

Accessibility and Disability Services for Libraries: A Survey of Large, Research-Intensive Institutions

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abstract: As academic libraries prioritize accessibility for all individuals, they have carried out transformations of their physical and virtual spaces. For example, they have purchased new hardware, software, and furniture; adjusted websites for screen readers; modified handouts used in instruction; and advocated for change with vendors of leased and purchased content. Whether driven by campus mandates, state regulations, lawsuits, or more proactive motives, libraries have reviewed and improved the delivery of their content to better serve the needs of all users. Several surveys cover the disability and accessibility services available at libraries and how they have changed over time, but few studies examine who within the library provides support to users and how changes in campus and state requirements impact the delivery of these services. This article summarizes the results of a survey of Association of Research Libraries (ARL) institutions in October 2020 related to what services the library provides, whether they have changed due to campus or state requirements, which positions within libraries provide support, and what the impetus was for offering services. The authors also discuss implications for scalable support of disability and accessibility services at university libraries.

Introduction

Libraries should be fully inclusive of all members of their community and strive to break down barriers to access. The library can play a transformational role in helping facilitate more complete participation in society by providing fully accessible resources and services.

—American Library Association, "Services to People with Disabilities:

An Interpretation of the Library Bill of Rights"

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ccording to the World Health Organization, over 15 percent of the world's population have some form of disability, a number that is increasing. In the United States, 26 percent of the population have disabilities, according to the infographic "Disability Impacts All of Us" from the Centers for Disease Control and Prevention. There are four general categories of disabilities—visual, aural, neurological, and physical—each with its own needs for library services and support.

Libraries' approach to disability and accessibility services continues to evolve. Universities have compliance requirements for their employees mandated by federal

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and state laws, but accessibility services for library patrons tend to be driven by local contexts and individual library priorities. Campus requirements for disability and accessibility services are changing with the focus on equity, sometimes due to lawsuits or to prevent legal action. Libraries have adjusted digital products, spaces, and services to better serve patrons with accessibility or disability needs. To hit this moving target, it is important to understand the local situation as well as what individual libraries can control or have capacity to change. Areas outside the

immediate jurisdiction of a library may advocate for change by engaging with consortia or with database vendors to provide products and services that meet users' needs.

Libraries aim to provide services for people of all abilities and strive to make physical and virtual spaces accessible to all. This concern is evidenced by the creation of groups dedicated to accessibility issues, such as the Library Accessibility Alliance (https://www.libraryaccessibility.org/). The alliance has representatives from four consortia: the Big Ten Academic Alliance (BTAA), the Association of Southeastern Research Libraries, the Greater Western Library Alliance, and the Washington Research Library Consortium. Another organization focused on library accessibility is the Orbis Cascade Alliance Accessibility Standing Group. One of the authors of this article is a member of the BTAA Library Accessibility group and was a member of the Library Accessibility Alliance steering committee as it was formed.

Since the late 1990s, the Association of Research Libraries has queried libraries every decade to capture snapshots of available services, publishing the results in its SPEC (Systems and Procedures Exchange Center) Kit series. Initially, many changes focused on improvements to physical spaces to allow greater access for those with visual or physical disabilities. As websites and Web-delivered content became ubiquitous, subsequent SPEC Kit recommendations began to emphasize digital access to library collections. Currently, campus mandates or revisions to state laws requiring greater access to leased or purchased library materials have begun to drive additional changes.

The Ohio State University in Columbus, the authors' institution, enacted a campus-wide digital accessibility policy in autumn 2018 (https://das.osu.edu/sites/default/files/2020/11/policy-final-digital-accessibility-20210518.pdf). This policy had ramifications for the Ohio State University Libraries because it required any new or existing digital system or platform, either purchased or created by the libraries, to meet the



university's minimum digital accessibility standards. The impact was substantial given the amount of content created and licensed by the libraries. Additionally, they had just two years to comply and provide an implementation strategy. By the deadline, the libraries had to examine all content, created or renewed, and then request an exemption or begin remediation. In May 2019, the libraries formed an accessibility and disability working group to address a request from the Office of Disability Services to "detail current services and create a communication plan related to services around accessibility." The plan included the creation of a website detailing services (https://library.osu.edu/accessibility-resources). Based on the authors' backgrounds in user experience and licensing and the likely impacts on their workflows, both became part of this working group.

With a huge number of accessibility audits looming, the authors wondered if other higher education institutions faced similar pressures to make their collections or spaces more accessible. Many libraries provide information about disability and accessibility services and accommodations on their websites, but it is hard to determine if a campus mandate or policy has driven the creation of these services. If so, a potential model for service delivery might emerge, especially related to which departments typically provide support. While not scalable or applicable at all institutions, a survey of similar types of libraries—in this case, ARL institutions—could compare what approaches were employed, notice trends driving the changes, and possibly suggest methods that could be replicated elsewhere.

Literature Review

Many articles discuss accessibility in libraries both before and after the passage of the Americans with Disabilities Act (ADA) in 1990. Recently, however, libraries have begun listing specific services for those with accessibility needs. Preferences for licensing language related to accessibility have also changed. Yet, research in the library literature related to accessibility has not addressed this revision of services.

Two longitudinal studies trace the evolution of library accessibility services over time. ARL surveyed accessibility services in 1999 ("SPEC Kit 243: Services to Users with Disabilities"), in 2010 (SPEC Kit 321: Services for Users with Disabilities), and in 2018 (SPEC Kit 358: Accessibility and Universal Design). The first SPEC Kit reported on interviews of 13 member libraries. The 2010 and 2018 surveys went to all member libraries; both had a similar respondent size and gathered comparable responses. A notable difference, however, was that the 2018 survey included questions about universal design. According to the Centre for Excellence in Universal Design, such an approach involves "design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability" (http://universaldesign.ie/What-is-Universal-Design/). The addition of universal design language points to a recognition that libraries should address the needs of all users in their resources and places, both physical and virtual.

