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Differently Able: A Review of Academic Library Websites for People with Disabilities

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Differently Able: A Review of Academic Library Websites for People with Disabilities

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This research is based on the Library Services for People with Disabilities Policy, which was approved by the American Library Association in 2001. The policy identified focus areas for libraries including library services, facilities, collections, and assistive technology. Library websites frequently convey this information to users. Our study examined and compared academic library websites for the differently able. What services do academic libraries offer to the differently able? Is there a basic level of services that libraries identify or should offer? Are websites for people with disabilities easily located from the library's home page?

INTRODUCTION

Individuals with disabilities make up a large segment of the U.S. population. According to a 2008 study, approximately 10.1% (more than 19 million) of noninstitutionalized adults, ages 18–64 years, reported a disability. These estimates are based on a sample of more than 1.8 million people who participated in the 2008 American Community Survey. Individuals were considered to have a disability if they, or their proxy, noted hearing, visual, cognitive, ambulatory, self-care, or independent living disabilities (Erickson, Lee, and von Schrader 2010).

The *Digest of Education Statistics 2009* stated that 11.3% of undergraduate students and 7.6% of graduate students reported having a disability during 2007-2008. These figures are based on a sample survey of students enrolled in colleges or universities who reported at least one of the following: a specific learning disability, hard of hearing/deafness, visual handicap, a speech disability, orthopedic handicap, or a health impairment (Snyder

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and Dillow 2009, 328). There is no consensus of opinion on preferred terminology to describe those with disabilities. The Americans with Disabilities Act, as amended in 2008, frequently uses the terms "people with disabilities" and "individuals with disabilities." The document states that the term "disability" means "a physical or mental impairment that substantially limits one or more major life activities of such individual; a record of such an impairment; or being regarded as having such an impairment" (www.ada.gov/pubs/adastatute08.htm, section 12102).

Copeland, Walling, Kaney, and Olmstead, who presented the workshop "Differently Diverse: Moving Libraries beyond ADA Compliance to Full Inclusion for All" at the 2010 National Diversity in Libraries Conference, challenged (dis)abled terminology and stated that the focus should instead be on abilities. "Differently able" was the preferred term used because individuals are only temporarily able to carry out normal functions. Our paper uses the terms "differently able" as well as "people [or persons, patrons, or individuals] with disabilities."

While libraries have provided accommodations and services to the differently able for some time, the quantity of these noticeably increased following the passage of the Americans with Disabilities Act of 1990. The American Library Association (ALA) has become more active in its efforts to write and promote documents to support library services for persons with disabilities. The Library Services for People with Disabilities Policy was passed in 2001 by the ALA Council, the governing body of the American Library Association. This group in 1998 committed to five Action Areas (later changed to seven) as guiding principles for the future, one of which is equitable access to information and library services (American Library Association 2001). The Association of Specialized and Cooperative Library Agencies (ASCLA), a division within ALA, has as part of its mission a section devoted to improving the quality of library service for those with special needs. ASCLA's Libraries Serving Special Populations Section addresses library services for individuals with disabilities.

The Americans with Disabilities Act of 1990 (ADA) propelled academic libraries to review their facilities, collections, and services for people with disabilities and make necessary modifications. Many library buildings required alteration to reduce or eliminate barriers at entrances, add elevators and handicapped restroom facilities, and widen aisles and stacks. Specialized software and hardware were obtained to increase access for visually impaired, physically challenged, hearing impaired, and those with learning disabilities. Services were reviewed with modifications frequently made for circulation, photocopying, and methods of communication.

The library website is an important tool for all users. While the home page provides an overview of library resources and services, more detailed information is available on webpages linked from the home page.

Of particular interest to the researchers are academic libraries' webpages for the differently able, which describe library services and resources available to this clientele. The purpose of this research is to examine and compare academic libraries' websites for people with disabilities. The population studied comprises selected members of the Association of Research Libraries, known as ARL libraries.

LITERATURE REVIEW

There are several articles that address disabilities services for library users. However, if we narrow the focus to academic libraries serving users with disabilities, a smaller subset of articles provides information about the landscape of library services. While many of the books and articles cover website accessibility according to ADA legal guidelines, none uses the American Library Association's Library Services for Disabilities Policy. The bulk of the library literature deals with the web accessibility of library web pages; however, few articles address how well the library informs users with disabilities of their services.

