Implementing accessibility initiatives at the Michigan State University Libraries

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Abstract

Purpose – This paper aims to describe a variety of accessibility initiatives implemented at the Michigan State University (MSU) Libraries to better support persons with disabilities who want to use and access library services and resources.

Design/methodology/approach – By using two campus accessibility policies to help expand and improve its accessibility efforts, the MSU Libraries implemented accessibility purchasing procedures for e-resources; drafted a five-year accessibility plan, which launched an extensive multi-year staff accessibility training plan and detailed plans for content accessibility and accessibility investment; dedicated additional library staff positions and time to accessibility; drafted an accessibility statement and website documentation; established an in-house remediation service; increased library web page and collection remediation; and began leading efforts related to vendor e-resource accessibility in the Big Ten Academic Alliance library consortium.

Findings – As a result of these many accessibility initiatives, the MSU Libraries has thought strategically about and taken action on constantly improving its accessibility in a variety of areas; provided or hosted 29 staff accessibility training sessions; implemented new accessibility positions, roles and services; and helped influence and improve library e-resource accessibility, especially through its leadership in the Big Ten library consortium.

Originality/value – Most libraries strive to provide welcoming access to information and library services for all users, including persons with disabilities, but resources and literature on comprehensive accessibility initiatives in academic libraries are somewhat limited. The library accessibility initiatives implemented by a large, academic research library shared in this paper will hopefully contribute to the much-needed library and information science literature on this topic.

Keywords Academic libraries, Library services, Accessibility, Higher education, Disabilities, Library resources

Paper type Case study

Introduction

According to the 2010 USA Census, 57 million people, or approximately 19 per cent of the US population, have some form of disability (Brault, 2012) and the World Bank reports that there are approximately 1 billion individuals with a disability worldwide (The World Bank, 2018). Therefore, libraries of all kinds and sizes have been, or should be, concerned about the accessibility of their services and resources. Many libraries view accessibility as the right and obvious thing to do and are passionately addressing accessibility as an issue of social justice. Other libraries are implementing or improving accessibility initiatives because of accessibility-related lawsuits and complaints. Whatever the reason, libraries and librarians seem to genuinely want to provide access to information and library services as inclusively as possible and are addressing accessibility in a variety of ways. For example, libraries and librarians are incorporating accessibility into staff positions and are publishing articles and
resources defining these roles (Rosen, 2018) and the competencies needed (Pereyaslavska, 2015). Other libraries have contributed to the literature by describing their efforts to incorporate accessibility into electronic information resource procurement (Ostergaard, 2015; Schroeder, 2018) and by sharing the value of collaborating with campus student disability offices (Arzola, 2016). There has been quite a bit of research conducted on library website, e-resource and document accessibility, like one study that examined the accessibility of PDFs from four library vendors (Nganji, 2015) and another that assessed the accuracy, or rather inaccuracy, of library vendors' voluntary product accessibility templates, or VPATs (DeLancey, 2014). Other publications have offered accessibility best practices and guidance to incorporate into library collections work (Sender and Schroeder, 2018; Tatomir and Tatomir, 2012) and for libraries to serve students with disabilities (Samson, 2011).

This article describes a wide variety of accessibility initiatives implemented at the Michigan State University (MSU) Libraries to both better support persons with disabilities who want to use and access library services and resources and to adhere to and support campus accessibility policies. The wide-ranging accessibility initiatives detailed by the MSU Libraries will hopefully provide libraries with information and resources they can use to implement and improve the accessibility of their institutions, and therefore better serve persons with disabilities.

MSU, located in East Lansing, MI, is a large, public, land-grant university with, as of 2017, over 50,000 students, 5,600 faculty and academic staff, and 7,000 support staff (MSU). It offers over 200 programs of study from 17 colleges and in 2016-2017, it received $596m in external research funding (MSU). Inclusion is one of MSU’s three core values and it supports students, faculty and staff with disabilities via its robust Resource Center for Persons with Disabilities (RCPD) office. MSU implemented a Web Accessibility Policy in 2008 and has adopted the World Wide Web Consortium’s Web Content Accessibility Guidelines (WCAG) 2.0 at Compliance Level AA as its official technical guidelines. In 2015, MSU implemented two additional accessibility policies: one related to electronic information technology (EIT) accessibility purchasing procedures and another that required all Major Administrative Units (MAU) to submit five-year accessibility plans. As a MAU that procures a significant amount of EIT, the MSU Libraries used these two campus-wide policies to help expand upon and improve its accessibility efforts. Specifically, the MSU Libraries drafted and began implementing accessibility purchasing procedures for EIT (primarily library electronic resources) and its five-year accessibility plan, which addresses an extensive multi-year accessibility training plan for library staff, the accessibility of new content, the accessibility of existing content, the accessibility of purchased/outsourced content, resource allocation/investment related to accessibility and future needs. The MSU Libraries also dedicated additional library staff positions and time to accessibility, drafted an accessibility statement and documentation for its website, established an in-house on-demand remediation service for inaccessible library content and collections, began proactively remediating library Web pages and documents and began leading efforts related to vendor e-resource accessibility in the Big Ten Academic Alliance library consortium.

