



Application of Information Communication Technology in Library Development in Public Libraries Operations in Anambra State, Nigeria

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ABSTRACT

The rapid advancement of Information and Communication Technology (ICT) has fundamentally transformed library operations, necessitating a shift from traditional to technology-enabled services. This study examines the application of ICT in cataloguing and classification within public libraries in Anambra State, Nigeria, addressing its impact on resource accessibility, user experience, and operational efficiency. Despite documented benefits, systemic barriers such as infrastructural deficits, funding constraints, and skills gaps hinder optimal ICT adoption. Using a descriptive survey design, data were collected from 23 librarians across 11 public libraries in Anambra State. Findings revealed that ICT enhances cataloguing by improving resource accessibility (mean rating: 3.16–3.40), streamlining processes, and fostering collaboration. Automated systems like OPACs and digital repositories significantly improved user satisfaction and information retrieval efficiency. However, challenges such as unreliable internet connectivity and inadequate technical training persist. Statistical analysis (t-test: -3.729, $p=0.091$) indicated no significant gender-based differences in librarians' perceptions of ICT's efficacy, with both groups affirming its transformative potential. The study underscores the need for increased government funding, robust ICT infrastructure, and continuous staff training to bridge existing gaps. The study contributes to the discourse on library modernization in resource-constrained contexts, advocating for policy interventions to accelerate ICT integration. By addressing these challenges, public libraries in Anambra State can better serve their communities, aligning with global trends in digital information management.

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INTRODUCTION

The contemporary information landscape has undergone profound transformation, fundamentally altering the paradigms of information creation, organization, storage, and dissemination (Breeding, 2019). This metamorphosis, primarily driven by the rapid advancement and proliferation of Information Communication Technology (ICT), has necessitated a comprehensive reevaluation of traditional library and information service models.

Public libraries, historically conceptualized as static repositories of print materials, are experiencing unprecedented pressure to evolve into dynamic, technology-enabled information centers that can effectively serve the diverse and increasingly sophisticated needs of their user communities (Aharony, 2012; Kumar & Singh, 2018).

Within the Nigerian context, and specifically in Anambra State, public libraries confront a particularly complex operational

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environment characterized by escalating user expectations for digital services while simultaneously grappling with systemic resource constraints and infrastructural limitations (Muokebe & Ogbomo, 2013). The strategic integration of ICT into library operations represents more than a mere technological upgrade; it constitutes a fundamental paradigm shift toward ensuring institutional relevance, enhancing service accessibility, and achieving operational sustainability in an increasingly digitized information ecosystem (Ani & Ahiauzu, 2008; Muokebe, 2013).

The conceptual framework of ICT application in library development encompasses a comprehensive array of technological interventions, including but not limited to: integrated library management systems (ILMS), digital repository systems (Ogbomo & Muokebe, 2015), Online Public Access Catalogs (OPACs), networking infrastructure, electronic resource management systems, digital literacy programming, and web-based information delivery platforms (Babu & Ann, 2006; Oketunji, 2000). These technological applications possess the potential to fundamentally transform traditional library operations through enhanced service delivery mechanisms, improved resource discoverability and accessibility, streamlined administrative workflows, and expanded service reach beyond conventional geographical and temporal constraints (Nwabueze et al., 2014).

Anambra State, situated within Nigeria's southeastern geopolitical zone, presents a distinctive demographic and socioeconomic profile that merits specific examination in the context of ICT adoption in public libraries. The state demonstrates relatively favorable literacy indices, expanding urbanization patterns, and progressive internet penetration rates, factors that collectively suggest significant potential for technology-mediated library service enhancement (National Bureau of Statistics, 2018). However, consistent with broader developmental challenges across sub-Saharan Africa, public libraries in Anambra State operate within a constrained resource environment characterized by inadequate funding mechanisms, deficient

infrastructural frameworks, limited human capital with requisite technical competencies, and unreliable power supply systems (Mutula, 2004).

The scholarly significance of this investigation extends beyond the immediate geographical boundaries of Anambra State, contributing substantively to the evolving discourse on library modernization within developing economy contexts. The systematic examination of ICT integration processes in resource-constrained public library environments provides critical insights for library and information science professionals, policy formulation entities, and international development practitioners engaged in advancing information access equity and digital inclusion initiatives across similar socioeconomic contexts (Lor & Britz, 2005).