ARL published two SPEC Kits related to disabilities. The SPEC Kit 176, *Library Services for Persons with Disabilities*, focused on thirteen academic libraries providing excellent services to customers with disabilities (Ragsdale 1991). SPEC Kit 243, *Issues and Innovations in Service to Users with Disabilities*, provides additional information on libraries that have dedicated personnel focused on disability issues (De Candido and Blixrud 1999). Since 1999, ARL has not produced an updated report on library services for persons with disabilities.

Miller-Gatenby and Chittenden (2000, 313-326) discussed the importance of academic libraries assisting differently abled students with reference services. Suggestions were made to improve bibliographic instruction, webpages, and staff training. These changes will enhance reference services not only for people with disabilities but for all students. A unique feature of Carter's article (2004, 13-18) was recommendations for staff training. Special attention was paid to information for staff to improve attitudinal training, equipment training, service training, and legal information on the ADA requirements.

Epp (2006, 411-429) defined the term "print disabilities" as those issues which encompass visual, learning, and mobility disabilities. The article focused on national and international cooperative efforts to make print materials accessible electronically. The limitations of copyright laws force libraries and other organizations to creatively come together and address the problems.

Guyer and Uzeta (2009, 12-35) provided a definition of what an "accessible" library should offer in regard to assistive technologies and services. Peter Hernon and Philip Calvert's book (2006) addressed a variety of

topics assessing quality of library services for students with disabilities. Chapters cover students with disabilities in higher education, ADA legislation, legal issues, and specialized assessments for students. There are particularly good examples of projects and survey designs for libraries to consider.

Ravonne Green has done extensive research on library services for the differently able. In 2009, Green provided a brief overview of the clauses in the Americans with Disabilities Act that pertain to academic libraries. Her research followed her unpublished 2007 report that surveyed Carnegie Research I libraries to determine whether the libraries provided disability services on their websites. Green also provided information for academic librarians and recommendations on how to improve accessibility.

Focusing on database accessibility of 33 academic library websites, Power and LeBeau (2009, 55-72) reviewed library web pages for access to text-only databases using World Wide Web Consortia (W3C) guidelines and also reviewed the libraries' disability services pages. The authors developed a rating scale of 1 to 5, with 1 being "good and easily found" and 5 signifying "no disability services page evident." Only 5 of the 33 websites mentioned any information related to database accessibility, and half of the libraries studied were rated "good" based on information regarding services and "findability." The authors also offered suggestions for good terminology, wheelchair icons, and placement of links for users with visual disabilities using screen readers.

METHODOLOGY

Our research is based on the Library Services for People with Disabilities Policy. This policy was approved in 2001 by the ALA Council, which serves as the governing body of the American Library Association. The document affirms ALA's commitment to accessibility for all library patrons, including those with disabilities. The policy states expectations by the ALA organization. It is applicable to librarians employed at various types and sizes of libraries. Addressed in the policy are library services, facilities, collections, assistive technology, employment, and ALA conferences, as well as library education, training, and professional development. The policy also states that ALA publications should be available in alternative formats and that the ALA website should follow accepted accessibility guidelines.

The focus of our study is academic library websites that are targeted to the differently able. An academic library is "a library that is an integral part of a college, university, or other institution of post secondary education, administered to meet the information and research needs of its students, faculty, and staff" (Reitz 2004). A website is defined as "a group of related, interlinked Webpages installed on a Webserver and accessible 24

hours a day," while a webpage is "usually one of a group of related, interlinked files that together comprise a Website" (Reitz 2004). Our study primarily focused on general features of library websites, facilities, assistive technology, collections, and services.

Research questions for the study included: (1) Are websites for the differently able easily found from the library's home page? (2) Are websites for the differently able easy to navigate? (3) Are websites for the differently able welcoming? (4) What services do academic libraries offer to the differently able? (5) Is there a basic level of services that libraries identify or should offer?

The survey population consisted of a select group of institutions belonging to the Association of Research Libraries (ARL), a not-for-profit organization composed of North American research libraries (Association of Research Libraries 2009). There were 123 ARL libraries as of July 2009. Twenty-four Canadian and nonacademic libraries were eliminated from the list, leaving 99 U.S. academic libraries in the study. The study took place in August-November 2009.

