



OMANARP INTERNATIONAL JOURNAL

OF ARTS & SOCIAL SCIENCE

Available on : <https://acadrespub.com/index.php/oijass>

Vol. 1, 1. Pp. 1-11; AUG. 2024

CHALLENGES OF ADOPTED DIGITAL TECHNOLOGIES IN PUBLIC LIBRARY SERVICES IN NIGERIA

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ABSTRACT

ARTICLE INFO

Received Date: 11th July, 2024

Date Revised Received: 27th August, 2024

Accepted Date: 30th August, 2024

Published Date: 30th August, 2024

Citation: Agwuna, O.M et al:
Challenges of Adopted Digital
Technologies in Public Library
Services in Nig: OMANARP
INTER. J. Art & Social Sciences
Vol.1, Pp. 1-11, Aug, 2024.

The adoption of digital technologies in public library services in Nigeria, particularly in Anambra State, faces significant challenges that hinder their full potential. This study examines the barriers to the effective integration of Information and Communication Technology (ICT) in public libraries, focusing on infrastructural deficits, inadequate funding, poor internet connectivity, and insufficient digital literacy among librarians. Using a descriptive survey design, data were collected from 23 librarians in Anambra State. Findings reveal that inadequate funding, unreliable electricity, and lack of technical support are major impediments. Additionally, the study found no significant difference in perceptions of these challenges between male and female librarians. The results underscore the need for targeted interventions, including increased funding, policy reforms, and capacity-building programs, to enhance ICT adoption. Addressing these challenges is crucial for modernizing public library services and ensuring equitable access to digital resources for all users.

KEYWORDS: Digital Technologies , Public library, Services, ICT and Challenges

Introduction

A public library is defined as an institution that provides free access to a wide range of information and resources for the community. It serves as a vital resource for education, information, and personal development. Public libraries aim to meet the diverse needs of the community, offering services such as book lending, computer access, and educational programs. By providing a space for learning and exploration, public libraries empower individuals and contribute to the overall development of society (Oduwale, 2020). More so, public libraries are regarded as information hubs that provide access to a vast collection of books, periodicals, and digital resources (Muokebe, 2013). They play a critical role in ensuring that individuals have the necessary information to make informed decisions. Public libraries have adapted to technological advancements by offering online resources and e-books, enhancing their accessibility (Muokebe & Ogbomo, 2013). This transformation enables users to engage with information more efficiently, fostering a culture of reading and continuous learning within the community (Afolabi, 2021).

A public library is seen as a center for lifelong learning, providing resources and programs that cater to users of all ages. It offers educational opportunities through workshops, seminars, and reading programs designed to enhance skills and knowledge (Ogbomo & Muokebe, 2013). Public libraries play a crucial role in promoting literacy and education, particularly in underserved communities. By fostering a love for learning and personal growth, public libraries contribute to the development of informed and engaged citizens (Chinwe, 2020). Public libraries are often defined as cultural institutions that preserve and promote the heritage of a community (Nwabueze et al., 2014). They serve as repositories of local history and culture, providing access to archives, manuscripts, and cultural events. Public libraries host activities that celebrate local traditions and diversity, enriching the community's cultural landscape (Ogbomo & Muokebe, 2015). By encouraging community engagement through cultural programming, public libraries foster a sense of identity and belonging among residents (Nwogu, 2019).

Public libraries are recognized as technology access points, providing community members with access to computers, the internet, and other digital tools (Ofordile et al., 2016). This definition highlights the role of public libraries in bridging the digital divide, particularly in regions with limited access to technology. Public libraries offer training sessions on digital literacy and provide resources that enable users to navigate online platforms effectively (Ibeh et al., 2025). By facilitating access to technology, public libraries empower individuals to engage with the digital world and enhance their skills (Adebayo, 2021). Additionally, a public library

is often viewed as a community meeting space where individuals can gather for various activities, including meetings, workshops, and social events (Ibeh et al., 2025). This aspect of public libraries fosters collaboration and engagement among community members. Public libraries provide a neutral space for dialogue and exchange of ideas, promoting social cohesion and community building. By hosting diverse events, public libraries enhance community relationships and contribute to a vibrant civic life (Obinna, 2020).

