

DIGITAL INFORMATION RESOURCES AS CORRELATE OF SERVICE PROVISION IN PUBLIC LIBRARIES IN SOUTH-EAST, NIGERIA

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Abstract

This study examined the digital technologies as correlate of services in public libraries in South-East, Nigeria. Three research questions were posed and two null hypotheses formulated to guide the study. The researchers adopted descriptive survey and correlational design for the study. The population of the study was sixty-four (64) professional librarians; census sampling technique which involves the use of the entire population was adopted. The instrument that was used to collect data for this study was a researcher-made checklist and rating scale titled: "Digital Information Resources and Library Service Provision Questionnaire" (DIRLSPQ). Pearson Product Moment Correlation (PPMC) was used to analyze the research questions while the hypotheses were tested using the t-test of significance of Pearson "r" at 0.05 alpha level. From the data analyzed, the result of the survey on the digital technologies available in the five public libraries is low, it was found that there is a positive and very high significant relationship between e-book and the services of public libraries in South-East, Nigeria and the coefficient of correlation between online database and the services of the public libraries, which shows a very high and positive relationship. The researchers recommended that there should be integration of digital technologies in public libraries in south-east, Nigeria and since there is significant positive correlation between e-book online databases and library services in the libraries; library management should prioritize the acquisition and effective implementation of all digital technologies studied to enhance overall service delivery.

Keywords: Digital technologies, Library services, Electronic-book, Online databases, public libraries

Introduction

Digital technologies have significantly transformed the landscape of library services, enabling libraries to offer a wide array of digital resources and services to their patrons. In addition to digital resources, Public libraries are evolving to meet digital and information-literacy needs in the changing environment. For example, Bakhtiar, Abu, & Shaifuddin (2025) developed a collaborative framework between state public libraries and school resource centres in Malaysia, demonstrating how libraries can serve as hubs for digital information-literacy programmes, integrating access, evaluation, creation and sharing of digital content. Their study asserts that such initiatives support sustainable collaboration and capacity-building, enabling libraries to offer workshops, digital platforms, and outreach services beyond classic physical collections. Accordingly, public libraries are increasingly delivering technology training sessions, digital-skills workshops (such as for internet use, mobile devices, cyber security) and virtual programming. They also use digital registration systems and virtual event formats to widen outreach — especially reaching patrons unable to attend in person. Through these efforts, libraries empower individuals to navigate the digital landscape with more confidence and provide broader access to e-books, audio-books, online databases and digital archives.

The public library has a wider influence on societal as well as national development. It brings all round development in a society and nation: Thus, it is regarded as “people’s university. It functions as an intellectual power house, aspiring to meet the intellectual,

educational, recreational, informational and cultural requirements of the people. It makes provisions of not only recreational materials for leisure reading but also of economic, social, cultural and political materials to make the public aware of the developments around them. According to Ogbu, Oche, Nwachukwu and Batagarawa (2020) the public library is the only institution, which caters for all categories of users irrespective of age, race, sex, color, creed and religion. Public libraries serve as a catalyst for socio- cultural and educational development by providing access to information and knowledge. Public library functions as a center for self -education. It is the primary functions of a public library to select and organize need based literature and other means of information and education suitable to the requirements of the local community in which the library is located. It fosters and provides means for self- development of the individual and group at every stage of education, closing the gap between the individual and recorded knowledge. As a self- education center, the public library supports and promotes all types of education as formal and non-formal education, adult and continuing education by making provision of adequate stock of books and other reading materials and making them available to all sections of community, irrespective of caste, creed and color. Education is an ongoing process of improving knowledge and skills.

Learning consists of various forms of education and training, formal and informal, whether in the school system from primary to tertiary level, the free adult education, informal search and training, individually, in a group setting or within the framework of social movements. Public Library provides a cost effective infrastructure for learning and easy access to the required reading and learning materials in its collection (Bertot, Real &

Jaeger, 2016). The public library functions as community information centres by providing required and essential information to various communities such as rural, linguistic, religious, legal etc. It brings to these communities accurate and up-to-date information quickly and in depth, particularly on socio – economic needs of the society.

