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# Webometrics and Mississippi Public Libraries: A Webometrics Study of Public Libraries in Mississippi

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## Introduction

What a library is has been a discussion for many years. Some may consider it a place only used when a member of the public wants to check out a book. Summers and Buchanan (2018) define libraries as cultural hubs, by “offering trusted spaces for people to come together to access, share, create, appropriate, and appreciate cultural resources and material” (p. 286). But until the advent of the Internet, public libraries were simply a brick-and-mortar presence, one that the user would need to physically visit to gain information. Today, a library’s website can serve as a patron’s first interaction with the library.

With the introduction of the Internet, library websites have become new access points for a global community. A library’s website serves as a new branch for its users, one that can be accessed 24/7 globally. But with that continuous access to such a large audience, a library’s website should include certain information to be truly beneficial to the user. This website content analysis examines the websites of public library systems in Mississippi for the presence of four elements from Kumar and Bansal’s 2014 seven essential menus for a library’s homepage:

- My Account –for members of the library. It provides the login window for members and general rules and procedures for quick access.
- Services – Various types of services provided by the library.
- Hours – Library hours specifically, e.g. if there is any holiday or if any cut/extension in opening hours on a particular day” (p. 285).
- Eight elements from Chow, Bridges, and Commander (2014) study of public and academic libraries in the United States:
- Contact – phone number or email address

- eResources – databases, eBooks, eAudiobooks, and streaming services
- OPAC
- Location – physical address or map
- Circulation Information – how to get a library card, loan periods, or fines
- Key Staff – administrative or front-line
- Search Tool – search website tool
- Creation/Copyright Date – creation or last update posted (Kumar & Bansal, 2014).

## Purpose Statement

This research assesses public library websites in the state of Mississippi for essential elements identified by Kumar and Bansal (2014) and Chow, Bridges, and Commander (2014).

## Research Questions

R1. How many library systems in Mississippi have dedicated websites?

R2. How many of the library systems’ websites in Mississippi contain elements of Kumar and Bansal’s “Ideal Homepage” and/or Chow, Bridges, and Commander’s criteria?

R3. How do library systems’ websites in Mississippi compare to the results of Chow, Bridges, and Commander’s study?

## Definitions

*Branch Library:* “An auxiliary service outlet in a library system, hosted in a facility separate from the central library, which has at least a basic collection of materials, a regular staff, and established hours, with a budget and policies determined by the central library. A branch library is usually managed by a *branch librarian* who may have responsibility for

more than one branch. In a public library system, new branches may be sited on the basis of a comprehensive plan for the entire city, county, region, or library district served by the system” (Reitz, 2018).

*Cybermetrics*: “Description and evaluation of the impact of the internet as a scholarly communication tool, primarily by means of quantitative analysis of web-based scholarly and scientific communications. Sometimes used synonymously with *webometrics*” (Reitz, 2018).

*Homepage*: “The first or main page of a site on the World Wide Web, displayed whenever a user logs on to a Web browser and opens the site address (URL). The filename at the end of a homepage address is often *home.html*, *index.html*, *main.html*, or something similar. A well-designed homepage gives the title of the site, name of author, host, date of last update, notice of copyright, table of contents, and links to subpages providing more detailed information about the site, usually the best starting point when navigating the site for the first time. Also spelled *home page*” (Reitz, 2018).

*Library system*: “A group of libraries administered in common, for example, a central library and its branches or auxiliary outlets. Also, a group of independently administered libraries joined by formal or informal agreement to achieve a common purpose. Under such an arrangement, each library is considered an affiliate” (Reitz, 2018).

*OPAC*: “An acronym for online public access catalog, a database composed of bibliographic records describing the books and other materials owned by a library or library system, accessible via public terminals or workstations usually concentrated near the reference desk to make it easy for users to request the assistance of a trained reference librarian. Most online catalogs are searchable by author, title, subject, and keywords and allow users to print, download, or export records to an e-mail account.