Electronic information technology accessibility purchasing procedures
MSU has developed campus-wide accessibility procedures to follow when procuring EIT through MSU’s central purchasing unit. As the majority of library EIT, primarily library electronic resources such as databases, e-books and e-journals, are not procured centrally by MSU but rather internally in the Libraries, the MSU Libraries has developed EIT purchasing procedures related to accessibility that closely mirror MSU’s central EIT accessibility.
Implementing accessibility initiatives

purchasing procedures but that also account for the uniqueness of library EIT – both the products themselves and the Libraries’ procedures for acquiring them. Like the central MSU policy for EIT procurement, the MSU Libraries ask library EIT and e-resource vendors and publishers for accessibility documentation, specifically VPATs and/or WCAG 2.0 documentation, and also for vendors and publishers to insert accessibility license language into the MSU Libraries’ licenses. Instead of using the accessibility license language proposed for central EIT purchases at MSU, the MSU drafted its own accessibility license language in 2015 after reviewing the Association for Research Libraries’ LIBLICENSEs, and other peer libraries’ accessibility license language as examples. In 2016, the MSU Libraries began using the model accessibility license language developed by the Big Ten Academic Alliance (BTAA) Library E-Resource Accessibility Group, described in more detail in a later section of this article.

The MSU Libraries also began asking library vendors and publishers for accessibility contact information – a person or team at their companies dealing with accessibility that could answer accessibility related questions. In some instances when purchasing a new library e-resource or renewing an existing e-resource contract, another step in the MSU Libraries’ EIT accessibility purchasing procedures is to conduct accessibility testing to determine major accessibility barriers. Testing is done either informally in-house, primarily by the MSU Libraries’ Accessibility Coordinator and/or student accessibility interns, or is outsourced to an accessibility consulting company, which is paid for from the MSU Libraries’ collections budget. Not all e-resources are tested – the MSU Libraries uses a variety of factors to help try to determine potential risk. If the vendor accepts the MSU Libraries’ ideal license language, testing is typically not done since the license language not only states the vendor is WCAG 2.0 AA compliant but also that the vendor will remediate inaccessible content at no cost to the licensee in a timely manner. If the ideal language is not accepted, and the e-resource is anticipated to be wide-reaching and/or used in courses, is costly, or seems as if it would be difficult for the MSU Libraries to manually remediate inaccessible content, it is more likely to be evaluated for accessibility. Communicating accessibility findings and progress with publishers and vendors has been an important, continuous step of the MSU Libraries’ accessibility purchasing procedures, and staff in the MSU Libraries spend a lot of time emphasizing the importance of accessibility to vendors. The final and vitally important step in these procedures is to document all of the above accessibility information in an internal location for library staff to access. Currently, the MSU Libraries is using a spreadsheet and shared drive but has plans to investigate the feasibility of inserting accessibility information and documentation into its electronic resource management system in the near future.

Because the MSU Libraries has e-resources on hundreds of platforms, and because library e-resource procurement is especially active during certain times of the year, like the end of calendar and fiscal years, it needed to also develop a process to make implementing these accessibility purchasing procedures manageable and reasonable. Therefore, it has divided its hundreds of platforms into five tiers to correspond with the five years of the Libraries’ five-year accessibility plan. It placed what it viewed as the largest, most heavily used and/or most expensive vendor platforms in the first tier, to be examined in the first year, and so on. Dividing up the hundreds of e-resources over five years has made it more manageable for the MSU Libraries’ Accessibility Coordinator and E-Resources/Licensing and Collections staff to implement these new procedures.

It is important to note that the MSU Libraries’ accessibility purchasing procedures are intended to help educate and encourage vendors to improve their accessibility and to document that the MSU Libraries is proactively taking significant steps to ensure and
improve e-resource accessibility. While the MSU Libraries has delayed or declined a few new purchase requests because of accessibility issues, these were all e-resources that fell into the “nice to have” rather than “need to have” category. The MSU Libraries has currently not canceled e-resources because of them being inaccessible or a vendor not accepting its ideal accessibility license language. Especially for essential e-resources that are critical to the advancement of scholarship, research, education and teaching on campus, the MSU Libraries has taken the approach to continue urging vendors to improve inaccessible platforms and content rather than cancel or not buy/subscribe to these resources. The MSU Libraries remains committed to remediating inaccessible content for users with disabilities in a timely fashion.

