### Part 1: Comparison Chart

<table>
<thead>
<tr>
<th>Article 5</th>
<th>“US National Accessibility Survey: Librarians Serving Patrons with Disabilities”</th>
</tr>
</thead>
</table>
| **Topic, Author, (Author's Background)** | **Topic:** Study of delivery of services to disabled patrons.  
**Author: Laurie J. Bonnici**  
Assistant Professor at the University of Alabama, College of Communication and Information Sciences. Her research is centered on social disconnects in information technology, user support, information technology design, and application for effective information access. She is the corresponding author and can be reached at lbonnici@slis.ua.edu.  
**Author: Stephanie L. Maatta**  
Assistant Professor at the University of South Florida School of Library and Information Science. She currently teaches in the area of reference and user services, including a special topics course entitled “Services for People with Disabilities in Libraries.”  
**Author: Muriel K. Wells**  
Wells is a Research Librarian for the Network of Children’s Advocacy Centers. Wells holds a Master’s degree in Library and Information Studies from the University of Alabama. |
| **Problem Statement or Research Problem** | Can students navigate electronic resources independently and locate and select articles for their research? |
| **Approach or Research Method** | Qualitative research approach |
| **Types of Data and Data Sources** | Data were rich and presented in numerous and detailed figures which included the following: educational attainment of BPH librarians from high school through Ph.D. (Figure 1, bar chart, p. 516); age of oldest client ranging from 60-100+ (Figure 2, pie chart, p. 517); ages of youngest clients from under 10-29 years (Figure 3, pie chart, p. 517); age of majority of clients from 35-89 years (Figure 4, pie chart, p. 518); confidence of national access by 2012 from confused to very confident (Figure 5, pie chart, p. 520). |
| **Data Collection Strategy and/or Instrument** | In December 2008, a Web-based survey consisting of 27 questions was distributed to the 128 library professionals in the 50 United States and the District of Columbia listed as providing materials and services through the National Library Service for the Blind and Physically Handicapped (NLS/BPH). The survey solicited information in six key areas: clientele, services, career opportunities, LIS education, state/local services, and librarian demographics (p. 515). An opened-ended question was included at the end to collect information beyond the scope of the survey. The email survey is included in the appendix as Figure A1. |
| **Data Analysis Approach** | The qualitative study employed a research design that was exploratory in nature. Employing a Web-based survey, the authors extracted data from the findings and graphically illustrated results in bar graphs and pie charts. The data were subsequently interpreted for the reader in written form. |
| **Findings/ Results /** | While the Internet and adaptive technologies hold much promise for the |
Outcomes

visually impaired in bridging the digital divide, there are still challenges to overcome. Two key challenges, according to this team of researchers, are training staff and utilizing technology that interfaces well with assistive technologies (p. 512).

Implications of the Research/Study/Evaluation

The scope of the study was limited to librarians serving NLS/BPH which also limits its findings and implications. The authors admit that expanding the survey to other countries could encourage future research and provide greater insight. The authors are strong advocates of shifting academic library facilities from special access areas to universal design. Further, the study suggests that it is vital to prepare graduates to serve an aging population that will challenge standard methods of information access (p. 512).