Public libraries are defined as equalizers of opportunities, providing all community members with access to information and resources regardless of their socio-economic status (Orakpor, 2007). This definition emphasizes the library's role in promoting equity and inclusion. Public libraries strive to offer services that cater to marginalized groups, ensuring that everyone has the opportunity to benefit from available resources (Orakpor et al., 2014). By providing equal access to information and learning opportunities, public libraries help to level the playing field for all individuals (Iroha, 2021).

The advent of digital technology has revolutionized library services worldwide, fostering enhanced access to information, improved service delivery, and fostering user engagement (Lonsdale & De Saulles, 2012). In Nigeria, public libraries are increasingly adopting digital tools to bridge the gap between traditional information provision and the modern needs of their diverse users (Aina, 2014; Orakpor & Anyaoku, 2012). Despite the recognized benefits, the implementation of digital technologies in Nigerian public libraries faces several challenges that impede realization of their full potential (Okechukwu & Orakpor, 2017). These hurdles often limit user engagement, diminish service quality, and delay the realization of the transformative goals of digital library initiatives (Orakpor & Omoruyi, 2022). Understanding these challenges is crucial for policymakers, library practitioners, and stakeholders to develop targeted strategies that optimize digital adoption and improve service delivery (Orakpor et al., 2010).

Statement of Problem

Although there has been a progressive shift towards integrating digital technologies into Nigerian public libraries, the pace of adoption and effectiveness remain inconsistent across regions and institutions. Challenges such as inadequate infrastructure, limited skilled personnel, poor funding, and infrastructural disparities hinder the optimal deployment of digital solutions (Aderinoye & Ojokowo, 2009). These issues, compounded by technological obsolescence and socio-technical barriers, threaten to marginalize public library services and restrict access to vital information

resources, especially among underprivileged populations. This study aims to identify and analyze these challenges, providing insight into how they inhibit the successful integration of digital technologies in Nigerian public library services.

Purposes of the Study

Examine the hindrances to application of digital technology in public library services in Anambra State.

Research questions

What are the hinderances to application of digital technology in public library services in Anambra State?

Hypothesis

H01: There is no significant difference between the mean ratings of male and female librarians on the hinderances to application of digital technology in public library services in Anambra State.

Literature Review

The integration of digital technology in library services has become a global phenomenon, driven by technological advancements and the increasing demand for instant information access (Chowdhury & Chowdhury, 2010). However, the Nigerian context presents unique challenges due to socio-economic and infrastructural limitations.

Infrastructural deficits, such as unreliable electricity supply, poor internet connectivity, and lack of necessary hardware, significantly impede digital adoption in Nigerian public libraries (Akporhonor & Owolabi, 2016).

Aina (2014) emphasizes that inadequate funding also hampers the procurement and maintenance of digital resources, thus restricting service expansion and sustainability. Furthermore, the shortage of skilled personnel capable of managing digital systems remains a persistent obstacle; many library staff lack sufficient training to operate new technologies effectively (Okiy & Olusanya, 2012). Socio-cultural barriers, such as user resistance to change and low levels of digital literacy, further complicate the adoption process (Nwalo, 2008). Many Nigerian users still prefer traditional methods of information retrieval and are skeptical of digital sources due to trust issues, which diminishes the perceived usefulness of digital services (Nwalo & Aina, 2014).

Financial constraints remain paramount. As digital initiatives often require substantial initial investment and ongoing maintenance costs, many public libraries struggle to allocate adequate funds, especially in a resource-scarce environment (Emefa & Oye, 2015). This situation is exacerbated by policy gaps and lack of strategic planning, which limit the scope of digital transformation (Okiy, 2013). Recent studies advocate for a holistic approach that considers infrastructural development, personnel training, user education, and sustainable funding to surmount these challenges (Adeboye & Eke, 2019). In sum, although digital technology offers promising avenues for improving public library services in Nigeria, multiple intertwined challenges must be addressed to realize their full benefits.