A spreadsheet was developed listing elements related to the major headings: general features of the website (9 elements), services (14 elements), facilities (7 elements), assistive technology (6 elements), and collections (3 elements). The authors examined websites of the 99 ARL libraries identified for the study to determine whether they contained websites or webpages targeted to people with disabilities. A few elements were specific only to libraries with websites for the differently able. These included the number of clicks from the library homepage to the disabilities home page, the title of the website for people with disabilities, and the numbers of links on the people with disabilities homepage. The remaining elements studied refer to the total population, all 99 of the ARL libraries studied, regardless of whether libraries had websites devoted to people with disabilities or just interspersed information throughout the website.

The presence or absence of each element was noted on the spreadsheet with a "y" for yes or "n" for no. Certain elements, such as the number of links on the people with disabilities page, were counted. In some instances, additional notes concerning unique features of the homepages were entered into a Word file. Data for each library's website was entered into an Excel spreadsheet and manually compiled using raw numbers and percentages. Data were tabulated using simple averages.

RESULTS
General Features

Eighty-seven of the 99 libraries studied (88%) did contain links to a people with disabilities homepage. When a homepage was not located, the researchers used the library's search or site index features to expand their

search. The absence of a homepage specific to services for the differently able was frequently verified by inquiries to these libraries' Ask-A-Librarian chat or email reference services. (See Discussion and Conclusion section for additional information.)

The researchers found that two-thirds of the homepages for the differently able were relatively easy to locate. On average it took two mouse clicks to access disability services information from the library's homepage. A few websites were found by clicking on a handicapped symbol from the library's homepage. However, the majority were found under a "services" heading. Examples of headings where it was more challenging to find homepages for the differently able include *Frequently Asked Questions*, *Help*, *Visitor Information*, *About-Facilities*, *About the Libraries-Administration*, *Use Our Services-More*, and *Help Yourself*.

The name listed for the disabilities webpages varied considerably. More than 40 different names appeared, although titles were often very similar. The most common webpage name was *Disability Services*. This was followed by *Services for Users with Disabilities*, *Services for People with Disabilities*, and *Accessibility*. Examples of names listed by only one library are *Accommodations for Disabilities*, *ADA Services*, and *Persons with Disabilities*. There was also a great deal of diversity in the number of links found on the disabilities homepage. These varied from zero to 52 links.

Information was also gathered on various elements of the libraries' websites. For example, we found that 62 of the 99 libraries studied contained links to their university office for disability services. Nearly every library included contact or address information to assist users in locating their buildings. Most libraries' websites contained freshness dates, allowing users some idea as to the currency of the information. Freshness dates found on the libraries' homepages tended to be much more current than those found on disabilities webpages. If freshness dates on disability homepages are used as a general guide, it appears that information on some websites had not been updated for three or four years.

Services

According to the Library Services Section of the Library Services for People with Disabilities Policy, "Libraries must not discriminate against individuals with disabilities and shall ensure that individuals with disabilities have equal access to library resources." Sixty-four percent of libraries studied have a mission statement specific to the differently able on their public website.

The authors examined websites for the presence of core services: retrieval of materials, photocopy, circulation/access assistance, reference and reference assistance, services at branch libraries, interlibrary loan, instruction, proxy users, and flyers or information sheets about the services. Table 1

TABLE 1
Services Found on Academic Library Websites

Services	Percentage
Retrieving materials	74%
Photocopying	59%
Circulation/access assistance	55%
Reference	54%
Research assistance	53%
Services at branch libraries	47%
Interlibrary loan	33%
Instruction	32%
Proxy allowed	32%
Flyers or information sheets	6%

summarizes the findings of these services on library website pages. Some of the core services presented on library websites are retrieval of materials, circulation/access assistance, photocopying, and reference and research assistance in more than 50% of webpages. Available services were also posted for branches on 47% of the pages and information about interlibrary loan, proxy users, and instruction on about a third of the websites. Contact information for a library coordinator(s) or campus disability services contact is present on 46% of websites.

Retrieving Materials. Most websites indicated that this service was offered to library users with mobility concerns. Other libraries included the visually impaired or individuals who were having difficulty reaching materials on higher shelves. However, several libraries stated that if a large number of items needed to be retrieved, patrons should allow up to a day for materials to be pulled. One library has a Buddy Program offering personalized assistance with book retrieval as well as photocopying and library research.