Laurie Bonnici and Stephanie Maatta conducted another longitudinal survey, polling librarians in 2008 and in 2014 at the National Library Service for the Blind and Physically Handicapped, part of the Library of Congress. Their survey examined available services, the demographics of the librarians providing the assistance, and the characteristics of the

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patrons served. Notable changes from 2008 to 2014 were perceptions of reduced support from the library administration, expressed needs for better technology assistance, and disappointment at the delayed release of the planned Digital Talking Books Program. Librarians in both years reported fiscal concerns and a lack of qualified professionals.⁴

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site will have negative impacts on overall access and usability of the library's resources and spaces. Mary Cassner, Charlene Maxey-Harris, and Toni Anaya examined the availability of services for users with disabilities on the websites of 99 ARL libraries 5 They determined that 88 percent of the libraries had pages supporting people with disabili-

ties, and many libraries provided services, such as retrieving materials, and circulation assistance, such as extended checkout times. In contrast, in 2018 K. T. Vaughn and Stefanie Warlick examined library websites of Virginia's four-year academic institutions in the Virtual Library of Virginia consortium and found that only 27.5 percent of the 40 websites included information on their home pages about policies or programs for people with disabilities.⁶ Both studies recommended that libraries have a designated point of contact for users needing accessibility help, as did an earlier article by Kathy Lenn. Vaughn and Warlick recommended inclusive language to use on web pages and in policies, as well as topics to cover on accessibility web pages. Kyunghye Yoon, Laura Hulscher, and Rachel Dols studied blind participants' navigation of library and nonlibrary websites using screen readers and advocated that library websites employ an inclusive information architecture for screen readers.8 They offered recommendations for the layout of the content, issued a reminder that screen readers convey information aurally, and cautioned that extraneous material, such as decorative elements, hinders usability. While their suggestions specifically related to users of screen readers, their overarching recommendations are based on universal design concepts.

Many studies, including those by Cassner, Maxey-Harris, and Anaya and by Vaughn and Warlick, discuss availability of library services for persons with disabilities. In 2004, Catherine Carter described three areas where libraries could focus to support users with disabilities—bibliographic instruction, web pages, and staff training. These three areas are common themes in the literature and are highlighted in J. J. Pionke's 2020 article discussing library employees' views toward disability services.¹⁰

Other areas of the literature focus on specific services. For example, Janice Kahler described setting up a scanning process for textbooks in a course reserves unit to make them more accessible, including a discussion of how copyright law impacted the work. 11 Julia Caffrey and Jacob Simone reported on a project to make maps of their library's floor plan easier to use, converting PDF files to HTML and creating audio walk-throughs and text alternatives to existing maps. While the additional options were beneficial, the authors were concerned about sustainability of the audio walk-throughs due to the complexity of such presentations.¹² Adefunke Alabi and Stephen Mutula summarized different types of assistive technologies for people with visual disabilities and suggested that libraries add them as lendable objects.¹³

Many libraries offer services to persons with disabilities only upon request. Such pleas triggered the scenarios described in articles by Kahler and by Anna Marie Johnson

and Joshua Whitacre. Kahler's project developed from library efforts to provide textbooks for a blind student. Johnson and Whitacre report that their awareness about services deepened when they supported a blind student in finding articles for a project. Working with that individual, they realized that multiple barriers can impact the success of a disabled person, and library staff need an awareness of what supports might be required throughout a research process. Johnson and Whitacre also recognized that librarians have a role in advocating with vendors to deepen their support of users with disabilities.¹⁴

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Johnson and Whitacre's reasoning regarding vendor involvement is valid. The vendors and publishers of library resources have roles to play in providing accessible materials for all users. Vendors point to their Voluntary Product Accessibility Template as an assessment tool libraries can use to determine possible accessibility problems. Samuel Kent Willis and Faye O'Reilly evaluated the template for their 2020 article. They tested its accuracy by performing accessibility tests on databases and found that only 65 percent of the 227 databases matched the claims. Missing skip navigation was often a notable issue. They also discussed whether the size of a vendor had any impact on accessibility of content; their results indicated that larger vendors had higher accessibility scores. Ferry Falloon and Faye O'Reilly write about projects to incorporate accessibility information in their workflow for acquisition of electronic resources and discuss complications obtaining information from vendors. Libraries have begun advocating for

more accessible electronic resources directly with vendors in hopes of engaging them in the discussion and holding them accountable for the usability of their products. One example is the Library Accessibility Alliance, already mentioned, which began as the Big Ten Academic Alliance Library E-Resource Accessibility Group. J. J. Pionke and Heidi Schroeder described the evolution of this group and its activities in a 2020 article. The group had two main foci—developing strong license language to support accessi-

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bility needs and establishing an independent accessibility testing program. The testing effort utilized two companies to evaluate electronic resources held by many consortium members for accessibility. Vendors received copies of the results and had an opportunity to respond to highlighted issues. The test results and responses are available on an open website (https://libraryaccessibility.org/testing). In 2021, the Library Accessibility Alliance published a white paper that analyzed the accessibility of electronic resources according to surveys of vendors and librarians. The top errors included problems with

keyboard navigation, unstructured navigation, and color contrast problems. Reports from the survey indicated how vendors used the results (or not) to integrate accessibility issues into their development and enhancement workflows.¹⁸

Methods

For this article, the researchers developed a multifactor survey with two core intentions: (1) to identify where disability and accessibility services are typically placed in the organization of an academic library and what common services or supports are available through the library, and (2) to see if the services and support have changed in comparison to previous surveys. The full survey tool is found in Appendix A.

Research questions included:

- 1. Which positions within libraries support disability and accessibility services?
- 2. Are library services offered in a proactive way (to provide the best service to users) or a reactive way (after a lawsuit or request for remediation)?
- 3. Are libraries changing their disability and accessibility services due to additional campus or state requirements?
- 4. Is there a common model for offering disability and accessibility services that is replicable across research libraries?

This study qualified for and was approved as Institutional Review Board-exempt research (OSU IRB Exempt: #2020E1058).

It was important to ensure respondents worked from a common understanding of *accessibility* and of the existing guidelines. For the purposes of the survey (and this article), *accessibility* is defined as the design of products, devices, services, or environments to be usable by people who experience disabilities (visual, aural, neuro, or motor). It can be achieved through universal design practices and intentional engineering (strongly preferred) or through providing alternate formats to accommodate specific disabilities (if necessary). Federal guidelines (https://www.3playmedia.com/2017/11/30/accessibility-laws-for-public-colleges/) cover accessibility of physical and virtual environments at public universities. The definition of *universal design* mentioned in the literature review was used throughout this study.