Conceptual Review

Figure1:Schematic Representation of the Study Concepts

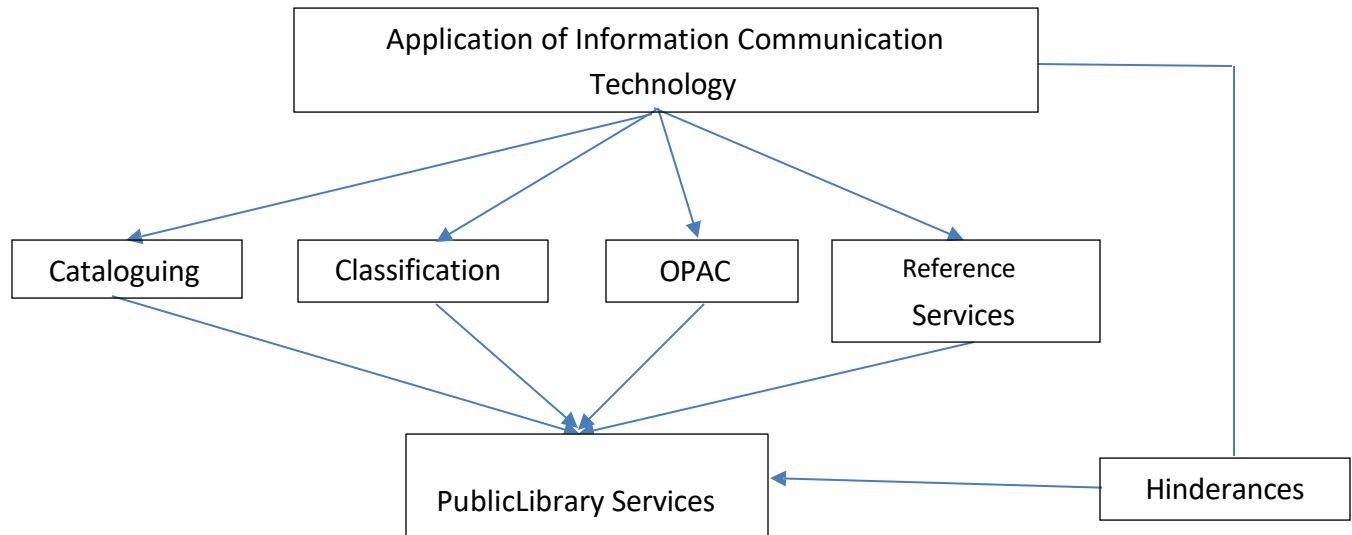


Fig. 1: Shows the schematic representations of the study concepts.

Information Communication Technology

Information and Communication Technology (ICT) is defined as the integration of telecommunications, computers, and the internet to facilitate the management and exchange of information (Smith, 2020). This integration enables users to access, retrieve, and share data efficiently across various platforms. The rise of ICT has transformed communication methods and improved access to information. It allows for real-time interactions and supports collaborative efforts in various fields, including education, healthcare, and business, ultimately contributing to national development (Akinyemi, 2020). More so, ICT refers to the tools and resources used to communicate, create, disseminate, and manage information in educational settings (Obi, 2020). It encompasses software, hardware, and various platforms that enhance teaching and learning processes. The use of ICT in education has revolutionized classroom experiences, enabling interactive learning and improving student engagement. Online learning platforms and digital resources provide learners with access to a wealth of information, fostering independent study and research skills essential for academic success (Eze, 2021).

ICT encompasses all forms of communication technologies used to transmit and receive information (Eze & Nwafor, 2023). This includes traditional media, such as radio and television, as well as digital platforms like social media and email. ICT has transformed how people communicate, breaking down geographical barriers and fostering connections. The widespread use of mobile devices and the internet has made information sharing instantaneous, enabling citizens to participate in social and political discussions, thereby strengthening democracy and civic engagement (Nwankwo, 2020). ICT is viewed as a vital tool for knowledge management, aiding organizations in capturing, organizing, and sharing knowledge effectively. Institutions utilize ICT to improve decision-making processes and foster innovation. The implementation of knowledge management systems, supported by ICT, enhances collaboration among employees and facilitates access to critical information. This leads to increased efficiency and the ability to respond swiftly to market changes, which is crucial for competitiveness in today's economy (Iwuanyanwu, 2020).

ICT is recognized as a global connector that bridges gaps between nations and cultures through the sharing of information and resources. It enables individuals from different backgrounds to communicate and collaborate, fostering understanding and cooperation.

ICT in libraries is often defined as the application of technology in managing library operations and services. This includes the use of Integrated Library Systems (ILS) to catalog and circulate resources efficiently. By automating various processes, libraries can streamline operations, enhance inventory management, and provide users with easy access to materials. The adoption of ICT in library management has improved service delivery and user satisfaction, making it possible for librarians to focus more on user engagement and outreach activities (Oduwale, 2020). More so, ICT refers to the technologies that enable the creation and management of digital libraries, providing users with access to electronic resources. Digital libraries leverage ICT to offer e-books, online journals, and multimedia content, which can be accessed remotely. However, studies such as Nwafor-Orizu et al. (2024) highlight concerns about mobile device usage in academic libraries, noting potential distractions for students despite the benefits of digital access.