Public libraries according to Ogbu, Oche, Nwachukwu and Batagarawa (2020), supports the growth of communities through the provision of information services designed to meet local needs. It functions as an important tool for reducing disparity between the information rich and the information poor citizen. They also organize various forms of performing arts. Thus a local public library functions as a community information center.

Electronic books (e-books) are digital versions of traditional printed books that can be read on electronic devices such as e-readers, tablets, or computers. E-books offer a convenient and portable way for readers to access literature, providing an alternative to physical books and expanding the reach of library collections. According to Royal Melbourne Institute of Technology University Library (2023), an e-book is a book in digital format. Throughout history, books have been hand scribed texts, mass-printed with movable type, read aloud as audio books, photocopied, purchased, borrowed, annotated and indexed. And now books can be read online on a wide variety of devices anywhere, anytime. E-books can be accessed wherever and whenever one needs them.

Furthermore, online databases are digital repositories of organized information, typically accessible over the internet. They cover a wide range of subjects and may include academic journals, articles, reference materials, and other digital resources. Online

databases broaden the scope of available information, offering users access to a wealth of scholarly and general knowledge resources beyond traditional library holdings. According to Ofua (2021) databases have become essential components of research projects. The development of this digital infrastructure has also led to easier ways to store and utilize data in digital formats. Online databases can be used to find relevant data faster without the expense of reproducing experiments and physical research. This makes data more available to researchers and society in general.

Statement of the Problem

The digital era has ushered in unprecedented opportunities for information access and dissemination. Public libraries in South-East, Nigeria seem to face multifaceted challenges in navigating the complexities of digital technologies transformation. The lack of robust internet connectivity, outdated hardware, and limited access to modern software can impede the effective incorporation of digital technologies, as revealed by Barbuti (2020). This poses a significant hurdle to the seamless integration of digital resources and services and may hinder users not being satisfied with library services offered by the public libraries in South-East, Nigeria. The preservation of digital resources, including e-books, online databases, and multimedia content, demands specialised knowledge and infrastructure settings. As public libraries evolve into digital spaces, there arises a pressing need for librarians and staff to acquire digital literacy skills, hence the need to x-ray the correlate of digital technologies such as; e-books and online databases on the services of public libraries in South-East, Nigeria. As the public library has a role to play in this digital

age as the library for the general public, there is therefore the need to ascertain the correlation of digital technologies on services of public libraries in South-East, Nigeria.

Research Questions

To systematically address the objectives outlined in this study, the following research questions were posed to guide the study:

1. What are the types of digital technologies available in public libraries in the South-East, Nigeria?
2. What is the coefficient of relationship between e-book and the services of public libraries in South-East, Nigeria?
3. What is the coefficient of relationship between online databases and the services of public libraries in South-East, Nigeria?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance.

1. (H_{01}): The correlation coefficient between e-books and public library services is not significant.
2. (H_{02}): There is no significant correlation coefficient between online databases and the services of public libraries in South-East, Nigeria.

Literature Review

Today the emergence of digital technology and computer networks has provided a means whereby information can be retrieved, disseminated and duplicated in a fast and efficient manner. In future, for libraries to survive and succeed they must change from the role of store house of fixed printed materials to the digital libraries of dynamic electronic

multimedia documents in order to satisfy the changing information needs of the users. The established of digital library is a complex task and does not happen easily and cheap. As stated by Bansode and Shinde (2019), this depends upon several factors such as organization's goal, value of timely information, availability of necessary infrastructure and resources for conversion. Furthermore, Rafi, JianMing and Ahmad (2019) stated that digital library database resources have a significant influence on stimulating the research culture in higher education.

The use of digital databases makes it possible to understand intellectual growth, research productivity, planning and identification of user information needs; evaluating the effectiveness of user database resource utilization and research. Also, Khan, Ahmed, Khan, and Khan, (2017), findings showed that the frequency of use of Digital Library Resources (DLRs) and its purposes significantly contributed to the research students' satisfaction and research productivity. The authors also discovered a significant relationship between the predictors (DLRs purposes, DLRs frequency) and outcome variables (users' satisfaction and research productivity). The findings are also significant for Higher Education Commission (HEC) authorities, university library administrators, and library and information science professionals/information providers to develop e-resources and formulate effective usage policies through which they could make effective use of DLRs.