Citation


---

**Part 1: Comparison Chart**

<table>
<thead>
<tr>
<th>Article 6</th>
<th>“Best Practices for Serving Students with Disabilities”</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic, Author, (Author’s Background)</strong></td>
<td>Topic: Best practices for serving students with disabilities across an evaluation group of eight universities in the Rocky Mountain region of the United States.</td>
</tr>
<tr>
<td><strong>Author:</strong> Sue Samson</td>
<td>Professor, Humanities Librarian and Library Instruction Coordinator at the Maureen and Mike Mansfield Library at the University of Montana. Curriculum Vita of Sue Samson <a href="https://www.umontana.edu/library/staff/sue-samson/">at this link</a>. The author may be contacted at <a href="mailto:sue.samson@umontana.edu">sue.samson@umontana.edu</a>.</td>
</tr>
<tr>
<td><strong>Problem Statement or Research Problem</strong></td>
<td>What are best practices to serve students with disabilities?</td>
</tr>
<tr>
<td><strong>Approach or Research Method</strong></td>
<td>Qualitative research approach</td>
</tr>
<tr>
<td><strong>Types of Data and Data Sources</strong></td>
<td>A series of five tables presents data in the following categories: minority group representation at each (of the 8) institution (Table I, p. 265); physical accessibility (Table II, p. 266); services (Table III, p. 268); monitoring and management (Table IV, p. 269); and investment (Table V, p. 270).</td>
</tr>
<tr>
<td><strong>Data Collection Strategy and/or Instrument</strong></td>
<td>Data collection forms, included in the paper as tables, were the primary instruments the researcher elected to use (shared in advance of the scheduled site visit). The author conducted interviews with designated librarians most directly responsible for disabled patron services. Physical access to and within the library facility was evaluated and documented. Researchers met with officials at each Disabled Student Services office on each campus. The author conducted site visits to eight academic libraries to document how their facilities, services, management practices, and investments meet the needs of patrons with disabilities and to identify best practices.</td>
</tr>
<tr>
<td><strong>Data Analysis Approach</strong></td>
<td>The author of this qualitative research study quantitized data collected from survey instruments into numeric percentages to rank minority group representation. Using eleven variables, the author collected yes/no responses on a paper survey from eight academic libraries regarding the physical features of the libraries. Other tables represent the same data analysis approach of collecting survey data, converting the data into numeric percentages or yes/no tabulations, and then writing commentary on the data.</td>
</tr>
</tbody>
</table>
Findings/Results/Outcomes

Not all disabled students disclose their disability in higher education. The author discovered that self-reporting students with disabilities were the largest minority group at three campuses in her study and the second largest minority group at another three campuses. Complaints from disabled patrons were the driver for five libraries to modify their services with three libraries incorporating elements of universal access. Out of eight participating universities, not one proactively had configured a set of best practices to serve students with disabilities (p. 260).

Implications of the Research/Study/Evaluation

The research enabled the authors to identify and recommend a series of best practices to provide academic libraries the tools they need to comply with the spirit of the Americans with Disabilities Act and the new Department of Justice regulations to be implemented in 2012 (p. 260).

Citation


<table>
<thead>
<tr>
<th>Article 7</th>
<th>&quot;Online Databases and the Research Experience for University Students with Print Disabilities&quot;</th>
</tr>
</thead>
</table>
| Topic, Author, (Author’s Background) | Topic: Visually impaired student challenges using adaptive technology to access online academic databases.  

**Author: Kelly Dermody**  
Disability Studies Librarian and Coordinator of Library Services for Persons with Disabilities at the Ryerson University Library located in Toronto, Canada. Dermody is the corresponding author and may be reached at kdermody@ryerson.ca.  

**Author: Norda Majekodunmi**  
Reference and Instructional Librarian at the Scott Library at York University, Toronto, Canada. Majekodunmi has a B.A., M.ISt. and teaches Information Literacy classes. Her research interests include accessibility of electronic library resources for users with disabilities, scholarly communication issues, and the application of Web 2.0 technologies in libraries. |
| Problem Statement or Research Problem | What are the challenges facing visually impaired students in accessing online research databases using adaptive technology? |
| Approach or Research Method | Mixed research approach |
| Types of Data and Data Sources | Two tables presented detailed data from the study including: Locating and reading full text articles by database (Table I, p. 154) and student rating of using screen readers to complete specific tasks by database (Table II, p. 155). |
| Data Collection Strategy and/or Instrument | A total of ten undergraduate students at Ryerson University and York University participated in a study conducted in computer labs equipped with various screen readers (JAWS, Zoomtext and Kurzweil 3000). Subjects were asked to complete a series of search tasks in three different online databases (Expanded Academic ASAP, CBCA Complete, and Sociological Abstracts).  

“For each database participants were instructed to use their screen readers to: (1) search the database for academic articles on ‘women with disabilities in Canada’; (2) identify two full-text scholarly articles; and (3) access the articles and read the first page of each article” (p. 152). Further, the authors utilized a keystroke recording program called
Camtasia Studio to capture and time the experience of each participant. The authors also administered a pre- and post-survey to collect quantitative data.

Data Analysis Approach
Participants in this mixed research study completed search tasks using three different academic databases using Camtasia screen recording software to capture the results. Both video and audio documentation of the process occurred. Survey data was collected before and after each test session (p. 149).