**Five-year accessibility plan**

All MAUs at MSU are required to submit five-year accessibility plans “to show the process and progress of EIT accessibility in MAUs across campus” (MSU, Web Accessibility). As a MAU with a significant amount of EIT, the MSU Libraries filled out and submitted its five-year plan in the spring of 2016. The MSU Libraries also submitted its first annual self-review in 2017, which “allows MSU to assess our institutional progress and offer an opportunity for MAUs to report changes in resource commitments, priorities or approach over the course of the year” (MSU, Web Accessibility). In its five-year plan, in addition to providing its accessibility statement and publicly available Web pages, the MSU Libraries details its extensive multi-year accessibility training plan for library staff, the accessibility of new content acquired or created by the Libraries, the accessibility of existing content, the accessibility of purchased/outsourced content, resource allocation/investment related to accessibility and future needs. The MSU Libraries’ five-year plan is not publicly available, but each of these sections is described in the following paragraphs.

**Process and training for staff**

In the first section of its five-year plan, the MSU Libraries describes its plans for communicating with staff about accessibility by committing to regular emails, in-person communication at various staff meetings and individual consultations. The majority of this section, however, deals with staff training plans related to accessibility. Specifically, it details the various ways library staff receive accessibility training: at campus-wide offerings, in library-led training sessions and outside of the library at conferences meetings and workshops. It also provides information about the extensive, multi-year accessibility training effort, coordinated by the Libraries’ Accessibility Coordinator and the Libraries’ Accessibility Working Group (LAWG), to ensure that accessibility training topics and sessions offered are prioritized based on the types of digital content library staff are creating and that accessibility training meets staff members’ needs.

The MSU Libraries has enthusiastically pursued accessibility training for library staff as a result of its five-year plan. In its first two years of the five-year plan, the Libraries’ Accessibility Coordinator and the LAWG identified top priority training topics and also surveyed library staff about their accessibility training needs. At the time this article was submitted, the MSU Libraries is three-quarters of its way through its second year of its five-year plan and has offered or hosted 29 total accessibility training sessions, webinars and/or virtual conferences to library staff – in a few cases, staff from other MSU units were invited and included. These training sessions are not required, but encouraged, and approximately 600 people have attended these 29 sessions. These are not unique individuals – many staff have attended multiple training sessions. Some of the topics and offerings have included: PDF accessibility, Drupal accessibility, LibGuides accessibility, introduction to universal
design for learning, legal aspects of accessibility, accessibility evaluation tools, mobile accessibility, presentation accessibility, collection accessibility, accessibility at MSU, the Accessing Higher Ground Virtual Conference, the Environments for Humans Virtual Accessibility Summit, service animals and public services accessibility. Many library staff members have also attended accessibility sessions or programs on their own – at library conferences and virtually. In the near future, the MSU Libraries plans to offer accessibility training on Microsoft Office’s Word and PowerPoint, Google Documents/Drive, e-book accessibility, online streaming video accessibility and more. The MSU LAWG has also created an accessibility LibGuide specifically for MSU Libraries staff that provides links to recorded trainings and webinars, other training materials and useful accessibility websites. The MSU Libraries is pleased with its progress in the area of accessibility training for staff and remains very committed to continued efforts in this area. The more library staff learn about accessibility in a variety of areas, the more likely they are to think about and incorporate it in their daily work, which will hopefully directly impact and improve the accessibility of the MSU Libraries.

Accessibility of new content
The MSU Libraries describes its efforts to create accessible new content in a variety of ways in this section of the five-year plan. Specifically, it details how the MSU Libraries employs best practices for web accessibility and that the MSU Libraries’ Web Services team reviews and approves authors’ submitted content prior to publishing through the Drupal-based Content Management System. It also mentions that Drupal’s framework and templates meet WCAG 2.0 AA and that core staff regularly review accessibility standards and attend training in this area. The MSU Libraries’ plans to ensure that the internal production of non-text content and PDF documents adequately captures descriptive text, high accuracy optical character recognition (OCR) and content linearization where appropriate is mentioned. This section also details the accessibility efforts by the MSU Libraries’ Course Materials Program (CMP), which produces electronic course packs. CMP staff have extensive accessibility training and have drastically improved the accessibility of electronic course packs by regularly communicating with various campus stakeholders about document accessibility best practices. Finally, the MSU Libraries’ processes and training available to staff creating video tutorials to ensure accessibility are also described. Thinking about and implementing ways to improve the accessibility of new digital content is another way the MSU Libraries is striving to become more accessible to all users.

Accessibility of existing content
In the section of the five-year plan dedicated to the accessibility of existing content, the MSU Libraries details its plans to address the accessibility of its websites, third-party applications and other existing content. For its website content that has not yet been remediated or improved for accessibility, the MSU Libraries plans to focus on navigational sites with the highest page views, content sites with the highest page views, websites with niche audiences and finally websites with low page views.

