

# INFLUENCE OF DIGITAL APP ON LIBRARIANS' INFORMATION SERVICE DELIVERY IN FEDERAL UNIVERSITIES IN SOUTH-SOUTH NIGERIA

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## Abstract

This study looked at how librarians' involvement in providing information services in federal university libraries in Akwa Ibom and Cross River States was impacted by the influence of digital app. This study used a descriptive survey design. 171 professional and para-professional librarians from the University of Uyo, Federal University of Technology, Ikot Abasi, and University of Calabar made up the study's population. Since all of the respondents were included in the study, the entire enumeration technique was used. A questionnaire was employed to gather data. The instrument underwent face validation. The dependent t-test was used to evaluate the hypotheses, and the mean and standard deviation were utilized to answer the study questions. The study's conclusions indicate that librarians' involvement in providing information services in federal university libraries in Akwa Ibom and Cross River States is significantly influenced by digital resource access apps and digital repository apps. Among other recommendations, the study recommended that the federal government should provide financial support to federal university libraries for the development of digital repositories and the acquisition of digital technologies.

**Keywords: digital app, librarians, information, service delivery.**

## **Introduction**

The provision of information services is an essential component of librarianship that supports a library's existence and significance. It is essential to university libraries' success in fulfilling the vision and objectives of their parent organizations. The provision of information services justifies the significant financial outlay university libraries make to acquire information resources, which would be a waste if they weren't properly disseminated. Information service delivery enables librarians to provide library users with information that is timely, relevant, authentic, and current.

According to Eze (2020), “university libraries provide information in a variety of formats to meet the wide range of information demands of its patrons through a variety of methods, activities, and facilities”. Additionally, Issa et al. (quoted in Umoh, 2024) defined information service delivery as library services that are intended to give users access to the appropriate information required to address their questions, assist them in making decisions, or lessen the degree of confusion. These include reference service, circulation services, current awareness services, inter-library loan services, selective dissemination of information (SDI), user education, literature searching, online database services, resource sharing, information repackaging, email alerts, instant messaging, and online reservation of books, amongst others. With the advent of information technology and the increasing availability of information in digital formats, university libraries have integrated information technology components and gadgets in dispensing

information service. An important tool used by librarians in engaging in information service delivery is digital application.

In the view of Olawole et al. (2024), “digital apps are essential tools for ensuring resource accessibility”. Liu and Briggs (2015) posit that “digital apps have become an attraction for university libraries as they are imbued with the ability to provide real-time updates and notifications”. Students and scholars are able to receive alerts about new acquisitions, library activities, and due dates, which fosters improved communication between libraries and users. Additionally, these platforms allow students and researchers to access e-books, journals, and multimedia resources directly on their mobile devices.

The disparity between physical and digital is mitigated through the adoption of digital application as it provide users with convenient access to library resources, enhance user engagement, and support research and academic activities remotely. This is supported by Obinyan (2020) in a reportage stated that “digital library apps have greatly impacted library service delivery by extending library services beyond physical library buildings and reaching communities that may have limited access to traditional library resources”.

Digital resources access apps are applications designed to enable users to browse, search and access various digital materials such as e-books, online courses, videos, audio journals, document and other resources in a library collections, institutional repository or institutional subscription, electronically and on the go. This app has transformed how university libraries deliver their services, enabling seamless and on-demand access to a wide array of academic

materials as they are indispensable tools for students, researchers, and faculty because of the diverse information resources provided to meet the diverse needs of an academic community.

A digital repository app serves as a digital archive, providing users with a structured and accessible way to store, manage, and retrieve digital files and information. Often linked to institutional repositories, these applications facilitate the preservation, organization, and distribution of scholarly materials, including theses, dissertations, faculty publications, datasets, and multimedia resources. According to Chandhok and Babbar (2015), “digital repository apps are pivotal tools in the realm of information service delivery, particularly in university libraries.