The authors surveyed individuals responsible for accessibility within ARL members to understand current staffing levels and projects related to disability and accessibility services. To identify the people involved, the authors consulted the general website for each member institution, then found the web pages specific to disability and accessibility services, and finally looked for contact information on those pages. If the web pages provided no contact information, the library's e-mail or chat feature was used to locate a contact person. Specific accessibility contacts were identified for 63 member libraries. An additional 43 libraries provided a general or a group e-mail on their website for accessibility requests. Finally, 18 libraries were contacted using the chat feature or e-mail to locate a specific person, who was then sent the survey. At the time of the survey in October 2020, there were 124 member libraries in ARL (see Appendix B). A new library became a member of ARL during the survey period but was not included.

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Results

In total, the survey received 32 responses, a 26 percent response rate. All the respondents were academic libraries (9 private, 22 public) with one exception, a government library. Two respondents indicated only the type of library and left the remaining questions unanswered. One respondent reported that their library had not engaged in any accessibility activities in the past three years. When asked how long the library had actively provided such services, 21 percent (n = 29) answered one to five years, while the remaining 79 percent said more than five years.

Three respondents indicated their library does not plan to engage in any accessibility activities in the coming year. Of the remaining respondents (n = 26), 1 reported having a one-time project, 6 have ongoing projects, and the other 19 have both one-time and ongoing projects.

Many of the 29 respondents checked multiple responses to the question of what triggered the development of accessibility services. Forty-eight percent indicated a campus mandate. Seventy-nine percent reported that accessibility was a library priority. Three percent developed accessibility services when changing publisher interfaces. Twenty-one percent noted that they began due to a lawsuit, whereas 14 percent did so to prevent legal action. Sixty-six percent indicated that their services originated because their library emphasized equity, diversity, and inclusion as professional values. Ten percent inaugurated accessibility services because they hired a staff member with needs. A full summary of this question set is available in Figure 1.

Asked to "Indicate which staff in your library participate in design/implementation/ assessment of accessibility or disability services," many respondents checked multiple responses. Ninety-seven percent (n = 29) indicated that individual staff provided services

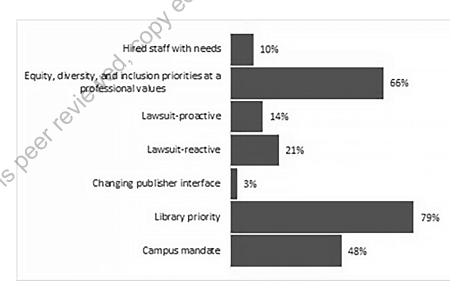


Figure 1. Survey respondents' answers to the question "What triggered the development of accessibility services in the library?"

based on the area requesting service. Nearly half (48 percent) of the requests were fielded by staff in the electronic resources department. The remaining breakdown is shared in Figure 2. For those that chose "other individual," responses included a specific committee, a campus group, an interlibrary loan staff/department, department heads and administrators, a designated staff member for accessibility/disability services, an IT staff member for physical computing accessibility, and a building coordinator.

The survey asked who has decision-making responsibilities related to accessibility services within the library. Respondents (n=28) could choose multiple responses, but most selected a single answer. They reported that decisions were made by a committee (25 percent), an individual staff member (46 percent), the library's executive team (50 percent), or another group (29 percent). Of those indicating another group, responses included a small group of representatives, public services, a community of advocacy, or a strategic action team focused on accessibility.

For the question about funding sources for disability and accessibility services (n = 26), respondents could choose multiple responses. They indicated that the money primarily comes from the library's operating budget (96 percent), with some funding from campus (19 percent), grants (19 percent), or special one-time funds (19 percent). One respondent reported that a campus ADA coordinator provides some training resources. Another indicated that financial support is shared among three campus partners.

When asked about hardware and software available for use by library patrons, 22 individuals responded, all marking more than one answer. In addition to the types of hardware and software covered in Figure 3, respondents specified that their library provided access to the speech recognition software Dragon NaturallySpeaking, optical character recognition (OCR) software enabling people with visual impairments to scan printed text, or the screen readers JAWS (Job Access with Speech), OpenBook, Read&Write, ABBYY FineReader, ZoomText, Inspiration 9, Duxbury Braille Translator,

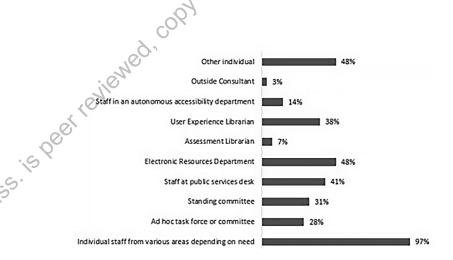


Figure 2. Survey responses about who participates in the design, implementation, or assessment of library disability and accessibility services.



Kurzweil 3000, or Fusion. The hardware provided included specialized desks or adjustable furniture, magnification devices, flatbed scanners, scanning pens, laptops, or tablets.

When asked about hardware and software for library staff, 18 individuals responded, all marking more than one answer. In addition to the types of hardware and software covered in Figure 3, several respondents indicated that if staff requested additional support, it would be supplied either through the library or through the campus human resources accommodation process, based on individual need.

Sixteen people responded to the question "On average, how many interactions per year do you have around accessibility services (patrons or staff)?" Forty-four percent indicated 1 to 10 interactions, 12 percent answered 11 to 20, and 44 percent reported 21 or more interactions. Seventeen people declared that they had fewer than 10 remediation requests per year (29 percent), 12 percent indicated they had 11 to 20 requests, and 17 percent acknowledged more than 21 requests. Forty-one percent said they referred remediation requests to a department outside the library. Just over half (52 percent) of the 19 institutions reported a campus-wide committee related to accessibility on which the library had representation. Twenty-seven percent of 15 respondents indicated that a state law regulated or required the library's disability or accessibility services; the remainder said there was no law or they did not know if such a law existed.