*Web site*: “A group of related, interlinked web pages installed on a web server and accessible 24 hours a day to internet users equipped with browser software. Most web sites are created to represent the online presence of a company, organization, or institution or are the work of a group or individual. The main page or welcome screen, called the homepage, usually displays the title of the site, the name of the person (or persons) responsible for creating and maintaining it, and the date of last update. Also spelled *website*” (Reitz, 2018).

### ***Delimitations***

This study is limited to specific essential elements of public library websites in Mississippi and does not include the presence of social networking pages, such as Facebook or Twitter.

### ***Assumptions***

For the purpose of this study, it is assumed that the “Master List of Mississippi Library Systems & Branches” (MLC, 2019) is correct and complete. It is also assumed that the accompanying information on each library (such as affiliated system and name of the library) is accurate and current. Additionally, it is assumed that all websites examined are current and fully functional at the time of data collection.

### ***Importance of the Study***

Comparable research could not be located in the research literature, so this study and its findings may help fill a gap in the existing research on the extent to which public libraries’ websites include essential elements. The findings of this study will not only be applicable to public libraries in the state of Mississippi but will be beneficial for those involved with designing and maintain the websites for public libraries and library systems in general.

## **Literature Review**

### ***Web Analysis of Library Websites***

To analyze a library website, criteria of what is needed should be offered. Websites for libraries are not a new concept, and experts have offered their suggestions on what information they should present and how they should be formatted.

Breeding (2004) postulated what he deemed the essential elements of a library website, which included what to consider as basic information and what could interfere with finding information easily. Basic information included “the official name of the library, the complete street and mailing address of the main library and all its branches, the phone number(s), an e-mail for general inquiries, the hours of service, a link to the library’s online catalog, and descriptions of the library’s facilities and collections” (Breeding, 2004).

Websites of libraries have been the subjects of content analysis before. Kumar and Bansal (2014) conducted a study of eight Indian Institute of Technology websites. In the study, the authors synthesized existing criteria for qualities of “good websites” as discussed in the definitions, which they propose as “a single source guide in developing a website for a big/small library.”

Chow, Bridges, and Commander (2014) did a webometric study of US academic and public libraries’ websites. The study utilized a sample of one evaluation per state for four types of libraries: urban public, rural public, private academic, and public academic. Since the data were amalgamated into core information, the study did not delineate the results by type of library. The article does provide criteria that align with Breeding’s (2004) suggestions and Kumar and Bansal’s (2014) “source guide.”

Velasquez and Evans (2018) acknowledge that websites for public libraries are referred to as “electronic branches,” due to how it establishes a digital presence for the physical entity. They surveyed 1,517 public library websites in Australia, Canada, and the United States over a four-year period. They concluded that Canada and the United States included more information on their websites, while there were overall similarities in all three nations. They developed what they considered a model of how to improve public library websites, which aligned with the suggestions of Breeding (2004), Kumar and Bansal (2014), and Chow, Bridges, and Commander (2014).

With the library’s website being an extension of the physical entity, Becker and Yannotta (2013) discussed the importance of redesigning the website to be user-centered. They identified areas of importance, such as not using jargon and focusing on ease of access by keeping navigation near the top and logical. Their recommendations build on the suggestions given in previous articles reviewed for this paper.

Wilson (2013) analyzed the websites of academic libraries in Alabama. He discussed the necessity of certain web elements and practices that enhance the functionality of the website, thus impacting the user experience. Wilson concluded that many of the sites lacked consistency and failure to demonstrate the sought-after elements. His study added to the field of webometric analysis of academic libraries, but Wilson’s checklist provides adequate criteria for public libraries as well, thus impacting a field of study less focused on.

As discussed in the literature review, webometrics have been conducted on library websites, but have focused mainly on academic websites such as the study by Shneiderman (2006), which does not address public library websites specifically, but contains general information that is useful for all types of library websites: use of breadcrumb navigation, avoidance of jargon, and placement of important information at the top of the page.