Libraries have witnessed a significant expansion of digital collections. Beyond traditional print materials, libraries curate digital archives, e-books, audiovisual content, and open-access resources. This diversity of digital resources broadens the scope of

available materials, catering to varied user preferences and needs. Digital technologies play a crucial role in the preservation of rare and fragile materials. Libraries digitize historical manuscripts, photographs, and artifacts, ensuring their long-term preservation while providing a digital surrogate for researchers and the public. This contributes to the conservation of cultural heritage. This is very important because according to Davis (2016), the integration of multimedia and interactive content enriches the user experience. The author again stated that digital resources can include videos, interactive simulations, and other dynamic elements, enhancing the educational and research value of the materials. Libraries leverage these technologies to engage users in novel ways.

Digital technologies have led to a significant transformation of library services. Libraries are no longer confined to physical spaces; they have become digital hubs, offering a wide range of online resources and services. Okafor (2023) reveals that digital library system has the potential of providing wide range of information resources and services that are created and made available online or offline such as digital repositories and archive of resources. It is therefore reshaping the method of public library services and increasing visibility of contents in various disciplines and topics. Public libraries have the opportunity to use digital library platforms to enhance the quality of their service delivery.

Technological innovations according to Chen and Davis (2020) are driven by knowledge-based societies as knowledge is very vital in achieving scientific and technological development anywhere in the world. In this present era, knowledge-based societies are synonymous with smart cities, thus, this shows that there is a clear relationship between smart cities, science and technology development with academic

libraries which are repositories of knowledge and active agents in research and development for scientific and technological advancement.

Public library resources are the information materials that come in various formats, both physical and digital, and serve to inform, educate, and entertain the library's users. According to Nworie and Unegbu (2017), library collections are made up of print materials, non-print materials, or digital or electronic materials. Print materials include textbooks, monographs, serials, periodicals, and government documents. Non-printed or digital/electronic materials include e-books, the Internet, e-textbooks, databases, graphics, still and moving images, audio, software, and web pages. Libraries are stocked with both human and material resources (such as print and non-print). Students who are admitted in their first year are given library instructions. They are established to complement classroom teaching and support extra reading for students. Some authors like Ogbomo (2023) observed that students were not adequately making use of the library, either through visits to consult materials on the shelves, sitting down to read their books or lecture notes, consulting materials for their assignment, or other personal reasons.

Online databases are collection of electronic information resources uniquely or generally organized to suit the information needs of researchers from specific or multi-disciplinary subject fields. According to Shaw Academy (2018), a database is an organized collection of data in the form of schemas, tables, queries, reports, views and other objects. Similarly, Abubakar and Akor (2017) defined database as an organized collection of information. As the authors further observed, databases are often characterized by the type of information they contain—text, numbers or fields. Electronic databases have become a

major element of library collections around the globe. They are essential for learning, teaching and research activities. Samaravickrama and Samaradiwakara (2014) opined that their influence on academic libraries and scholars is noteworthy and unprecedented.

These databases are organized digital collections of references to publish literature such as journal articles, newspaper articles, conference proceedings, reports, legal publications, theses, e-books among others. Larson (2017) stated that electronic databases are of different types such as bibliographic, full-text, directory and multimedia. Shaw Academy (2018) stratified databases into: centralized database, operational database, end-user database, commercial database, personal database and distributed database.

Furthermore, Thompson and Williams, (2019) affirmed that public libraries leverage online databases to provide users with access to a wealth of academic, scientific, and research materials. Online databases offer advanced search functionalities, enabling users to retrieve information efficiently. This digital infrastructure enhances the research capabilities of library patrons.

Electronic book (e-book) is digital versions of traditional printed books that can be read on electronic devices such as e-readers, tablets, or computers. E-books offer a convenient and portable way for readers to access literature, providing an alternative to physical books and expanding the reach of library collections. According to Royal Melbourne Institute of Technology University Library (2023) an e-book is a book in digital format. Throughout history, books have been hand scribed texts, mass-printed with movable type, read aloud as audio books, photocopied, purchased, borrowed, annotated

and indexed. And now books can be read online on a wide variety of devices anywhere, anytime. E-books can be accessed wherever and whenever one needs them.