Findings/Results/Outcomes
Quantitative data show that blind, low vision, and otherwise visually impaired students encounter significant barriers when attempting to access academic databases particularly when using screen-reading adaptive software (p. 149).

Implications of the Research/Study/Evaluation
This research shows that while companies that market academic databases are aware of the shortcomings of their product’s accessibility for the visually impaired end user, they have heretofore been reluctant to integrate usability testing into their product development process. The authors argue that it is in vendors’ best interest to aggressively prioritize issues of accessibility for the benefit of all users. Further, they point out that libraries can help visually impaired patrons who use screen readers by providing special training (p. 149).

Citation

<table>
<thead>
<tr>
<th>Part 1: Comparison Chart</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Article 8</strong></td>
</tr>
<tr>
<td>“Accessibility of Web-based Library Databases: The Vendors’ Perspectives in 2007”</td>
</tr>
</tbody>
</table>

**Topic, Author, (Author’s Background)**

**Topic:** Investigation of accessibility of online databases from the database vendor perspective.

**Author: Suzanne L. Byerley**
Library Instruction Coordinator at the Kraemer Family Library, University of Colorado at Colorado Springs; Associate Professor. Byerley’s Curriculum Vita is located at this link. Byerley may be reached at sbyerley@uccs.edu.

**Author: Mary Beth Chambers**
Associate Professor & Catalog Librarian; Department Liaison to Nursing and Health Sciences, Computer Science, and Psychology at the Kraemer Family Library, University of Colorado at Colorado Springs. Chambers may be reached at mchamber@uccs.edu.

**Author: Mariyam Thohira**
Assistant Professor & Electronic Serials Librarian; Department Liaison to Biology, Chemistry, and Physics at the Kraemer Family Library, University of Colorado at Colorado Springs. Thohira may be reached at mthohira@uccs.edu.

**Problem Statement or Research Problem**
Are database vendors exceeding the bare minimum for ADA compliance to make their products accessible to the blind and visually impaired user group?

**Approach or Research Method**
Qualitative research approach

**Types of Data and Data Sources**
Two tables presented detailed data from the study including: Questions and responses to vendors about their database products (Table I, pp.
Data Collection Strategy and/or Instrument
Web-based survey released to vendors of 17 databases offered through the Kraemer Family Library. In May 2007, the authors emailed customer service representatives with a description of the study and request to be referred to the appropriate person to survey in their organization. Using Survey Monkey, the authors designed a study composed of three main parts: general questions about product accessibility, compliance with Section 508 standards, and accessibility testing/usability studies. More commonly known vendors included EBSCO, H.W. Wilson, JSTOR, LexisNexis, ProQuest, and Thompson Gale.

Data Analysis Approach
The authors of this qualitative study used a Web-based questionnaire to collect data from makers of academic search databases concerning the accessibility of their products. The data was tabulated and categorized in tables using percentage values. The authors then explained the data analysis in their written commentary.

Findings/Results/Outcomes
The authors discovered that while nearly all vendors who agreed to participate in the study (not all gave consent) consider their product mostly accessible to users of adaptive technology; still few promote these features in their marketing and sales campaigns. The study showed that most vendors test their products for accessibility, but few conduct usability tests with persons who actually are visually impaired (p. 509).

Implications of the Research/Study/Evaluation
The research showed that purchasing agents of academic libraries must be proactive in encouraging vendors to provide products that are not only user-friendly but accessible to persons with disabilities (p. 509).