Since their website is an extension of a library, a user’s exposure to its website could be their first experience with the library. While the aforementioned research has included various elements suggested to enhance a user’s experience, this research uses selective criteria of Kumar and Bansal (2014) and the criteria of Chow, Bridges, and Commander (2014) to evaluate public libraries’ websites in Mississippi.

## **Methodology**

This webometric study is a content analysis of public library and library branch websites in Mississippi. The Mississippi Library Commission’s “Master List of Mississippi Library Systems & Branches” (2018),

which lists 53 public library systems and their websites, was used to identify the library websites examined in this study.

### **Data Collection and Analysis**

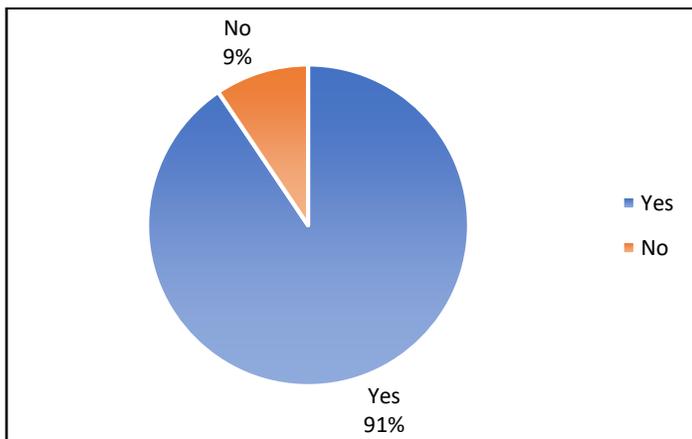
The data collected from each public library or library system website included selected criteria identified by Kumar and Bansal (2014): My Account, Services (such as programming), hours, as well as criteria identified by Chow, Bridges, and Commander (2014): contact information, access to electronic services (if offered), OPAC, location, circulation information, key staff names, a search tool, and the creation or last update date posted. The data were recorded in an Excel spreadsheet, compiled and analyzed to address each research question and to generate tables and figures.

### **Limitations**

The websites analyzed were limited to Mississippi, so the results cannot be generalized to other states or on a national level.

### **Results**

#### **R1. How many library systems in Mississippi have dedicated websites?**



**Figure 1. Library Systems with a Website**

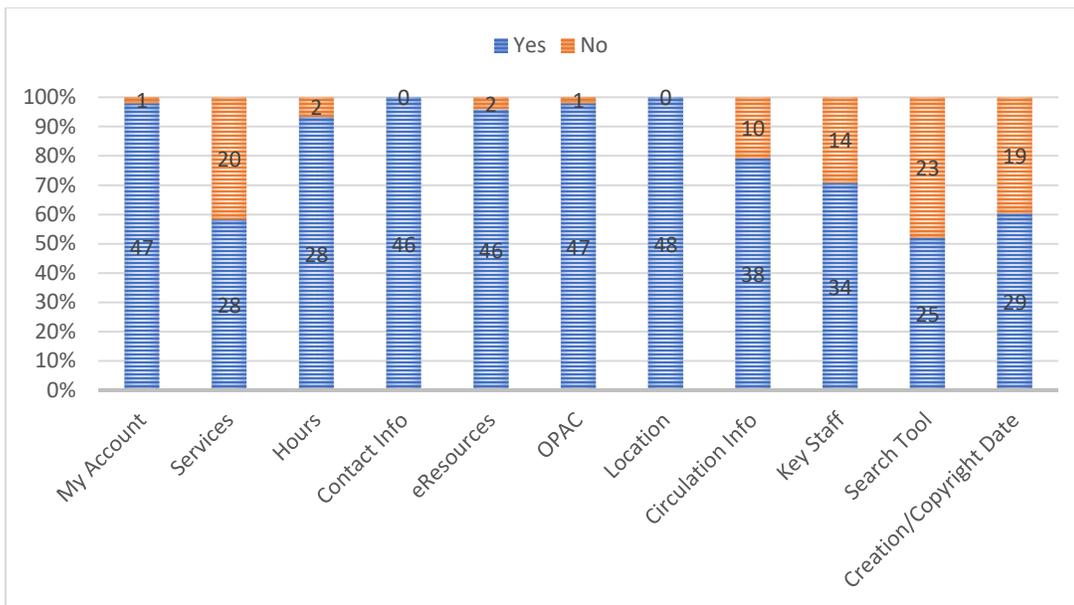
According to the Mississippi Library Commission’s “Master List of Mississippi Library Systems & branches” (2018), there are 53 library systems in Mississippi. Two library systems did not have a website listed (Choctaw County Library System and Pike-Amite-Walthall Library System), while three could not be accessed. As seen in Figure 1, 48 library systems (91%) in Mississippi had a website, while 5 library systems (9%) did not.