Despite the benefits, the transformation of library services through digital technologies is not without challenges. Libraries must address issues such as digital literacy gaps, privacy concerns, and the need for ongoing staff training to effectively navigate the evolving digital landscape. While the integration of digital technologies offers numerous benefits, public libraries encounter a range of challenges as they navigate the complexities of adopting and incorporating these technologies into their operations. Understanding these challenges is crucial for developing effective strategies to ensure a successful digital transformation.

Another, challenge associated with digital resources is their ephemeral nature. Digital materials may become obsolete due to changes in file formats, software compatibility issues, or technological advancements. Libraries must employ strategies for ongoing curation and migration to ensure the longevity of digital collections. This assertion is in line with Malak (2022) who reveals that the risk of losing valuable digital content grows. Data centers are not storage banks of lives any longer but are instead data troves that can be lost in a simple data backup incident, lost due to an unfortunate data backup incident: priceless memories, personal history, and invaluable information that may have been the key to solving an unexplained disappearance but the potential pain is worth for the protection of future generations. The author went further to state that data loss can cause a lot of problems for businesses and individuals alike. With no reliable backups, it's difficult to retrieve information that was lost. In order to mitigate this, businesses must be

aware of the risks and implement safeguards such as maintaining a secure backup system. Individuals need to understand the risks, too. It's important to back up all personal data in one place and keep it safe in case something. This is also applicable to public libraries because of loss of ephemeral materials. Digital technologies also pose challenges related to collection management and preservation.

Methodology

This study employed a survey research design of the correlational type to examine and compare the correlation of digital technologies on library service provision in public libraries across South-East Nigeria. The population of the study was 64 which include all the professional librarians working in the libraries studied. The study adopted a census sampling technique, to cover all the 64 professional librarians working in the libraries studied. Two instruments were used for data collection namely, "Digital Technologies Availability in Public Library Checklist" (DTAPLC) and the rating scale captioned "Digital Information Resources and Library Service Provision Questionnaire" (DIRLSPQ). Data obtained using DTAPLC were analyzed using descriptive statistics involving mean to determine the level of availability of digital technologies across libraries. Data collected using DIRLSPQ were analyzed using Pearson Product Moment Correlation (PPMC) to establish relationships between digital technologies and library service provision. The interpretation of correlation coefficients followed standard ranges from: 0.00–0.20 = very low, 0.21–0.40 = low, 0.41–0.60 = moderate, 0.61–0.80 = high and 0.81–1.00 = very high. The null hypotheses were tested using the t-test statistic at a 0.05 level of significance. The decision rule was: reject the null hypothesis if $p \leq 0.05$ and retain it if $p > 0.05$.

Result

Research Question 1: What are the digital technologies available in public libraries in South-East, Nigeria?

Table 1: Availability of Digital Technologies in public libraries.

S/N	Digital Technologies	Availability (%)	Non-availability (%)
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1	Library Management System (LMS)	2(3.1)	62(96.9)
2	Radio Frequency Identification (RFID)	1(1.6)	63(98.4)
3	Digital Catalogs	2(3.1)	62(96.9)
4	E-Books and Audio-books	1(1.6)	63(98.4)
5	Public Access Computers	32(50)	32(50)
6	Online Databases	3(4.7)	61(95.3)
7	Wi-Fi Networks	4(6.3)	60(93.7)
8	Digital Archives	2(3.1)	62(96.9)
9	Digital Learning Resources	3(4.7)	61(95.3)
10	Virtual Reality (VR)	0	64(100)
11	Augmented Reality (AR)	0	64(100)
12	3D Printing Services	0	64(100)
13	Maker Spaces	0	64(100)
14	Digital Storytelling Platforms	1(1.6)	63(98.4)
15	Social Media Presence	40(62.5)	24(37.5)
16	Digital Signage	2(3.1)	62(96.9)
17	Mobile Apps for Library Services	1(1.6)	63(98.4)
18	Electronic Resource Management Sys	2(3.1)	62(96.9)
19	Cybersecurity Measures	3(4.7)	61(95.3)
20	Remote Access Services	2(3.1)	62(96.9)
21	Streaming Services (e.g., Online Lectures, Webinars)	1(1.7)	63(98.3)
22	E-Readers and Tablets	2(3.1)	62(96.9)
23	Screen Readers and Magnifiers (for visually impaired users)	1(1.7)	63(98.3)
24	Internet of Things (IoT)	0	64(100)
25	Block chain Technology	0	64(100)

