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Public Library Websites in the Reaching Across Illinois Library System: A Webometric Examination

By Amy vanGoethem

Readers: Dr. Stacy Creel, Dr. Jeffery Hirschy

INTRODUCTION

A public library's website is often the first introduction that a user has to the library. Users come to the website looking for information about the library's location, hours, how to get a library card, library programs, search the library catalog, or other services. As Poll writes, "Libraries have started to offer a new virtual 'entrance' to their services: the library website" (2007, p. 1). As such, a library's website must provide users with the information they are seeking simply and clearly. People expect websites to be simple to use and to be able to find the information they are seeking quickly; simply put "if it's convenient, they will use it; if not, they won't" (Nielsen & Loranger, 2006, Preface, xxi). Ideally, a public library's website will fulfill these needs for their community. The library website should provide information to patrons in a way that the majority of its users will understand. Providing access to information is a key component of the mission of public libraries and the library website is often the first stop for patrons looking to access library resources.

During the initial stages of the COVID-19 pandemic, an American Library Association (ALA) survey found that while 99 percent of American public libraries closed their physical buildings, they increased their digital offerings through expanded online checkouts, virtual programming, increased Wi-Fi coverage, and increased digital communications (2021). A library's website is the portal through which its users access these digital materials and services, which have grown in importance. The same report noted that Overdrive, a major library platform for eBooks and eAudiobooks, saw a 40 percent increase in checkouts of digital materials from 2019 to 2020 (American Library Association, 2021). This shift further demonstrates the importance of the library website to the mission of the library.

Purpose Statement

This study is a web analysis of Chicago area public libraries in RAILS (Reaching Across Illinois Library System) using checklists based on the work of Chow, Commander, and Bridges (2014), Powers (2011) and Vargas Ochoa (2020).

Research Questions

R1. What elements from the created checklist of website features are present in RAILS public library websites?

R2. How frequently are terms from the created checklist found on RAILS public library websites?

R3. What accessibility errors does the WAVE (WebAIM Accessibility Tool) find on RAILS public library websites?

R4. Where do public library home pages provide information on common patron questions (e.g. getting a library card, library location and hours, contacting the library)?

Definitions

Accessibility: "extent to which products, systems, services, environments, and facilities can be used by people from a population with the widest range of user needs, characteristics and capabilities to achieve identified goals" (International Standardization Organization, 2019, sec. 3.1).

ARIA (Accessible Rich Internet Applications): a set of standards published by the World Wide Web Consortium designed to make websites and web applications accessible to people with disabilities (World Wide Web Consortium, 2022).

RAILS: a library system serving over 1,000 academic, public, school, and special library agencies in northern and central Illinois (RAILS: Reaching across Illinois library system, n.d.).

Usability: "extent to which a system, product or service can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction in a specified context of use" (International Standardization Organization, 2019, sec. 3.13).

WAVE® Web Accessibility Evaluation Tool: "a suite of evaluation tools that helps authors make their web

content more accessible to individuals with disabilities. WAVE can identify many accessibility and Web Content Accessibility Guideline (WCAG) errors, but also facilitates human evaluation of web content" (WAVE web accessibility evaluation tool, n.d., para 1).

Webometrics: "the quantitative study of Web-related phenomena" (Theiwall, 2004, p. 1213).

Delimitations

This study is limited to the websites of public libraries that are a part of the Reaching Across Illinois Library System (RAILS) and are located in either Cook, Lake, or McHenry County Illinois. It analyzes the contents of their institutional websites and does not include information on any social media platforms such as YouTube, X (formerly known as Twitter), Facebook, or Instagram. It is limited to an analysis of the contents of the website available at the time of data collection and does not include historical versions of the site. Given the small sample size and short time frame, this analysis is limited in scope and cannot be used to make conclusions on the contents of all public library websites.

Assumptions

This study assumes that the list of library websites provided by RAILS is current and accurate likewise this study assumes that the websites analyzed are fully functional when data is collected. For this study, the WAVE accessibility tool is assumed to be fully functional and accurate.

Importance of Study

While there are no universally accepted standards for web design, much research has been done on the topic. This study builds on previously conducted research to create checklists and demonstrates how they can be used for assessment. This information can benefit individuals designing public library websites by providing insight into what others are doing. This study also aims to look at how that information is organized on each library website. This provides a glimpse at the different ways that libraries provide their patrons with the same information.

LITERATURE REVIEW

Evaluating Library Websites

From Poll's (2007) discussion of the website as a virtual entrance to the library to Velasquez and Evans's (2018) discussion of library websites as "electronic branches," the importance of the library website has been evident in the literature. There is much in the literature about different methods for reviewing library websites and the different criteria that can be used. The first method common in the literature is to review many different library websites, often in a specific geographic area. Within studies that employ this method, a common theme is the wide variety of criteria that can be used to evaluate websites.

In one of the larger studies of library websites, Chow, Bridges, and Commander (2014) pulled criteria from the field of computer science, specifically the work of information architecture researchers Peter Morville and Louis Rosenfeld. Similarly, Poll (2007) outlines in her address to the World Library and Information Conference criteria for evaluating library websites based on the work of web design experts Jacob Nielsen and Ursula Schulz. In a study of Pennsylvania library websites, Powers (2011) focuses on standards set by OCLC, the Idaho Commission for Libraries, and those established by Brian Mathews in his 2009 *Library Journal* article. The researcher went so far as to write that "there is no established criterion" for evaluating websites (Powers, 2011, p. 22). While there are differences in the criteria used by these researchers to evaluate library websites there are also commonalities such as the availability of key information like hours, location, link to the online catalog, contact information, and the use of a mixture of text and images (Chow, et al, 2014; Poll, 2007; Powers, 2011). The lack of established and generally accepted standards leaves authors room to analyze and build upon the work of others.