STATEMENT OF THE PROBLEM

Notwithstanding the extensively documented potential of Information Communication Technology to catalyze revolutionary improvements in library service delivery and operational efficiency (Breeding, 2019; Muokebe, 2013), public libraries within Anambra State continue to encounter substantial systemic barriers in the adoption, implementation, and optimal utilization of ICT resources. This phenomenon represents a multidimensional problem requiring systematic scholarly investigation and evidence-based intervention strategies. Infrastructural and Technological Resource Deficits: A critical examination of the current state reveals that numerous public libraries across Anambra State operate with severely inadequate technological infrastructure (Ani & Ahiauzu, 2008; Muokebe & Ogbomo, 2013). The persistent absence of reliable broadband connectivity, insufficient computing hardware, and the continued reliance on manual cataloging and circulation systems significantly constrain institutional capacity to deliver contemporary information services.

Financial Resource Constraints and Sustainability Challenges: The procurement, deployment, and ongoing maintenance of comprehensive ICT systems necessitate substantial capital investment and recurrent



expenditure commitments that exceed the financial capacity of most public libraries within the state (Mutula, 2004; Ogbomo & Muokebe, 2015). The confluence of limited governmental funding allocations, absence of diversified revenue generation mechanisms, and lack of public-private partnership frameworks creates persistent barriers to meaningful ICT adoption. These financial constraints are further exacerbated by the ongoing operational costs associated with software licensing, hardware replacement cycles, telecommunications subscriptions, and specialized technical support services.

Purpose of the study

Examine the application of Information Communication Technology in Cataloguing for effective improvement in public library operations in Anambra State.

Research question

1. How does the application of Information Communication Technology improve the traditional system of Cataloguing and Classification in public library operations in Anambra State?

Hypothesis

H01: There is no significant difference between the mean ratings of male and female librarians on the application of Information Communication Technology in cataloguing or classification operations for effective improvement in public library services in Anambra State, Nigeria.

LITERATURE REVIEW

Application of ICT in Cataloguing

Cataloguing is defined as the systematic organization of information resources in a library or information center. This process involves creating entries for various materials, including books, journals, and digital resources, to facilitate easy access and retrieval by users. Effective cataloguing is essential for enhancing information management in libraries, allowing patrons to locate materials efficiently. By implementing standardized cataloguing practices, librarians

ensure that users can navigate the collection, enhancing overall user experience. Proper cataloguing also supports information literacy by enabling users to understand how materials are categorized, ultimately fostering a culture of learning and exploration within the community (Afolabi, 2021; Nwankwo & Agwuna, 2021).

Cataloguing is recognized as the creation of metadata that describes and provides information about various resources. This metadata typically includes details such as the title, author, publication date, and subject matter. Cataloguing plays a crucial role in making library resources discoverable and accessible to users. By adhering to established standards such as MARC (Machine-Readable Cataloging), librarians can create consistent and structured metadata that supports interoperability among different library systems. This approach not only improves the visibility of library collections but also enhances users' ability to search and retrieve relevant information effectively (Oduwale, 2020; Muokebe & Agwuna, 2024).

Cataloguing is defined as the process of resource description, which involves assigning bibliographic details and subject classifications to various materials in a library. This process ensures that each resource is accurately represented in the library's catalog, making it easier for users to find relevant information. In libraries, resource description is essential for developing comprehensive catalogs that reflect the diversity of available materials, including local and culturally significant works. By providing accurate and detailed descriptions, librarians facilitate user engagement and promote the use of library resources, ultimately supporting educational and research activities within the community (Nwogu, 2019; Agwuna & Enweani, 2018).

Cataloguing can be viewed as a standardization process that involves applying consistent rules and guidelines for organizing library materials. This definition highlights the importance of using established cataloguing standards, such as AACR2 (Anglo-American Cataloguing Rules) or RDA (Resource Description and Access), to ensure uniformity in cataloguing



practices. Adherence to these standards promotes cooperation and resource sharing among libraries, enhancing the overall effectiveness of information retrieval systems. By standardizing cataloguing practices, librarians can ensure that users encounter a consistent experience when searching for materials, ultimately improving user satisfaction and access to information (Iroha, 2021; Ike et al., 2022).

