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The Expansion of digital services in Mississippi public libraries

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Abstract
A content analysis of 53 public library systems' websites listed on the Public Library Directory of Mississippi Library Commission was conducted. The purpose of the study was to find types and levels of digital services offered by these library systems. The term "digital services" has been more used in recent literature, which suggests that more libraries started offering more since the start of COVID-19. This study intended to look closely how Mississippi's public libraries follow the national trend.

Introduction
The year 2020 was unprecedent for both individuals and libraries. Most working places experienced closures and many individuals retreated to work at home, as society exerted efforts to lower the transmission and infection of COVID-19 pandemic. At the peak of the pandemic many libraries fully closed their buildings and limited patrons' access. While libraries faced cutting down on their expenses, they resorted to expanding their digital services. The study explored the range of digital services listed on Mississippi public libraries' websites and made a preliminary assessment of their efforts.

Definition of digital services
The term "digital services" has emerged in recent library literature, job ads, and websites especially related to public libraries. For example, public libraries have extended their digital services during the pandemic (Goldstein, 2020; Guernsey, Prescott, Park, 2021). More public libraries are offering digital services librarian positions. A digital services librarian's duty often includes maintaining a library's web presence and access to digital resources. Despite its emergence, the definition of digital services, however, is not clearly defined in library literature as in business literature. Stephan (2015) offers the definition of digital services as "the electronic delivery of information including data and content across multiple platforms and devices like web or mobile." Hänninen, Pajula, Korpela & Taipale (2021) summarized digital services as "non-material activities transmitted by technology and online networks such as the internet." The activities identified as digital services are widely available and recognizable in society like mobile banking, UBER in transportation, Airbnb in hotel business, Apple in computer, and e-filing taxes. The core of digital services lies in offering a user experience through an online or electronic mode of delivery. The US digital service is created as a government sector to lead "technology that enables effective interactions between government and the people it services" (Balfundo, 2019). Leimeister, Hubert and Steven (2015) described the success of digital services with consumers is "personalized, context adaptive, real time" (p.255). Digital services can be included as part of social infrastructure. An optimal user experience is what digital services should aim for. An understanding of types of digital services and their purposes and benefits is relevant to improving digital services.

Therefore, such emphasis on user experience or consumers has an implication for libraries, especially public libraries, to develop viable services for users. McMenemy and Poulter (2005) addressed what public libraries utilize ICT (Information and Communication Technology) to provide access to users for lifelong learning and social inclusion. Di Duro (2008) pointed out the benefit for public libraries as "by providing more digital services that allow the public library to remain progressive and relevant to its patrons." The PEW Research Center (2013) reported that Libraries have offered digital services for more than a decade including eBooks, access, bringing services to patrons, and collaboration with local governments. By offering digital service, public libraries attempt to transform themselves from mere repositories to resource centers for communities.

Access and expansion of digital services
The American Library Association (ALA) (2006) pointed out "digital resources and services, or resources and services made primarily available online or on digital devices, are integral to libraries' mission in the twenty-first century." Libraries are supposed to meet "prevailing needs" of the community they serve (Michnik, 2015). Because of

the prevalence of digital content, libraries have a mission to provide access to information both in print and the digital format. Higgs, Lanford, and Fry (2013) investigated levels of digital provision, librarians' skills, library training programs through providing networked-GIS digital services by public libraries in Wales. Michnik (2015) discussed the impact of digital services on the sustainability of public libraries including the use of library physical space, librarians' skills, and cost on libraries such as eBooks.

The expansion of digital services is purported to reflect the mission of libraries to provide access to information to meet patrons' needs and adapt to unexpected changes. ALA's survey (2020) reported that many libraries in the nation were physically closed but offered virtual services during the pandemic. Most libraries identified that users would most need access to physical materials, computers and the Internet, and government applications and job search support after their buildings were closed (ALA, 2020). Breeding (2021) reported while vendors expanded access to digital collections and added online workflows to assist libraries, public libraries retained flexibility to mix a variety of services from different vendors. Goldstein (2020) noted public libraries that were closed during the pandemic, " have been using a variety of technologies to rapidly expand digital service offerings and aid their communities".   And such access is not limited to computers, internet, or digital tools, which indicates a potential for libraries to continue enhancing their digital resources and access. Access to digital resources offered by public libraries includes a broad range of digital products (audio books, e-books, databases, podcasts, videos, virtual events, and webinars).

The COVID-19 pandemic set realities for libraries to provide more digital services to mitigate the closures and continue services. Guernesey, Prescott and Park (2021) pointed out that public libraries have upheld their mission "to provide services to residents seeking knowledge, learning opportunities, and connections to information" during the pandemic (p.7). By doing so, public libraries made available online resources, Wi-Fi options and computer stations, and educational programs so many patrons became aware of online resources offered by their public libraries, which they found through a public library's website. Over the years public libraries have faced challenges to improve outreach and overcome stereotypes. Public

libraries' viability and transformation could be improved to provide communities' learning and access to knowledge and training staff and users (Guernesey, Prescott& Park, 2021).

