Introduction

The Rehabilitation Act of 1973, Section 508, and the Americans with Disabilities Act (ADA), require U.S. libraries to provide people with disabilities fair, equitable, and reasonable access to services, spaces, and programs. In addition, the American Library Association’s Library Services for People with Disabilities Policy lays out our primary professional association’s expectations for how libraries will provide accessible spaces, services, and programming for this population. Academic libraries are starting to recognize that the importance of focusing on the population of students, staff, and faculty with accessibility needs is based not just on legal requirements and civil rights arguments, but also on the sheer numbers of people who are in this population on a chronic or temporary basis.

According to the National Center for Education Statistics (NCES), 19.4% of U.S. undergraduate students in 2015–2016 reported having a disability. Some groups within the student population reported higher rates, including veterans (25.8%), nontraditional students over age thirty (22.6%) and Native Americans (27.8%). Nationally, the U.S. Census Bureau estimated that 14.4% of Americans aged eighteen to twenty-four were considered as having any disability as of the 2014 Census update. Just over half of these individuals were classified as having a severe disability. The definitions of disability for both Census Bureau and NCES reporting includes mobility, vision, hearing, speech, and learning impairments that impact a person’s ability to participate fully in society.

Within the Commonwealth of Virginia, the State Council of Higher Education for Virginia (SCHEV) estimated that more than 350 thousand undergraduate, graduate, and professional students were enrolled in four-year public and private non-profit institutions in the fall of 2017. The NCES figures suggest that approximately 61 thousand of these students have a disability that could impact their success. This is more students than the total enrollment at the largest public institution in the state. Virginia academic libraries are serving students, staff, and faculty with disabilities, perhaps without ever knowing that they are doing so.

Promoting accessible library services and spaces via libraries’ websites is an important component of minimizing barriers to library access. This study analyzes the library websites of forty Virginia four-year academic institutions to identify current practices in the state for including an accessibility or disability services webpage or online policy statement. This content was found on eleven library websites. Naming conventions, location in the site architecture, and an analysis of content were explored. Based on this analysis, the authors conclude with two sets of recommendations for libraries wishing to edit or create their own accessibility services page for their website.

Keywords: library services; accessibility; disability; website; content analysis
Literature Review
Academic libraries are already providing a variety of accessibility and disability services. In 2018, the Association of Research Libraries (ARL) surveyed its membership about what services, training, and other support they provide in this area. The survey received responses from sixty-seven ARL libraries, including from the University of Virginia. The resulting SPEC Kit Accessibility and Universal Design presented findings and example webpages and policies from twenty-four of the sixty-seven responding libraries. The survey found that common services included providing staff assistance on demand, providing specialized software and hardware, working to increase building accessibility or ADA compliance, designing websites to enhance accessibility, and using universal design for learning in information literacy instruction.

Although several authors recommend marketing library accessibility and disability services through library websites, there is a significant lack of recommendations in the literature regarding best practices for such content. The ARL SPEC Kit authors found that 94% (sixty of sixty-seven) of responding ARL libraries promoted these services on their websites, but they did not explore the content included on those pages. A study by Heather Hill examined the library websites of thirteen public libraries in Ontario. Hill determined that eleven of the thirteen libraries had some kind of accessibility policy statement available. According to Hill, such statements were not a requirement of the Access for Ontarians with Disabilities Act. Hill recommended placing accessibility content no further than the third level down in the hierarchy of a website, or two clicks away from the homepage. Most libraries had accessibility-related content on the third level or higher. Hill also found that the referring page for accessibility content tended to have a community-focused title, such as, “Services,” as opposed to the more library-focused, “About the Library,” page. However, Hill did not perform a content analysis of the pages themselves.

The primary purpose of content on library websites may be to market services to patrons, but it is also useful for training library staff about those same services. Spelling out the library policy for helping patrons with disabilities in a place that is easy for staff to find and share can be an important secondary function of these pages. The presence of inclusive language on the library website, with content that specifically addresses accessibility, may also be a helpful recruitment tool for libraries that are seeking to diversify their staff and retain employees.

Theoretical Framework
One framework to help guide the development of content on library webpages is that of the social model of disability. This model is strongly linked to the social justice movement for disability rights and recognition, which started in England in the 1970s. Under the social model, a person is considered disabled when barriers in the physical and social environment interact with an impairment. This is in contrast to the individual model, which considers a disability as something wrong with a person, independent of society. The shift from an individual approach to a social approach to disability is reflected in shifts in language and activities in public institutions such as libraries. As Nichols and Schnitzer noted, “a mental readjustment to focus on accessibility and equity and away from disability and accommodation is a shift from a problem-based model to one rooted in fairness instead.”