Cataloguing is often defined as a gateway to information, serving as the primary means through which users can access library resources. This definition emphasizes the role of catalogues as navigational tools that guide users in locating materials efficiently. In Nigerian libraries, effective cataloguing practices create a user-friendly environment where patrons can easily find the information they need. By providing detailed entries and subject classifications, librarians help users to understand the scope of available resources, facilitating their research and learning activities. Thus, cataloguing is integral to promoting information literacy and ensuring that library services meet user needs (Adebayo, 2021; Nwankwo & Agwuna, 2021).

Cataloguing is recognized as a preservation tool that aids in the long-term management and protection of library resources. By accurately documenting and cataloguing materials, librarians can ensure that information is preserved for future generations. Where many libraries face challenges related to resource degradation and loss, effective cataloguing becomes critical in safeguarding valuable collections. This process involves not only documenting physical items but also providing digital records that facilitate preservation efforts. By implementing cataloguing practices that prioritize preservation, libraries can maintain the integrity of their collections and promote continued access to important cultural and historical materials (Chinwe, 2020).

Cataloguing can be seen as a user-centric service that prioritizes the needs and preferences of library patrons. This definition highlights the importance of tailoring cataloguing practices to enhance user experience and accessibility. Libraries, librarians engage with

users to understand their information-seeking behaviors and preferences, which informs the development of user-friendly catalogues. By considering users' needs, librarians can implement effective classification systems and subject headings that facilitate efficient information retrieval. Ultimately, a user-centric approach to cataloguing fosters a positive relationship between libraries and their patrons, encouraging greater utilization of library resources (Obinna, 2020).

Cataloguing is defined as an educational function that contributes to the overall learning experience within libraries. This definition emphasizes the role of cataloguing in teaching users how to navigate and utilize library resources effectively. Libraries, cataloguing practices often include instructional elements that help patrons understand the cataloguing system and the organization of information. By providing orientation sessions and guides on how to use catalogues, librarians empower users to engage more fully with available resources, promoting information literacy and lifelong learning. Thus, cataloguing serves as a foundation for educational initiatives within the library context (Ogunmola, 2019).

The application of Information and Communication Technology (ICT) in cataloguing within public libraries has revolutionized the way libraries manage their collections and serve their users. With the rapid advancements in technology, public libraries in Nigeria have increasingly adopted ICT to enhance cataloguing processes, improve resource accessibility, and foster user engagement. This paper explores the various ways ICT is applied in cataloguing within public libraries, highlighting its benefits, challenges, and future prospects. Cataloguing, traditionally is a manual and time-consuming process, involves the organization and description of library resources to facilitate their retrieval by users. The advent of ICT has transformed this process by automating many aspects of cataloguing, enabling libraries to manage their collections more efficiently. In Nigeria, where public libraries face numerous challenges such as limited funding, inadequate infrastructure, and a



growing population with diverse information needs, the integration of ICT into cataloguing has become essential for improving service delivery (Nwogu, 2019).

ICT Applications in Cataloguing for Enhanced Resource Accessibility

ICT applications in cataloguing have significantly enhanced resource accessibility in public libraries. With automated cataloguing systems, libraries can create online public access catalogs (OPACs) that allow users to search for and locate materials remotely. This development is particularly crucial in Nigeria, where many users may not have the means to visit libraries physically (Orakpor, 2007). OPACs provide a user-friendly interface for searching bibliographic records, allowing patrons to find information quickly and efficiently (Oduwole, 2020). Furthermore, the integration of ICT enables the digitization of library resources, including books, journals, and historical documents. This digitization process involves creating digital versions of physical materials, which can then be catalogued and made accessible online (Orakpor et al., 2014). In Nigeria, digitization efforts have been supported by various initiatives aimed at preserving cultural heritage and making valuable resources available to a broader audience (Chinwe, 2020).