More digital services have been offered by public libraries during the pandemic. Digital services provided a response to libraries' physical closure. The Mississippi Library Commission already has the digital services branch to provide consulting, training and web development to public libraries. Facing the COVID pandemic, the Mississippi Library Commission's annual report (2020) marked "the new norm by constraining decisions, attitudes, and services."   Public libraries' provision of digital services during the pandemic becomes the new norm. Given this new norm, this study intends to answer these two research questions.

1. **What are types of digital services offered by the public libraries in Mississippi?**
2. **What are levels of digital services**?

Methodology

From literature review, a public library website became the logical focal point of the investigation. A content analysis of the library websites was employed in this study because the content analysis is helpful to find the presence of words, themes, and concepts. Since the focus of this study is on digital services, content analysis is an ideal method to find the presence of digital resources. Data of content analysis was collected from the directory of Mississippi Public Libraries by Mississippi Library Commission with links of public library systems in all parts of Mississippi was employed. The analysis of data was focused on the use of the keywords "digital services," "electronic services," or "services," which shows an implication of using a computer or Internet. In the meantime, alternative terms such as resources could be checked if they include Internet and computer access. A total of 53 public library systems weblinks were counted for the study. Data collected were focused on electronic resources and technology applications ranging from computer access to Internet resources.

Results

Of 53 public library systems, as stated on their websites, all the library systems experienced temporary closures, and most have been fully open after a year of pandemic. As of 2022, they are all open. The results after the content analysis were

presented in three aspects of data analysis: the terms' usage associated with digital services, access to digital technologies, and products offered by libraries.

After the analysis, terms including "services," "library services" "digital services," "adult services," "curbside service," and "current services" are present on these library systems' menu. Of 53 library systems, the term "services" is still most used (n= 9, 17%), then followed by digital services (n=6, 11%) and library services (n=6, 11%), adult services(n=1), curbside service(n=1). All the computer and internet offered that can be found among these public library websites, "resources" is most used (n=9, 17%), followed by digital resources (n=3, 5 %) and electronic resources (n=3, 5 %), then online resources (n=2, 5 %) and featured resources(n=1). Some use "digital library" (n=2) "learning and research" (n=1) or "weblinks" (n=4, 8%) or do not specify a name but they do provide services and resources.

All public libraries provide online catalog (N=53, 100%), Research (genealogy or databases n=32, 60%), social media (n=29, 55%), and eBooks (n=28, 53%), health information(n=18) and computer access (computer, Wi-Fi, mobile printing, n=9), career information (n=9, 34%), virtual story time (n=6, 11%), online driving practice (n=4, 8%), and computer training (n=4, 8%).

A variety of digital products is associated with digital services. Of 53 library systems, most digital products available on all the library systems' websites are Magnolia(n=36) for research, LearningExpress(n=34) for academic skills, Facebook(n=25) for social media, and Hoopla(n=10) for eBooks. Many provide external links to the government job resources, language learning, test tutorials, and even childcare and mortgage. Table 1 shows the results of categorizing functions of digital services and names of databases and products.

Digital Services Functions	Databases and Products
Research (search and genealogy research)	Magnolia, Ancestry.com, Heritage Quest
Ebooks	Project Gutenburg, Hoopla, Overdrive, Axis360, Libby, Digitalmagazines, Worldbook
Learning and test prep	LearningExpress, Akhan academy, Digital learn
Language learning	Rocket Language, Transparent Language, Google translate
Driving test practice	Online permit practice, renewal
Social media	Facebook, Twitter, Instagram, blog, YouTube, Pinterest
Health information (COVID)	Health Information Complete, Mississippi State Department of Health, CDC, COVID updates
Career resources	Cypress resume builder, Mississippi State Department of Employment, Careeronestop
Computer access, WI-FI, mobile printing	

Table 1. Functions of digital services and databases and products

Conclusion

The results show that the words like "services" and "resources" are still most used by these public library systems. A variety of digital services or electronic resources are listed under services or resources. Most services and resources offered are internet-based or accessed by computers. It is reasonable to interpret that not all services or resources offered by all these public library systems are the same because of confounding factors including the service population, funding, library management, staff trainings and skills, or web design. Even the use of the term "digital services " does not determine there are more services in a comparison with those which don't use it.   Although digital services can entail extra costs on libraries, these public library systems provide external links to free resources benefit both libraries and their patrons. The current digital services and resources provide a snapshot of what public libraries offer   and how they engage with their communities. They cater to diverse groups of patrons with a variety of services, resources, and tools. Virtual story time, mobile printing, driving test practice, and learning and career resources, and health resources offered imply that public library has made efforts to meets current needs of their patrons at all ages. Although this study generated preliminary results, the variety of services and resources match with national trends. A further study like using a survey with the library staff may help to figure out how the services are expanded exactly and their impact.

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