ICT is defined as a critical resource for information retrieval in libraries, enabling users to search and access data efficiently (Akinola & Adeyemi, 2022). Advanced search engines and databases powered by ICT allow patrons to find relevant information quickly. Libraries are increasingly incorporating ICT tools that support metadata creation, indexing, and online searches, improving the user experience. However, the effectiveness of these tools depends on librarians' ICT literacy. Nwabueze and Ibeh (2016) emphasize that librarians in federal university libraries in South East Nigeria often lack sufficient ICT skills, which hinders optimal service delivery.

ICT is also viewed as an educational tool that supports learning and research. Libraries utilize technology to provide training and workshops on information literacy, digital skills, and research methodologies. Such initiatives are crucial in equipping users with the skills necessary to navigate the vast array of information available online. Kamaluddeen et al. (2024) further argue that ICT can bridge gender gaps in education, particularly in technical and vocational fields, by promoting female participation through inclusive digital training programs in libraries. ICT in libraries is also defined as a facilitator of communication between librarians and users. Through various platforms such as social media, email, and library websites, ICT enables librarians to disseminate information about services, events, and resources (Okeke, 2021). Effective

communication through ICT enhances user engagement and fosters a sense of community within libraries. This two-way communication channel allows librarians to receive feedback and address users' needs promptly, thus improving overall library services (Adebayo, 2021).

ICT is recognized as a platform for collaboration among libraries, allowing for resource sharing and networking. Through initiatives like interlibrary loans and consortia, libraries can leverage ICT to expand their collections and services. Collaborative efforts facilitated by ICT enable libraries to pool resources, share expertise, and improve service delivery. This collaboration not only enhances the range of materials available to users but also strengthens the library community and fosters professional development among librarians (Obinna, 2020). ICT is defined as a vital support system for archiving and preserving information in libraries. With the digitization of archival materials, libraries can protect valuable resources while making them accessible to a broader audience (Okafor, 2022). The use of ICT for archiving is increasingly important in preserving the country's cultural heritage and historical records. However, Ibeh and Ezeabasili (2024) stress that librarians must acquire advanced electronic records management skills to ensure effective digital preservation in federal university libraries.

Finally, ICT in libraries is viewed as an enhancer of user experience, making it easier for patrons to access and utilize library resources. By implementing user-friendly interfaces, mobile applications, and online catalogues, libraries can improve the overall experience of their users. The integration of ICT in library services has made it possible for users to interact with library systems seamlessly. This focus on user experience not only attracts more visitors but also encourages the utilization of library resources for personal and professional development (Ogunmola, 2019). ICT in libraries is also defined as a facilitator of communication between librarians and users. Through various platforms such as social media, email, and library websites, ICT enables librarians to disseminate information about services, events, and resources (Okeke, 2021). Effective communication through ICT enhances user engagement and fosters a sense of community within libraries. This two-way communication channel allows librarians to receive feedback and address users' needs promptly, thus improving overall library services (Adebayo, 2021). ICT is recognized as a platform for collaboration among libraries, allowing for resource sharing and networking. Through initiatives like interlibrary loans and consortia, libraries can leverage ICT to expand their collections and services. Collaborative efforts facilitated by ICT enable libraries

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Methodology

This study adopted a descriptive survey research design. According to Creswell (2015), a

descriptive survey research design is a method used to collect detailed information about a population or phenomenon at a specific point in time. This design involves using surveys or questionnaires to gather data from participants, allowing researchers to describe characteristics, behaviors, attitudes, or opinions within a given group. The main goal is to provide a snapshot of the current state of affairs or conditions, rather than examining causal relationships or changes over time. The population comprised 23 librarians in a public library in Anambra State, Anambra State. According to the organogram and the nominal roll of the Anambra State Library Board, 2024, Anambra State has a total number of 11 public libraries with 12 librarians and 11 library officers.