The result in Table 1 shows that majority of the digital technologies are not available in the public libraries in South-East, Nigeria. The data presents the availability and non-availability of various digital technologies in public libraries in South-East Nigeria. A detailed analysis reveals the following key findings: Library Management Systems (LMS) are available in only 3.1% of libraries, indicating that most libraries still rely on manual systems for managing library operations. Radio Frequency Identification (RFID) is barely used (1.6%), reflecting poor adoption of modern security and tracking systems for library materials. Digital Catalogs have similarly low availability (3.1%), which affects the ease of access to library collections. E-books and audio-books are available in only 1.6% of

libraries. Online databases (4.7%) and digital archives (3.1%) are also significantly underutilized, limiting the availability of up-to-date and diverse resources for library users. Wi-Fi networks are present in 6.3% of libraries, which is still far from adequate in today's digital age. Technologies like Virtual Reality (VR), Augmented Reality (AR), 3D Printing, Internet of Things (IoT), and Block-chain Technology are completely absent in public libraries. This indicates a substantial lag in adopting innovative technologies that could transform user experiences and expand service offerings. Public access computers are available in 50% of libraries, providing a relatively reasonable level of digital access for library users. Social media presence is high (62.5%), indicating that libraries are leveraging social media to engage with users and promote services. Cyber security measures (4.7%) and remote access services (3.1%) are limited, which suggests that libraries are unprepared for potential data breaches and unable to offer off-site access to their resources.

Research Question Two: What is the relationship between e-books and the service provision in public libraries in South-East, Nigeria?

Table 2: The Coefficient of Correlation between e-books and the services provision in public libraries in South-East, Nigeria

Variable	<i>n</i>	<i>r</i>	<i>r</i> ²	Remark
E-book	64	0.949	0.978	Positive
Serv.				

As presented in Table 2, the coefficient of correlation between e-book and the services of public libraries in South-East, Nigeria is 0.949, while the coefficient of determination is 0.978. The coefficient of correlation is positive and is within the range

0.81 – 1.00 for very high relationship. Hence, there is a positive and very high of relationship between e-book and the services of public libraries in South-East, Nigeria.

Hypothesis One: The relationship between e-book and the library services of public libraries in South-East, Nigeria is not significant.

Table 3: Summary t-values Table for Testing Hypothesis One

	t_{Cal}	df	t_{Crit}	p	Decision
-11.659	62	1.998	0.000	Reject H_{03}	

The analysis in Table 3 showed that the calculated t-value -11.659 is significant at an observed probability value (p-value) 0.000 which is not greater than the hypothesized probability value 0.05. Thus, the researcher rejects the null hypothesis three which states that “The relationship between e-book and the services of public libraries in South-East, Nigeria is not significant”. Therefore, the relationship between e-book and the services of public libraries in South-East, Nigeria is significant.

Research Question Two: What is the relationship between online database and the services of public library in South-East, Nigeria?

Table 4: The Coefficient of Correlation between Online database and the services of public library in South-East, Nigeria

Variable	n	r	r^2	Remark
Online Database Serv.	64	0.959	0.919	Positive

Analysis in Table 4 indicates that the coefficient of correlation between online database and the services of public library in South-East, Nigeria is 0.959. The coefficient of determination is 0.919. The coefficient of correlation is positive and within the range 0.81 – 1.00 for very high relationship. The coefficient of determination on the other hand indicates

that 91.9% in variations in the services of public library in South-East is explained by online database.

Hypothesis Two: The relationship between online database and the services of public library in South-East, Nigeria do not differ significantly.

