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## Piloting a Student Digital Accessibility Program

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## Piloting a Student Digital Accessibility Program

### Abstract

In spring 2022, Furman University Libraries piloted an innovative program that provided student workers with foundational knowledge of digital accessibility concepts and facilitated their development of skills in creating, remediating, and checking the accessibility of Word and PDF documents. This article describes the pilot program in-depth, including set-up, costs, implementation, and results.

### Keywords

digital accessibility, student, training

## Piloting a Student Digital Accessibility Program

### Background

*Digital accessibility can be defined as the practice of designing and developing digital content so that everyone, including people with disabilities, can use them.<sup>1</sup> We here in the Furman University Libraries have been leaders and advocates for accessibility on campus. We have served on the University's Accessibility Committee, including chairing its Digital Accessibility sub-group. We have also created online tutorials, hosted displays about the Americans with Disabilities Act, presented on digital accessibility at conferences, and coordinated a digital accessibility webinar series. We also spearhead the ongoing assessment and improvement of our LibGuides website to make it more accessible. Despite these intentional practices, there is still a lot of work to be done. One area of particular need is the remediation of documents on our LibGuides website and within our digital repository software. We have over 1,450 PDF and Word documents on our website and over 50,000 files in our digital repository platforms: CONTENTdm and Digital Commons. Many of these files, particularly the PDFs, were initially created without any consideration of accessibility. The prospect of remediating these documents is daunting and will require a significant investment in time and resources.*

*To make progress in this significant undertaking, we proposed the idea of training student assistants to remediate the documents and build the capacity to do further remediations. When envisioning the project, we established the following goals and objectives both in the short-term and for the future.*

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<sup>1</sup> Adapted from the World Wide Web Consortium's definition of web accessibility (<https://www.w3.org/WAI/fundamentals/accessibility-intro/#what>).

***Primary Goals***

- Provide two student assistants with training and experience in creating accessible digital content and remediating accessibility issues in digital documents.
- Leverage the additional capacity these student workers provide to improve the accessibility of the Library's digital documents.

***Secondary Goals***

- Provide the resources and structure to enable these students to develop foundational digital accessibility knowledge and skills that they can use in their academic work and future careers.
- Identify efficiencies in training and coordinating the work of digital accessibility student workers so that this project can potentially be scaled up at Furman.
- Use this project as a pilot to determine the feasibility of a University Accessibility Student Fellows program that could be scaled to the University level.

**Funding and Budget**

When planning for this project, two major cost areas were identified: student pay and student training. Our existing library student assistant budget could cover the pay for the 2 student assistants. We sought funding to cover the cost of training by applying for a [Furman Diversity and Inclusion Mini-Grant](#). This grant program was established in 2015, and provides up to \$900 in funding for initiatives that support diversity, equity, and inclusion as they relate to climate, access, education, policy, and/or assessment. For the purposes of the Digital Accessibility Student Worker pilot, we requested \$90 to pay for accessibility training through [Deque University](#) and \$246 for 2 perpetual licenses for Adobe Acrobat Pro 2020. The device licenses were one-time purchases, so if we continue the program, the ongoing costs would only be for student salaries and \$45 per student for one-time training.

## Training

### ***Foundational Accessibility Concepts***

We used [Deque University's](#) online training course for [IAAP CPACC Certification Preparation](#). This course covers the International Association of Accessibility Professionals (IAAP) [Certified Professional in Accessibility Core Competencies \(CPACC\) Body of Knowledge](#). While we did not pursue certification for the student workers (the certification is beyond the scope of this project, and the cost of the exam would be \$440/student), this course is a very economical and efficient way to provide the student workers with a broad, substantive, professionally developed and vetted background in digital accessibility. The Deque University course also incorporates online quizzes, which we use to track student progress. Note that, in keeping with the purpose and scope of this project, we omitted certain modules in this course. We used the following course modules:

- [Basic Disability Concepts](#)
- [Theoretical Models of Disability](#)
- [Types of Disabilities](#)
- [Disability Statistics](#)
- [Disability Etiquette](#)
- [Benefits of Accessible Design](#)
- [Usability and Accessibility](#)
- [Myths and Misconceptions about Accessibility](#)

### ***Microsoft Word Accessibility***

We chose to use a freely available YouTube video created by the University of Alabama's [Technology Accessibility Initiative](#). We felt that this video provided good coverage of the concepts and practice of

creating accessible Word documents. We also provided a link to a cheat sheet created by the [National Center on Disability and Access to Education \(NCDAAE\)](#).