Plans to address the MSU Libraries’ third-party applications, such as the Catalog, discovery layer and interlibrary loan system, are also described. As most of the renewals for these third-party applications do go through MSU’s central purchasing unit, they are subject to MSU’s EIT accessibility purchasing procedures. The Libraries remains committed to assisting central purchasing however it can, usually by communicating with these third-party library vendors about accessibility.
As the MSU Libraries has created and hosts a variety of other existing digital content and collections, it also addresses its accessibility plans for those in this section of the five-year plan. The text in this section describes the huge size and scope of the MSU Libraries’ created and hosted content and collections, however, and explains that remediating all would be nearly impossible. To provide more context, the MSU Libraries has over 325,000 PDF documents with an estimated page count of over 8 million. It also has over 40,000 h of spoken word recordings from more than 100,000 different individuals, and approximately 300,000 scanned images and photographs. The MSU Libraries therefore describes that it will prioritize remediation efforts based on collection usage, public visibility/interest and other factors and that it will aim to remediate at least one major collection each year. The MSU Libraries also commits in this section to publicly noting all currently inaccessible digital collections with a referral to the MSU Libraries’ on-demand remediation service so users can easily place a remediation request for materials they need that may be inaccessible to them. This on-demand remediation service is described in a later section of this article.

Accessibility of purchased/outsourced content
In this section of the five-year plan, the MSU Libraries briefly describes the nature of library EIT, or e-resource, procurement and the EIT purchasing procedures it developed to mirror MSU’s accessibility purchasing procedures for central purchases, which were described previously in this article. Its approach to dividing its hundreds of resources into five tiers, one for each year of the five-year plan, to implement these procedures in a manageable way, is also described. The names of selected e-resources for each of the five tiers are given. For example, in tier/year one, the MSU Libraries mentions it will implement accessibility purchasing procedures for some of its largest and widest-reaching vendors, such as ProQuest, JSTOR, Ebsco and Elsevier.

Resource allocation/investment
In this section of its five-year accessibility plan, the MSU Libraries describes its recent commitment to increasing resources and investments in accessibility. Specifically, it details the MSU Libraries’ increased accessibility staff, described in the next section of this article, funding accessibility evaluations and testing of library e-resources and providing some library staff members with software needed for accessibility remediation and improvements, like ABBYY FineReader and Adobe Acrobat Pro.

Future needs
The final section of the five-year plan asks units to detail what resources they need or would like to support EIT accessibility efforts. The MSU Libraries indicates that central funding and support from the University for VPAT evaluation/review and for accessibility testing of library e-resources would be incredibly helpful. The Libraries also stresses that wider availability of software and tools to assist with accessibility testing and remediation, Web compliance software and continued and regularly refreshed courses related to EIT accessibility at low-to-no-cost through MSU information technology or elsewhere on campus, would be appreciated.

Accessibility library staff
The MSU Libraries has a strong history of dedicating library staff time to accessibility. There has been a library liaison to MSU’s RCPD for many years and members of the MSU Libraries’ E-resources, Web Services, CMP, ‘Teaching and Learning and other units have
considered the accessibility of e-resources, Web pages, electronic course packs, instruction and more well before accessibility efforts on MSU’s campus increased in 2015. In 2015, however, the MSU Libraries began increasing its accessibility staff more formally and intentionally. Specifically, the MSU Libraries established an Accessibility Coordinator, the LAWG, a librarian secondary assignment in accessibility and student accessibility interns. The MSU Libraries believes that by increasing its commitment to accessibility staffing, more areas and units in the Libraries will consider and implement accessibility, and therefore the overall accessibility of the MSU Libraries will be improved.

The MSU Libraries’ Accessibility Coordinator, also the author of this article, oversees accessibility initiatives at the MSU Libraries, serves as the Libraries’ primary accessibility contact and advocate, chairs the LAWG and supervises the MSU Libraries accessibility student interns. The Accessibility Coordinator also serves as one of the MSU Libraries’ Web Accessibility Policy Liaisons. MSU Web Accessibility Policy Liaisons meet monthly and are considered the main accessibility contacts for the various units on campus. The MSU Libraries’ Accessibility Coordinator position began in 2015 as a secondary quarter-time assignment, was increased to a half-time assignment in 2016 and in 2018 became a full-time assignment. Before the Accessibility Coordinator was established, they had become especially aware of accessibility issues in 2012 when serving as one of the coordinators of MSU’s electronic textbook pilot. During the pilot, it was discovered that the electronic textbook files and the platforms used had major accessibility barriers. The Accessibility Coordinator then began investigating the accessibility of library e-books and e-resource platforms and, not surprisingly, realized many library resources also had significant accessibility issues. As a former health sciences and sciences librarian with experience in collections, reference and instruction, the Accessibility Coordinator has spent a considerable amount of time increasing her knowledge of accessibility guidelines, standards and laws; creating and remediating accessible documents; accessibility evaluation tools; assistive technologies; general disability issues and topics; and accessibility in higher education and libraries.