#### **R2. How many of the library systems’ websites in Mississippi contain elements of Kumar and Bansal’s “Ideal Homepage” and/or Chow, Bridges, and Commander’s criteria?**

Figure 2 illustrates the elements observed on library branch websites in Mississippi. Of the 48 library systems with websites, 47 websites (97.9%) offered the capability to log into an account to make requests or renew items, 28 websites (58.3%) provided information about services, such as events and programming.

Of the observed websites, 46 (95.8%) included the libraries’ operating hours. All of the 48 observed websites (100%) included contact information, either the phone number or an email address. Of the 48 observed websites, 46 (95.8%) provided information about available e-resources and 47 websites (97.9%) featured access to the library systems’ map.

While 1 (2.1%) did not provide access to an OPAC, all 48 websites (100%) provided a physical address. Of the 48 observed websites, 38 (79.2%) included circulation information, such as how to get a library card, loan periods, and/or fine rates. Thirty-four websites (70.8%) included some of the key staff names and/or contact information. Twenty-five of the observed websites (52.1%) provided a search tool specifically for the website, and 29 websites (60.4%) included a creation or copyright date.

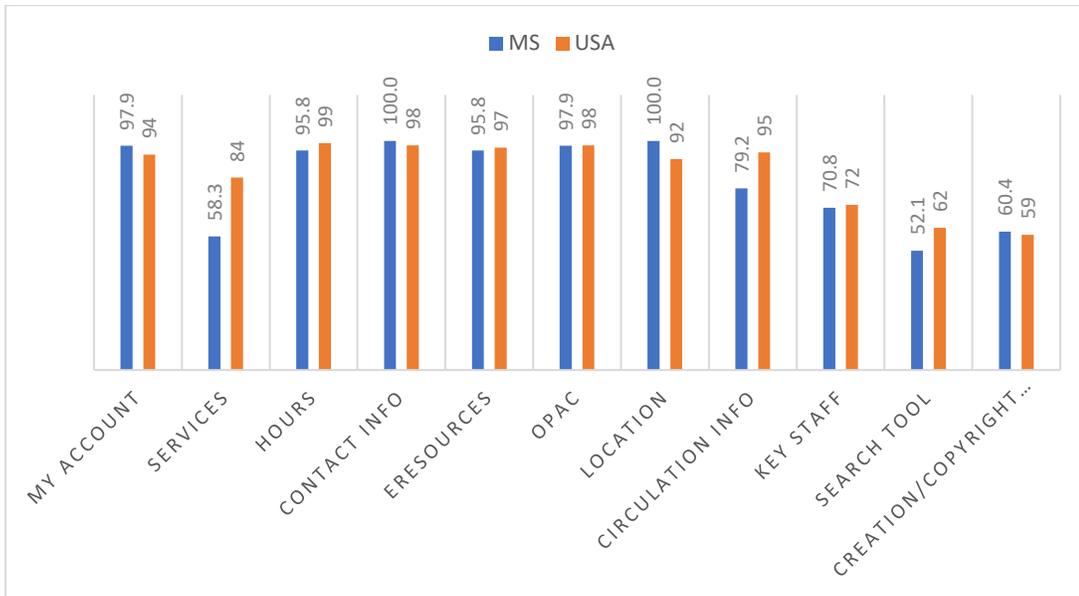


**Figure 2. Elements found on Mississippi Library Systems' Websites**

***R3. How do library systems' websites in Mississippi compare to the results of Chow, Bridges, and Commander's study?***