Improving User Experience through ICT-enabled Cataloguing

The application of ICT in cataloguing has led to a significant improvement in user experience within public libraries. Automated cataloguing systems allow for the use of advanced search features, such as keyword searching, Boolean operators, and filters, enabling users to refine their searches based on specific criteria (Orakpor & Anyaoku, 2012). This enhanced search capability ensures that users can quickly locate relevant materials, saving them time and effort (Nwogu, 2019). Moreover, the use of ICT in cataloguing supports the development of personalized user services. For instance, many library management systems now include features that allow users to create personal accounts, save search preferences, and receive notifications

about new acquisitions relevant to their interests (Orakpor & Omoruyi, 2022). In Nigeria, these personalized services have the potential to foster a deeper connection between libraries and their users, encouraging greater engagement and usage of library resources (Adebayo, 2021).

Despite the numerous benefits, public libraries in Nigeria face several challenges in implementing ICT for cataloguing. One primary obstacle is the lack of adequate funding to acquire and maintain modern cataloguing systems and technologies (Orakpor & Modili, 2024). Many public libraries operate on limited budgets, making it difficult to invest in necessary infrastructure and software (Obinna, 2020). Additionally, there is a notable gap in technical skills required to operate ICT systems among library staff (Orakpor, Ezejiofo & Nwana, 2010). While some librarians are proficient in using technology, others may lack training to fully utilize automated cataloguing systems (Ogunmola, 2019). This skills gap can lead to inconsistent cataloguing practices and reduced effectiveness of ICT applications. Looking ahead, the future of ICT in cataloguing within Nigerian public libraries appears promising.

Emerging technologies like artificial intelligence (AI) and machine learning could further enhance cataloguing processes (Okechukwu & Orakpor, 2017). AI-powered tools could assist in automating data entry and improving accuracy in cataloguing (Nwogu, 2019). Furthermore, collaboration among public libraries could facilitate resource sharing and collective cataloguing efforts (Orakpor & Igwilo, 2024). By working together, libraries can pool resources to acquire advanced cataloguing systems and develop standardized practices (Afolabi, 2021). The integration of ICT into cataloguing processes has transformed Nigerian public libraries, enhancing service delivery and resource accessibility. While challenges like limited funding and skills gaps persist, continued investment in technology and training can help libraries overcome these obstacles (Orakpor, 2007; Orakpor et al., 2014). Through collaborative initiatives and adoption of emerging technologies, public libraries can better fulfill their mission of



providing equitable access to information in the digital age (Orakpor & Omoruyi, 2022).

The Role of Library Classification in Information Retrieval

Library classification plays a critical role in information retrieval, enabling users to locate specific materials quickly and efficiently. By organizing resources according to a logical classification scheme, libraries facilitate the search process, allowing patrons to find information relevant to their needs with minimal effort (Ibeh & Ezeabasili, 2024). This aspect of classification is particularly vital in academic and research libraries, where users often seek specific data or literature. The implementation of effective classification systems is crucial for enhancing the efficiency of information retrieval in libraries (Afolabi, 2020). Library classification is a dynamic process that evolves alongside changes in knowledge and information organization. As new subjects emerge and existing fields expand, classification systems must adapt to accommodate these developments (Nwabueze & Ibeh, 2016). This dynamic nature ensures that libraries remain relevant and continue to meet the diverse needs of users. The ability to update and revise classification systems is essential for maintaining accurate and comprehensive collections that reflect current trends and knowledge (Emeka, 2021).

Library classification fosters user engagement by creating an organized and navigable environment for exploring resources. By classifying materials in a manner that aligns with users' informational needs, libraries encourage patrons to interact with collections and discover new information (Ibeh & Ezeabasili, 2024). This engagement is crucial for promoting literacy, education, and lifelong learning. In Nigeria, where public libraries strive to enhance community participation, effective classification plays a vital role in attracting users and supporting their information-seeking behaviors (Obinna, 2020). The application of Information and Communication Technology (ICT) in library classification has significantly transformed public libraries, particularly in Nigeria, where traditional classification methods face numerous challenges

(Nwabueze & Ibeh, 2016). With the growing volume of information and the need for efficient organization, public libraries have increasingly adopted ICT tools and systems to enhance their classification processes. This digital transformation offers solutions to improve accuracy, efficiency, and user satisfaction in library services.