Table 5: Summary t-values Table for Testing Hypothesis Two

	<i>t_{Cal}</i>	<i>df</i>	<i>t_{Crit}</i>	<i>p</i>	<i>Decision</i>
-13.809	62	1.998	0.000	Reject H ₀₄	

In Table 5, the calculated t-value of -13.809 is significant at an observed probability value (p-value) 0.000 which is not greater than the hypothesized probability value 0.05. Thus, the researcher rejects the null hypothesis four which states that “The relationship between online database and the services of public library in South-East, Nigeria do not differ significantly”. Therefore, the relationship between online database and the services of public library in South-East, Nigeria is significant.

Discussion of Findings

Availability of Digital Technologies

The findings of this study reveal that the availability of digital technologies in public libraries in South-East Nigeria is low, indicating significant challenges in the adoption and integration of contemporary digital tools. This result suggests that most public libraries in the region are yet to transition meaningfully from traditional service models to digitally driven library environments. The low availability of digital technologies constrains access to electronic resources, limits service innovation, and reduces the capacity of libraries to respond effectively to the evolving information needs of users in the digital age.

This finding corroborates earlier empirical studies on digital technology adoption in Nigerian public libraries. Specifically, the result aligns with the study by Ike, Chinedu, and Umah (2023), which reported a low level of digital awareness and a low extent of digital technology integration in public libraries. Similarly, previous studies in other parts of Nigeria have consistently reported inadequate provision of ICT infrastructure, limited access to emerging technologies, and poor digital readiness in public libraries, largely due to systemic constraints. Several factors may account for this low availability of digital technologies. First, inadequate funding remains a critical issue, as public libraries depend heavily on government subventions that are often insufficient to support ICT acquisition, maintenance, and upgrades. Second, the absence of clear digital transformation policies and strategic planning frameworks limits coordinated efforts toward technology integration. Third, poor technical infrastructure, including unreliable electricity supply and limited internet connectivity, further hinders the deployment of advanced technologies such as virtual reality, augmented reality, maker spaces, and Internet of Things (IoT) tools. Additionally, the limited digital competence of library staff and lack of continuous professional training reduce the effective adoption and utilization of available technologies.

The low availability of digital technologies also reinforces the persistence of the digital divide, particularly for users who rely on public libraries as their primary point of access to digital information and information literacy skills. Overall, the findings underscore the urgent need for deliberate investment, policy support, and collaborative partnerships to enhance digital technology availability and reposition public libraries in South-East Nigeria as relevant hubs for innovation, learning, and community development.

Coefficient of Correlation between e-books and the services of public libraries in South-East, Nigeria

The findings of this study reveal that the relationship between e-books and public library services in South-East Nigeria is positive and highly significant; indicating that increased availability of e-book resources corresponds with improved library services and higher user patronage. This result implies that e-books play a critical role in enhancing the relevance, attractiveness, and effectiveness of public library services in the digital information environment. As e-book availability increases, users are more likely to access library services due to the convenience, flexibility, and immediacy that digital resources provide.

This finding corroborates earlier empirical studies that have established the value of e-books in improving library service delivery. For instance, Pandey (2016) reported that postgraduate students held positive perceptions of the quality of e-books and that perceived quality significantly influenced the extent of e-book usage. This supports the present finding by confirming that users' acceptance and increased use of e-books enhance library engagement and service effectiveness. Similarly, the study by Achugbue, Edogiawerie, Omorodio, and Azih (2023) demonstrated that university libraries provided access to a wide range of digital information resources, including e-books, which significantly supported teaching, learning, and research activities. Their findings affirm that e-books constitute a vital component of modern library service delivery.

The result is also consistent with Alhassan and Macaulay (2015), who found that university students frequently used internet-based resources such as e-books due to their

ease of access and usefulness. However, the present finding contrasts with Oyedapo and Ojo (2013), who reported low usage of electronic resources, including e-books, among respondents—possibly due to infrastructural limitations and low digital literacy at the time of their study. The strong positive relationship observed in this study further supports Kiondo's (2014) assertion that as libraries increasingly recognise the instructional value of electronic resources, their integration enhances learning quality and library service delivery.

The significant relationship between e-books and public library services can therefore be attributed to factors such as remote accessibility, multiple-user access, cost-effectiveness, space efficiency, and alignment with contemporary information-seeking behaviour, making e-books a powerful tool for strengthening public library services in South-East Nigeria.