Citation

---

Part 1: Comparison Chart

<table>
<thead>
<tr>
<th>Article 9</th>
<th>“Ubiquitous Library Usability Test for the Improvement of Information Access for the Blind”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic, Author, (Author’s Background)</td>
<td>Topic: Usability tests to improve library accessibility for the blind and visually impaired using the LG Digital Talking Book product to produce a new ubiquitous service model.</td>
</tr>
<tr>
<td>Author: Seung-Jin Kwak</td>
<td>Kwak is the Professor at the Department of Library &amp; Information Science, Chungnam National University, Daejeon, Korea. Prior to this, he was a librarian at the LG Sangnam Library, and has been a consultant or the ubiquitous library for the print-disabled LG DTB Library. Research interests include metadata, digital libraries, digital content, and information systems.</td>
</tr>
<tr>
<td>Author: Kyung-Jae Bae</td>
<td>Bae is the Manager of the LG Sangnam Library in Seoul, Korea. He has worked on various library projects, including the ubiquitous library project for the print-disabled LG DTB Library and the science portal for youth project. His research interests include information usability and information literacy. He can be contacted at <a href="mailto:bae@lg.or.kr">bae@lg.or.kr</a>.</td>
</tr>
<tr>
<td>Problem Statement or Research Problem</td>
<td>Are the information needs of the blind and visually impaired better served using the innovative technology of the LG Digital Talking Book to create a ubiquitous library service model?</td>
</tr>
<tr>
<td>Approach or Research</td>
<td>Mixed research approach</td>
</tr>
</tbody>
</table>
### Method
In this study, the researchers used survey questionnaires directed toward the blind, in-depth interviews with the instructors of students who were blind, and analyses of usage statistics collected from a web server log of the LG DTB Library. The survey was conducted in an online format. To assure objectivity, the authors collected data from outside the library by soliciting the help of the largest blind online user community in South Korea, Broad Town (p. 628). The survey questionnaire included five categories: Internet usage pattern, reading pattern, utilization of the LG DTB Library, user requirements for service improvement, and personal information. Teachers recommend the top five blind end users to be subject to in-depth interviews (conducted at the participant’s workplace) by the authors to collect qualitative data. Results from the online survey, interviews, and usage statistics were collectively analyzed by topic and recommendations were formulated for the management of library services for the blind (p. 629).

### Types of Data and Data Sources
Twenty tables presented detailed data from the study including: access procedures of the LG DTB Library (Table I, p. 626); design of the questionnaire (Table II, p. 628); age distribution, teens to fifties+ (Table III, p. 629); occupational distribution (Table IV, p. 630); favorite websites - general (Table V, p. 630); favorite websites – sites for the blind (Table VI, p. 631); website preference reasons (Table VII, p. 631); average number of books read per week (Table VIII, p. 631); favorite reading methods (Table IX, p. 631); preferences on subject area (Table X, p. 632); the average frequency of LG DTB Library use per week (Table XI, p. 632); source of site recognition (Table XII, p. 633); preferred voice book listening methods (Table XIII, p. 633); reasons for satisfaction with the LG DTB Library services (Table XIV, p. 633); quantitative monthly usage trends of the LG DTB Library (Table XV, p. 634); statistics of digital voice usage tools (Table XVI, p. 635); preferred subject areas and actual usage statistics (Table XVII, p. 635); usage statistics of digital voice books (Table XVIII, p. 635); average use rate of new publications (Table XIX, p. 636); and average usage rate of massage textbooks (Table XX, p. 636).

### Data Collection Strategy and/or Instrument
The authors chose a mixed research approach blending quantitative and qualitative data collection strategies. Blind patrons took an online survey and were interviewed. Usage statistics analysis of the Digital Talking Book Library services and Web server log analysis comprised the usability test component (p. 623).

### Data Analysis Approach
Usability testing was the primary data analysis approach of choice in this study. Extensive representation of data in twenty data-rich tables accompanied by written commentary to help the reader understand the data findings was included.

### Findings/Results/Outcomes
Blind participants report that serious issues for them include lack of educational content, delayed accessibility to new publications, and unbalanced subject areas. The paper effectively shows that mobile devices were instrumental and preferred in diffusing a new service model for the blind or visually impaired patron (p. 623).

### Implications of the Research/Study/Evaluation
The researchers were able to show that blind and visually impaired patrons read far more than the average non-impaired patron. Eighty-four percent of those who participated in the study read more than two books per week (p 636). The service model of innovative delivery of content using mobile devices is revolutionary.