The sample sized of this study was 23 librarians in public library in Anambra State. The entire population was used as the sample size because the population of the study is relatively small and manageable. The instrument for data collection was a structured questionnaire. The questionnaire was titled: **"Challenges of Adopted Digital Technologies in Public Library Services in Nigeria"**. The reliability of the instrument was conducted on ten (5) librarians in Enugu State. This area is chosen because it has similar characteristics with the present area. Cronbach Alpha coefficient was used to analyse the data collected. The results revealed that the coefficient value for Clusters I was 0.855, Cluster II was 0.850, Cluster III was 0.790, Cluster IV was 0.793 and Cluster V 0.818. The instrument had an average coefficient value of 0.821 which was considered reliable for the study. Mean scores and standard deviations were used to analyse all the research questions. The decisions of the agreement will be rated based on the following ranges

Research Question 1: What are the hinderances to application of information communication technology in public library services in Anambra State?

Table 1: Mean ratings of the hinderances to application of information communication technology in public library services in Anambra State

S/N	Item Statements	Male Librarians=5			Female Librarians =18		
		$\bar{X}_1$	SD_1	Remarks	$\bar{X}_2$	SD_2	Remarks
41	Inadequate funding limits the Adoption of ICT in public libraries.	3.40	.936	Agree	3.32	1.009	Agree
42	Poor internet connectivity affects ICT-based reference services.	3.35	1.078	Agree	3.43	.932	Agree
43	Lack of ICT infrastructure hinders the effective use of technology in libraries.	3.34	1.108	Agree	3.40	.930	Agree
44	Insufficient digital literacy among Librarians reduces ICT adoption.	3.18	1.174	Agree	3.40	.890	Agree
45	High costs of ICT equipment hinder The availability in public libraries.	3.40	1.083	Agree	3.40	.916	Agree
46	In adequate technical support affects The maintenance of ICT facilities.	3.34	1.160	Agree	3.42	.970	Agree
47	Poor government policies slowdown ICT implementation in public libraries.	2.86	1.247	Agree	3.06	1.197	Agree
48	Lack of ICT training for library staff reduces effective usage.	3.45	1.030	Agree	3.41	.881	Agree
49	Limited access to electricity disrupts ICT operations in libraries.	3.39	1.057	Agree	3.42	.805	Agree
50	Poor digital security measures discourage ICT use in libraries.	2.89	1.233	Agree	3.12	1.136	Agree
Average		3.26	1.111	Agree	3.34	.967	Agree

Test of Hypothesis

The results in table 1 shows the mean ratings of the hinderances to application of information communication technology in public library services

in Anambra State. The results specify that the average

mean score ratings of the male and female librarians in public library services in Anambra State were 3.26 and 3.34 with corresponding standard deviations of 1.111 and 0.967 respectively. The findings indicate that both the male and female librarians agreed that the above items are hinderances to application of information communication technology in public library services in Anambra State.

H₀: There is no significant difference between the mean ratings of male and female librarians on the hinderances to application of information communication technology in public library services in Anambra State.

H₁: There is significant difference between the mean ratings of male and female librarians on the hinderances to application of information communication technology in public library services in Anambra State.

Table 1: Summary of the t-test on the hinderances to application of information communication technology in public library services in Anambra State

Variable	No.	X	SD	df	t	Sig. (2-tailed)	Decision
The hinderances to application of information communication technology in public library services in Anambra State	Males	5	3.26	.687	639	-2.175	.081
	Females	18	3.34	.757			

Source: SPSS Output (Version26)

The results in table 1 reveal the summary of the T-Test analysis on the hinderances to application of information communication technology in public library services in Anambra State. The results indicated that the mean score for the male librarians was 3.26 while that of the female librarians was 3.34. Moreover, the calculated independent t-test was -2.175 with a p-value of 0.081.

Based on this, the null hypothesis was not retained and the alternative hypotheses was retained.

Thus, there is no significant difference between the mean ratings of male and female librarians on the hinderances to application of information communication technology in public library services in Anambra State. This implies that both the male and female librarians agreed that there are hinderances to application of information communication technology in public library services in Anambra State.

Discussion of Findings

Hinderances to application of information communication technology in public library services in Anambra State.