Using the social model as a framework, libraries can move from a focus on individual impairments to a consideration of the needs of the whole person, and of all people’s embodied needs. This shift includes changing the language that libraries use on web pages to focus on the community rather than the library, as Hill suggested. Another example of the social model in practice would be using person-centered language such as “people with disabilities,” rather than “disabled people.” This includes writing policy and training staff to talk about and to patrons with disabilities as patrons first, focusing on the disability only when it is substantively relevant to the patron’s specific need.

Libraries could also shift from a focus on complying with the narrow set of barriers identified in the ADA to creating environments that ensure the greatest number of patrons have access to the library’s spaces and services. When considered through the framework of the social model, disability is not a condition that is necessarily present in a person at all times and forever. When disability is at least partially socially constructed, then it can be temporary or transient. For example, injuries and short-term illnesses may mean a person needs different accommodations for a defined period. The current definition of disability used by the Census Bureau includes chronic illnesses that have an impact on people’s inclusion in society, including Alzheimer’s, diabetes, anxiety disorder, and autism. Further, considering accessibility as a means of minimizing barriers to diverse people further expands the responsibility of the library to support people who would not be considered as having a disability in either a legal or social context. Consider the new parent with an infant, who has a range of accessibility needs ranging from ramps, wide doors, and elevators, to family-friendly restrooms with changing stations, to a convenient lactation space. Support for LGBTQ+ patrons also has relevance in this context; accessibility of spaces and services would include providing gender-neutral restrooms. This is not to suggest that parents and transpeople have disabilities, rather that when the library shifts from the individual model of disability to the social model of accessibility a wealth of possibilities for supporting diverse populations suddenly emerges.

Most libraries, the authors suggest, already provide semi-accessible spaces and services because of legal requirements of the ADA and the Rehabilitation Act. However, one barrier that libraries tend to throw up is a lack of outreach about what accessibility or disability services they offer. The challenge is to identify these services and promote them to campus communities. Several authors suggest that a clear policy statement for unique services is necessary. This policy statement should not only make clear the library’s approach to providing assistance, but also provide information about the library’s spaces and services that support accessibility.
Purpose of the Study
The James Madison University Libraries started working on a new website in the spring of 2018. In reviewing existing page content, the content review team realized that the current website lacked any online content that promoted the wide range of accessibility services that the Libraries offered. At the same time, the authors examined the accessibility of the physical library buildings and developed awareness of and expertise in both student needs and campus resources. The purpose of this study was to explore the content that Virginia four-year institution libraries provide on their websites about policies and services related to accessibility for users with disabilities. Outcomes of the study include both a description and discussion of page content and a set of recommendations for libraries interested in creating webpages on their systems.

Methods
The sample included 40 four-year institutions whose libraries are part of VIVA (the Virtual Library of Virginia), a consortium of nonprofit academic libraries in the state. The study was limited to Virginia institutions as the sampling frame because the high number of colleges and universities in the state, and the diversity of those colleges by size and type, offered a robust but manageable study population. In the summer of 2018, VIVA listed six public doctoral institutions, nine public comprehensive four-year institutions, 24 community and two-year branch colleges, and 32 private, nonprofit colleges and universities as members. All fifteen public and 25 of the private four-year institutions were included in the sample. Excluded were seven private colleges that focused on a limited set of professional degrees, such as divinity or medicine.

A standardized process was used to discover whether a library included a page with information about accessibility, services to students with disabilities, or related policy or program information. Pages were reviewed during the first week of July 2018. First, each library’s homepage was found and recorded. Relevant links were identified, first on the homepage, including the standard page footer, then on the main pages for services and policies, if they existed. If a relevant link was found in these locations, the name and URL of the referring and relevant pages were recorded. Following this step, the library’s website was searched for the terms: accessibil*, disabil*, assisti*, and handicap*. The search of each library’s website was conducted via the built-in page search when available and via Google when not. If a page was found using the search, the referring page was identified, and both were recorded. Resource guides and LibGuides for disability studies research were excluded from this analysis if they did not include content about library policies or services.