### Citation
### Part 1: Comparison Chart

<table>
<thead>
<tr>
<th>Article</th>
<th>“Overcoming the Information Gap: Measuring the Accessibility of Library Databases to Adaptive Technology Users”</th>
</tr>
</thead>
</table>
| **Topic, Author, (Author’s Background)** | **Topic:** Measuring and assessing database accessibility to adaptive technology users.  
**Author:** Jennifer Tatomir  
Tatomir is a recent graduate of the School of Information at the University of Michigan. While at the school, Tatomir has conducted several usability studies. The author can be contacted at tatomirj@umich.edu.  
**Author:** Joan C. Durrance  
Joan C. Durrance is the Margaret Mann Collegiate Professor of Information at the University of Michigan School of Information. Durrance teaches and conducts research in information needs and use in communities, community informatics, community-focused library services, evaluating the outcomes of services, and professional practice of librarians. The author has written several books and articles. Durrance's bio web page can be found [here](#). |
| **Problem Statement or Research Problem** | This research addresses problems associated with the accessibility of academic library databases for visually impaired or blind patrons. |
| **Approach or Research Method** | Mixed research approach |
| **Types of Data and Data Sources** | Five tables and one graph present detailed data from the study including (in order of appearance): load time group one - slow responding databases (Table I, p. 586); load time group two – unacceptable slow loading databases (Table II, p. 587); relationship between load time and number of missing TAC features (Figure I, graph, p. 588); moderately accessible databases (Table III, p. 589); marginally accessible databases (Table IV, p. 590); and inaccessible databases (Table V, p. 591). |
| **Data Collection Strategy and/or Instrument** | The Tatomir Accessibility Checklist (TAC) was used to test the accessibility of a group of subscription databases available at a large university library. The TAC (created by the author) uses 10 factors to determine how accessible a website or digital resource is to the user of adaptive technology. In addition to the TAC, the authors used surveys and interviews with qualified librarians and graduate students. |
| **Data Analysis Approach** | Using the TAC instrument, this mixed research study evaluated 32 databases and measured the accessibility of each database to users of assistive technology (p. 577). Load times (less or more than 5 minutes) are highlighted in the data and explained in written form by the authors. |
| **Findings/Results/Outcomes** | The authors were able to show in their study that 72 percent of the evaluated databases were rated as “inaccessible” or “marginally accessible” (p. 577). This demonstrates a low level of compliance to federal Web accessibility legislation and international accessibility standards. Using the TAC instrument, 10 component parts were measured to provide findings for interpretation (p. 577). |
| **Implications of the Research/Study/Evaluation** | The study is significant in that its findings can be useful by those who purchase databases for academic libraries. The research shows which databases are more accessible than others. Vendors of such products can benefit from the study by allowing their designers to analyze the data collected to add missing features (p. 577). |
Article Collection Critique & Synthesis

Introduction

Persons with disabilities are an ever-growing segment of any population. Bonnici, Maatta, and Wells (2009) suggest that “all nations are home to citizens who have congenital or acquired physical or mental disabilities that impede information access” (p. 513). A subset of the handicapped population, visually impaired persons, has essentially the same needs and desires for information to conduct their daily and business lives as those who are without a visual impairment. Tatomir and Durrance (2010) write:

> Information access represents a fundamental need of citizens within any society. From understanding legal rights and obtaining medical information, to attending school and earning a college diploma, all individuals in theory should possess unhindered access to a wide variety of options and tools capable of completely fulfilling information needs. (p. 577)

As the authors above contend, nearly every (adult) global citizen has legitimate needs to access the Internet. Sadly, the disabled in general and the visually impaired in particular are often marginalized, and open access is not necessarily tantamount to equal access.

Interestingly, visually impaired persons are returning to and prospering in institutions of higher education in large numbers. Dermody and Majekodunmi (2011) report that, “More and more students with disabilities are graduating from higher education institutions. There is no doubt that technology has opened the door for students with disabilities” (p. 150). Vocational Rehabilitation and Disabled Student Services partner together to play an integral role in helping the visually impaired student adjust to campus life.

The campus library is a wellspring of resources for all students in most university settings. While emerging technologies in academic libraries are presenting unprecedented benefits to the blind, low vision, or print disabled (henceforth collectively referred to as the “visually impaired,”) challenges continue to exist. One of the authors in the collection, Sue Samson (2011), contends: “The passage of ADA … did not automatically eliminate barriers and discrimination towards the disabled community any more than the passage of the Civil Rights Act of 1964 eliminated a culture of discrimination towards Americans of color” (p. 260). This statement should be a clarion call for equal access and universal design as societal priorities to reduce and, ideally, eliminate discriminatory conditions as exemplified in Samson’s assertions.