The MSU LAWG was also formed in 2015. It meets approximately once a month to discuss and work on accessibility activities and initiatives taking place at the MSU Libraries, on MSU’s campus and beyond. The LAWG offers and promotes accessibility education and training opportunities to library staff. LAWG is made up of approximately eight library staff who work on or are interested in accessibility. A few examples of current LAWG members include the MSU Libraries’ Accessibility Coordinator, Library Liaison to MSU’s RCPD, Head of Web Services and Head of User Experience.

From 2015-2016, there was an additional librarian at MSU who had a secondary, quarter-time assignment in accessibility. This librarian, who had knowledge of accessibility standards and guidelines, creating accessible documents and captioning and transcription, assisted the Accessibility Coordinator with drafting the MSU Libraries’ five-year plan and with hiring the MSU Libraries’ first student accessibility interns (described in the next paragraph). This librarian left the institution in 2016, and due mainly to the increased percentage of the MSU Libraries’ Accessibility Coordinator job responsibilities, this secondary assignment in accessibility has not been filled since 2016. It is possible in the future, however, that a librarian could have a secondary assignment in accessibility.

Beginning in 2016, the MSU Libraries also started employing two student accessibility interns, working approximately 10 h per week each, with slightly increased hours during
the summer. Student applicants were recruited from MSU’s Tower Guard sophomore honors society (in which students provide 120 hours of service to MSU’s RCPD), MSU’s Experience Architecture Program, and via the MSU Libraries’ student job site. Driven students who enjoy challenging, detail-oriented, rewarding work were sought to support the MSU Libraries’ accessibility initiatives, mainly by conducting accessibility reviews of library electronic resources and remediating electronic content in the MSU Libraries’ digital collections and from library publishers/vendors. Although experience with or interest in accessibility (including accessibility evaluation tools and standards), user experience, creating accessible documents, ABBYY FineReader and/or Adobe Acrobat Pro, HTML and CSS were desired skills, the MSU Libraries understood that most student applicants would not possess all or many of these skills and that training and educating student employees in these areas would be crucial. Training and working with these student accessibility interns has been very time consuming, but the MSU Libraries has been incredibly pleased with their contributions to the Libraries’ accessibility initiatives. These students fill the MSU Libraries’ on-demand remediation requests (described in detail in an upcoming section), have provided accessibility training and documentation to library staff and units and have spent significant time remediating digital collections that were scanned by the MSU Libraries years ago when unfortunately, accessibility was not considered.

Accessibility statement and documentation
It is very important to the MSU Libraries that visitors know about its commitment to accessibility and that they can easily find information about accessibility on its website. The MSU Libraries therefore developed the following accessibility statement in 2015 and posted it publicly via its website in early 2016: The MSU Libraries are committed to providing equal access to library collections, services, and facilities for all library users. It is a priority for the MSU Libraries to select and acquire, whenever possible, resources and technologies that are accessible to all and compliant with the Americans with Disabilities Act. For library collections that aren’t accessible, we are committed to providing reasonable accommodations and timely access to users with disabilities. For assistance, or if you have suggestions or comments, please contact: accessibility@lib.msu.edu. To draft this statement, the MSU Libraries’ Accessibility Coordinator, Senior Associate Director, and Associate Director for Collections reviewed peer institutions’ accessibility statements and thought about what was important and appropriate for the MSU Libraries to convey in its accessibility statement.

The MSU Libraries also created several accessibility Web pages on its website: http://lib.msu.edu/general/accessibility. Linked to from the MSU Libraries’ “General Info” and “About Us” sections of its website, the accessibility Web pages provide library visitors and users with useful accessibility information and documentation. The accessibility landing page includes the MSU Libraries’ accessibility statement and displays left-side navigation to the other accessibility Web pages. These other pages provide essential information about the MSU Libraries’ accessibility staff, services for persons with disabilities, Assistive Technology Center, five-year accessibility plan, library collection accessibility, on-demand remediation service and website accessibility.

According to Google Analytics, between September 2017 and March 2018, the eight accessibility Web pages had 1,237 page views.

On-demand library remediation service
The MSU Libraries has offered several accessibility-related services to patrons for some time. These include an Assistive Technology Center that provides a quiet study space
with a variety of assistive technologies, a book retrieval service, a motorized scooter, accommodations for library events, research assistance and help for students with disabilities and more. In the fall of 2016, however, a new remediation service to help address the inaccessibility of library materials was implemented. Although the MSU Libraries strive to collect, acquire and develop accessible digital and electronic collections, unfortunately, not all are. The MSU Libraries’ on-demand remediation service allows users with disabilities to request remediated, accessible versions of digital or electronic library documents that are inaccessible to them and the assistive technology that they use. At the time of this article’s publication, the remediation service is limited to electronic and digital materials – print materials are excluded, as MSU’s RCPD offers the digitization of print materials for MSU affiliates registered with their office. The MSU Libraries is investigating whether it might be able to remediate print materials from its collection in the future. Remediation requests are handled internally in the MSU Libraries in a completely confidential manner. Users of this service are encouraged to submit requests as far in advance as possible, as some remediation may take a significant amount of time. Users can submit remediation requests three ways. They can directly e-mail the MSU Libraries’ remediation team, submit their request through an online form via the MSU Libraries’ accessibility Web pages or place requests through MSU’s RCPD. This last option allows users to remain completely anonymous to the Libraries, although if they choose the e-mail or online form options, requests remain confidential within the MSU Libraries’ remediation team.