Other large-scale evaluations since then have built upon the work done by Chow, Bridges, and Commander and Powers. Velasquez and Evans (2018) used the eighteen criteria that Powers outlined to evaluate 1,517 public library websites from Australia, Canada, and the United States. Simpkins's (2019) review of Mississippi public library websites drew upon the work of Chow, Bridges, and Commander. Velasquez and Evans's (2018) study showed the

regional differences between library websites in different parts of the English-speaking world finding that Australian library websites tended to have less information than those of libraries in Canada and the United States. Simpkins's study showed that the websites of public libraries in Mississippi contain the recommended features identified by Chow, Bridges, and Commander at a similar rate to the public libraries across the United States in their 2014 study (2019).

Still, further large-scale studies have focused on evaluating the accessibility of library websites for people with disabilities using different tools to analyze the website's structure. Maatta Smith (2014) examined the accessibility of urban public libraries using the WAVE web accessibility tool finding that public library websites often fell short of meeting Web Content Accessibility Guidelines (WCAG) and did not have the features necessary to meet the information-seeking needs of people with disabilities. Ingle, Green, and Huprich (2009) had similar results in their analysis of Georgia public library websites using the WebEXACT tool finding that only four of the 58 libraries they studied had no errors. A recent similar study by Pollard (2021) used the AInspector toolbar extension for the Firefox web browser to analyze the accessibility of public library websites in Illinois and found that there is still much room for improvement in website accessibility. All these studies mention the limitations of such web tools in identifying accessibility errors with Pollard (2021) likening them to spell checkers which ultimately need a human to decide whether a word is misspelled or simply a word that the program does not recognize (Ingle, et al., 2009; Maatta Smith, 2014). These studies show that accessibility continues to be a large issue for library websites and a barrier to access to library resources for some users.

A common limitation recognized by the authors of these large-scale studies is that they only serve to provide a snapshot of library websites at a given time and do not input from users of the websites. Chow, Bridges, and Commander (2014, p. 264) write "Despite the large number of websites examined for this study, the patron user experience in terms of general satisfaction and how they use and perceive library websites remains unknown" illustrating the limitation of this type of analysis. While large-scale statistical analysis can identify large trends in the state

of library websites, they do not provide insight into the user experience but only compare those websites to guidelines chosen by the authors.

Usability Testing

Beyond the large-scale quantitative studies of multiple library websites discussed above, the literature also includes examples of usability case studies conducted on a single library website. Vargas Ochoa (2020) conducted a user-centered usability study as part of the redesign of the website of the University Library of California State University, Stanislaus by observing the methods used by 38 students to complete tasks on the website. Azadbahkt, Blair, and Jones (2017) conducted a similar observation-based usability study of the University of Southern Mississippi Library but examined the results of different user groups (undergraduate students, graduate students, faculty, and library employees).

These usability studies provide more in-depth information into how the users of a specific website manage tasks but not about library website trends overall. Azadbahkt, Blair, and Jones (2017) found that students did not always differentiate between different search bars for different tasks and rather approached the University of Southern Mississippi site like Google, expecting one search bar for everything while Vargas Ochoa (2020) found that the task-based menu system utilized by California State University, was easiest to navigate for students.

Similar Methodology

Webometrics has long been applied to library websites. The studies by Chow, Bridges, and Commander; Simpkins; Pollard; and Velasquez and Evans are just a few examples of webometric studies mentioned above. A webometric study most often begins by selecting the websites that will be covered. To create their sample, Chow, Bridges, and Commander randomly selected libraries from two websites that aggregate web addresses for public libraries and a list from the Carnegie Foundation of all academic libraries in the United States. They then limited the sample so that they had one rural public library, one urban public library, one private academic library, and one public academic library from each U.S. state and the District of Columbia (Chow, et al., 2014). Other studies selected library websites based on geographic area, for example, Simpkins (2019)

limited his study to public libraries in Mississippi and used the Mississippi Library Commission's master list to find the websites for those libraries.

Webometric studies use different tools to examine and gain quantitative data about their sample websites. For example, Pollard (2021) used a toolbar extension that examined the code of the website and checked for accessibility errors. Other webometric studies have used other types of tools, such as a Search Engine Optimization (SEO) analyzer as used by Sarkar, Pal, and Kar (2018) to evaluate tourism websites in India. These tools allow researchers to gather quantitative data about aspects of the website that may not be observable on the surface allowing researchers to analyze the architecture of the sites not just their content. Sarkar, Pal, and Kar (2018) also looked at how the analyzed websites were connected. They used a web crawler to look for links between the sites and found that Delhi's tourism site had the most connections to other tourism sites throughout India.