Libraries now employ digital applications to expand their services beyond physical locations. By enabling users to access resources, catalogs, and services directly from their devices, these apps make library offerings available whenever and wherever they are needed. Oyelude & Alabi, (2020) reported that “libraries adopting digital apps have recorded increased user satisfaction due to the convenience and accessibility they offer”. However, digital applications facilitate user engagement by providing tailored experiences. Libraries can use these platforms to send notifications about new arrivals, organize virtual reading events, and offer real-time chat support to address user inquiries. These features not only improve user-library interactions but also encourage frequent use of library services.

Engaging with digital applications brings significant benefits, including the promotion of inclusivity and digital literacy. As libraries evolve in the digital era, adopting and effectively utilizing digital applications becomes crucial for improving service delivery and maintaining relevance in a technology-driven world. However, resources availability does not establish its

utilization, but based on the goals and objectives of an academic library which is to meet teaching, learning, research and information needs of the institution members while also impacting on the immediate community where it is established, it becomes imperative for librarians to engage in digital apps for effective and efficient service delivery. This study therefore examines influence of digital app on librarians' information service delivery in federal universities in south-south Nigeria.

### **Statement of the Problem**

Digital application have been identified as possible learning and research infrastructure that librarians should employ to enhance user experience by increasing user access, search, and retrieval of information through efficient service delivery. Libraries recognize that these technologies have the enablement to improve services provided to patrons in libraries and information centers even outside of physical space and time. On the other hand, university libraries deploy digital apps to provide real-time access to vast collections of resources for usage and consultation.

Libraries that make use of digital applications do so in order to enhance the quality of services they provide to their parent community. The researcher has noticed that, despite the potential benefits of using digital app, librarians have been slow to accept and use new technologies in the provision of information services. Additionally, it has been observed that librarians who used existing digital applications seldom give their customers individualized help or real-time access to information. In order to satisfy users' urgent needs, digital apps can rapidly transmit electronic resources like e-books, journals, theses and dissertations, archival materials,

or publications. The observed phenomenon is of concern to the researcher as it reflects librarian's inadequate exploitation of available digital apps for timely service delivery. However, if librarians don't use these digital apps efficiently, users won't profit from them, which would motivate them to use the library as a resource whenever they need information. In light of this, the purpose of this study is to investigate the influence of digital applications as it affects the provision of information services by librarians in federal university libraries located in the south-south Nigeria.

### **Research Questions**

- i. What is the influence of digital resource access apps on librarians' information service delivery in federal university libraries in south-south?
- ii. What is the influence of digital repository app on librarians' information service delivery in federal university libraries in south-south?

### **Literature Review**

Essentially, digital applications are specialized software applications designed for mobile devices such as smartphones and tablets which enable users to access and interact with library services and resources without the constraints of time, location and space. Manjula (2016) defines digital app as "computer program designed to run on mobile device such as smart phones and tablets which are usually available through application distribution platform".

Owate (2024), posited that "digital applications have significantly increased the accessibility of library resources, breaking the barriers of time and location". It provides consistent access to the library resources. They are particularly valuable for users who cannot

visit physical library spaces, remote learners and professionals. They are suitable for providing access to digital resources, facilitating database search and discovery, enhancing user account management, creating notifications. Softlink (2024) highlights that digital apps improve resource accessibility, user experience, librarians engagement with users and boosts competitive advantage.

Information service delivery encompasses a wide range of activities aimed at bridging the gap between information resources and users. According to Horsfall (2023), information service delivery in academic libraries refers to the structured and systematic processes of meeting the information needs of students, researchers, and other stakeholders. This is premised on the provision of access to various resources, services, and tools that facilitate the discovery, retrieval, and utilization of information effectively. Dogara cited in Okechukwu and Monokpo (2019), informed that “information service delivery is the generation, collection, organization and dissemination of up-to-date, accurate, unbiased and relevant information available in a variety of formats either when demanded by the user or in anticipation of a demand”. According to Sahabi and Otobo (2021), “information service delivery is a dual process of providing access to information and equipping users with the skills to locate, evaluate, and utilize information independently”. In the same vein, Bande et al. (2023) “maintain that information service delivery is the provision of information resources, services, and support to meet the academic, research, and personal needs of library users”. This encompasses more than just accessing and managing information; it also includes the strategies used to ensure that services are effective, accessible, and customized to meet users’ needs.