Remediation requests submitted via e-mail or the form go to a mailbox that is checked multiple times a day during the week. The MSU Libraries’ Accessibility Coordinator and accessibility student interns have access to the mailbox. If a request is received, the accessibility student interns or the MSU Libraries’ Accessibility Coordinator begin working on the request right away. If the request is for content from a library publisher or vendor, the Accessibility Coordinator checks to see whether the MSU Libraries has accessibility license language with that vendor that states the vendor will either provide remediated files or attempt to provide remediated files. If so, the vendor is contacted immediately by the Accessibility Coordinator asking for a remediated document. Because the MSU Libraries is committed to providing users with disabilities remediated files as quickly as possible, and because some vendors have not provided remediated files very quickly or that do not need additional remediation or fixing, the MSU Libraries’ student accessibility interns usually begin remediating the request themselves, or at least the first document(s) if it is a large request containing multiple documents. Typically, this process involves uploading inaccessible PDFs into the ABBYY FineReader program, which performs OCR and also allows user to verify and correct OCR errors. ABBYY also allows users to fix reading order and other accessibility issues and export the file in a variety of file formats. Sometimes, additional remediation, like adding in alternative text and headings, is performed in Microsoft Word or Adobe Acrobat Pro.

As the MSU Libraries implemented this service, it has received requests from four different individuals. Two of these individuals contacted the MSU Libraries directly while the other two had their disability specialist at MSU’s RCPD contact the Libraries on their behalf. The two individuals who contacted the MSU Libraries directly needed electronic files of one entire book each, two books total, remediated in a way that would work with the assistive technologies they were using. The two requests the Libraries received from RCPD were for individual book chapters, 11 total from library e-books listed on course reading lists. While the MSU Libraries has accessibility license language with several e-resource vendors that says vendors will either provide or try to provide
remediated files for the MSU Libraries and its users with disabilities, in all cases where it requested remediated files from vendors, the MSU Libraries’ accessibility student interns completed the remediation of these items themselves before a vendor provided them. In three of the four requests, users had the remediated files they requested the same business day. The other, which was the Libraries’ first request, took slightly longer at 48 h, as it involved more initial back and forth communication with the patron about which files they needed and in what format.

The MSU Libraries is very proud of its on-demand remediation service and the quick turn-around time it has offered patrons thus far. Ensuring that all users have access to library materials and collections is very important to the MSU Libraries. With only four total people using the service, the MSU Libraries wants to better advertise this service and hopes to see the number of requests increase. The MSU Libraries suspects that more library materials have been remediated than from these four requests, and that the remediation has likely taken place at MSU’s RCPD, either by their specialists’ access to databases like Bookshare or manually by their student employees and volunteers.

Proactive Web page and collection remediation
As a result of the MSU Libraries’ five-year plan, it has been remediating inaccessible library Web pages and existing digital collections more proactively and systematically to improve the accessibility of its digital presence for all users. In addition to their normal processes to improve library website accessibility, the Libraries’ Web Services unit has taken advantage of MSU students to help identify accessibility issues with its website. Specifically, students in MSU’s Experience Architecture program, which emphasizes user experience and accessibility best practices, worked with the Libraries’ Web Services team to audit certain high-traffic library web pages, like the homepage and hours page, for accessibility. The Web Services team used the report from these students to then correct and fix these issues. Some examples of issues identified, and then fixed, included insufficient color contrast, a keyboard trap, missing focus while tabbing, tables missing row/column headers, heading hierarchy issues and more. The MSU Libraries’ Web Services team also recently hired two student employees to evaluate library Web pages using WAVE, a free web accessibility evaluation tool developed by WebAIM, and document issues in a spreadsheet that the Libraries’ Web Services team then uses to track and fix issues. Although WAVE, like any automated Web accessibility evaluation tool, does not catch everything, it is easy for the students to use and identifies some low-hanging fruit for Web Services to fix.

The MSU Libraries’ Accessibility Coordinator also devotes student accessibility intern time and labor to proactively remediate existing digital collections that were scanned by the MSU Libraries some time ago. To start, the student accessibility interns have been remediating the MSU Libraries’ Feeding America historic cookbook collection. They use both ABBYY FineReader and then Adobe Acrobat Pro to produce more accessible PDFs, ensuring that the reading order is correct, images have alternative text, documents have a correct heading structure, language and titles are entered properly and more.