Library classification is essential for organizing collections, facilitating resource retrieval, and ensuring user satisfaction. Traditional classification methods, such as the Dewey Decimal Classification (DDC) or the Library of Congress Classification (LCC), have long been used in public libraries to categorize resources systematically. However, as the volume of information continues to grow exponentially, these traditional methods alone are insufficient to meet the demands of modern library users (Ibeh & Ezeabasili, 2024). The integration of ICT into library classification offers innovative solutions to enhance efficiency and effectiveness in organizing library materials (Chukwuma, 2021).

One of the most significant applications of ICT in library classification is the implementation of automated classification systems. Integrated Library Management Systems (ILMS) are software applications designed to manage library operations, including cataloging, circulation, and classification (Nwabueze & Ibeh, 2016). These systems automate various classification tasks, allowing librarians to create and manage bibliographic records electronically. For example, popular ILMS like Koha and Libsys enable librarians to input classification data quickly and accurately, reducing the time and effort required for manual classification (Nwafor, 2020).

The application of ICT in library classification has also led to the development of user-centric classification approaches. Traditional classification methods often focus on subject matter and cataloging standards, which may not always align with users' information-seeking behaviors. However, with the use of ICT tools, libraries can analyze user preferences and behaviors to create classification systems that better meet their needs (Afolabi, 2020). For

example, data analytics can be employed to assess the popularity of specific topics or resources among users. Libraries can then adjust their classification schemes accordingly, ensuring that frequently accessed materials are readily available and easy to locate. This user-centric approach fosters greater engagement with library resources, promoting a culture of reading and learning within communities (Chukwuma, 2021).

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 overtime. The population comprised 23 librarians in 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: Application of Information Communication Technology in Library Development in Public Libraries Operations in Anambra State, 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:

RESULTS

Research Question

How does the application of Information Communication Technology improve the traditional system of Cataloguing and Classification in public library operations in Anambra State?

Table 1: Mean ratings of the application of Information Communication Technology in cataloguing in public library services in Anambra State

S/N	Item Statements	Male Librarians=5			Female Librarians =18		
		X ₁	SD ₁	Remarks	X ₂	SD ₂	Remarks
1	ICT in cataloguing enhances the accessibility of library resources for users.	3.30	1.075	Agree	3.40	.947	Agree
2	The application of ICT speeds up the cataloguing process in public libraries.	3.14	1.040	Agree	3.50	.869	Agree
3	ICT improves the accuracy and consistency of cataloguing in public libraries.	3.11	1.008	Agree	3.47	.864	Agree
4	ICT tools facilitate easier updating of catalogued materials in public libraries.	3.13	.956	Agree	3.49	.811	Agree
5	ICT-based cataloguing makes it easier for Users to locate library resources	3.11	.990	Agree	3.48	.850	Agree

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S/N	Item Statements	Male Librarians=5			Female Librarians =18		
		X ₁	SD ₁	Remarks	X ₂	SD ₂	Remarks
6	ICT in cataloguing increases the efficiency of information retrieval for library users.	3.11	1.085	Agree	3.48	.910	Agree
7	The use of ICT in cataloguing enhances the organization of library materials	3.15	1.147	Agree	3.09	1.191	Agree
8	ICT in cataloguing enhances collaboration between public libraries and other institutions.	3.09	.929	Agree	3.46	.815	Agree
9	ICT enable the integration of digital and traditional cataloguing in public libraries.	3.11	.839	Agree	3.48	.737	Agree
10	ICT application in cataloguing reduces inability to use library resources	3.32	.966	Agree	3.19	1.099	Agree
Average		3.16	1.004	Agree	3.40	.909	Agree

Table 1 reveals the mean ratings of the application of Information Communication Technology in cataloguing in public library services in Anambra State. The results indicate that the average mean score ratings of the male and female librarians in public library services in Anambra State were 3.16 and 3.40 with corresponding standard deviations of 1.004 and 0.909 respectively. The findings indicate that both

the male and female librarians agreed that the application of Information Communication Technology improve cataloguing in public library services in Anambra State. This suggests that the application of Information Communication Technology improve cataloguing in public library services in Anambra State.

Table2: Summary of the T-Test analysis on the application of Information Communication Technology in cataloguing in public library services in Anambra State

Variable	No.	X	SD	df	t	Sig. (2-tailed)	Decision
The application of Information Communication Technology in cataloguing in public library services in Anambra State	Males 5 Females 18	3.16 3.40	.811 .671	639	-3.729	.091	Sig.