The Coefficient of Correlation between Online database and the services of public library in South-East, Nigeria

The finding of the study also reveals a positive, very high, and statistically significant relationship between the use of online databases and the services of public libraries in South-East Nigeria. This result implies that increased utilization of online databases leads to corresponding improvements in public library services, particularly in information access, reference services, and user satisfaction. The very high coefficient of relationship underscores the strategic importance of online

databases as a critical digital resource in contemporary public library service delivery.

This finding corroborates with earlier studies that emphasized the positive contribution of online databases to library services. Ivwighreghweta and Eireyi-Fidelis (2022) reported a high level of awareness and extensive use of electronic academic databases such as JSTOR, Elsevier, DOAJ, ProQuest, Science Direct, and LexisNexis, noting their effectiveness in supporting teaching, learning, and research activities. Similarly, these databases enhance public library services by providing users with timely access to credible, current, and diverse information resources beyond the limitations of print collections.

The significant relationship observed in this study may be attributed to the ability of online databases to support remote access, quick information retrieval, and comprehensive coverage of scholarly and professional content. These features enable public libraries to meet users' information needs more efficiently, reduce dependence on physical collections, and improve the quality of reference and information services. Consequently, the integration of online databases strengthens the service capacity of public libraries and reinforces their relevance in the digital information environment.

Recommendations

Based on the findings of this study, the following recommendations were made.

1. Digital technologies should be made available and functional in public libraries in South-East, Nigeria.
2. To capitalize on the high demand for e-books, public libraries in South-East Nigeria should invest in expanding their e-book collections to meet the evolving needs of their patrons.
3. Public libraries in south-east should focus on addressing issues related to epileptic power supply, lack of downloadable full-text, and information literacy skills to maximize the benefits of online databases.

Conclusion

The study concludes that digital technologies are indispensable tools for contemporary public libraries. Their impact on library services in Southeast Nigeria is undeniable. By leveraging these technologies, public libraries can transform into dynamic knowledge centers that effectively serve their communities. Continued investment in digital infrastructure and staff development are essential to ensure the sustained growth and relevance of public libraries in the digital age.

References

- Abubakar, M. S. & Akor, P. (2017) "Availability and utilization of electronic information databases for research by agricultural scientists in federal university libraries in North central Nigeria". *Library Philosophy and Practice (e-journal)*. Retrieved from <https://www.researchgate.net/publication/321299849>
- Achugbue, E. I., Edogiawerie, S., Omorodio, E. E. & Azih, A. C. (2023). Accessibility and use of electronic resources for digital reference services among university libraries in southern Nigeria. *Regional Journal of Information and Knowledge Management*, 8 (2), 1-16.

- Bakhtiar, H. A., Abu, R., & Shaifuddin, N. (2025). Sustainable collaborative digital information literacy index framework for state public library and school resource centre in Malaysia. *International Journal of Modern Education (IJMOE)*, 7(24), 1377-1397. <https://doi.org/10.35631/IJMOE.724098>
- Bansode, N. N. & Shinde, M. G. (2019) Impact of New Technologies in the Digital Libraries. *Journal of Advancements in Library Sciences*. 2019; 6(Special Issue 1): 279–283.
- Barbuti, N (2020) Thinking digital libraries for preservation as digital cultural heritage. *International Journal on Digital Libraries*. 22, 309 – 318
- Bertot, J. C., Real, B. & Jaeger, P. T. (2016). Public libraries building digital inclusive communities: Data and Findings from the 2013 Digital Inclusion Survey. *Library Quarterly* 86 (3): 270–289. doi:10.1086/686674.
- Chen, L., & Davis, R. (2020) "Digital Literacy Gaps in Public Libraries: A Systematic Review" Book: Digital Inclusion and Social Empowerment Retrieved on 20th October, 2025
- Davis, R. 2016, "The digital transformation of public libraries," *Digital Libraries Journal*, 45(3), 210-225.
- Ike, N. I.; Chinedu, O. N. & Umah, C. (2023) Impact of digital technologies on resources and services of public libraries in Anambra and Imo State. *Library Philosophy and Practice (e-journal)*. 8017. <https://digitalcommons.unl.edu/libphilprac/8017>
- Ivwithreghweta, O. & Eireyi-Fidelis, S. (2022). The usage of electronic academic database resources among lecturers and postgraduate students in Western Delta University, Oghara, Delta State, Nigeria. *International Journal of Librarianship*, 7(2), 106-112. <https://doi.org/10.23974/ijol.2022.vol7.2.250>
- Khan, A., Ahmed, S., Khan, A. and Khan, G. (2017), "The impact of digital library resources usage on engineering research productivity: an empirical evidences from Pakistan", *Collection Building*. 36(2), pp. 37-44. <https://doi.org/10.1108/CB-10-2016-0027> Accessed on 1st July, 2025
- Kiondo, E. (2014). An assessment of the levels of IT investments, electronic information resource usage and users' information literacy skills. *International Journal of Librarianship*, 10(8), 89–95.
- Larson, A. G. (2017). Faculty awareness and use of library subscribed online databases in the University of Education, Winneba. Ghana: a survey. *Library Philosophy and Practice (ejournal)*. 1515. Retrieved from: <http://digitalcommons.unl.edu/libphilprac/1515> Accessed on 15th March, 2025.