Photocopying. Wheelchair-accessible photocopiers are available at some libraries. Many websites indicate that library staff will photocopy materials for users with disabilities upon request. One library encourages these patrons to bring another person to help with photocopying. Another library says their copier service will make copies for the differently able at the self-service price.

Circulation/Access Assistance. Websites frequently noted that individuals with disabilities can request exceptions to normal circulation policies. Libraries mentioned extended loan periods of regular and reserve materials, allowing noncirculating materials to be checked out, and willingness to accept special requests via the Internet, mail, or phone. Several libraries mentioned the possibility of mailing books to the patron's home as well as sending journal articles or book chapters in print or elecronic format. One library offered to deliver branch library materials to the main library, with another listing the campus Center for Disability Services as a

potential drop-off and pick-up circulation point. A website indicated that patrons with disabilities may choose to ask circulation staff to consider reducing or dismissing fines accrued as a direct result of a disability. Another library stated that patrons can use a section of the Circulation desk that is lower height to accommodate wheel chairs.

Reference and Research Assistance. Individuals with disabilities were frequently referred to the Reference Desk for assistance. Many libraries indicated that while general reference or research assistance was available at the Reference Desk, for specialized service individuals should consider making an appointment with a Subject Librarian or the library coordinator for disability services. Options for reference inquiries included online chat, e-mail, telephone, and in-person visits.

Services at Branch Libraries. Information specific to branch libraries roughly parallels that found on the main library websites—such as circulation, retrieving materials from the stacks, photocopying, and interlibrary loan. In addition, one branch library website stated that staff members were available to help the differently able with reading assistance when using electronic resources and online catalogs, and in retrieving materials. However, it should be noted that not all libraries indicate they have branch libraries.

Interlibrary Loan. Interlibrary loan accommodations for people with disabilities included extended loan periods and noting the preferred format when requesting mateials. One library mentioned that interlibrary loan will try to borrow large-print editions of books and journals if requested.

Instruction. Libraries offer customized tours or instruction to individuals or groups with disabilities. One website indicated that library guides could also be provided in various formats. Some libraries offered instruction in assistive software, while others referred patrons to the campus office for disability services. A library stated its willingness to train readers who assist the visually impaired, to use the library catalog and online journal article indexes. Several websites instructed differently able students to contact the class instructor or coordinator of library services in advance to arrange for needed accommodations. Examples might include sign language interpreters, instruction sessions in physically accessible rooms, and individual instruction using assistive technology.

Proxy Users. One-third of the library websites studied indicated that proxy service was available for people with disabilities. Most often a designated proxy was allowed to check out or pick up library materials after submitting the proper forms. Occasionally library websites state that the library patron, rather than the proxy, is responsible for items checked out on the patron's card.

Other Services. While not specifically for people with disabilities, one library has a drive-through window at the main library. Patrons can drop

off materials they are returning or pick up materials previously reserved without leaving their cars. Another library advertised that Microforms and Current Periodicals & Newspapers staff members were available to assist individuals with disabilities in using equipment and materials.

Flyers or Information Sheets on Services. While very few libraries provided links to flyers or information sheets on their services, information on services, resources, and assistive technology could be printed from library websites as needed.

Staffing

Contact for Questions Related to Disability Services. This information varies as to whether a specific individual or position within the library or university is listed. Often there is a link to an e-mail address without a name. One website provided the names of two individuals who might be contacted, and another referred questions to the chair of the library's accessibility committee. Other websites linked to accessibility resource rooms or campus offices for assistive technology and services.

Library Staff Training. Only 5% of library websites examined contained information related to library staff training. However, additional documents may be available in staff intranets, which are often located behind firewalls. Some websites included guidelines for assisting people with disabilities in emergency situations. Among the links found on websites targeted toward staff instruction are Assistive Technology Training; Assisting Patrons with Disabilities; Software for Visual Disabilities & Software for Learning Disabilities (includes online tutorials); Equipment for Mobility Disabilities; and, Accessible Technology Products.