The results in Table 2 reveal the summary of the t-test analysis on the application of Information Communication Technology in cataloguing in public library services in Anambra State. The results indicated that the mean score for the male librarians was 3.16 while that of the female librarians was 3.40. More so, the calculated independent t-test was -3.729 with a p-value of 0.91. Based on this, the null hypothesis was not retained and the alternative hypothesis was retained. Thus, there is no significant

difference between the mean ratings of male and female librarians on the application of Information Communication Technology in cataloguing improves public library services in Anambra State. This implies that both them male and female librarians agreed that the application of Information Communication Technology in cataloguing improves public library services in Anambra State.

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DISCUSSION OF FINDINGS

Application of Information Communication Technology in operations in public library services in Anambra State.

The application of information communication technology improves cataloguing in public library services in Anambra State. The adoption of ICT in cataloguing improves users' access to library resources while accelerating the cataloguing process in public libraries. It enhances accuracy and consistency, ensuring well-organized library materials. ICT tools simplify the updating of catalogued materials and facilitate easier resource location for users. Additionally, ICT-based cataloguing boosts the efficiency of information retrieval and fosters collaboration between public libraries and other institutions.

It also supports the integration of digital and traditional cataloguing methods, ultimately reducing barriers to utilizing library resources. In line with these findings, Ogunniyi and Adebayo (2021) found that the adoption of ICT in cataloguing plays a critical role in enhancing library services, particularly in public libraries, by improving accessibility, efficiency, and collaboration. Similarly, Aina (2020) found that ICT facilitates faster cataloguing processes, ensuring that library materials are well-organized and readily available for users. The use of digital cataloguing tools enhances accuracy and consistency, reducing errors that often occur in manual cataloguing systems.

Furthermore, Eze and Okoye (2019) findings affirmed that ICT simplifies the updating of catalogued materials, making it easier for libraries to maintain accurate records of available resources. This is particularly beneficial in large public libraries, where manual updates can be time-consuming and prone to inconsistencies. Adegbite (2022) findings attested that the integration of digital and traditional cataloguing methods through ICT also improves resource location, allowing users to retrieve materials efficiently. In addition, Okonkwo (2021) findings agreed that ICT-based cataloguing promotes the efficiency of information retrieval, ensuring that users can quickly find the materials they need.

Uche and Nwosu (2020) findings also revealed that automated systems such as Online Public Access Catalogues (OPAC) make it easier for users to search for books and other resources, thereby improving library service delivery. More so, Obi and Chukwu (2018) findings attested that ICT fosters collaboration between public libraries and other institutions by enabling resource sharing and digital networking, which enhances the availability of educational materials.

Ultimately, Chinwe and Adeyemi(2021) findings confirmed that ICT-based cataloguing reduces barriers to utilizing library resources by improving accessibility and usability, ensuring that both students and researchers can maximize available materials. Therefore, the integration of ICT in cataloguing should be prioritized to enhance the overall effectiveness of public libraries in Nigeria.

CONCLUSION AND RECOMMENDATIONS

In conclusion, the adoption of ICT in public libraries significantly enhances cataloguing, classification; ICT facilitates seamless integration of digital and traditional systems, fosters collaboration among libraries, and improves user satisfaction by enabling quicker retrieval of information. The findings of this study have significant educational implications, emphasizing the need for proper integration of ICT in public libraries to enhance learning, research, and access to information. Efficient cataloguing, classification, OPAC, and reference services improve resource accessibility, enabling students and researchers to retrieve information quickly and accurately. Ignoring the challenges hindering ICT adoption—such as inadequate funding, poor internet connectivity, and lack of digital literacy—may limit the effectiveness of library services, reducing their impact on education. Therefore, stakeholders must address these barriers to ensure that libraries remain relevant in the digital age. Proper ICT implementation will foster collaboration, improve user satisfaction, and equip both library staff and users with essential digital skills for academic success. Based on the findings of the study, the following were recommended:

1. Government and stakeholders should allocate more financial resources to



enhance ICT infrastructure, ensuring the availability of modern tools for cataloguing, classification, OPAC, and reference services in public libraries.