Webometrics also includes analyzing the content of websites. In these studies, researchers examine the information and layout of the content of websites based on a specific list of criteria. These studies may draw their criteria from previous studies as seen in the Velasquez and Evans (2018) study and the Simpkins (2019) study or the authors may develop it themselves by consulting work from other disciplines. Andrews (2020) drew on the work of previous researchers, including Chow, Bridges, and Commander (2014), as well as developed her criteria to examine the navigability and use of responsive design to ensure mobile functionality in theological library websites finding that the most common way navigation method for these websites is through text on the front page and that two-thirds of the websites were fully functional in their mobile versions.

The existing research has identified several key issues relating to library websites. The first of these is the lack of standard criteria by which to judge websites. The research of Powers (2011) and Chow, Bridges, and Commander (2014) provides a basis for identifying key features of a library website and other later studies have built upon that work. The second issue for library websites is accessibility. As the research of Maata Smith (2014); Ingle, Green, and Huprich (2009); and Pollard (2021) shows most

library websites fall short of meeting the WCAG standards creating barriers to access. Library websites are often a user's first introduction to the library and serve as virtual branches (Velasquez & Evans, 2018). This study uses a webometric approach to examine features of public libraries within RAILS (Reaching Across Illinois Library System), drawing on criteria developed by Powers (2011) and Chow, Bridges, and Commander (2014), and builds on the work of Pollard (2021) to assess the current level of accessibility of public libraries in Cook, Lake, and McHenry counties in Illinois.

METHODOLOGY

Information Sources

This study is a webometric content analysis of the information found on Illinois public library websites in the Chicago area. The library websites selected for this study were found in the online member directory of the Reaching Across Illinois Library System (RAILS). Since RAILS includes academic, school, and special libraries in addition to public libraries, the list was limited to "Public" and then further limited to libraries in Cook, Lake, or McHenry counties. The option for "Primary Only" was also selected to avoid duplicate entries for library systems with more than one library. This produced a list of 128 libraries. The websites analyzed were taken from the RAILS directory entries for those libraries. Eight of those websites were unreachable during August and September 2023 when the research was conducted creating a final sample size of 120 library websites (see Appendix A).

Data Collection and Analysis

Data were collected using coding sheets and Microsoft Excel. To gather data about common features of library websites, a list of 16 features was drawn from the work of Chow, Commander, and Bridges (2014) as well as that of Powers (2011). Those 16 features were: library name, library address, library phone number, library email, library chat, hours of operation, library board member names, link to the online catalog, event calendar, mission statement, link to digital materials, link to research databases, Web 2.0 (social media) links, description of library service, and copyright or updated date. Each library website was then investigated, and it was recorded in an Excel spreadsheet whether the library website contained that information or feature. Those

data were then analyzed to determine the frequency of those features across all the websites studied. For a feature to be counted as present it needed to be available on the website or menus itself and not in a linked document or image.

At the time this research was conducted, public libraries in the Chicago area were receiving bomb threats through their online communication portals leading some libraries to disable their online chat functionality (Seidenberg, 2023). When collecting data about the online chat features it was noted whether the library had a chat feature and whether that chat feature was available. All data were collected during library operating hours.

A similar method was used to gather data about common terminology on library websites. A list of ten terms or phrases commonly used in libraries was developed based on the work of Vargas-Ochoa (2020). These terms or phrases were catalog, reference, database, research, eLibrary, digital library, virtual library, circulation, hold, and reader's advisory. The Excel sheet was marked with a 2 if the term was prominently used on the website (e.g., in a menu or as a page title), a 1 if the term was merely present, and a 0 if the term could not be found on the website. In order to avoid disparities between websites which had a search function and those that did not, the terms were searched for using the built-in search function of the Google Chrome web browser. This was used to determine both the use of the term in navigation and its presence on the website. Those data were then analyzed based on those factors.

To examine the accessibility of each website the WAVE (WebAIM Accessibility Tool), which was used by Maata Smith (2014) in her research, was used to analyze the features of the website designed to aid people with disabilities. The results of these reports were then entered into a spreadsheet enumerating the type and number of errors for each website. These

data were then analyzed to examine the frequency of each type of error across all websites and the average number of each type of error.

Finally, to examine where libraries provide information for common patron questions, a coding sheet (see Appendix B) was developed listing common information sought by library patrons based on the work of Chow, Commander, and Bridges (2014), along with Powers' research and possible locations on the website where that information could be found (2011). That coding sheet was then applied to each website and the results were tallied on an Excel spreadsheet. Those data were then analyzed to determine the most common location for information about each patron question.

Limitations

This study is limited by the information available on each library website at the time of analysis. This study is also limited by the accuracy of the WAVE accessibility tool. The analysis only takes into account the errors identified by that tool and does not consider accessibility concerns beyond those identified.

RESULTS

R1. What elements from the created checklist of website features are present in RAILS public library websites?

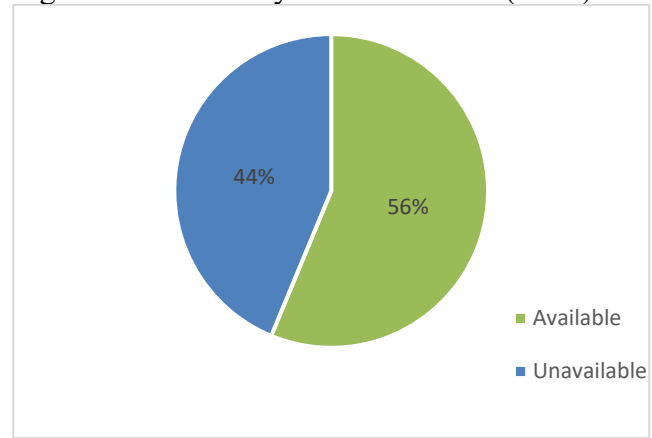
A total of 120 websites were analyzed for this study and while many of the website features examined were common to most of them, none of the website features examined were common to all 120 websites. Table 1 illustrates the prevalence of the 16 website features examined. The most common features were the library name, library address, library phone number, library email address, hours of operation, names of board members, link to catalog, event calendar, and a link to digital materials. All of these were present in over 90 percent of library websites examined.