Collections. All ARL libraries studied appeared to collect materials related to disabilities and services for people with disabilities. An in-depth study of the collections was not conducted by the researchers. However, most likely the number of volumes in each library is affected by variables such as curriculum needs, faculty and student research interests, and budgetary constraints.

Facilities

The American with Disabilities Act requires that existing architectural barriers be removed whenever feasible. Although it is likely that most academic libraries have reviewed their buildings and made changes, this is often not mentioned on their webpages. The elements studied for facilities include communication, parking, structural modifications, branch library accessibility, rest rooms, elevators, and emergency procedures (see Table 2). Information about communication was found on 82% of the websites studied. Parking information and structural modifications, like ramps and entrance assistance, were addressed for more than half of the libraries.

TABLE 2
Facilities Found on Academic Library Websites

Facilities	Percentage
Communication	82%
Parking	55%
Structural modifications	52%
Branch library accessibility	46%
Rest rooms	45%
Elevators	45%
What to do in emergency	17%

Information on ADA accessible rest rooms, elevators, and facilities in branch libraries was also present on a little less than half of all libraries with webpages. On the other hand, only 17% of library webpages had information about emergency procedures.

Communication. This category included equipment and service options within the libraries. Most commonly noted was specialized equipment such as TTD/TTY phones or pay phones with volume control. One library stated that selected telephones were installed at wheelchair height. Assistive technology—software, hardware, peripherals—can also improve communication. In addition, libraries often mentioned alternative methods of communicating with library staff, such as chat, texting, or e-mail. Mailing addresses were also provided.

Parking. Frequently libraries noted the location of accessible parking on campus, particularly in relation to the libraries. In some instances links to campus maps also showed curb cuts, potential outside barriers, and accessible pathways. One library website had a particularly useful interactive map. This library used Google Maps to show patrons how to locate handicap parking places and building entrances. Another website stated that if handicapped spaces were not available, vehicles displaying handicapped plates or hang-tags can park in any university lot at any time. Occasionally websites mentioned additional enhancements for accessibility such as lift-equipped vans, Dial-A-Ride, and campus buses.

Structural Modifications. Frequently structural modification information related to automatic or assistive entrances or ramps for individuals using wheel chairs, crutches, canes, or other mobility devices. While many of the websites indicated that their libraries were accessible, others noted that there were barriers to access. Several libraries asked that people ring a bell or telephone for assistance entering a building or to access a particular floor. A website stated that their stacks are ADA-spaced. Conversely, some websites admitted that various stacks or offices are not accessible to wheelchairs but that patrons should ask library staff for assistance. One library stated that structural barriers to access in a branch library would be addressed during future remodeling projects.

Branch Library Accessibility Information. When branch libraries did exist, they were more likely to indicate problems with building accessibility versus main libraries. For example, one branch stated that the barrier-free access door is kept locked so patrons need to call in advance to arrange for a remote control device for entrance. Another indicates that should patrons have difficulty opening the entrance door, they should "knock loudly." Some branch libraries provide contact information for individuals who might address accessibility needs specific to their libraries. A few libraries included floor maps for some of their branch libraries as well as for the main library.

Elevators and ADA Rest Rooms. Many websites linked to individual library floor maps that note ADA elevators and accessible rest rooms. Occasionally websites indicated accessible controls or Braille markings within the elevators. One library indicated that all rooms, including rest rooms, are Braille labeled. Several libraries stated the availability of accessible water fountains.

Information on What to Do in Emergency. Several libraries mentioned the availability of strobe fire alarms for patrons who are hard of hearing. Some libraries include instructions for emergency situations, such as safe areas of refuge and the most accessible routes in and out of stack areas. One website provided emergency guidelines for library staff, including assisting users in moving to stair wells or areas of rescue assistance and notifying campus security.

Other. Two library websites noted that service assistance animals, such as seeing-eye dogs, are permitted in library facilities. One said that a wheelchair-accessible book drop, particularly for the convenience of mobility-impaired patrons, was located in a parking lot.

Assistive Technology

Based on the ALA guidelines, "Libraries should work to...integrate assistive technology to meet the broad range of disabilities, including learning, mobility, sensory, and developmental disabilities." Assistive technology includes software and hardware including peripherals, devices, and equipment. As defined under federal law, an assistive technology device is any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities (Assistive Technology Act 2004).