- Malak, H. A. (2022). Ten guaranteed advantages of digitization you should know. <https://theecmconsultant.com/adv>
- Nworgu, B. G. (2015). *Educational research: Basic issues and methodology*, (2nd Ed.). Nsukka; University Trust Publishers
- Nworie, J. C. & Unegbu M. (2017) Library collection, nature, types and uses in academic libraries. In: *Library use companion and study skills* (pp.24-32) Springfield Publishers. Accessed from: <https://www.researchgate.net/publication/327187509>
- Ofua, J. O. (2012). Awareness and utilization of online subscribed databases by academics in university libraries in Delta State. *Library Philosophy and Practice (e-journal)*. 6436. <https://digitalcommons.unl.edu/libphilprac/6436>
- Ogbomo, E. F. (2022). Virtual reality library services: A global vision for university libraries in Delta and Edo states, Nigeria. *Regional Journal of Information and Knowledge Management*, 7 (1),1-13.
- Ogbu, K. N.; Oche,, N. A.; Nwachukwu,, V. N.; & Batagarawa,, S. A. (2020). "Effective management of cultural heritage information resources: A comparison of libraries and museums in South East Nigeria". *Library Philosophy and Practice (e-journal)*.4505.<https://digitalcommons.unl.edu/libphilprac/4505> Accessed on 15th March, 2025.
- Okafor, K. (2023), "Prospects of digital information services in Nigerisn public libraries". *Library Philosophy and Practice (e-journal)*. 7692. <https://digitalcommons.unl.edu/libphilprac/7692> Accessed on 4th March, 2025
- Osaroluka, R. N., Okpokwasili, N. P. & Nnodim, A. U. (2023). Availability and utilization of e-database for effective instructional delivery among library educators in public universities in South- South Zone of Nigeria. *International Journal of Advanced Academic & Educational Research* 14(13), 24 –33 DOI: 2726-145-223-7-14133.
- Pandey, S. K. (2016). Impact of e-books in academic libraries. *International Journal of Research in Library Science* 2(1), 151-154
- Rogers, E. M. (1962). *Diffusion of Innovations*. New York: The Free Press.
- Royal Melbourne Institute of Technology University Library (2023) Library collection guides retrieved from <https://rmit.libguides.com/ebooks/ebookcollections>
- Samaravickrama, P. G. R., & Samaradiwakara, A. (2014). Predicting faculty member adoption of online databases by Diffusion Theory approach: case study at the University of Sri Jayewardenepura in Sri Lanka. *International Journal of Technical Research and Applications* 2(7):87-97

Shaw Academy (2018). Six important types of databases. Retrieved from <http://www.shawacademy.com/web-development/different-types-of-databases.html?spage=true> Accessed on 15th May, 2025

Thompson, J., & Williams, K. (2019) "Community Engagement in Virtual Libraries: A Case Study" Conference: Proceedings of the International Conference on Digital Libraries