Staff in the MSU Libraries’ Digital and Multimedia Center (DMC) have also increased and improved their accessibility efforts when scanning new items for its digital collections. To do this, the DMC increased its accessibility training, knowledge and documentation and had an accessibility consulting company audit their internal processes to ensure they were addressing accessibility at all stages and most efficiently. Although the steps these units are
taking are time consuming and labor intensive, they reflect the MSU Libraries’ commitment to improved digital content accessibility.

**Big ten academic alliance library E-resource accessibility initiatives**
The MSU Libraries knew that other libraries must also be concerned about the inaccessibility of many of library e-resources. As MSU is a member of the BTAA consortium, the MSU Libraries suggested at a 2015 BTAA Library Director’s meeting that the Big Ten libraries use their collective influence to improve e-resource accessibility and work together to not duplicate efforts. The Big Ten Library Directors, recognizing the growing concerns about accessibility in library e-resources, therefore unanimously approved the BTAA Library E-Resource Accessibility Group’s creation. The BTAA Library E-Resource Accessibility Group developed a three-part charge to:

1. create and encourage accessibility language in library e-resource licenses;
2. collectively fund third-party accessibility testing of library e-resources and share results with vendors; and
3. create a shared, publicly available repository for accessibility documentation and testing reports.

Because of its recent experiences with and knowledge of e-resources accessibility, the MSU Libraries worked with the BTAA to lead initial efforts.

**Accessibility license language**
The BTAA Library E-Resource Accessibility Group formed a licensing subgroup to look at various examples of accessibility license language used in libraries to draft language it could use both for Big Ten consortial licenses and in individual Big Ten libraries’ licenses. At the time of this article’s publication, the ideal accessibility license language developed by the Big Ten libraries is:

*Licensor shall comply with the Americans with Disabilities Act (ADA), by supporting assistive software or devices such as large print interfaces, text-to-speech output, voice-activated input, refreshable braille displays, and alternate keyboard or pointer interfaces, in a manner consistent with the Web Accessibility Initiative Web Content Accessibility Guidelines 2.0 AA ([www.w3.org/WAI/guid-tech.html](http://www.w3.org/WAI/guid-tech.html)). Licensor shall ensure that product maintenance and upgrades are implemented in a manner that does not compromise product accessibility. Licensor shall provide to Licensee a current, accurate completed Voluntary Product Accessibility Template (VPAT) to demonstrate compliance with accessibility standards ([https://www.itic.org/policy/accessibility](https://www.itic.org/policy/accessibility)). If the product does not comply, the Licensor shall adapt the Licensed Materials in a timely manner and at no cost to the Licensee in order to comply with applicable law.*

As those Big Ten libraries who had already been negotiating for accessibility license language knew that many vendors unfortunately would not accept all or parts of the ideal language, and that negotiations surrounding accessibility license language can be time consuming and complex, the group wanted to provide Big Ten libraries with alternative language that they could refer to during negotiations. Therefore, for each of the four sections of the ideal accessibility license language, the group drafted and provided alternatives Big Ten libraries could refer to if vendors redlined sections. For example, for the first sentence on compliance, there are three alternative statements: each one less strict than the previous alternative. Specifically, the ideal language says, “vendors shall comply with the ADA [. . .] in a manner consistent with WCAG 2.0 AA.” The first alternative changes the “shall
comply” to “shall make reasonable efforts to comply” and eliminates the AA level from the WCAG statement in case the vendor is only complying at the single A level. The second alternative sentence deletes the WCAG section altogether, and the third alternative, which is the weakest simply says: “Licensor shall make reasonable efforts to comply with the Americans with Disabilities Act (ADA).”

The Group was also interested in learning about and sharing the extent to which Big Ten libraries have been successful at including accessibility language in contracts with e-resource vendors. They are interested in not only successes – contracts that include accessibility language – but also failures – contracts for which vendors refused to include accessibility language – among the Big Ten libraries. The group feels this will help the Big Ten libraries better prioritize efforts and negotiate with vendors. It therefore created an internal form for Big Ten libraries to easily enter information about accessibility language negotiations. Currently, information entered by Big Ten libraries can only be viewed by librarians and library staff at Big Ten institutions who request access. There is a statement on the form that reminds Big Ten libraries to ensure that any information they provide is in keeping with any confidentiality or non-disclosure agreements between their institution and the vendor.