Eighty-seven percent of libraries with disability pages listed software and hardware on the library's website. Libraries organized their information for assistive technology in a variety of ways. Some divided the software and hardware by the disability: mobility, learning, visual, and auditory. Others just provided a listing of the software and hardware. The ele-
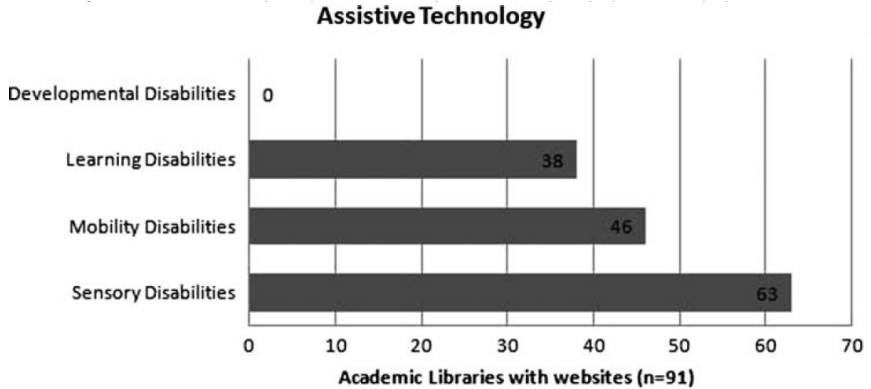
Assistive Technology

FIGURE 1
Assistive technology categories on academic library websites.

libraries provided technology for sensory disabilities. Another 51% had information for persons with learning disabilities and 42% for mobility (see Figure 1).

SOFTWARE

The most popular software owned by libraries was ZoomText (55 of the libraries studied), available from Ai Squared, Job Access with Speech (JAWS), produced by Freedom Scientific (56 libraries), Dragon Naturally Speaking (35 libraries), Kurzweil 1000 (28 libraries) and 3000 (34 libraries), and Open-Book (OCR) (18 libraries). ZoomText is "integrated magnification and screen reading" software and JAWS reads the text on the screen with commands to meet the needs of visually impaired individuals (ZoomText 2010; JAWS 2010). Dragon Naturally Speaking, speech recognition software, has been reviewed by an editor of the *PC Magazine* as "very good" (Muchmore 2008).

OpenBook, also produced by Freedom Scientific, reads and scans print material and converts it to electronic text (OpenBook 2010).

Cambium Learning Group is the producer of the Kurzweil software and hardware system, which is designed to meet the needs of children and adults. According to the website, Kurzweil 1000 reads the text of printed and electronic resources for visually impaired individuals (Kurzweil 1000 2010).

Likewise, Kurzweil 3000 allows individuals to reformat text and provides access to a variety of individuals with dyslexia, attention disorders, and several other learning ability issues (Kurzweil 3000 2010). The Kurz-

weil system package is configured for the Windows platform and can include the OCR scanner and printer with the software. Because of the different packages available, some libraries have listed Kurzweil 1000 and 3000 under both software and hardware.

While some library websites categorize their technology for a specific use, often others can also benefit from these products. Much of the visual software can be used by individuals with learning and cognitive disabilities and by English-language learners (Vandenbark 2010, 23-29; McHale 2007, 25-28). Dragon Naturally Speaking software, used for dictating speech to text, can be utilized by individuals that are mobility, visually, and learning ability challenged.

No assistive technology was identified for meeting the needs of developmentally disabled individuals. This is an area that needs to be further researched to meet the needs of the developmentally disabled individual. Academic libraries are beginning to partner with developmentally disabled organizations to address how to meet these students' needs (Mulliken and Atkins 2009, 276-287).

HARDWARE AND EQUIPMENT

Many of the hardware and computer peripherals were common to all libraries. Some websites listed specific keyboards, Braille typewriters, scanners, head phones, embossers, monitors, and printers. Special adjustable office equipment was supplied, such as tables, work stations, and photocopy machines.

Unique equipment listed on the websites included a talking calculator, Ergopod stations, a videophone at Kent State University, and Intellikeys adaptable keyboards. The Intellikeys keyboards produced by Intellitools are compatible with Mac and Window computers and provide a flexible way to meet the needs of diverse users. Wayne State University provided a thorough list of mobility and orthopedic impairments with explanations of the software and equipment. Closed-captioned video collections were also available on some libraries' websites to meet the needs of sensory impaired individuals.