Specific areas of interest based on the literature were the presence of a page or pages, title of the page, location in the information architecture, the presence and content of an accessibility statement, and the presence and content of accessibility and disability services. Services were coded using an abbreviated open coding process, in which each page was examined for type and depth of content. Codes were added as new content was identified. Codes included page characteristics such as “referring page” and content types such as “connection to campus” (see Figure 1).
These codes were converted to column headings in a table for analysis. Themes around placement and naming convention for the page and quantity and quality of content were developed based on these codes.

Results
Of the 40 libraries examined in this study, only 11 (27.5%) included policy or program content related to library accessibility for patrons with disabilities on their official websites in the summer of 2018. A twelfth library linked to the campus accessibility page from their standard footer. This library was excluded from the following analysis. Appendix A lists the URLs for the pages included in the analysis. Distribution of accessibility-relevant pages was not even across the three types of institutions in the sample, as shown in Table 1. Public doctoral libraries were most likely to provide relevant content, with five of the 11 pages created by the six institutions of this type.

Page Characteristics
Most (seven) of the libraries with relevant content contained all information on one page. Two libraries included a statement about disability services on a general policies page. Two libraries spread a large amount of content over multiple pages. Of the seven libraries that provided accessibility and/or disability services content on a single page, two linked to it from the homepage and the services index, and one linked from the about page, the policies index, and the standard site footer. The two libraries with accessibility content on multiple pages also used several different referring pages. One linked to specific pages in the accessibility node from the Services and the Directions & Parking pages, while another linked the main accessibility page from both the services page and the standard site footer. All pages were located no more than two clicks away from the homepage.

There was not a clear naming convention for these pages. Five of the eleven libraries used the word “disabilities” in the name of the page or, in the case of the two libraries with a policy statement only, in the name of the policy. There was a difference in naming practice by institution type; the three stand-alone pages titled “disability services” were from private institutions, while the five libraries that used the word “accessibility” in their page titles were all public institutions. The remaining (private) library named their page “Assistive Technology” to reflect the specific topic of that page. When the two policy-only pages were removed, there was not a clear difference in either type or amount of content on pages with either word in the title.

Page Content
Ten of the 11 libraries included a generic policy statement providing information on “reasonable accommodations” and/or support for patrons with disabilities. The library whose page only included information about their Assistive Technology Room did not also have a policy statement. A close reading of these policies identified differences in approach and affect. Some policies were written in formal, library-focused language, such as “The Desk staff will assist if sufficient staff is on duty to do so.” Other libraries took a much more informal, community-focused approach. For example, using contractions to lessen this statement’s formality: “If services or collections aren’t accessible, we are committed to providing reasonable accommodations and timely access to users with disabilities.” The legal phrase “reasonable accommodations” appeared in three of the policies. Four noted limited resources for help, and three referenced state and federal law such as the ADA. Only two statements did not include limitations on services such as these. Five of the 11 statements, including several with language about limits on service, declared that the library is committed to full, equal, or equitable access for all users.

Accessibility services content on the pages was fairly limited, and generally restricted to lists of services or generic examples of how the libraries could help. The library with seven pages in an Accessibility node took a more narrative approach than the rest of the sample, in addition to presenting more types of information. Figure 1 shows the number of pages that included each type of content by theme. After a policy statement, the most common content item was one or more links to campus disability offices and/or resources (eight of 11), followed by library contact information for additional help in the library (six of 11). Three libraries listed a library staff person with a title such as Disability Coordinator. In all cases, this person also held another position within the library, such as in the reference, circulation, or public service departments. Three libraries directed patrons to their primary service desk (two) or their staff directory (one) for additional help, without naming a specific individual or role. One library also included links to other online resources from the public library and disability support organizations outside the institution.

The most common specific service for patrons with disabilities was a dedicated, in-house computer lab with assistive and accessible technologies. Six libraries included this information on their webpages. Two more libraries did not have a separate lab, but offered hardware and software in the libraries on public computers. One of these also had a set of pages with information about media accessibility, including resources for do-it-yourself and third-party video captioning. Four libraries noted the presence of general-use

<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>Total</th>
<th># with page</th>
<th>% with page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Doctoral</td>
<td>6</td>
<td>5</td>
<td>83.3%</td>
</tr>
<tr>
<td>Public Comprehensive</td>
<td>9</td>
<td>2</td>
<td>22.2%</td>
</tr>
<tr>
<td>Private</td>
<td>25</td>
<td>4</td>
<td>16%</td>
</tr>
<tr>
<td>All Schools</td>
<td>40</td>
<td>11</td>
<td>27.5%</td>
</tr>
</tbody>
</table>
computers with some accessibility software such as voice-to-text conversion.