This collection of six refereed journal articles takes a closer look at what opportunities and challenges visually impaired patrons face in academic libraries. The collection also exposes a key vulnerability in libraries for the visually impaired research student: the serious challenge to access search databases using adaptive technology. This critique and synthesis will examine what are the indicators of opportunities and challenges based on the literature. Further, the paper will compare and contrast the articles on the basis of their respective similarities, differences, strengths, and weaknesses. Next, the paper will provide a section called “Take Aways” to summarize big ideas and lessons learned about the critique of the collection and segue to a conclusion to synthesize the information gained.

Part 2A - Similarities

The collection offered several easily discernable similarities revealing that each…

- was a research paper using a qualitative or mixed research approach
- was written in a library setting
- centered on the target population of the visually impaired patron
- dealt extensively with adaptive technology
- used instruments to measure data and generate findings
- presented research data collected at academic libraries (no public libraries in the collection)
included at least three general categories in their research findings: (1) the perspective of the visually impaired patron, (2) staff training, and (3) information technologies, assistive technologies, and accessible Web design

As can be seen, common threads are interwoven throughout the collection.

Part 2B - Differences

While the collection shared some similarities in research approach and methodology, it also reflected multiple differences. Obviously, no two authors or team of authors will see or report findings exactly the same, even if the topic is identical. Following are notable differences observed in the collection:

- out of the thirteen authors, eleven were female and two were male
- nine of the thirteen authors were professional librarians
- two of the six articles acknowledged the predominant role of the Web Access Initiative (WIA) section of the World Wide Web Consortium - (Dermody & Majekodunmi, 2011; Tatmir & Durrance, 2010)
- two of six wrote extensively of the American Library Association (ALA) - (Bonnici, et al., 2009; Byerley, Chambers, & Thohira, 2007)
- two of the six focused predominantly on the concept of universal access - (Bonnici, et al., 2009; Samson, 2011)
- four of the six focused on usability access to online databases for the visually impaired - (Byerley et al., 2007; Dermody & Majekodunmi, 2011; Kwak & Bae, 2008; Tatmir & Durrance, 2010)
- four articles featured research conducted within United States borders while two studies originated from other countries: Canada (Dermody & Majekodunmi, 2011), and the Republic of Korea (Kwak & Bae, 2009). Not surprisingly, these countries provide their own legal counterpart to ADA compliance regulations to protect the civil rights of the visually impaired in their homelands.
- three in the collection opted to use a qualitative research approach (Bonnici, et al., 2009; Byerley et al., 2007; Samson, 2011), and the other three elected to use a mixed research approach (Dermody & Majekodunmi, 2011; Kwak & Bae, 2009; Tatmir & Durrance, 2010)
- one study focused exclusively on the vendors’ perspective of Web-based research databases (Byerley, et al., 2007), as opposed to the more common consumer perspective
- one research paper used a social capital theory approach to their research thus providing a lens to conceptualize equal access in a global context (Bonnici, et al., 2009)
- a single article provided a background section outlining the history of library services in the United States to the visually impaired reaching back from 1897 to present (pp. 513-515), (Bonnici, et al., 2009)
- Samson (2011) wrote the only article that took on the ambitious goal to establish a set of best practices for academic libraries that conform to ADA and complies with new 2010 Department of Justice regulations
- Kwak and Bae (2009) offered a unique perspective into what the authors “…claimed to be the world’s first ubiquitous library for the blind … developed by the LG Sangnam Library” (p. 624). This study was unique among the collection in that it focused exclusively on the innovative concept of using state-of-the-art ubiquitous technology to untether the visually impaired patron from sole reliance on computers in lieu of mobile devices. The pair of researchers presents an entirely new service model (p. 624).
- while the collection was congruent as far as the target population, only one study mentioned the popular digital accessible information system (DAISY) technology (p. 626), (Kwak & Bae, 2009)

While the collection encapsulated similar themes involving the visually impaired patron target population, the bullet points above demonstrate significant diversity.
Part 2C – Strengths of the Collection

The collection has much to offer in the content and presentation of the data. Each article comes from a reputable journal, peer reviewed by scholars. The research follows generally accepted protocol for well-written research papers. Research problems and/or questions are clear and easy to identify. The data is presented throughout the collection in meaningful pie charts, tables, and figures. Each article contains a thorough list of references for further study.