When asked to describe what accessibility activities the libraries undertook in the last three years, most respondents listed multiple projects. Answers ranged from creating or adjusting staff positions related to accessibility and disability services, establishing accessibility committees or task forces, modifying specific or general library spaces, auditing or redesigning the library website, or conducting training for library staff. Other efforts included adding a designated e-mail contact person, updating library spaces, remediating audiovisual content, hiring a consultant to facilitate space planning with campus partners, providing enhanced software in group study rooms, and training staff both

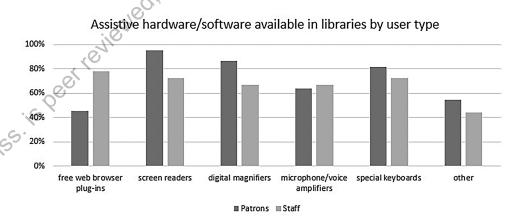


Figure 3. Survey responses about what assistive hardware and software is available for library patrons and staff.

generally and for specific software or technology. Still other answers involved auditing teaching materials and online learning objects, developing a consortium accessibility portal, joining campus accessibility committees, reviewing signage, examining exhibition practices for accessibility, purchasing new software, enhancing door access, usability testing, establishing guidelines for materials on the Web and social media, highlighting new services through exhibits, and creating Voluntary Product Accessibility Templates for all vendor licenses and standardizing the language used.

In response to the open-ended question "What services does your library provide for accessibility requirements?" The most prevalent answers were scanning or OCR of resources and retrieval of materials, mentioned by nearly all respondents. Other answers included specific software on public computers; wheelchair availability; coordination with other units on campus; reservable rooms with assistive technologies; shipping materials to users; providing hardware or tools such as magnifiers, large format keyboards, braille keyboards, or adjustable height furniture; captioning videos; and offering individualized orientations with users.

A key question for the researchers was where the library listed jobs with accessibility responsibilities in its organizational structure. Thirty-eight percent of respondents (n = 29) indicated that accessibility was not mentioned in any position description, while 62 percent had a position with that responsibility. Of the 18 respondents who indicated accessibility was included in a job description, 17 provided the title or titles of the positions and their supervisors, which are listed in Table 1. Ten institutions had positions with *accessibility* or *disability* in the job title itself. Only one library indicated having more than one such job title; it had two. Seven schools had two, three, or more positions mentioning disability and accessibility services in job descriptions. The location of positions varied, with a majority in public services or administration. When there were multiple positions at a school, each had at least one in library IT. Figure 4 details the placement of the positions in the organizational structure.

In addition to individual library efforts, many consortia provide disability and accessibility services to their members. Forty-three percent (n = 28) of respondents indicated they belonged to a consortium that addresses accessibility issues or concerns. Consortia addressing accessibility included the Big Ten Academic Alliance, the Washington Research Library Consortium, the Association of Southeastern Research Libraries, OhioLINK, the Orbis Cascade Alliance, and the Ontario Council of University Libraries.

Additionally, the survey left the option to add other topics not covered. One respondent noted there were different accommodations for students and staff and declared that each unit in the library provided disability and accessibility services based on the individual's unique needs, instead of a cookie-cutter response. In some cases, disability and accessibility services were available on a temporary basis, such as for a student who had broken a leg and needed document delivery.

Discussion

How libraries approach disability and accessibility services is evolving; therefore, it is important to understand what affects the delivery of services. One factor in developing

Table 1.

Library positions with accessibility or disability in the job description

Library positions with accessibility or aisability in the job			
description	Supervisor Head of research services		
Position*	Supervisor		
Research services librarian	Head of research services		
Head of UX [user experience] and digital accessibility	Assistant director for digital strategies and innovation		
Accessibility and accommodations librarian	Director, user experience		
Inclusion and accessibility librarian is the lead on coordinating accessibility activities for the whole library.	Associate dean for academic success		
Service design librarian	Associate dean for user services		
Digital services librarian	Associate dean for user services		
Diversity coordinator	Director of marketing and communications		
Executive associate dean	Director of public operations and content development librarian		
Community engagement librarian and coordinator of campus partnerships	Associate dean for research and learning		
Health sciences: operations librarian	Health sciences: director and associate dean		
Several library employees have accessibility in work plans for projects including website accessibility, technical support, etc.	various		
Coordinator for library accessibility services	Associate university librarian–service; manager–services		
Alternative text specialist	Head of access services		
Manager, discovery access and Web services	Head, libraries strategic technologies		
Accessibility specialist	Director of connected scholarship		
User experience and accessibility specialist (other IT positions also include accessibility in the title)			
Disability services liaisons: Reference, supervisor (1); Reference, professional (3); Medical library, library assistant (4)	Reference, supervisor		
DevOps [development and operations] unit	Supervisor, DevOps unit		
Library accessibility services coordinator and AODA [Accessibility for Ontarians with Disabilities Act] adviser	Position is currently unfilled; accessibility services are provided by a team of people from across the library.		



Position*	Supervisor
ADA [Americans with Disabilities Act] accessibility liaison for public services	Associate university librarian for public services
Web services and usability librarian	Head of systems and technical operations
Senior Web project lead	Senior Web accessibility specialist (university level); director of student disabilities (university level)
Web project analyst	Associate university librarian for library technology services
Discovery services manager	Head, digital initiatives and infrastructure support
Electronic resources officer	Acquisitions and discovery strategist
eResources licensing coordinator	Electronic resources officer
Digital accessibility and licensing analyst	eResources licensing coordinator
Head of research, teaching, and services and coordinator of accessibility resources	Associate dean for library services
Faculty services librarian	Head of faculty services
Librarian for inclusion initiatives	Head of teaching and learning and subject librarians*Positions with <i>accessibility</i> or <i>disability</i> in the job title are boldfaced.

Area of the library where Accessibility/Disability Services positions report

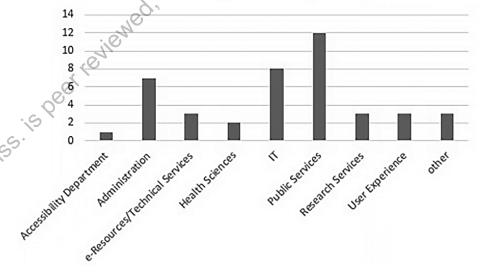


Figure 4. Survey respondents' answers to a question asking where jobs with responsibility for accessibility appear in the library's organizational structure.

scalable services is to understand if there is a prevailing placement of positions organizationally. This survey found no common location for disability and accessibility ser-

vices within library organizations; position titles and their placement within the organizational structure varied widely. There may be several reasons for this result. For example, many libraries are currently building new disability and accessibility services and have not identified a "best" placement yet organizationally. The areas affected by and delivering the services may be

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interconnected and draw upon the skills of people in multiple departments, or service requests may go to several areas throughout the libraries. Alternatively. individuals from across the libraries may have folded this work into their normal duties, do not view it as a new service, and do not highlight it on organizational charts.