Third-party accessibility evaluations
After each of the Big Ten libraries committed funds to collectively fund third-party accessibility evaluations of library e-resources, the BTAA Library E-Resource Accessibility Group formed an accessibility testing subgroup that began investigating potential third-party accessibility consulting companies to test library e-resources. After comparing multiple companies, two that could provide affordable, high-level, WCAG 2.0 AA evaluations that identified major accessibility issues in a limited timeframe, were selected. The testing subgroup then began discussing with the broader group which library e-resources to test first. The group decided to start evaluating e-resources that were held by all or most of the BTAA Libraries – especially those purchased/subscribed to consortially through the BTAA’s large-scale acquisitions program. The testing subgroup also recommended identifying library e-resources from a variety of publishers/vendors and subject areas. Between February 2017 and March 2018, the BTAA Libraries have funded accessibility evaluations for the following 16 library e-resources (in alphabetical order):

- Adam Matthew Empire Online;
- Alexander Street Press: Disability in the Modern World;
- Cambridge Core;
- Clarivate Analytics’ Web of Science;
- Ebsco Ebooks;
- Elsevier’s ScienceDirect;
- Gale’s Eighteenth Century Collections Online (ECCO);
- JSTOR;
- Kanopy Streaming Service;
- Nature Journals;
- Ovid/LWW Journals;
- ProQuest Dissertations & Theses Global;
- ProQuest Ebook Central (accessibility mode on & off);
Involving vendors in the testing process is very important to the Big Ten libraries. Before testing most e-resources, vendors are notified of the plans to have an accessibility testing company evaluate their e-resource and are asked to provide guest login credentials the testing company can use. Vendors are told the reports will be publicly posted and that they will receive a copy of the accessibility report at no cost. They are invited to submit a response reacting to the results or detailing their plans to make improvements, which is posted publicly along with the report. Finally, starting in the fall of 2017, the BTAA Library E-Resource Accessibility Group began offering vendors a 1-h consultation call with the accessibility testing company that evaluated the e-resource, at no cost to the vendor, so they can ask questions about issues identified in the report and learn more about fixing them.

Perhaps not surprisingly, the most commonly reported accessibility issues in the reports so far have been with PDFs. Barriers have included everything from PDFs being scanned images and therefore completely inaccessible to screen readers and other assistive technologies to missing tags, no structural information, missing titles, no alternative-text for images and inaccurate OCR.

Some other accessibility issues commonly identified in these reports include missing/improperly structured headings, incorrect/insufficient keyboard focus, objects not being accessible to keyboard users, insufficient color contrast, missing alternative text, incorrect reading order, problems with interactive elements like labels/values and the inability to skip repeated content.

Public repository of testing results
It is very important to the BTAA Library E-Resource Accessibility Group and the BTAA Library Directors that the accessibility evaluation reports funded by this group be publicly available to benefit the greater library community and library users. The BTAA therefore created three Web pages on their website detailing the group’s efforts (BTAA). The first Web page provides a general overview of the group and its charge, the second provides the ideal accessibility license language the group drafted and the third provides all of the third-party accessibility evaluations of library e-resources, along with any vendor-submitted responses. These publicly available web pages can be found at www.btaa.org/library/accessibility. The Big Ten Library E-Resource Accessibility Group has received positive feedback about its initiatives and is very pleased with the impact it is making related to the accessibility of library e-resources.

Future plans and conclusion
The MSU Libraries has worked hard to improve and expand its accessibility initiatives and looks forward to continuing to think about and further develop its accessibility efforts to better meet the needs of all of its users in the future. Although using two campus-wide accessibility policies has initially helped the MSU Libraries identify and prioritize efforts, it would like to engage more with users with disabilities and MSU’s RCPD to ensure it is moving in the right direction and focusing its time and resources in the right areas. The MSU Libraries’ Accessibility Coordinator would also like to work more with various library units and teams to help them further incorporate accessibility into their daily and routine work. For example, MSU’s Digital Scholarship Lab opened in the spring of 2018 in the MSU
Main Library and there are accessibility issues to investigate and address. Conversations and collaborations between the MSU Libraries’ accessibility staff and Digital Scholarship Lab staff will be a focus in the near future to ensure this innovative space is as accessible as possible. The MSU Libraries also plans to continue offering staff accessibility training and contacting e-resource vendors about accessibility as part of its five-year plan. The MSU Libraries’ Accessibility Coordinator, the Libraries Accessibility Working Group and accessibility student interns will continue to identify and work on new accessibility initiatives and projects.

The MSU Libraries and the MSU Libraries’ Accessibility Coordinator have learned a lot about accessibility in academic libraries as a result of these initiatives and feels the MSU Libraries is a more welcoming, accessible place as a result. Hopefully, this article has provided other libraries with ideas and resources they can use to improve their accessibility. In the area of accessibility, there is so much work libraries can and need to do – we can always do better. At the same time, it is important for libraries to recognize and celebrate positive progress and the impact they make with each accessibility improvement. Whether a library is new to accessibility or already has existing accessibility polices and services, starting somewhere or striving to continuously improve is incredibly important to help ensure that libraries continue to provide all users a welcoming environment and access to information and library services.

References
Further reading


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