibility support, and online learning support to discuss what needs to be done and what services these departments can offer. Finally, it is a good idea to reach out to database vendors as soon as possible, so they can provide accessibility information.