Most disability and accessibility services are available through public services, library IT, or a user experience department (see Figure 4.) Some schools have begun to approach accessibility through technical services and to address the accessibility requirements of digital content from library-licensed, third-party platforms and vendors. Some libraries segment responsibility according to the individual or unit approached by a user. Others have cross-division working groups or steering committees to provide governance and support for disability and accessibility services or remediation requests. Overall, the organizational placement matters less than if a patron seeking services can find whom to contact on the library website.

As mentioned in the literature review, Cassner, Maxey-Harris and Anaya, Vaughn and Warlick, and Kerr all suggested that libraries have a single point of contact for disability and accessibility services. Many ARL members apparently follow this recommendation. When the authors constructed a contact list for this survey in 2020, 63 institutions (51 percent) identified a person as the contact on their website. The websites of 106 other schools (85 percent) listed a general library contact or an accessibility group. In the survey that same year, 62 percent of respondents reported a person with job responsibilities for accessibility and disability services. The institutions who have one person to contact for such services might have been more likely to fill out the survey than those where services are handled by a group or general library contact.

A single point of contact is recommended, and many libraries have either an individual or a standing group to coordinate services. One survey respondent commented, however, that "accessibility cannot be handled by one individual, so there is one person who is the liaison, but there are representatives for a core steering committee. Many others work on accessibility concerns from other angles . . . the responsibility also lies with every member of the libraries staff." Libraries may have more employees dedicated to accessibility, disability, or universal design than appear on either the organizational charts or on web pages about those services. Seven respondents reported multiple positions responsible for disability and accessibility services in their libraries. As more requirements arise on campuses, it would be interesting to see if this trend continues and whether more campus-wide support is provided, which would mean that library

support might scale back. Several individuals at the authors' institution have added accessibility to their normal practice of librarianship without it being specifically included

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in their job description. If that happens at other libraries, disability and accessibility work might attract little or no attention. Training and other resources for disability and accessibility may not be coordinated, and positions might not show up on library websites. It is challenging to benchmark library disability and accessibility services that are not clearly indicated on the library home page. These objectives may be so engrained in library culture that they can-

not be captured without more in-depth conversations. Similarly, all the responses came from research-intensive institutions, so another area of future research would be to see if the same trends occur at other schools.

Many libraries have representation on campus-wide accessibility committees, which is important given the services and content that libraries provide to users. One school reported that the employees who handle accessibility requests have their offices in the libraries but report to a university disability department. Most libraries pay for disability and accessibility services from their library budgets, but some also get campus funding or receive campus-wide training resources.

The second research question focused on whether library disability and accessibility services are offered proactively or reactively. Some libraries provide services because of a lawsuit or to prevent one (21 percent and 14 percent, respectively; see Figure 1). However, most libraries offer disability and accessibility services because equity, di-

Most libraries offer disability and accessibility services because equity, diversity, and inclusion priorities align with their professional values or library goals. versity, and inclusion priorities align with their professional values or library goals (66 percent or 79 percent, respectively). This result matched the type of projects libraries are undertaking. Several schools indicated that they modify spaces and adjust software on an ongoing basis, rather than responding only to remediation requests. Many schools create committees, conduct ongoing usability testing, and audit content licensed or created by the libraries. It is unclear whether this is a larger trend in libraries or whether ARL

libraries are leaders in providing disability and accessibility services, yet another area ripe for additional research.

The third research question focuses on changes due to campus mandates or state requirements. From this survey, 48 percent of respondents indicated that a campus mandate defined their disability and accessibility services. As mentioned previously, universities have ADA compliance requirements for employees, which are mandated by federal and state laws and monitored through the university's human resources department. Campus mandates and state requirements often detail additional accessibility accommodations



for patrons or the public. At the authors' institution, course-related accommodations are handled through the Office of Student Life Disability Services (https://slds.osu.edu/), while requests from the public are handled individually by each event host or service provider. While the authors did not specifically look at state or province requirements, a growing number of states and provinces require additional services. The ADA and federal laws apply only to institutions that receive federal funds, but individual states may have stronger rules. Rules across Canada differ as well. In Ontario, two laws that require disability and accessibility services are the Accessibility for Ontarians with Disabilities Act of 2005 and the province's Human Rights Code, enacted in 1962.

The fourth research question asked if there was a replicable model for disability and accessibility services at libraries. Based on responses and information from literature reviews, webinars, and library websites, there is no common arrangement for such services at university libraries. Localized community needs and pressures may make it difficult to build a model that can be widely implemented at libraries. Instead, the authors provide thematic areas of disability and accessibility services that may be addressed by libraries, including instruction, library spaces, and electronic access to content. Carter and Pionke both suggest three general areas of support to patrons with disabilities: bibliographic instruction (sometimes referred to as teaching and learning

or instruction services), website accessibility, and staff training.²⁰ The authors advocate adding generalized remediation support to this list. Such support could include ensuring accessibility for all library content, whether created, purchased, or licensed. While libraries have little or no direct control over content development, they are increasingly expected to support all users' needs for access to that content. The authors recommend that libraries analyze their own disability and accessibility services with local campus constraints

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considered. Then an individual or library committee can address areas that fall short. In this way, university libraries can determine how to modify their services to meet their audience needs.

A useful approach to providing support for disability and accessibility services might be to work closely with vendors. As many schools face similar requirements, libraries should advocate for vendors to address issues with content and display. Such changes would be scalable and applicable to a wider audience, and libraries could then focus their services more directly on users. Additionally, library consortia could work with vendors to address accessibility requirements. An example of such a consortial effort is that of the Library Accessibility Alliance, which tests platforms for accessibility and sends the results to vendors. The results are posted on a publicly accessible website, and vendors are encouraged to respond. A Library Accessibility Alliance white paper suggests that both vendors and librarians need greater awareness about accessibility issues.

The other area the authors investigated was whether library services were evolving, as reported through surveys. Surveys in the literature include specific questions about services, but with few longitudinal studies available, it is difficult to identify trends. Many

alterations happen due to interactions with patrons needing assistance. One notable development is the inclusion of universal design concepts or questions when discussing library services. The findings presented here may act as a benchmark for disability and accessibility services offered by libraries in the future.