CENTERS AND LABS

An additional element was a designated space or responsibility for the software and hardware. On 37% of websites, the assistive technology was located in a separate room or center in the library. Assistive technology centers or adaptive centers were managed either separately by the library or collaboratively with information services or disability services. The centers and labs demonstrate the collaborative support of disability offices and information technology (IT) departments and libraries in meeting the needs of people with disabilities.

For the majority of libraries the software and hardware were available on computers in the library. Some common locations were in the information commons or reference area. Also noted were the different policies and procedures for using these services. The usage policies for some labs were very restrictive. For example, some assistive technology centers were locked rooms to be used only by students who have signed up for services at the disability office. In contrast, there were some libraries that provide Text Help and Kurweil 3000 on all their public computers. Another variation for service is providing a laptop with the preloaded software (Text Help, Kurweil, and Dragon Naturally Speak) for students to use.

Larger library systems with several campuses had inconsistent assistive technology information at the different branches and campuses. This may reflect the variety of scenarios for managing these services. However, the language of the policies and procedures set the tone for service. A welcoming statement appears on the University of Illinois at Chicago website, "These rooms are available for anyone with visual, perceptual, cognitive, or other disabilities who may be aided by this technology."

Overall, websites that have a specific list of software and hardware broken into primary areas of disability are very useful. Informative webpages also provided links to room layout for the assistive technology center and labeled the computers with the specific software and their equipment.

Reasonable Accommodations Made. For the most part, the researchers believe that the ARL libraries studied are making reasonable accommodations for individuals with disabilities. Nearly all of the ARL libraries had websites, or at least links, specific for persons who may have need of special accommodations. Information found through these links covered a variety of topics including facilities, services, and assistive technology. A few libraries, however, appeared to have little information specific for the differently able.

DISCUSSION AND CONCLUSION

Findings indicate that a large majority of ARL libraries (88%) have a webpage for people with disabilities. These webpages differ widely in length and coverage. While some are easily accessible from the libraries' homepage, others prove more challenging to locate. Nearly all ARL libraries with webpages for people with disabilities contain information related to assistive technology.

Parking and accessible entrances are frequently mentioned. While it was evident from the study that most libraries have accessible entrances, some require wheelchair users to ring a bell or to ask for assistance. Although major structural modifications may be required, libraries should continue to look for funding to improve access to their buildings. Online library building maps may prove useful to some patrons. Some libraries include

maps on their website but do not specify ADA rest rooms or elevators, narrow stacks, etc. Most libraries provide webpages for branch libraries. However, it was noted that the information on these lower webpages contained inconsistent information specific to accessibility. Few websites address information related to accommodations for the differently able in emergency situations.

There are some exceptions; for instance, Johns Hopkins and North Carolina State libraries both have information on procedures for evacuation and emergency services. The University of Hawaii was the only library to provide procedures for staff to assist users during an emergency evacuation.

The researchers suggest that a library coordinator be designated to serve as liaison between the libraries, patrons with disabilities, and campus offices for assistive services and technology. The coordinator's name and contact information should be listed on the library's webpages and in campus phone directories.

The coordinator should lead efforts to discuss library services, facilities, and assistive technology with differently able individuals as well as the campus community as a whole. Are the individuals aware of any barriers within the libraries or would additional services be helpful? Coordinators should also consider a more formal process for needs analysis, such as round table discussions or surveys of people with disabilities. It is also important that librarians keep in contact with campus offices having the most responsibility for meeting the needs of this population group. Partnerships with these groups should be created whenever possible. Are staff members aware of the services, facilities, and assistive technology currently offered by the library? Do they have suggestions for library enhancements specific to meeting the needs of this population group? Ask library staff members' opinions on publicizing library services. Perhaps staff members might be aware of potential funds that might be available to improve library services, assistive technology, or facilities to increase accessibility.

Some general guidelines for librarians reviewing their webpages are:

- Remember your audience! Too frequently websites are aimed toward those who work in libraries rather than library users.
- Patrons should be able to locate the disability services website easily and not have to guess at its location or click on multiple levels to find it. The website should be easy to navigate.
- The website should have a positive or at least a neutral tone. Unfortunately, some may be perceived as negative. Also, check the tone on any forms that libraries are asking people with disabilities to complete to obtain special accommodations. An attractive and friendly website will be welcoming.