There are hinderances to application of information communication technology in public library services in Anambra State. The challenges hindering the adoption of Information and Communication Technology (ICT) in public libraries in Anambra State include inadequate funding, which restricts ICT implementation, and poor internet connectivity, which affects ICT-based reference services. The lack of ICT infrastructure further limits the effective use of technology in libraries, while insufficient digital literacy among librarians reduces ICT adoption. Additionally, the high cost of ICT equipment makes it less accessible, and inadequate technical support hampers the maintenance of ICT facilities. Poor government policies slow down ICT

implementation, while the absence of proper training for library staff affects effective utilization. Further more, limited electricity supply disrupts ICT operations, and weak digital security measures discourage the use of ICT in libraries.

The adoption of Information and Communication Technology (ICT) in public libraries in Anambra State faces several challenges that hinder its effective implementation. One of the major obstacles is inadequate funding, which restricts the acquisition of ICT tools and infrastructure necessary for modern library operations (Okoye & Eze, 2021). Without sufficient financial support, libraries struggle to procure computers, software, and high-speed internet connectivity, limiting the effectiveness of ICT-based services (Aina, 2020).

Poor internet connectivity further exacerbates the problem by affecting ICT-based reference services, making it difficult for users to access online catalogues and databases (Obi & Nwosu, 2019). In addition, the lack of ICT infrastructure, including network systems and digital archives,

prevents seamless integration of traditional and digital library services (Ogunniyi & Adebayo, 2021). Many public libraries in Anambra State also suffer from a shortage of trained personnel with adequate digital literacy skills, making it challenging to operate and maintain ICT facilities effectively (Uche & Okonkwo, 2020).

The high cost of ICT equipment, including computers, scanners, and servers, further limits accessibility, making it difficult for libraries to keep up with technological advancements (Eze & Okoli, 2019). Additionally, inadequate technical support for maintaining ICT systems results in frequent downtimes, reducing efficiency (Akinyemi, 2019). Poor government policies and lack of strategic planning slowdown ICT implementation, leading to inconsistent progress in modernizing public libraries (Chukwu & Adegbite, 2022). Limited electricity supply disrupts ICT operations, making it difficult to provide consistent digital services (Obi, 2018). Furthermore,

weak digital security measures expose library systems to cyber threats, discouraging the adoption of ICT in public libraries (Okoro & Chinwe, 2021). Addressing these challenges requires significant investment, policy reforms, and capacity-building initiatives to ensure effective ICT integration in public libraries.

Conclusion

The study highlights the multifaceted challenges hindering the adoption of digital technologies in public libraries in Anambra State. Key issues include inadequate funding, poor infrastructure, unreliable electricity, and a lack of skilled personnel. These barriers collectively limit the effectiveness of ICT integration, restricting access to digital resources and diminishing service quality. Despite these challenges, the study found consensus among librarians, regardless of gender, on the need for urgent interventions. Addressing these obstacles is essential for aligning public library services with global digital trends and meeting the evolving needs of users.

Recommendations

1. **Increased Funding:** Governments and stakeholders should allocate more resources to procure and maintain ICT infrastructure.
2. **Capacity Building:** Regular training programs for librarians to enhance their digital literacy and technical skills.
3. **Improved Infrastructure:** Investment in reliable electricity and internet connectivity to support digital services.
4. **Policy Reforms:** Development of robust policies to guide ICT implementation and ensure sustainability.
5. **Public-Private Partnerships:** Collaboration with private sectors to secure additional funding and technical support.
6. **User Education:** Initiatives to educate library users on the benefits and use of digital resources.