Based on the survey results reported here, the respondents had no unified approach for delivering accessibility and disability services. Job descriptions highlighting such responsibilities appeared in many places in the library organization. There was a growing trend for having either a position within library administration or a centralized committee providing disability and accessibility support. Libraries offered services both proactively and in response to remediation requests. This finding aligns with the growing interest in universal design and equity-based service provision. While many library surveys have addressed what services are offered, few have focused on who provides the service and what drives decisions around support for accessibility and disability.

Additional research could be done in several areas related to library disability and accessibility services. A future area of research would be to examine the differences in patron and employee accommodations. Another would be to compare the services available from the libraries to those provided at a campus level and to examine the governing body or approach to service delivery at several schools. Additionally, it might be illuminating to explore how library instruction incorporates support for learners with disabilities into information literacy and discovery sessions, especially as changes to pedagogy might be influenced by universal design theories. Finally, as more schools publicize disability and accessibility offerings, it would be interesting to examine position descriptions where disability and accessibility services are specifically mentioned versus those where all library employees have responsibilities for such services.

Conclusion

Libraries continually review and improve the delivery of their content in both physical and virtual spaces for patrons with disability or accessibility needs. The development

Efforts once driven by patron requests have evolved to a proactive approach inspired by the values of diversity, equity, inclusion, and accessibility and a focus on enhancing the user's experience of both physical and virtual spaces.

and provision of these services may result from an organizational culture that strives to meet all users where they are. Websites detailing services are a new trend that has emerged. Efforts once driven by patron requests have evolved to a proactive approach inspired by the values of diversity, equity, inclusion, and accessibility and a focus on enhancing the user's experience of both physical and virtual spaces. While campus mandates, state laws, or national conversa-

tions may influence the creation of services, many libraries have implemented projects or staffing to meet local campus needs.

As this is an evolving area at universities, it will be important to look at longitudinal developments as requirements change. Finally, libraries have an opportunity to work

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more closely with consortia or directly with vendors to advocate for accessible content delivery and interface adjustment for both purchased and leased content.

The COVID-19 pandemic catapulted to the forefront the need for more distance education support. This development benefited those with disabilities because many distance education platforms have built-in accessibility and universal design components, such as recording, captioning, and adjustable menus.²¹ As libraries reexamine their services post-pandemic, it will be important to consider accessibility as part of those redesigned services and interfaces.

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Appendix A

Survey Instrument Accessibility in the Association of Research Libraries Q1 Enter which ARL library you work for:

<text entry field>

Q2 Type of institution **Public**

> Academic public Academic private Special/Government

And ication, portal 22.A. Q3 Reminder: Please fill out only ONE survey per library; include the name of the individual filling out the survey on behalf of the library or committee handling accessibility within the library.

Definitions of *Accessibility* Used in This Survey

Accessibility: The design of the by people of the survey of th Accessibility: The design of products, devices, services, or environments to be usable by people who experience disabilities (visual, aural, neuro, motor). It can be achieved through universal design practices and intentional engineering (strongly preferred) or through providing alternate formats to accommodate specific disabilities (if necessary). See https://dl.acm.org/citation.cfm?doid=2596695.2596719. Federal guidelines (https:// www.3playmedia.com/2017/11/30/accessibility-laws-for-public-colleges/) cover accessibility of physical and virtual environments at public universities.

Universal design. The design and composition of an environment so that it can be accessed, understood, and used to the greatest extent possible by all people regardless of their age, size, ability, or disability. See http://universaldesign.ie/What-is-Universal-Design/.

Q4 Has your library engaged in any accessibility activities as defined above during The past three years? (Examples include website redesign, facilitating advisory boards, auditing services or online resources, creating accessibility positions/units, etc.)

Yes

No

Skip To: Q5 If Has your library engaged in any accessibility activities as defined above during the past three $y \dots = Yes$



Skip To: Q12 If Has your library engaged in any accessibility activities as defined above during the past three y ... = No

Q5 Please describe the accessibility activities your library has undertaken during the past three years.

Q6 How long has your library been actively providing accessibility services to users?

less than 1 year
1–5 years
6 or more years

Q7 What services does your library Q7 What services does your library provide for accessibility requirements (ex. scanning/ OCR, retrieval of materials, specialized equipment)?

<text entry field>

Q8 What triggered the development of accessibility services in the library? (Check all that apply)

Campus mandate

Library priority

Changing publisher interfaces

Lawsuit, reactive

Lawsuit, proactive

Equity, diversity, and inclusion priorities as a professional value

Hired staff with needs

Our library does not provide services

Q9 Is responsibility for accessibility in a position description?

Skip To: Q10 If Is responsibility for accessibility in a position description? = Yes

Skip To: Q12 If Is responsibility for accessibility in a position description? = No

Q10 What is the position title of the individual(s) in your library who has primary responsibility for coordinating accessibility activities?

<text entry block>

Q11 What is the position title of the manager(s) for the person/people coordinating accessibility activities?

<text entry block>

Q12 Are you involved in a consortium that is addressing accessibility issues / concerns? If yes, please include consortia name.

Yes <text entry block>

No

Q13 Does your library have plans to engage in any accessibility activities in the coming year?

Yes

No

Skip To: Q14 If Does your library have plans to engage in any accessibility activities in the coming year? = Yes

Skip To: Q15 If Does your library have plans to engage in any accessibility activities in the coming year? = No

Q14 If yes, will these activities be one-time/project-based or ongoing or both?

One-time

Ongoing

Both

Q15 This section examines how your library deploys staff to assess and design for accessibility. Some libraries have created specific positions and departments to lead these efforts. Other libraries perform these tasks with staff who have multiple job responsibilities in addition to accessibility or universal design.

Q16 Indicate which staff in your library participate in design/implementation/assessment of accessibility or disability services. Check all that apply.

Individual staff from various departments depending on the need at the time

An ad hoc task force or committee

A standing committee

Any staff at a public services desk

Electronic resources department

Assessment librarian

User experience librarian

Staff in an autonomous accessibility department in the library

Outside consultant



Other individual(s) or group(s): Please specify the individual(s) or group(s) and briefly describe their role in accessibility/disability services <text entry space> No staff at my library participates in accessibility/disability services Skip To: End of Survey If Indicate which staff in your library participate in design/ Staff member
Other group <text entry space>

Q18 What is the source of funding for this activity? Check all that apply.

Library operating budget

Special one-time funds from your library
Campus funded
Grants
Other <text entry space implementation/assessment of accessibi . . . = No staff at my library participates in

Q19 What software/hardware are you providing for accessibility purposes for PA-TRONS?