- Webpages should contain a freshness date and be reviewed on a frequent basis. Dead links are frustrating and may not reflect favorably on the library.
- As noted earlier, include the name and contact information for the library's coordinator of disability services.
- Consider including links to other campus services that provide services to this population group.

Many library websites indicate that staff will retrieve materials for patrons in need of this assistance. However, most of the websites mention some combination of services such as circulation assistance, the possibility of designating a proxy to pick up materials, photocopying, interlibrary loan accommodations, reference or research assistance, or instructional services specific to individuals with disabilities. Libraries may wish to consider these core services. Sixty-four percent of libraries include mission statements specific to this population group on their website; however, very few contain printable flyers or information sheets. Publicity efforts such as these may also demonstrate that libraries are interested in meeting the needs of these individuals and have a strong interest in accessibility. Library staff training related to services for people with disabilities is rarely mentioned on the website. Perhaps, however, this is being done but is not considered germane for inclusion on the website.

Availability and functionality of assistive technology should be reviewed on a yearly basis at minimum, as well as a review of use and ease of accessibility. A detailed listing of available software and hardware should also be included in library websites where possible. Libraries should continue to explore collaborative relationships with information technology and disability services to share computer equipment and technology in the information commons or in the adaptive technology centers. Providing a map to the location of these computers and centers improves the service to library users.

A great deal of useful information was also gained from the workshop "Differently Diverse: Moving Libraries beyond ADA Compliance to Full Inclusion for All" presented by Copeland et al. One specific suggestion for libraries designing webpages was to place the link for the people with disabilities link near the top of the page, as screen readers scan text from the top left to the bottom. This information is helpful, as some libraries have their link to information at the bottom footer, the bottom of the page, or on secondary pages.

The workshop panelists also alluded to the lack of technology usage by people "differently able." They stated that assistive technology provides access to all and is beneficial for individuals whose primary language is not English. Librarians were encouraged to ask differently able individuals

TABLE 3
Recommended Academic Library Websites

Arizona State University Libraries—provides an ADA Services Center in the Hayden Library as well as a map, complete with the number of steps needed to arrive at the center
University of Colorado Libraries—offers valuable information and services including Bookfinder, a system to assist patrons in locating and pulling books in the stacks
Colorado State University Libraries—provides a detailed list of hardware and software along with five assistive technology rooms
Georgia Tech University Libraries—provides useful Google interactive map with directions to each library as well as handicap parking places and information about accessible entrance and parking
University of Kansas Libraries—displays list of all library services and links to maps with parking areas
University of Michigan Libraries—provides links to most of the libraries in this large system and lists ADA links as well as accessible parking, building, and study space information
University of Minnesota Libraries—provides consistent information for each branch, including a map of the library and information on accessible entrances, parking, elevators, and restrooms
Penn State University Libraries–displays maps for both accessible and nonaccessible entrances, elevators, restrooms, phones, stacks, and offices
University of Tennessee Libraries—includes disability services information for library staff training related to people with disabilities

what services and technology they need to meet their academic needs. Database vendors should be encouraged to comply with website guidelines to ensure databases are accessible to all. Panelists also remarked that the acquisition of nonprint resources and the accessibility of databases are an emergent area of research (Copeland et al. 2010).

A spring 2010 follow-up review of ARL library webpages for people with disabilities found some to be particularly noteworthy, as listed in Table 3.

The purpose of our research was to examine and compare academic libraries' webpages for people with disabilities. This study offered a baseline or a "snapshot in time" of ARL libraries' webpages for people with disabilities. This is also a limitation since library websites undergo frequent updates or changes causing results to vary somewhat. However, this examination and comparison adds to the literature on library webpages for the differently able. It offers discussion points and some suggestions for web developers and librarians. This may lead to improvements in library websites and services for individuals with disabilities. Another limitation is the initial focus on websites rather than on the differently able who benefit from accessible library accommodations and services. It is important that their voices be heard in future studies, both on an individual basis as well as in other venues such as round tables or surveys. Perhaps the American Library Association may also wish to review its Library Services for People with Disabilities Policy document to see whether changes or additions should be considered.

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