Table 1. Website features (n=120).

Website Feature	No. of Libraries	Percentage
Library Name	119	99.20%
Library Address	119	99.20%
Library Phone Number	119	99.20%
Link to Catalog	117	97.50%
Hours of Operation	115	95.80%
Names of Board Members	115	95.80%
Library Email Address	114	95.00%
Link to Digital Materials	114	95.00%
Event Calendar	110	91.70%
Link to Research Databases	106	88.30%
Information about Library Services	106	88.30%
Web 2.0 features	105	87.50%
Copyright Date	79	65.80%
Mission Statement	76	63.30%
Chat (available & unavailable)	32	26.70%

The least common feature was a chat feature which allowed users to chat online in real time with a staff member with only 26.7 percent of libraries providing this resource. Of those 32 libraries with chat features, 14 were disabled at the time this research was conducted (see Figure 1). The second least common feature was a mission statement. A mission statement was only found on 63.3 percent of library websites.

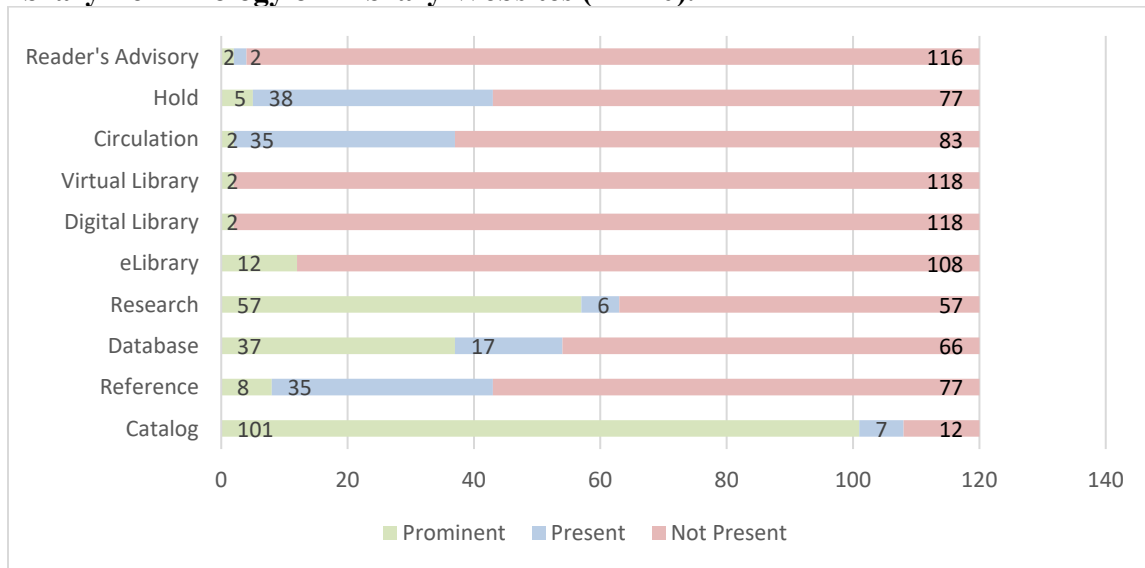
Figure 1. Availability of Chat Feature (n=32).



R2. How frequently are terms from the created checklist found on RAILS public library websites?

Of the list of the ten library terms examined only two were found to be present on most library websites examined. The term “catalog” was the most frequently used being seen prominently on 101 library websites and present on an additional seven. The term “research” was also frequently used on library websites being used prominently on 57 library websites and present on an additional six. Library terminology such as “reader’s advisory”, “circulation”, and “hold” was not used prominently on many websites. The term “reader’s advisory” was used prominently on two websites and present on an additional two. The term “hold” was used prominently on five websites and present on an additional 38 and “circulation” was only used prominently on two websites but was present on an additional 35. Lastly, terminology for online resources like eBooks and other downloadable materials was greatly varied. Of the three terms examined “eLibrary” was the most frequently used, being used prominently on 12 library websites.

Figure 2. Library Terminology on Library Websites (n=120).



R3. What accessibility errors does the WAVE (WebAIM Accessibility Tool) find on RAILS public library websites?

Of the 120 library home pages analyzed using the WAVE (WebAIM Accessibility Tool) only one was found to have zero errors with the rest of the websites ranging in number of errors from one to 230. The average number of errors found on public library home pages was 36. Table 2 enumerates the types of errors found on library home pages. The most common error identified by WAVE was a contrast error, meaning that the webpage had low contrast between text and background which can make it difficult for people with low vision and/or color blindness to navigate. 84.2 percent of libraries had a contrast error somewhere on their homepage with the average number of contrast errors being 18 per library home page. The second most common error was a missing form label. Form labels are used by screen readers to allow navigation of a website by the blind and people with low vision. Fifty-two and a half percent of library home pages had missing form labels which would make it impossible for screen readers to accurately navigate the web page.