Free Web browser plug-ins Screen readers Digital magnifiers Microphones/voice amplifiers Special keyboards, etc. Other, please specify <text entry space>

Q20 What software/hardware do you provide for accessibility purposes for STAFF?

Free Web browser plug-ins Screen readers Digital magnifiers Microphones/voice amplifiers Special keyboards, etc. Other, please specify <text entry space>

Q21 On average, how many interactions per year do you have around accessibility services (patron or staff)?

1 - 1011 - 2021 or more Q22 How many remediation requests do you have per year?

less than 10

11-20

more than 21

Q24 Is there a state law in place that dictates what services are offered at your library?

Yes
No

Q25 Please enter any additional informatic
if your library's approach to

may assis vities. vities and according to the distribution of the

Appendix B

List of Institutions Surveyed and URLs for Accessibility and Disability Services within the Libraries Institution Accessibility URL University of All 1

Institution	Accessibility URL
University of Alabama Libraries, Tuscaloosa	https://accessibility.ua.edu/
University at Albany, State University of New York, University Libraries	https://accessibility.ua.edu/ https://library.albany.edu/services/persons-with-disabilities
University of Alberta Library, Edmonton	https://www.library.ualberta.ca/services/accessibility-services
University of Arizona Libraries, Tucson	https://new.library.arizona.edu/accessibility
Arizona State University Library	https://www.asu.edu/accessibility/; https://lib.asu.edu/disability/hayden
Auburn University Libraries, Auburn, Alabama	https://www.lib.auburn.edu/ada/services.php
Boston College Libraries	https://libguides.bc.edu/accessibility
Boston Public Library	https://www.bpl.org/users-with-disabilities/
Boston University Libraries	N/A cdll
Brigham Young University Library, Provo, Utah	https://lib.byu.edu/about/accessibility/
University of British Columbia Library, Vancouver	https://services.library.ubc.ca/facilities/disability-access-by-building/
Brown University Library, Providence, Rhode Island	https://library.brown.edu/info/libweb/dss/
University at Buffalo, State University of New York, Libraries	https://www.buffalo.edu/studentlife/who-we-are/departments/accessibility.html
University of Calgary Libraries and Cultural Resources	https://libanswers.ucalgary.ca/faq/198192
University of California Berkeley Library	https://www.lib.berkeley.edu/help/disability-resources
University of California Davis Library	https://www.library.ucdavis.edu/service/services-patrons-disabilities/
University of California Irvine Libraries	https://www.lib.uci.edu/accessibility

Accessibility and Disability Services for Libraries: A Survey of Large, Research-Intensive Institutions

	University of California Los Angeles Library	https://www.library.ucla.edu/use/access-privileges/disability-resources
	University of California Riverside Library	https://library.ucr.edu/using-the-library/disability-services
	University of California San Diego Library	http://libraries.ucsd.edu/ask-us/persons-with-disabilities.html
	University of California Santa Barbara Library	https://www.library.ucsb.edu/disability-services
	Case Western Reserve University, Kelvin Smith Library, Cleveland, Ohio	N/A
	Center for Research Libraries, Chicago	https://www.crl.edu/accessibility-statement
	University of Chicago Library	https://www.lib.uchicago.edu/research/help/infofor/accessibility/
	University of Cincinnati Libraries	https://libraries.uc.edu/spaces-technology/adaptive-technologies.html
	University of Colorado Boulder University Libraries	https://www.colorado.edu/libraries/services/accessibility-services
	Colorado State University Libraries, Fort Collins	https://lib.colostate.edu/technology/assistive-technology/
	Columbia University Libraries, New York	https://library.columbia.edu/using-libraries/disability.html
	University of Connecticut Library, Storrs	https://lib.uconn.edu/location/stamford-campus-library/library-services-for-persons-with-disabilities-stamford/
	Cornell University Library, Ithaca, New York	https://www.library.cornell.edu/services/disability
	Dartmouth College Library, Hanover, New Hampshire	https://www.library.dartmouth.edu/libraries-and-spaces/accessibility
	University of Delaware Library, Museums and Press, Newark	https://guides.lib.udel.edu/c.php?g=85328&p=548437
	Duke University Libraries, Durham, North Carolina	https://library.duke.edu/services/disabilities
0,	Emory University Libraries, Atlanta, Georgia	https://libraries.emory.edu/using-the-library/accessibility.html
	University of Florida George A. Smathers Libraries, Gainesville	http://www.uflib.ufl.edu/accessibility/
	Florida State University Libraries, Tallahassee	https://www.lib.fsu.edu/accessibility

George Washington University Libraries and Academic Innovation, Washington, D.C.

https://library.gwu.edu/about/facilities/disability-support/disability-support

Georgetown University Library, Washington, D.C. https://www.library.georgetown.edu/disabilities

University of Georgia Libraries, Athens Georgia Institute of

https://www.libs.uga.edu/accessibility https://www.gatech.edu/accessibility/

Technology Library, Atlanta

University of Guelph

ortal 22.A. https://www.lib.uoguelph.ca/using-library/library-accessibility-services

Library Harvard Library

https://library.harvard.edu/accessibility

University of Hawai'i at

https://manoa.hawaii.edu/library/help/ada/

Manoa Library

University of Houston

https://libraries.uh.edu/spaces-tech/accessibility

Libraries

Howard University

N/A

Libraries, Washington, D.C.