The collection provides a diverse perspective into a number of interesting and expanding thoughts on the subject of opportunities and challenges for the visually impaired patron. For example, one author serves as tour guide for a brief history of academic libraries and the evolution of attempts to assist the visually impaired. Another author emphasizes the impact of the ADA and Section 508 of the federal code. Yet another offers a glimpse to the inner workings of a potentially new service model poised to replace desktop computers with handheld mobile devices to accommodate visually impaired patrons. These three examples accentuate the point from varying perspectives that both opportunities and challenges co-exist in the visually impaired patron’s world.

Adding further to the strength of the collection, the six articles are contemporary and not antiquated with articles published as recent as 2007, 2008, 2009, 2010 (two articles), and 2011. For example, Sue Samson (2010), whose research was published only one year prior to the of date of this critique and synthesis, holds that her research is unique:

No other recent study documents the broad spectrum of service needs that can be proactively addressed by academic libraries for students and faculty with disabilities. This study underscores the value of universal access to information as a civil right of this user group while also improving services for all. (p. 260)

Equal access as a civil right has been a hallmark of the United States legislative process in the last century. The underserved and hidden people groups within the American culture continue to be identified and addressed to incrementally extinguish the blight of inequality. Other authors within the collection share Samson’s opinion of the relevance, reliability, and validity of their research.

Byerley, et al. (2007) writes: “This is the second known study that examines online database accessibility and usability based on database vendors’ perspectives” (p. 509).

Korean researchers Kwak and Bae (2008) contend: “This paper has a unique value in that the real effect and usability of the ubiquitous library service for the blind is investigated for the first time” (p. 623).

Bonnici, et al. (2009) assert:

The literature review demonstrates that this survey is the most recent in three decades to determine the state of library and information services to disabled people in the USA. It is the first to address the topic in relation to new technologies, leading to better service through better understanding. (p. 512)

The three preceding quotations testify of the uniqueness and strength of the authors’ respective research efforts. There are many other quotes and excerpts that could be shared but they would be superfluous in making the point that this collection is strong in research methodology, significance, and relevance to the target population.

Part 2D – Weak Areas of the Collection

No research is exhaustive, and some research raises more questions than it answers. Inherent weaknesses exist in this collection as in any collection of literary or scholarly work on a given topic. A few authors in the collection acknowledge that their research approach is limited. For example, Bonnici, et al. (2009) admit that their study “…focused exclusively only polling librarians who were members of the National Library Service for the Blind and Physically Handicapped” (p. 512).
While traveling to academic libraries in multiple states is admirable, Sue Samson (2011) published “Best Practices for Serving Students with Disabilities” based on site visits, surveys, and interviews at only eight institutions out of the hundreds in the United States. Her research is sound but lacks the breadth and scope to be adopted industry-wide as a suite of best practices.

Dermody and Majekodunmi (2011) experienced a similar weakness in their study which focused only on a small sampling of university students (a total of ten) with visual impairments and, additionally, lacked a control group of non-visually impaired students against which the results could be measured.

Byerley, et al. (2007) confesses a pair of weaknesses in their research commenting, “This study covered a small sample of database vendors and relied on self-reporting by representatives from database companies” (p. 509). The authors also point out flaws in their methodology by revealing: “The drawback for all these methods lies in the fact that their results can quickly become obsolete as vendors roll out new releases or upgrades to their products” (p. 526).

While the LG DTB Library in Korea that Kwak and Bae (2009) conduct their research in is the only ubiquitous library for the visually impaired of its kind, this very fact limits comparison and contrast with others of its kind. The study cannot be replicated in any other academic library setting thus prohibiting validation of research findings across multiple studies. The authors further admit that “…library services for the handicapped [in Korea] are still in their infancy and are evolving very slowly” (p. 624).

The final article of mention in the collection is “Overcoming the Information Gap: Measuring the Accessibility of Library Databases to Adaptive Technology Users.” Co-author Jennifer Tatomir (2010), in what readers might perceive as an egotistical move, names the instrument of measurement after herself. The Tatomir Accessibility Checklist (TAC) is touted as the instrument of choice to assess databases interacting with assistive technology. Additionally, test subjects complained of database searches taking from four to eight hours in some cases yet the authors’ research only tested and measured for database search times in two load time groups: (1) sites which load in less than five minutes and (2) sites that require greater than five minutes to load. There seems to be a disconnection between what the students are complaining about and what is being measured.