Advancements in information and communication technology have continually transformed the landscape of information service delivery. As a result, digital resources and services have become more prevalent, enabling libraries to meet user needs without limitations of time, space, or location. In the view of Anyanwu-Odu (2023), “information service delivery in the current dispensation is the application of information and communication technologies (ICTs) in organizing, retrieving, and disseminating information for academic purposes since university libraries increasingly rely on digital platforms, such as institutional repositories and electronic databases, to fulfill this role”.

Owate (2024) stated that “digital apps are specialized tools designed to facilitate seamless and efficient access to scholarly databases and research materials”. These apps allow users to browse, search, and retrieve academic resources from a range of disciplines. They are essential in academic and research libraries, because they provide access to journals, articles, datasets, and multimedia content. According to Taylor (2022), “digital resource app is imbued with advanced search capabilities, including keyword, Boolean, and subject-specific filters. Apps such as EBSCOhost, ProQuest, and JSTOR are widely used, offering features like saved searches, citation export, and customizable dashboards”. In the view of Irenoa and Sawyerr-George (2022), “a significant advantage of database access apps is their ability to provide remote access to subscription-based resources”. This is particularly beneficial for distance learners and researchers working off-campus. They bridge the gap between physical library services and remote academic needs, ensuring equitable access to resources. Mobile optimisation is an important aspect of digital resource access. As reported by Anyim (2020), “digital access apps are optimized for

mobile devices, ensuring users access to resources on as platforms like PubMed Mobile and IEEE Xplore which offer mobile-friendly interfaces that retain the functionalities of their desktop counterparts. Mobile optimization is particularly crucial for users who prefer on-the-go access to academic materials”. Digital resource access apps, in essence, serve as transformative tools that improve academic research by increasing accessibility, functionality, and efficiency. Through the integration of advanced search functions, mobile-friendly interfaces, and collaborative options, these applications effectively cater to the varied requirements of today’s researchers.

Ukwoma and Ngulube (2019) described “an institutional repository (IR) as a database for preserving the local content of academic institution which consists of materials as examination question papers, research publications, working papers and inaugural lectures generated in institutions of higher learning”. These materials have information that are vital for teaching, learning and research in universities. These are often difficult to come by since many of them are not in published form. However, the materials are leaflets that can easily become brittle. As such IRs provide a safe option for the preservation and accessibility of the local contents in digital format.

In the view of Meesad and Mingkhwan (2024), “digital repository apps have transformed the role of librarians by enabling more effective curation, preservation, and dissemination of digital content”. Digital repository app assists librarians in enhancing the accessibility and visibility of academic outputs, supporting research, teaching, and learning. Also, Chan (2016) asserted that “digital repository apps have significantly expanded librarians’ engagement in information service delivery”. By facilitating open access, preserving digital content, and

enhancing institutional visibility. They enable librarians to play a more active and strategic role in academic environments.

### Methodology

The survey design used for this investigation was descriptive. Federal University libraries in the South-South were used for the investigation. The survey included 171 professional and paraprofessional librarians. For the investigation, the total enumeration method was applied. A questionnaire was employed to gather data. The dependent t-test was employed to test the hypotheses at the 0.05 level of significance, and the mean and standard deviation were utilized to address research issues, subjecting the research instrument to face validation.

### Results and Discussion

#### Research Question one

What is the influence of digital resource access apps on librarians' information service delivery in federal university libraries in south-south?