- [Creating Accessible Word Documents](#) (54:41 video)
- [Word Accessibility Cheatsheets](#)

### ***PDF Accessibility***

Here again, we chose freely available YouTube videos created by the University of Alabama's [Technology Accessibility Initiative](#).

- [Creating Accessible PDFs with Adobe Acrobat Pro DC](#) (57:06 video)
- [Advanced PDF Accessibility with Adobe Acrobat Pro DC: Scanned Documents, Tables, and Lists](#) (51:52 video)

### **Implementation and Timeframe**

In late January, we began to recruit for the Library Digital Accessibility Student Assistant positions. We hired two students, and both began working in early February and continued working through the last day of classes in April. The students worked in the Technical Services suite on the lower level of Duke Library. We selected two socially-distanced, existing student worker PC workstations, on which we had the Adobe Acrobat Pro 2020 software installed for this project.

The students' assignments began with training. Since one of the project goals was to provide the students with a foundational knowledge of digital accessibility, the training began with an online course offered by Deque University that covered these core concepts. From there, the students viewed the selected YouTube videos that described how to create, test, and fix basic accessibility issues in Microsoft Word and PDF documents. On a self-paced schedule, the students completed the training in approximately ten hours. We checked in with the students regularly and were available to answer questions during the training.

After training, we presented the students with several test documents to provide them with hands-on experience and one-on-one feedback in identifying and remediating representative Word and PDF accessibility issues. The remainder of the students' assignments consisted of fixing accessibility issues in documents from the Library's digital collections.

In total, after training, the two Library Digital Accessibility Student Workers worked 116 hours on this project. In that time, they completed their training and remediated 1,207 pages in 26 PDF documents and 1 Word document. Since remediating PDF documents is generally much more technically challenging and more labor-intensive than remediating Word documents, we focused most of the students' work on PDF documents.

### **Evaluation**

We used several methods to evaluate this project:

1. The students completed each module within the online Deque University course and completed the accompanying short quizzes.
2. We kept track of the number of documents and pages that the students remediated.
3. We subjectively evaluated the students' developing abilities to perform accessibility remediations of Word and PDF documents, including the knowledge and skills to address all of the common accessibility issues reported by the built-in Microsoft Word and Adobe Acrobat Pro accessibility checkers.
4. We had originally intended to track the amount of time that we spent coordinating the students' work, but other responsibilities, and the fragmented nature of being responsive to student questions during their work shifts, made this impractical.

### Final Observations

We were impressed by how quickly the students developed effective skills at remediating digital documents. PDF document remediation, in particular, is a very technical, even tedious, and labor-intensive process. Not only did the students develop these skills quickly, but they also demonstrated solid understanding of how and when to use each accessible authoring and remediation technique. In several instances, the students researched, experimented, and developed workarounds for stubborn issues that could not readily be fixed using Acrobat Pro. We still, ultimately, needed to verify these remediation techniques using screen reader software, and there remain some accessibility issues that we could not fix<sup>2</sup>, but overall we are very happy with the results.

When the students did have questions, they tended to ask higher-level, conceptual questions, rather than "how to" questions. We noticed the nature of these questions demonstrated deeper understanding than those of colleagues who attended workshops that only addressed the "how", and not the "why" of digital accessibility.

Overall, the pilot program provided us with an effective strategy for remediating documents for accessibility. As such, we plan to continue with a Library Digital Accessibility Student Worker program. Moreover, we hope to increase student engagement, experiential learning, and project management efficiencies by providing returning student workers with opportunities to mentor new student worker hires. We are excited by the success of the program and how it allows us to make progress in our accessibility goals while empowering students to advance digital accessibility throughout their academic and working lives.

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<sup>2</sup> For the majority of the PDF documents that the students worked on, we did not have access to the original source documents. Without this access, it is often not possible to make a PDF document fully accessible.