2. Public libraries should be equipped with stable and high-speed internet to facilitate seamless access to OPAC and reference services, improving users' ability to retrieve information quickly.

REFERENCES

- Adebayo, A. (2021). *Cataloguing practices in Nigerian libraries: Challenges and prospects*. Journal of Library and Information Science, 15(2), 45-62.
- Adegbite, O. (2022). *Digital transformation in public libraries: The role of ICT in cataloguing*. African Journal of Library, Archives and Information Science, 32(1), 78-95.
- Afolabi, K. (2020). *Classification systems and information retrieval in academic libraries*. Library Management Quarterly, 18(3), 112-128.
- Afolabi, K. (2021). *Enhancing cataloguing practices through technology integration*. Information Processing & Management, 28(4), 203-220.
- Agwuna, P. K., & Enweani, V. N. (2018). *Resource description and access in Nigerian university libraries*. Cataloguing & Classification Quarterly, 56(5), 445-462.
- Aharony, N. (2012). *An analysis of American academic librarians' attitudes toward change in academic libraries*. Library & Information Science Research, 34(2), 138-146.
- Aina, L. O. (2020). *Information and communication technology applications in libraries*. Ibadan University Press.
- Alemnna, A. A. (2001). *The need for marketing library and information services in Africa*. Library Management, 22(4/5), 210-216.
- Ani, O. E. (2010). *Internet access and use: A study of undergraduate students in three Nigerian universities*. The Electronic Library, 28(4), 555-567.
- Ani, O. E., & Ahiauzu, B. (2008). *Towards effective development of electronic information resources in Nigerian university libraries*. Library Management, 29(6/7), 504-514.
- Babu, B. R., & Ann, O. P. (2006). *Digital libraries: Dynamics of information revolution*. Atlantic Publishers.
- Breeding, M. (2019). *Library systems report 2019: Cycles of innovation*. American Libraries, 50(5), 22-29.
- Burke, W. W. (2002). *Organization change: Theory and practice*. Sage Publications.
- Chinwe, N. (2020). *Digital preservation strategies in Nigerian university libraries*. Journal of Academic Librarianship, 46(3), 89-102.
- Chinwe, N., & Adeyemi, T. (2021). *ICT integration and library service delivery in Nigeria*. Library Hi Tech, 39(2), 298-315.
- Chukwuma, O. (2021). *User-centered classification approaches in modern libraries*. Classification Research, 14(1), 33-48.
- Creswell, J. W. (2015). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (5th ed.). Pearson.
- Emeka, U. (2021). *Dynamic nature of library classification systems*. Knowledge Organization, 48(4), 245-262.
- Eze, M., & Okoye, F. (2019). *Digital cataloguing tools in Nigerian public libraries*. Library Technology Reports, 35(2), 67-84.
- Ibeh, C., & Ezeabasili, A. (2024). *Information retrieval and library classification: A modern perspective*. Information Science & Technology, 41(1), 78-95.
- Ike, C., Okoro, N., & Eze, P. (2022). *Standardization in cataloguing: Implementation of RDA in Nigerian libraries*. Cataloguing & Classification Quarterly, 60(2-3), 156-173.
- Iroha, M. (2021). *Anglo-American cataloguing rules implementation in West African libraries*. Library Resources & Technical Services, 65(3), 234-251.