**Table 1: Mean and standard deviation of the influence of digital resource access apps on librarians' information service delivery in federal university libraries in south-south (N= 168 )**

Variables	$\bar{x}$	N	SD
Digital resource access apps	3.60	168	0.38

Pair 1

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Librarians' information service delivery	2.88	168	0.61
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The result in Table 1 shows the weighted mean scores of 3.60 and 2.88 obtained by the respondents for digital resource access apps and librarians' information service delivery respectively and their respective standard deviation scores of 0.38 and 0.61. These standard deviation scores are small which means that the spread of scores are not too wide apart. Also, since the weighted mean scores for the two variables are above the cutoff point of 2.50, it means that there is influence of digital resource access apps on librarians' information service delivery in federal university libraries in south-south.

The finding of the influence of digital resource access apps on librarians' information service delivery in federal university libraries in south-south revealed that there is significant influence of digital resource access apps on librarians' information service delivery in federal university libraries in south-south. The finding can be attributed to the fact that digital resource access apps simplify the process of locating, organizing, and sharing digital content. With these tools, librarians can respond to information needs more efficiently, saving time and effort while enhancing the overall quality of service. This ease of use encourages consistent librarian participation in service delivery activities. The finding lend credence to the observation of Irenea and Sawyerr-George (2022), "who reported that a significant advantage of database access apps is their ability to provide remote access to subscription-based resources". The finding is also in line with that of Kolawole et al. (2024) who found that the "utilisation of mobile technology is important for effective library service delivery in South-West, Nigeria". The finding also lend

credence to the observation of Singh et al. (2023), who observed that “digital resource access apps are transformative tools that enhance the accessibility, functionality, and efficiency of academic research”. By integrating advanced search capabilities, mobile optimization, and collaborative features, these apps address the diverse needs of modern researchers.

**Research Question Two:** What is the influence of digital repository apps on librarians’ information service delivery in federal university libraries in south-south?

**Table 2: Mean and standard deviation of the influence of digital repository apps on librarians’ information service delivery in federal university libraries in south-south (N= 168 )**

	Variables	$\bar{x}$	N	SD
	Digital repository apps	3.78	168	0.25
Pair 1	Librarians’ information service delivery	2.88	168	0.61

The result in Table 2 shows the weighted mean scores of 3.78 and 2.88 obtained by the respondents for digital repository apps and librarians’ information service delivery respectively and their respective standard deviation scores of 0.25 and 0.61. These standard deviation scores are small which means that the spread of scores are not too wide apart. Also, since the weighted mean scores for the two variables are above the cutoff point of 2.50, it means that there is influence of digital repository apps on librarians’ information service delivery in federal university libraries in south-south.

The finding of the influence of digital repository apps on librarians’ information service delivery in federal university libraries in south-south revealed that there is significant influence of digital repository apps on librarians’ information service delivery in federal university libraries in

south-south. The finding is possible in view of the fact that digital repository apps serve as platforms for storing, organizing, and disseminating the institution's intellectual output including theses, dissertations, conference papers, and faculty publications. Librarians are central to managing these repositories, which increases their responsibility and active engagement in delivering information services. The finding I agrees with the observation of Asogwa and Ugwuishiwu (2016) who maintained that “digital repository apps are essential tools in university libraries. It enables the collection, management, and dissemination of scholarly outputs”. They support open access, facilitate resource sharing, and ensure the preservation of academic work. The finding also agrees with the observation of Chan (2016) who reported that “digital repository apps have significantly expanded librarians’ information service delivery”. By facilitating open access, preserving digital content, and enhancing institutional visibility. They enable librarians to play a more active and strategic role in academic environments.

### **Recommendations**

Based on the findings of this study, it is recommended as follows:

1. University management should allocate resources to improve ICT infrastructure, including reliable internet access and power supply, to support the effective use of digital library services.
2. The federal government should offer financial support to federal university libraries for the acquisition of digital technologies and the development of digital repositories.
3. Librarians should invest in continuous professional development to improve skills in using and digital applications.

4. In house training should be carried out by librarians. This will equip them with the necessary knowledge of how digital app is used within the library.

## Conclusion

The study's findings indicate that mobile applications have an impact on information service delivery by librarians in federal university libraries located in the South-South region.

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