Table 2. Type of Identified Error (n=120).

Type of Error	No. of Libraries	Percentage
Contrast Error	101	84.20%
Missing form label	63	52.50%
Linked image missing alternative text	57	47.50%
Empty link	48	40.00%
Empty button	28	23.30%
Missing alternative text	23	19.20%
Empty heading	20	16.70%
Broken ARIA reference	15	12.50%
Empty form label	12	10.00%
Multiple form labels	11	9.20%
Language missing or invalid	8	6.70%
Broken skip link	3	2.50%
Missing or uninformative page title	2	1.70%
Empty table	1	0.80%

R4. Where do public library home pages provide information on common patron questions (e.g., getting a library card, library location and hours, contacting the library)?

Certain locations emerged as common places where libraries provide information on patron questions. Table 3 located in Appendix C illustrates where libraries provide information commonly searched for by patrons. For example, the library address was found in the footer on 65.8 percent of library home pages, the library phone number was found in the footer on 63.3 percent of library home pages and the library's hours of operation were found in the footer on 60 percent of library home pages. The home page's header was another place where answers to common questions were found. A link for patrons to access their library card account was located in the header on 55.8 percent of library home pages and the catalog search was found in the header on 32.5 percent of library home pages. Some information was commonly found in multiple locations on a library's home page. For example, 95.8 percent of library home pages had the library's name in multiple locations and 53.3 percent of library home pages had information about library programming available in multiple locations on their home pages.

DISCUSSION AND CONCLUSION

Results from this study indicate that while public library websites contain many of the same elements, public libraries choose different ways to arrange those elements and terminology to communicate with their users. The majority of RAILS library websites had the following features: library name, library address, library phone number, library email, hours of operation, library board member names, link to the online catalog, event calendar, mission statement, link to digital materials, link to research databases, Web 2.0 (social media) links, description of library service, and copyright or updated date. A real-time chat feature was the least common feature and the current situation with libraries receiving bomb threats through those online chat features means only 15 percent of the library websites studied had an active chat feature (Seidenberg, 2023). This demonstrates how the public discourse surrounding libraries can impact the level of service made available to patrons. RAILS library websites in the Chicago area contain elements of the checklist at rates similar to those found in previous similar studies. The area where they differed the most

was in information about library services. This study found that 88.3 percent of RAILS library webpages had information about library service whereas Chow, Bridges, and Commander (2014) found 84 percent of library websites nationwide had this type of information, and Simpkins (2019) found that 58.3 percent of Mississippi library websites had this type of information. Overall, RAILS public library websites were robust and provided patrons with a great deal of information.

Of the ten library terms examined, only the term "catalog" was found to be used prominently on the majority of library websites studied. Other terms such as "circulation" and "reader's advisory" were not frequently used. This demonstrates that RAILS public library websites are adhering to the principle found by Vargas Ochoa that "To make menu links exceptionally user-friendly, it is recommended to utilize clear and common terminology" (2020, p. 12). Of particular interest were the terms used by libraries to describe their digital resources such as eBooks, eAudiobooks, and streaming video. The three terms "Virtual Library," "Digital Library" or "eLibrary" were seldom used by the websites studied. Rather terms like "eBooks and eAudiobooks" and "Download and Stream" or just the brand name of the service like "Libby" or "Hoopla" were seen being used on library websites. Further research into the specific terminology that public libraries use to describe their digital services is warranted.

The results of this study indicate that RAILS public library websites still have room for improvement when it comes to accessibility. While one website was found to have no accessibility errors, the average number of errors identified by WAVE (WebAIM Accessibility Evaluation Tool) was 36. While all of these errors contribute to making library webpages inaccessible to people with color blindness, low vision, and those who use screen readers, some are more serious than others. Similar to the results of Maatta Smith (2014) some library websites were found to be missing form labels on catalog search boxes which would prevent users using screen readers from being able to search their online catalog. Another common error of missing alternative text means that users utilizing screen readers will not know what information images contain such as information about library programming. Public

libraries often pride themselves on providing access to information and resources, but the results of this study indicate that website accessibility is one area where they could do more.

This study indicates that there are certain areas where libraries tend to place information for which patrons commonly search. The header and footer were both common areas for libraries to place information such as the library address, phone number, and hours of operation. While some information was seen in the top menus of public library websites such as information on library programming, information on digital resources such as digital materials and research databases was often in a drop-down menu meaning that patrons would need to search further to find that information. Despite certain commonalities identified by this study, the data does not suggest that there is a standard template for public library websites.

This study suggests several areas for further research. First, the terminology that libraries use to refer to their digital materials such as eBooks and eAudiobooks, and research databases was widely varied, and further research could help to identify common trends and how well they are received by patrons. Second, this study did not examine the usability of library websites. While the majority of the library websites studied had the selected features, information on how easy those features were to use or how simple that information was to find was not examined. Lastly, the libraries studied have service area populations that range in size from over 100,000 to less than 250. More research into how factors such as the population of a library's service area, budget, and size of staff affect the information provided on library websites could help to develop a better understanding of trends in public library websites.