While weaknesses did exist in the collection, these limitations were not so extensive as to nullify the data or make the findings invalid.

**Part 2E – Take Aways**

Clearly, the contribution of each article adds to the body of literature on the important topic of how academic libraries are responding to the specialized needs of visually impaired patrons. Further, an aging population will add to the number of non-traditional students returning to school with visual impairments and other assorted disabilities. While persons with disabilities are indeed a minority group, nevertheless their perspectives and needs are an important part of a diverse society. This collection is relevant on many levels and provides important discussions for civilized societies. The collection effectively shows that there is a strong potential for emerging technologies to bridge the digital divide as long as academic libraries commit vision and resources to develop adaptive technologies for patrons with disabilities. The data show that persons with visual disabilities are a growing demographic on university campuses and still suffer some effects of marginalization, whether intentional or not.

Sue Samson (2011) reminds readers that “…experiences of disability discrimination often exceed those based on gender and ethnicity” (p. 260). She goes on to report: “Those without a visible disability often withhold that information from family, friends, and employers due to the stigma and stereotypes still prevalent in today’s culture” (p. 261).

The negative undertones handicapped persons face on a daily basis is often prevalent even in an enlightened society. What the reader of the collection can surmise is that visually impaired persons may never receive the help they are entitled to because some will refuse to disclose their disability for fear of social reprisal.
A take away that is unmistakable is succinctly offered by Sue Samson (2011) in this powerful quote: “The renaissance builds on the social model of disability upon which the ADA is based that supports the idea that barriers create disability not an individual’s impairment” (p. 260). This is a keystone statement and one that the other authors in the collection have assented to in one way or another.

While new opportunities for the visually impaired patron abound, the collection also identified that impaired students intent on performing scholarly research using speech readers are in for a disappointing experience. The collection provides substantial evidence that while most libraries in the United States and abroad have done a good job at removing physical barriers to library holdings, still the electronic holdings seem to be out of reach for visually impaired patrons using adaptive technology.

Another big idea that four articles focused on is that vendors of academic databases like EBSCO and JSTOR need to offer trial versions of adaptive technology to libraries and that usability testing with actual visually impaired persons is strangely lacking in the industry. Further, the remarkable advancements in Web 2.0 technologies does not always take into consideration the compatibility needs of the visually impaired who rely on this technology to be a bridge and not a roadblock to their life development process.

Finally, as Tatomir and Durrance (2010) assert: “Few are aware that making digital resources accessible actually increases the usability of digital resources to the benefit of multiple user groups, not simply adaptive technology users” (p. 578). The collection effectively shows that universal design is in the best interest of the larger society and transcends the needs of any minority group.

Conclusion

This collection highlights the ever-increasing role of adaptive technology in academic libraries around the world. It reports that the number of persons affected by disabilities is rising. In the United States alone, the Census Bureau reports the number of persons with disabilities in 2005 represented 18.7 percent of the population (Samson, 2011). These are large numbers of people, many of whom are visually impaired and entering or returning to college campuses or online degree programs empowered by the technology boom. The collection has identified key points including:

- not every visually impaired student self-reports to Disabled Student Services offices
- database access is unacceptably slow or altogether impossible
- global efforts to help the visual impaired patron are in their infancy
- physical limitations are not the only barriers
- breakthroughs are emerging and best practices are evolving

The collection of six refereed journal articles has examined what are some of the opportunities and challenges for visually impaired patrons of academic libraries based on the literature. Each research study followed generally accepted practices for good research yielding findings that seem to be valid and trustworthy. This paper has attempted to compare and contrast the similarities, differences, strengths, and weak areas of the collection. Not surprisingly, the evidence suggests that libraries nationally and abroad have a ways to go to meet the changing needs of the visually impaired library patron in the 21st century. Research studies like those found in this collection are contributing to the larger body of knowledge to help raise awareness, provide critical statistical data, and ultimately aid hastening a better global environment for the visually impaired library patron.
References