Figure 3 compares observations of the listed elements on the Mississippi library systems' websites to the Chow, Bridges, and Commander's 2014 study of library websites in the United States:

- 97.8 percent of websites in Mississippi were observed to have a My Account feature, while Chow, Bridges, and Commander observed 94 percent of websites nation-wide.
- Only 58.3 percent of websites in Mississippi had services, such as events or programming, while 84 percent of websites nation-wide were observed by Chow, Bridges, and Commander;
- 95.8 percent of websites in Mississippi had the hours of operation, while Chow, Bridges, and Commander observed 99 percent of websites nation-wide.
- All (100%) websites in Mississippi had contact information, either a phone number or email, while 98 percent of websites nation-wide were observed by Chow, Bridges, and Commander;
- 95.8 percent of websites in Mississippi provided access to eResources, such as databases, eBooks, and eAudiobooks, while Chow, Bridges, and Commander observed 97 percent of websites nation-wide;
- 97.9 percent of websites in Mississippi provided access to the OPAC, while 98 percent of websites nation-wide were observed by Chow, Bridges, and Commander.
- All (100%) of websites in Mississippi provided a physical address or map, while Chow, Bridges, and Commander observed 92 percent of websites nation-wide;
- 79.2 percent of websites in Mississippi were observed to provide circulation information, such as how to get a library card, loan periods, and/or fine rates, while 95 percent of websites nation-wide were observed by Chow, Bridges, and Commander;
- 70.8 percent of websites in Mississippi were observed providing some of the key staff names and/or contact information, while Chow, Bridges, and Commander observed 72 percent of websites nation-wide;
- 52.1 percent of websites in Mississippi were observed provided a search tool specifically for the website, while 62 percent of websites nation-wide were observed by Chow, Bridges, and Commander;
- 60.4 percent of websites in Mississippi included a creation or copyright date, while Chow, Bridges, and Commander observed 59 percent of websites nation-wide.



**Figure 3. MS Library Websites vs. USA Library Websites**

### Discussion and Conclusion

The summative findings of this survey are two-fold: first, the essential elements identified in previous studies by Breeding (2004), Chow, Bridges, and Commander (2014), and Kumar and Bansal (2014) as necessary for a high-quality library website still have not been fully embraced by those who design and maintain public library system websites.

Secondly, findings indicate Mississippi public library systems' websites are on par with other public library systems' websites throughout the United States with the information available on their websites. Many of the criteria described in the aforementioned studies are easily incorporated into website designs at no additional cost through the sight host.

The data of this study indicate the library's contact information and location had the highest observed presence on their websites, with all (100%) displaying these elements. Further research is needed to do a direct comparison of study results exclusive to Mississippi.

The library's contact information only scored 98 percent on Chow, Bridges, and Commander's (2014) national study, while the library's location only scored 92 percent on the same study. This indicates that Mississippi public libraries' websites have increased the presence of their contact information and location on their websites since the national average in the 2014 study.

The results of this study indicate that the library's search tools (52.1%) and services (58.3%) had the lowest observed presence on their websites. Further research is needed to do a direct comparison of study results exclusive to Mississippi.

The library's search tool only scored 62 percent on Chow, Bridges, and Commander's (2014) national study, while the library's services only scored 84 percent on the same study. This indicates that Mississippi public libraries' websites have a decreased presence of search tools and services on their websites compared to the national average as determined in the 2014 study.

Further research could be conducted on the specific locations of the criteria information, especially whether it was located on the homepage or how many clicks a user needed to access the information. Another area that could also be explored is the accessibility of the websites. This could include the accessibility of the websites through different web browsers, on different smart devices and computers, as well as those needed for ADA compliance, such as text-resizing capabilities.

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