REFERENCES

- American Library Association. (2021, April). *State of America's libraries 2021 special report: COVID-19*. <https://www.ala.org/news/sites/ala.org/news/files/content/State-of-Americas-Libraries-Report-2021.pdf>
- Andrews, G. (2020). Navigating theological resources A webometric content analysis. *Theological Librarianship*, 13(1), 13–26. <https://doi-org.lynx.lib.usm.edu/10.31046/tl.v13i1.550>
- Azadbakht, E., Blair, J., & Jones, L. (2017). Everyone's invited: A website usability study involving multiple library stakeholders. *Information Technology & Libraries*, 36(4), 34–45. <https://doi-org.lynx.lib.usm.edu/10.6017/ital.v36i4.9959>
- Chow, A. S., Bridges, M., & Commander, P. (2014). The website design and usability of US academic and public libraries. *Reference & User Services Quarterly*, 53(3), 253–265. <https://doi.org/10.5860/rusq.53n3.253>
- Ingle, E., Green, R., & Huprich, J. (2009). How accessible are public libraries' web sites? A study of Georgia public libraries. *Journal of Access Services*, 6(1–2), 101–115. <https://doi-org.lynx.lib.usm.edu/10.1080/15367960802247841>
- International Organization for Standardization. (2019). *Ergonomics of human-system interaction – Part 210: Human-centered design for interactive systems* (ISO Standard No. 9241-210:2019) <https://www.iso.org/obp/ui/#iso:std:iso:9241:-210:ed-2:v1:en>
- Maatta Smith, S. L. (2014). Web accessibility assessment of urban public library websites. *Public Library Quarterly*, 33(3), 187–204. <https://doi.org/10.1080/01616846.2014.937207>
- Nielsen, J., & Loranger, H. (2006). *Prioritizing Web Usability*. Pearson Education
- Poll, R. (2007). Evaluating the library website: Statistics and quality measures. *IFLA Conference Proceedings*, 1–9.
- Pollard, J. L. (2021). Analyzing the accessibility of Illinois public library homepages: Are we accessible to all? *Journal of Access Services*, 18(1), 50–62. <https://doi-org.lynx.lib.usm.edu/10.1080/15367967.2020.1870475>
- Powers, B. S. (2011). Oh, what a tangled web we weave! An evaluation of Pennsylvania's public library websites for a basic level of web presence and beyond. *Current Studies in Librarianship*, 31(1), 21–35.

RAILS: Reaching across Illinois library system. (n.d.). *Homepage*. RAILS: Reaching Across Illinois Library System. <https://railslibraries.org/>

Sarkar, A., Pal, A., & Kar, S. (2018). Webometric mapping of tourism sites in India. *Library Philosophy & Practice*, 1–14.

Seidenberg, B. (2023). Library ends online contact feature after bomb threats. *Evanston RoundTable*. <https://evanstonroundtable.com/2023/09/21/library-officials-take-steps-including-closing-online-contact-feature-source-of-bomb-threats/>

Simpkins, C. (2019). Webometrics and Mississippi public libraries: A webometrics study of public libraries in Mississippi. *SLIS Connecting*, 8(1), 35–41. <https://doi.org/10.18785/slis.0801.07>

Theiwall, M., & Vaughan, L. (2004). Webometrics: An introduction to the special issue. *Journal of the*

American Society for Information Science & Technology, 55(14), 1213–1215. <https://doi-org.lynx.lib.usm.edu/10.1002/asi.20076>

Vargas Ochoa, I. (2020). Navigation design and library terminology: Findings from a user-centered usability study on a library website. *Information Technology & Libraries*, 39(4), 1–15. <https://doi-org.lynx.lib.usm.edu/10.6017/ital.v39i4.12123>

Velasquez, D., & Evans, N. (2018). Public library websites as electronic branches: a multicountry quantitative evaluation. *Information Research: An International Electronic Journal*, 23(1).

WAVE web accessibility evaluation tool. (n.d.). WebAIM.org. <https://wave.webaim.org/>

World Wide Web Consortium. (2022, May). *WAI-ARIA Overview*. Web Accessibility Initiative (WAI). <https://www.w3.org/WAI/standards-guidelines/aria/>

APPENDIX A

Library Name	Website	Service Area Population	County
Acorn Public Library District	http://www.acornlibrary.org	30735	Cook
Algonquin Area Public Library District	http://www.aapld.org	40679	McHenry
Alsip-Merrionette Park Public Library District	http://www.alsiplibrary.info	21796	Cook
Antioch Public Library District	http://apld.info	25814	Lake
Arlington Heights Memorial Library	http://www.ahml.info	77676	Cook
Barrington Public Library District	http://www.balibrary.org	45360	Lake
Bedford Park Public Library District	http://www.bedfordparklibrary.com	787	Cook
Bellwood Public Library	http://www.bellwoodlibrary.org/	18789	Cook