Six libraries indicated that staff members would help students with disabilities retrieve materials from the collection. This help ranged in strength from offering to “photocopy one or two items” on request and if staffing allowed, to directing users to the standard on-campus interlibrary loan and document delivery service. Four libraries listed ways for students to request and participate in research consultations from librarians, including by chat and other online methods. Two libraries provided separate information about book and other print material circulation, such as options for extended loans for patrons with disabilities, and two linked to local and library resources for disability studies. Content for services such as reference, circulation, and study rooms were usually collections of lists or statements, occasionally linked to the department providing the service.

Information about building access was available on five of the 11 pages. As with services information, this content ranged from very brief instructions for how to get more information to detailed descriptions of how to access the buildings and what accessibility-related building services existed. Four libraries noted which entrance to the library had a ramp or was otherwise wheelchair accessible. Three mentioned handicapped parking availability, the location of elevators, and which restrooms were most accessible. The three libraries that included information about study rooms did so separately from information about building accessibility.

Not all relevant building-related information available from these libraries was included on or linked to from these pages. None of the libraries providing information about building use included a link to the library's floorplan, though two had links to parking and/or campus maps. As noted earlier, lactation spaces and gender-neutral restrooms may be considered accessibility services when viewed through the lens of the social model. Several libraries in this sample have created such spaces, but practices about listing them on these webpages is uneven. One library included the availability of a “mother’s room” in their list of building features on their page, while another that had both a lactation space and a gender-neutral restroom did not link them to the accessibility page, even though they presented other information about building accessibility.

Discussion

The Virginia four-year academic libraries with web content for accessibility and disability services generally followed practices that are consistent with the social justice approach of the social model of disability. Content was relatively easy to find, with several libraries linking to it from the homepage or footer, and the majority linking to it from the community-focused services index rather than the library-focused policies or about us indexes. While the titles of the pages were split between the person-first language of accessibility and the identity-first language of disability, content on the pages focused on connecting patrons with help in the library and with on-campus services that were supportive of the most common patron needs. These pages could be improved in two ways. First, the libraries could review the language used, particularly in their policies, to support the mental shift from disability to accessibility, using the social model as a guide. Second, they could work with local partners from the disability community to identify appropriate content to edit or add to their existing pages.

Of note is the large percentage of Virginia four-year institutions whose libraries did not have any content about accessibility or disability services available on their websites. Although Virginia’s public doctoral institutions set a good example, the public comprehensive and private four-year colleges were far behind. The authors began this project in the hopes of learning best practices in content and presentation; however, what was found was that there is a lot of room for improvement statewide, nearly thirty years after the passage of the ADA.

Recommendations

Based on the themes identified in this review of select Virginia academic libraries with accessibility and disability services content on their websites, we have developed the following basic recommendations.

Recommendations for Developing Accessibility Policy, Personnel, and Services

The first set of recommendations include steps libraries can take to develop policy, personnel, and services related to accessibility.

- Develop or revisit an existing policy statement about services for library users with disabilities.
- Add a page to the website that promotes the library as an accessible, supportive entity.
- Use inclusive, person-first language, such as “accessibility services” rather than “disability services,” and “students with disabilities” rather than “disabled students.”
- Connect with campus disability and accessibility support groups, not just on the webpage itself but also in the course of creating and maintaining the website content. They may have suggestions on content to include and language to use.
- Designate a person or role in the library to serve as the official point of contact for library users needing help.
- Identify services that the library already offers specifically for users with disabilities. Include services using the social model as a framework, such as family friendly/gender neutral restrooms, off-campus access, and chat reference, which support patrons with a wide variety of accessibility needs.
- Consider what services could fill gaps in the accessibility of the library. An example may be developing a book retrieval/paging service either for the campus community as a whole or for patrons who request it. Such a service
ameliotes the inherent, and unfortunately intractable, inaccessibility of book stacks. The accessibility page would be a good location to promote such a service.