References

- Adeboye, O. A., & Eke, I. C. (2019). Strategies for effective adoption of digital library services in Nigerian universities. *Library Philosophy and Practice*, 2590.
- Aina, L. O. (2014). *Library and information science text for Africa*. Ibadan: Stirling-Horden Publishers.
- Akporhonor, B. A., & Owolabi, S. A. (2016). Challenges of library automation in Nigerian university libraries. *International Journal of Library and Information Science*, 8(7), 109-117.
- Emefa, N. B., & Oye, O. (2015). Funding challenges in Nigerian public libraries: A case study of Lagos State. *Library Management*, 36(1/2), 86-98.
- Ibeh, O. B & Ezeabasili, A.C (2024). Electronic records management skills requirements by librarians for effective job performance in federal university libraries in south east Nigeria. *African journal of educational management, teaching and entrepreneurship studies*, 11(2), 155-166. <https://ajemates.org/index.php/ajemates/article/view/431>
- Ibeh, O.B, Muokebe, B.O, Agwuna, O.M & Orakpor, A.M (2025). Organizational Culture of Librarians in Eastern Nigeria: OMANARP International Journal of Library and Information Sciences. Vol. 2(2) pp. 1-13.
- Ibeh, O.B, Muokebe, B.O, Agwuna, O.M & Orakpor, A.M (2025). Computer Literacy Competencies in Contemporary Academic Librarianship; Imperatives for Enhanced Service Delivery in the Digital1 in the Digital Age: OMANARP International Journal of Science and Technology. Vol. 2(2).
- Lonsdale, R., & De Saulles, M. (2012). Learning spaces and library design. *Library Management*, 33(2/3), 119-132.
- Muokebe, B. O. & Ogbomo, F. O. (2013). The Place of ICT in the Development of Public Nigeria Libraries. *ANSU Journal of Integrated knowledge*. 3 (1)
- Muokebe, B. O. & Ogbomo, F. O. (2013). The Place of ICT in the Development of Public Nigeria Libraries. *ANSU Journal of Integrated knowledge*. 3 (1)
- Muokebe, B. O. (2013). Information Communication Technology (ICT): An Instrument for sustainable Development in Nigeria. *ANSU Journal of Educational Research* 1, (1)
- Muokebe, B. O. (2013). Information Communication Technology (ICT): An Instrument for sustainable Development in Nigeria. *ANSU Journal of Educational Research* 1, (1)
- Nwabueze, A. E. Ezekwe, F. A. & Muokebe, B. O. (2014). Examining the Role of Virtual Libraries in Execution of E-learning services in Nigeria Universities. *ANSU Journal of Educational Research* 2(1)
- Nwabueze, A.U & Ibeh, B.O (2016). Extent of ICT Literacy Possessed by Librarians in Federal University Libraries in South East Nigeria. *International Journal of Digital Literacy and Digital Competency (IJDLC)*, 7(3), 13-22. <https://doi.org/10.4018/IJDLC.2016070102>
- Nwafor-Orizu, O.E, Ezejiofor, V. O Ibe, O. and Okonkwo, I (2024). Use of Mobile Devices in Academic Libraries in Nigeria: are Students Distracted? *Communicate: Journal of Library and Information Science*, Vol 26(1). <https://www.cjolis.org/index.php/cjolis/article/download/75/65>
- Nwalo, K. I. N. (2008). User education and the utilization of information resources in academic libraries in Nigeria. *Library Philosophy and Practice*, 181.
- Nwalo, K. I. N., & Aina, L. O. (2014). Digital divide and access to online resources in Nigerian university libraries. *Information Development*, 30(3), 232-245.
- Oforidile, J. O. Agbanu, N. A. and Muokebe, B. O. (2016). Extent of Utilization of Information Technology in State University Libraries in Nigeria. *Journal of Vocational Educational and Research* 1(1)
- Ogbomo, F. O. and Muokebe, B. O. (2013). Information needs of Rural Habits Professional: A case study of the Tubercrolosis and leprosy referral centre. (TB/C). Eka-Delta State. *ANSU Journal of Educational Research*. 1 (1)
- Ogbomo, F. O. and Muokebe, B. O. (2015). Institutional Repositories, An Emerging Initiative in Nigeria

- University Libraries. *International Journal of Information and Knowledge Management* 5 (1)
- Okoye, R. B. (2013). Strategic planning for digital library development in Nigerian academic libraries. *Library Management*, 34(1/2), 56–69.
- Okoye, R. B., & Olusanya, O. (2012). Library personnel training needs for digital library development in Nigerian universities. *Library Management*, 33(5), 339–349.
- Orakpor, A.M. (2007). The Internet and Information Resources for State and Public Library Development in the 21st Century. *Anambra State Library and Information Digest: Journal of the Nigeria Library Association*. 1 (1): 37-42. <https://Adaora Orakpor<scholar.google.com>
- Orakpor, A.M. & Anyaoku, Ebere (2012). Knowledge and use of web 2.0 by Librarians. *African Journal of Library Archives and Information Science*. <https://www.semanticscholar.org/Orakpor>
- Orakpor, A.M; Ezejirofo, V.O. & Nwana, REA (2010). Information and Communication Technology in Library School Education in Anambra State. *Anambra State Library and Information Digest: Journal of the Nigerian Library Association*. 4 (1): 23 – 34 .<https://Adaora Orakpor<scholar.google.com>