Berkeley Public Library	http://www.berkeleypl.org/	5338	Cook
Berwyn Public Library	http://www.berwynlibrary.org/	57250	Cook
Blue Island Public Library	http://www.blueislandlibrary.org/	22558	Cook
Bridgeview Public Library	http://www.bridgeviewlibrary.org	17027	Cook
Calumet City Public Library	http://www.calumetcitypl.org/	36033	Cook
Calumet Park Public Library	https://librarylearning.org/calumet-park-public-library	7025	Cook
Cary Area Public Library District	http://www.caryarealibrary.info	27256	McHenry
Chicago Heights Public Library	http://www.chicagoheightslibrary.org	27480	Cook
Chicago Ridge Public Library	https://www.chicagoridgelibrary.org	14433	Cook
Cicero Public Library	http://www.cicerolibrary.org	85268	Cook
Cook Memorial Public Library District	http://www.cooklib.org	61297	Lake
Crestwood Public Library District	http://www.crestwoodlibrary.org	9214	Cook
Crystal Lake Public Library	http://www.clpl.org	40269	McHenry
Deerfield Public Library	https://www.deerfieldlibrary.org	19196	Lake
Des Plaines Public Library	http://dppl.org	60675	Cook
Dixmoor Public Library District	https://www.williamleonardlibrary.org/	2993	Cook
Dolton Public Library District	http://www.doltonpubliclibrary.org/	21432	Cook
East Hazel Crest Library District	https://www.thorntonlibrary.org/	1279	Cook
Eisenhower Public Library District	http://www.eisenhowerlibrary.org	24360	Cook

Ela Area Public Library District	http://www.eapl.org	36366	Lake
Elk Grove Village Public Library	http://www.egvpl.org	22205	Cook
Evanston Public Library	http://www.epl.org	78110	Cook
Evergreen Park Public Library	http://www.evergreenparklibrary.org	19943	Cook
Flossmoor Public Library	http://www.flossmoorlibrary.org/	9704	Cook
Forest Park Public Library	http://www.fppl.org	14339	Cook
Fox Lake Public Library District	http://fllib.org	26718	Lake
Fox River Grove Public Library District	http://www.frgml.org/	3973	McHenry
Franklin Park Public Library District	http://www.fppld.org/	18559	Cook
Fremont Public Library District	http://www.fremontlibrary.org	38792	Lake
Glencoe Public Library	http://www.glencoelibrary.org	8849	Cook
Glenview Public Library	http://www.glenviewpl.org	48705	Cook
Glenwood-Lynwood Public Library District	http://www.glpld.org	18513	Cook
Grayslake Area Public Library District	http://www.grayslake.info	27919	Lake
Green Hills Public Library District	http://www.greenhillslibrary.org	33209	Cook
Harvard Diggins Library	http://www.harvard-diggins.org	9469	McHenry
Harvey Public Library District	http://www.harveylibrary.org	20324	Cook
Highland Park Public Library	http://www.hplibrary.org	30176	Lake
Highwood Public Library	http://www.highwoodlibrary.org	5074	Lake
Hillside Public Library	http://www.hillsidelibrary.org	8320	Cook

Hodgkins Public Library District	http://www.hodgkinslibrary.org	1504	Cook
Hometown Public Library	http://www.myhometownlibrary.com	4343	Cook
Homewood Public Library District	http://www.homewoodlibrary.org/	19520	Cook
Huntley Area Public Library District	http://www.huntleylibrary.org	43839	McHenry
Indian Trails Public Library District	http://www.indiantrailslibrary.org	65423	Cook
Johnsburg Public Library District	http://www.johnsburglibrary.org	12128	McHenry
Justice Public Library District	http://justicepubliclibrary.com	14384	Cook
LaGrange Park Public Library District	http://www.lplibrary.org	13508	Cook
LaGrange Public Library	http://www.lagrangelibrary.org	16321	Cook
Lake Bluff Public Library	http://www.lakeblufflibrary.org/	5616	Lake
Lake Forest Library	http://www.lakeforestlibrary.org	19367	Lake
Lake Villa Public Library District	http://www.lvdl.org	39809	Lake
Lansing Public Library	https://www.lansingpl.org	29076	Cook
Lemont Public Library District	http://www.lemontlibrary.org	23182	Cook
Lincolnwood Public Library District	http://www.lincolnwoodlibrary.org	13469	Cook
Linda Sokol Francis Brookfield Library	http://www.brookfieldlibrary.info	19476	Cook
Lyons Public Library	http://www.lyonslibrary.org	10817	Cook
Marengo-Union Public Library District	http://www.muld.org	13628	McHenry
Markham Public Library	http://www.markhamlibraryil.org	11661	Cook
Matteson Area Public Library District	http://www.mapld.org	19519	Cook

Maywood Public Library District	http://www.maywoodlibrary.org	23568	Cook
McCook Public Library District	http://www.mccook.lib.il.us	247	Cook
McHenry Public Library District	http://www.mchenrylibrary.org	41852	McHenry
Melrose Park Public Library	http://www.mpplibrary.org/	24796	Cook
Midlothian Public Library	http://www.midlothianlibrary.org	14325	Cook
Morton Grove Public Library	http://www.mgpl.org	25297	Cook
Mount Prospect Public Library	http://www.mppl.org	56852	Cook
Nancy L. McConathy Public Library District	https://www.mcconathypubliclibrary.org	9345	Cook
Niles-Maine District Library	http://www.nileslibrary.org	59181	Cook
Nippersink Public Library District	http://www.nippersinklibrary.org	11083	McHenry
North Chicago Public Library	http://www.ncplibrary.org	30759	Lake
Northbrook Public Library	http://www.northbrook.info	35222	Cook
Northlake Public Library District	http://www.northlakelibrary.org/	26667	Cook
Oak Lawn Public Library	http://www.olpl.org	58362	Cook
Oak Park Public Library	http://www.oppl.org	54583	Cook
Orland Park Public Library	http://www.orlandparklibrary.org	58703	Cook
Palatine Public Library District	http://www.palatinelibrary.org	89395	Cook
Palos Heights Public Library	https://www.phlibrary.org	12068	Cook
Palos Park Public Library	http://www.palosparklibrary.org/	4899	Cook
Park Forest Public Library	http://www.pfpl.org	21687	Cook