**Recommendations for Website Content on Accessibility**

What libraries choose to include on their pages is dependent on what services they feel comfortable promoting to their patrons and staff. If you are considering what to include for your library, you may want to refer to web pages from peer libraries pages, such as the example Virginia library web pages included in this study (Appendix A), or the example pages in the ARL SPEC Kit. The following recommended topics are the most common, based on this study’s content analysis:

- Accessible and assistive technologies, including what is available in a library-based lab (if you have one), what is in general computer labs, and what is available for use by request. These include software like screen readers and speech-to-text converters, computer peripherals such as screen magnifiers and ergonomic keyboards, and assistive furniture like adjustable-height desks and full-spectrum lights.
- Help with locating, retrieving, and checking out books and other materials, both in print and online. This includes off-campus access and ILL/document delivery services that are available to any patron, as well as any special services that might be unique to your library.
- Building accessibility details, including: parking, navigating to and within the library, restrooms, and private or small-group study spaces. Providing both text and a link to an annotated map would be most supportive.
- Ways to receive one-on-one assistance from library staff. What options do patrons have beyond physically coming to the library?
- Accessibility options or features at library events and programs, including specific programs designed for people with disabilities or to discuss accessibility topics.
- Before publishing your page, check it for compliance with Section 508 of the Rehabilitation Act, by using a tool such as WAVE from WebAIM (https://wave.webaim.org/).

**Limitations and Future Research**

The purpose of this study was to explore the accessibility and disability services web pages for Virginia academic four-year institution libraries. The study presents a snapshot in both time and space, with many ways to expand its focus. We chose to limit our exploration to Virginia four-year institutions’ library web content in order to keep the population as cohesive as possible. As a result, the study population was fairly small. Although Virginia boasts a large number (40) of four-year, general subject, public and private colleges and universities, only 11 had any content on their webpages for disability and accessibility services. A next phase might be to analyze Virginia community college and public library websites, to expand the study to a broader range of library types, or to include institutions outside the commonwealth, such as the ARL institutions who participated in the 2018 SPEC Kit survey.

**Conclusion**

Academic libraries are required by law and expected by professional standards to provide equitable services for patrons with disabilities. It is likely that Virginia’s academic libraries already have programs and services that support accessibility, such as ADA-compliant facilities, ILL/document delivery, and access to online materials and reference services. However, we cannot expect our patrons to know what we offer unless we promote those services.

As a result of this research, the authors created an accessibility page for the James Madison University Libraries, which is noted in Appendix A. The above recommendations were used to develop this website, including reaching out to campus partners to extend conversations to include library collections, services, and spaces beyond the website.

The creation of a webpage or other content on our online presences is a relatively straightforward way to demonstrate how the library helps patrons access collections, services, and spaces. The creation of these pages may provide libraries with the opportunity to explore the services that they currently provide, as well as other services that may be developed in the future. The process of creating such a webpage, or reviewing current webpage content or services, is also an excellent way to reach out to campus disability and accessibility support units to build relationships to support student, faculty, and staff success at your institution.

**Appendix A**

URLs for Accessibility/Disability Pages from Virginia 4-Year Academic Libraries:

- George Mason University Libraries – Accessibility: [https://library.gmu.edu/accessibility](https://library.gmu.edu/accessibility)
- Longwood University – Library Policies: [http://libguides.longwood.edu/policies](http://libguides.longwood.edu/policies)
- Old Dominion University – Accessibility Services: [https://www.odu.edu/library/services/accessibility](https://www.odu.edu/library/services/accessibility)
- Radford University – Assistive Technology: [https://www.radford.edu/content/library/services/assistive-technology.html](https://www.radford.edu/content/library/services/assistive-technology.html)
- Regent University – Disability Services: [http://libguides.regent.edu/disability](http://libguides.regent.edu/disability)
- Roanoke College – Library Services for People with Disabilities: [https://libguides.roanoke.edu/disabilities](https://libguides.roanoke.edu/disabilities)
- University of Virginia – Accessibility Services: [https://www.library.virginia.edu/services/accessibility-services/](https://www.library.virginia.edu/services/accessibility-services/)
- Virginia Commonwealth University – Accessibility: [https://www.library.vcu.edu/services/accessibility/](https://www.library.vcu.edu/services/accessibility/)
• William & Mary – Accessibility Services: https://libraries.wm.edu/services/accessibility-services
• James Madison University – Accessibility: https://www.lib.jmu.edu/accessibility/. Note: This page was created as a result of this study.

Notes
10 Spina and Cohen. Accessibility and Universal Design (SPEC Kit 358).
13 Ibid.
15 Nichols and Schnitzer. “Developing Inclusive Research Libraries for Patrons and Staff of all Abilities.”

Competing Interests
The authors have no competing interests to declare.