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- Kumar, S., & Singh, R. (2018). *Technology-enabled information centers: Transformation of public libraries*. Library Review, 67(8/9), 542-558.
- Lor, P. J., & Britz, J. J. (2005). *Knowledge production from an African perspective: International information flows and intellectual property*. The International Information & Library Review, 37(2), 61-76.
- Muokebe, B. O. (2013). *Digital libraries and information services in Nigeria*. Information Development, 29(4), 343-354.
- Muokebe, B. O., & Agwuna, P. K. (2024). *Metadata standards in digital libraries: A Nigerian perspective*. Journal of Documentation, 80(2), 412-428.
- Muokebe, B. O., & Ogbomo, E. F. (2013). *Challenges of ICT implementation in Nigerian public libraries*. Library Philosophy and Practice, 2013, 1-15.
- Mutula, S. M. (2004). *IT diffusion in sub-Saharan Africa: Implications for developing and managing digital libraries*. New Library World, 105(7/8), 281-289.
- National Bureau of Statistics. (2018). *Nigeria demographic and health survey 2018*. NBS Press.
- Nwabueze, A. U., & Ibeh, C. (2016). *Classification systems evolution in African libraries*. African Journal of Library, Archives and Information Science, 26(2), 89-104.
- Nwabueze, A. U., Ibeh, C., & Okonkwo, U. (2014). *Traditional and digital library operations: Integration challenges*. Library Management, 35(6/7), 456-471.
- Nwafor, B. U. (2020). *Integrated library management systems in Nigerian universities*. Electronic Library, 38(1), 123-140.
- Nwalo, K. I. N. (2003). *Fundamentals of library practice: A manual on library routines*. Stirling-Horden Publishers.
- Nwankwo, C., & Agwuna, P. K. (2021). *Information literacy and cataloguing practices*. Library & Information Science Education, 38(2), 156-173.
- Nwogu, T. (2019). *User experience in digital cataloguing systems*. International Journal of Information Management, 49, 234-245.
- Obi, I., & Chukwu, E. (2018). *Collaborative networks in library resource sharing*. Library Consortium Management, 12(3), 78-92.
- Obinna, V. C. (2020). *User-centric services in Nigerian public libraries*. Public Library Quarterly, 39(4), 267-284.
- Ocholla, D., & Bothma, T. (2007). *Trends, challenges and opportunities for LIS education and training in Eastern and Southern Africa*. New Library World, 108(1/2), 55-78.
- Oduwale, A. A. (2020). *MARC records and bibliographic control in African libraries*. Cataloguing & Classification Quarterly, 58(3-4), 289-305.
- Ogunmola, K. (2019). *Educational functions of cataloguing in public libraries*. Library and Information Science Digest, 27(1), 45-61.
- Ogunniyi, S., & Adebayo, O. (2021). *ICT adoption in library cataloguing: Benefits and challenges*. Information Technology and Libraries, 40(1), 12-28.
- Okechukwu, E., & Orakpor, A. (2017). *Artificial intelligence applications in library cataloguing*. Library Hi Tech News, 34(8), 15-20.
- Okello-Obura, C., & Ssekitto, F. (2015). *Library and information science education in Uganda: Trends, challenges, and opportunities*. Library Review, 64(1/2), 30-44.
- Oketunji, I. (2000). *Application of information and communication technologies in Nigerian libraries*. African Journal of Library, Archives and Information Science, 10(1), 13-25.
- Okonkwo, I. (2021). *Information retrieval efficiency in digital libraries*. Journal of Academic Librarianship, 47(4), 102-118.
- Orakpor, A. (2007). *Digital divide and information access in Nigerian libraries*. The Electronic Library, 25(5), 582-595.

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- Orakpor, A., & Anyaoku, E. (2012). *Search strategies and user behavior in digital libraries*. Online Information Review, 36(3), 398-415.
- Orakpor, A., Ezejiogo, R., & Nwana, S. (2010). *Technical skills gaps in Nigerian academic libraries*. Library Management, 31(4/5), 247-261.
- Orakpor, A., & Igwilo, B. (2024). *Collaborative cataloguing initiatives in West African libraries*. Collaboration in Libraries, 15(2), 89-106.
- Orakpor, A., & Modili, S. (2024). *Funding challenges in Nigerian public library ICT implementation*. Library Funding Quarterly, 28(1), 34-51.
- Orakpor, A., Nwachukwu, V., & Ezema, I. (2014). *Digitization projects in Nigerian university libraries*. Digital Library Federation, 12(3), 156-172.
- Orakpor, A., & Omoruyi, T. (2022). *Personalized library services through ICT integration*. Library Technology and User Services, 18(4), 234-250.
- Prensky, M. (2001). *Digital natives, digital immigrants*. On the Horizon, 9(5), 1-6.
- Rosenberg, D. (2005). *Towards the digital library: Findings of an investigation to establish the current status of university libraries in Africa*. INASP.
- Sambo, A. S. (2008). *Matching electricity supply with demand in Nigeria*. International Association for Energy Economics, 4, 32-36.
- Uche, O., & Nwosu, C. (2020). *Online public access catalogues and user satisfaction*. Library Software Review, 29(2), 78-95.