Park Ridge Public Library	http://www.parkridgelibrary.org	39656	Cook
Phoenix Public Library District	http://www.phoenixlibrarydistrict.org/#!/about-us/cjg9	1734	Cook
Poplar Creek Public Library District	http://www.pclib.org	65645	Cook
Prairie Trails Public Library District	http://www.prairietrailslibrary.org	30376	Cook
Prospect Heights Public Library District	http://www.phpl.info	15044	Cook
Richton Park Public Library District	https://www.richtonparklibrary.org	12500	Cook
River East Public Library	http://www.rivereastlibrary.org	4230	McHenry
River Forest Public Library	http://www.riverforestlibrary.org	11717	Cook
River Grove Public Library District	http://www.rivergrovelibrary.org	10578	Cook
Riverdale Public Library District	http://www.rpld.org	10758	Cook
Riverside Public Library	http://www.riversidelibrary.org	9298	Cook
Rolling Meadows Library	http://www.rmlib.org	24200	Cook
Round Lake Area Public Library District	http://www.rlalibrary.org	39675	Lake
Rural Woodstock Public Library District	http://www.ruralwoodstocklibrary.com	12322	McHenry
Schaumburg Township District Library	http://www.schaumburglibrary.org/	130345	Cook
Schiller Park Public Library	http://www.schillerparklibrary.org	11709	Cook
Skokie Public Library	http://www.skokieliibrary.info	67824	Cook
South Holland Public Library	http://shlibrary.org/	21465	Cook

Steger-South Chicago Heights Public Library District	http://www.sschlibrary.org	13869	Cook
Stickney-Forest View Public Library District	http://www.sfvpld.org	10833	Cook
Summit Public Library District	http://www.summitlibrary.info	11163	Cook
Thomas Ford Memorial Library	http://www.fordlibrary.org	13629	Cook
Tinley Park Public Library	http://www.tplibrary.org	55971	Cook
Vernon Area Public Library District	http://www.vapld.info	44206	Lake
Warren-Newport Public Library District	http://www.wnpl.info/	66477	Lake
Wauconda Area Public Library District	https://www.wauclib.org	28941	Lake
Waukegan Public Library	http://www.waukeganpl.org	89321	Lake
Westchester Public Library	http://www.westchesterpl.org	16892	Cook
Wilmette Public Library District	http://wilmettelibrary.info	28180	Cook
Winnetka-Northfield Public Library District	http://www.winnetkalibrary.org	18495	Cook
Woodstock Public Library	http://www.woodstockpubliclibrary.org	25630	McHenry
Worth Public Library District	https://www.worthlibrary.com	10974	Cook
Zion-Benton Public Library District	http://www.zblibrary.info	42836	Lake

APPENDIX B

Name of Library:

URL:

Date:

	Front Page	Top Menu	Drop-down Menu	Header	Footer	Multiple Locations	Not Present
Search tool for the site							
Catalog Search							
Library Name							
Library Address							
Library Phone Number							
Online Contact							
Hours of Operation							
Link to Library Card Account							
Information on getting a library card							
Information on library programming							
Information on digital materials							
Information on online databases							

APPENDIX C

Table 3. Location of Commonly Searched for Information on Library Websites (n=120).

	Front page	Top menu	Drop-down menu	Header	Footer	Multiple locations	Not present
Search tool for the site	8(6.7%)	0(0%)	1(0.8%)	35(29.2%)	25(20.8%)	10(8.3%)	41(34.2%)
Catalog search	48(40%)	0(0%)	4(3.3%)	39(32.5%)	1(0.8%)	25(20.8%)	3(2.5%)
Library name	3(2.5%)	0(0%)	0(0%)	1(0.8%)	0(0%)	115(95.8%)	1(0.8%)
Library address	27(22.5%)	0(0%)	0(0%)	5(4.2%)	79(65.8%)	8(6.7%)	1(0.8%)
Library phone number	25(20.8%)	0(0%)	0(0%)	4(3.3%)	76(63.3%)	14(11.7%)	1(0.8%)
Online contact information	21(17.5%)	5(4.2%)	12(10%)	8(6.7%)	67(55.8%)	1(0.8%)	6(5%)
Hours of operation	14(11.7%)	0(0%)	0(0%)	11(9.2%)	72(60%)	18(15%)	5(4.2%)
Link to library card account	12(10%)	3(2.5%)	1(0.8%)	67(55.8%)	0(0%)	14(11.7%)	23(19.2%)
Information on getting a library card	54(45%)	13(10.8%)	27(22.5%)	0(0%)	9(7.5%)	5(4.2%)	12(10%)
Information on library programming	13(10.8%)	37(30.8%)	5(4.2%)	0(0%)	0(0%)	64(53.3%)	1(0.8%)
Information on digital materials	14(11.7%)	22(18.3%)	39(32.5%)	0(0%)	0(0%)	43(35.8%)	2(1.7%)
Information on online databases	44(36.7%)	3(2.5%)	55(45.8%)	0(0%)	0(0%)	14(11.7%)	4(3.3%)