University of Illinois Chicago University Library

https://library.uic.edu/help/article/1955/use-accessibility-services

Illinois University Library, Urbana

https://guides.library.illinois.edu/usersdisabilities

Indiana University **Bloomington Libraries**

https://libraries.indiana.edu/services/services-library-users-disabilities

University of Iowa Libraries, Iowa City

http://www.lib.uiowa.edu/help/disabilities/

Iowa State University

www.lib.iastate.edu/help-services/accessibility-services

Library, Ames

https://ask.library.jhu.edu/faq/44617 Johns Hopkins

University Sheridan Libraries, Baltimore, Maryland

University of Kansas Libraries, Lawrence

https://www.kent.edu/accessibility

https://lib.ku.edu/services/ada

Kent State University Libraries, Kent, Ohio

University of Kentucky Libraries, Lexington

http://libraries.uky.edu/Disability

Bibliothèque de l'Université Laval, N/A

Québec

https://www.loc.gov/accessibility/

Library of Congress, Washington, D.C.

https://www.lib.lsu.edu/services/patrons-disabilities

Louisiana State University Libraries,

Baton Rouge

Libraries, Chapel Hill

Accessibility and Disability Services for Libraries: A Survey of Large, Research-Intensive Institutions

University of Louisville https://library.louisville.edu/ekstrom/accessibility Libraries University of Manitoba https://libguides.lib.umanitoba.ca/accessibility Libraries, Winnipeg publication, portal 22.A. University of Maryland https://www.lib.umd.edu/services/disabilities Libraries, College Park University of https://www.library.umass.edu/services/disabilities/ Massachusetts Amherst Libraries MIT Libraries, https://libguides.mit.edu/disabilities Cambridge, Massachusetts McGill Library, https://www.mcgill.ca/library/services/access Montreal McMaster University https://library.mcmaster.ca/spaces/las Library, Hamilton, Ontario University of Miami https://www.library.miami.edu/about/ada.html Libraries University of Michigan https://www.lib.umich.edu/about-us/about-library/diversity-equity-Library, Ann Arbor inclusion-and-accessibility/accessibility Michigan State University https://lib.msu.edu/general/access-services/ Libraries, East Lansing University of Minnesota https://www.lib.umn.edu/services/access-lib Libraries, Twin Cities University of Missouri https://libraryguides.missouri.edu/personswithdisabilities/services Libraries, Columbia https://www.nal.usda.gov/main/accessibility National Agricultural Library, Beltsville, Maryland www.archives.gov/global-pages/accessibility National Archives and Records Administration, Washington, D.C. National Library of https://www.nlm.nih.gov/accessibility.html Medicine, Bethesda, Maryland University of https://libraries.unl.edu/library-services-people-disabilities Nebraska-Lincoln Libraries University of New https://library.unm.edu/services/accessibility.php Mexico Libraries, Albuquerque New York Public https://www.nypl.org/accessibility Library New York University http://library.nyu.edu/services/teaching-learning/disability-services/ Libraries University of North https://library.unc.edu/services/disability-services/ Carolina University

North Carolina State https://www.lib.ncsu.edu/accessibility-services University Libraries, Raleigh Northwestern Libraries, https://www.library.northwestern.edu/visit/visitor-privileges/ Evanston, Illinois disability-services.html otal 22.A. University of Notre https://library.nd.edu/accessibility Dame Hesburgh Libraries Ohio State University https://library.osu.edu/accessibility-resources Libraries, Columbus Ohio University Libraries, https://www.ohio.edu/library/services/persons-disabilities Athens University of Oklahoma https://libraries.ou.edu/content/services-patrons-disabilities Libraries, Norman https://library.okstate.edu/using-the-library/access-for-persons-with-disabilitiesOklahoma State University Edmon Low Library and Branch Libraries, Stillwater University of Oregon https://library.uoregon.edu/library-accessibility Libraries, Eugene University of Ottawa https://biblio.uottawa.ca/en/services/accessibility Library University of https://www.library.upenn.edu/about/access/accessibility Pennsylvania Penn Libraries, Philadelphia Penn State University https://libraries.psu.edu/about/departments/access-services Libraries University of Pittsburgh http://www.library.pitt.edu/ask-us University Library System Princeton University https://library.princeton.edu/services/disabilities Library, Princeton, New Jersey Purdue University Libraries and School of Information Studies West Lafayette, Indiana Queen's University https://library.queensu.ca/help-services/accessibility Library, Kingston, Ontario Rice University Fondren http://library.rice.edu/accessibility Library, Houston, Texas University of Rochester https://www.library.rochester.edu/services/accessibility-services River Campus Libraries Rutgers University Libraries, New https://www.libraries.rutgers.edu/accessibility

https://library.usask.ca/studentlearning/resources/new-students/

Brunswick, New Jersey

Saskatchewan University

disabilities.php

University of

Library, Saskatoon

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Simon Fraser University Library, Burnaby, British Columbia	https://www.lib.sfu.ca/about/overview/services-you/disabled
Smithsonian Libraries, Washington, D.C.	https://www.si.edu/visit/VisitorsWithDisabilities
University of South Carolina University Libraries, Columbia	https://sc.edu/about/offices_and_divisions/university_libraries/about/locations/tcl/disability_access/index.php
University of Southern California Libraries, Los Angeles	https://libraries.usc.edu/accessibility-disability-services
Southern Illinois University Carbondale Morris Library	https://lib.siu.edu/services/disability-support.php
Stony Brook University Libraries, State University of New York	https://library.stonybrook.edu/services/access-services/accessibility/
Syracuse University Libraries	https://library.syr.edu/accessibility/index.php
Temple University Libraries, Philadelphia, Pennsylvania	https://library.temple.edu/services/disability-services-at-temple-university-libraries
University of Tennessee Libraries at Knoxville	https://www.lib.utk.edu/info/disabilities/
University of Texas Libraries, Austin	https://www.lib.utexas.edu/about/policies/services-assistive
Texas A&M University Libraries, College Station	https://library.tamu.edu/services/accessibility.html
Texas Tech University Libraries, Lubbock	https://www.depts.ttu.edu/library/user-experience/disablity-resources.php
University of Toronto Libraries	https://onesearch.library.utoronto.ca/accessibility-office/library-accessibility-office
Tulane University Libraries, New Orleans, Louisiana	https://library.tulane.edu/locations/library-accessibility-information
University of Utah Marriott Library, Salt Lake City	https://campusguides.lib.utah.edu/libraryaccessibility
Vanderbilt University Jean and Alexander Heard Libraries, Nashville, Tennessee	https://www.library.vanderbilt.edu/about/accessibility.php
University of Virginia Library, Charlottesville	https://www.library.virginia.edu/services/accessibility-services
Virginia Commonwealth University Libraries, Richmond	https://www.library.vcu.edu/access/accessibility/
Virginia Tech University Libraries, Blacksburg	https://vt.edu/accessibility.html

University of Washington

Libraries, Seattle

https://www.lib.washington.edu/services/accessibility

Washington State University Libraries, https://libraries.wsu.edu/accessibility/

Pullman

Washington University in St. Louis University Libraries

, accessibility/
...orary.www.edu/disability-services

https://www.library.wisc.edu/about/accessibility/
https://web.library.yale.edu/services-persone/
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