



INFORMATION AND COMMUNICATION TECHNOLOGY UTILIZATION AND LIBRARY COLLECTION DEVELOPMENT IN SELECTED ACADEMIC LIBRARIES IN OYO STATE, NIGERIA

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Abstract

This study examined the Information and Communication Technology (ICT) utilization on library collection development in three selected academic libraries in Oyo State, Nigeria, namely Ladoko Akintola University of Technology Library, Ogbomoso, Emmanuel Alayande University of Education Library, Oyo, and The Polytechnic, Ibadan Library. The study was carried out to determine the extent of ICT utilization in library collection development, assess the impact of ICT on collection development activities, and identify the challenges affecting the effective utilization of ICT in the selected academic libraries. A descriptive survey research design was adopted for the study. The population comprised eighty (80) library staff from the three selected academic libraries, and the entire population was used through the total enumeration sampling technique. Data were collected using a structured questionnaire developed by the researcher. Data collected were analyzed using frequency counts, percentages, mean scores, standard deviation. The findings of this study revealed that Information and Communication Technology (ICT) is highly utilized in library collection development in the three selected academic libraries in Oyo State. The study concluded that ICT has become an indispensable tool for effective library collection development in academic libraries and has significantly improved the acquisition, management, and accessibility of information resources. The study recommended increased funding for ICT infrastructure, regular staff training and retraining programmes, improved internet facilities, provision of alternative power supply, and the formulation of sustainable ICT policies to enhance the effective utilization of ICT in library collection development.

Keywords: ICT, Collection Development, Academic Libraries, Library and Information Resources.

Introduction

Library collection development is one of the most fundamental functions of any library. It refers to the systematic process of selecting, acquiring, evaluating, organizing, preserving, and maintaining information resources that meet the educational, research, and informational needs of library users. The effectiveness of a library largely depends on the quality, relevance, adequacy, and accessibility of its collections. In academic libraries, collection development is particularly important because it provides the information resources required for teaching, learning, research, and knowledge creation. Without a well-developed collection, an academic library cannot adequately fulfill its mandate of supporting academic excellence and intellectual development.

Meanwhile, Technology (ICT) has become an essential tool for enhancing collection development activities. ICT provides opportunities for libraries to acquire electronic resources, access online databases, automate acquisition processes, participate in resource-sharing networks, and provide users with quick and convenient access to information resources. In Nigeria, the adoption of ICT in academic libraries has increased considerably over the last two decades. Many higher institutions have invested



in computers, internet facilities, integrated library management systems, and electronic information resources to improve library services. According to Ogbuabor *et al.* (2024) observed that ICT facilities in academic libraries save time during collection development, enable quick delivery of information materials, improve communication with vendors/ publishers, facilitate acquisition of current information sources, and standardize collection development practice with global needs and save cost on transportation of hard copies through online subscription.

How ever, despite these benefits, many academic libraries in Nigeria continue to face difficulties in fully integrating ICT into their collection development processes. Consequently, some academic libraries still struggle to build and maintain balanced collections that adequately meet the growing and changing information needs of their users. Moreso, the level of ICT utilization varies among institutions due to differences in funding, infrastructure, administrative support, and staff competence.

The above development necessitated the need to investigate the impact of Information and Communication Technology on library collection development in Oyo State, Nigeria, with a view to determining its influence on collection development activities, identifying the benefits derived from its utilization, examining the challenges affecting its effective application, and suggesting appropriate measures for improving ICT-driven collection development practices in academic libraries.

Objectives of the Study:

The specific objectives of the study are to:

- i. examine the extent of ICT utilization in library collection development in the selected academic libraries in Oyo State.
- ii. determine the perceived influence of ICT on library collection development in the selected academic libraries.
- iii. identify the challenges affecting the effective utilization of ICT in library collection development in the selected academic libraries.

Literature Review

Concept of Information and Communication Technology (ICT)

The concept of Information and Communication Technology (ICT) refers to the various technological systems used for the creation, collection, processing, storage, retrieval, transmission, and dissemination of information. According to Kumar (2018), ICT is a combination of hardware, software, communication technologies, and network systems that enable users to create, access, store, manipulate, and exchange information efficiently. ICT has become a critical 'component of social, economic, educational, and technological development because it enables individuals and organizations to access, share, and utilize information more effectively. In today's knowledge-driven world, information is regarded as a valuable resource, and ICT serves as the primary medium through which this resource is generated, processed, and distributed. As a result, institutions such as universities, research centers, government agencies, and libraries increasingly depend on ICT to enhance productivity, improve service delivery, and achieve their organizational objectives. This broader perspective highlights the multifaceted nature of ICT and its ability to support different activities within organizations.

Concept of Library Collection Development

Library collection development is one of the most fundamental and indispensable functions of any library because it serves as the foundation upon which all library services are built. The effectiveness of a library in meeting the information needs of its users largely depends on the quality, relevance, adequacy, and accessibility of its collection. Collection development refers to the systematic and continuous process of planning, selecting, acquiring, evaluating, organizing, preserving, and maintaining information resources to meet the present and future needs of library users. According to Evans and Saponaro (2012), collection development is a carefully coordinated activity that ensures that library resources are developed in line with the objectives of the parent institution and the information requirements of users. In academic libraries, collection development occupies a central position because



the success of teaching, learning, research, and community service activities depends largely on the availability of relevant information resources. Without a well-developed collection, a library cannot effectively support academic programmes, scholarly research, or intellectual development. Consequently, collection development is often regarded as the backbone of library services and a major determinant of library effectiveness.

One of the major objectives of collection development is to ensure that library resources are relevant to the needs of users and aligned with the mission and goals of the parent institution. According to Johnson (2018), collection development is a strategic activity that requires careful assessment of users' information needs, institutional priorities, and available resources. Librarians must continuously evaluate the relevance and adequacy of existing collections while identifying new materials that reflect emerging trends and developments in various fields of knowledge. Major components of collection development include: selection, acquisition, evaluation, preservation and maintenance library materials

ICT and Library Collection Development

The integration of Information and Communication technology (ICT) into library services has significantly transformed the nature and management of library collection. Traditionally, library collection consisted mainly, print materials such as books, journals and news papers. However, with the advent of ICT, libraries now maintain hybrid collection that include both prints and electronic resources, like e-books, e-journals, data bases, and institutional repositories (Adeyemi & Adebayo, 2021). ICT has fundamentally reshaped how libraries manage the core component of their collections.

In the selection process, ICT tools such as online data bases, vendor websites and usage statistics form library management systems help librarians identify relevant materials that meet users' needs more accurately.

For acquisition, e-procurement platforms, online subscriptions and consultiia agreement allow library to order print and electronic resources faster and often at reduced cost. (Opara, 2020).

ICT also support collection evaluation through automated reports on circulation data. In terms of preservation, digitization, cloud storage, and backup systems protect materials from physical deterioration and loss. (Babalola, 2022).

Maintenance is also enhanced through library automation software that tracts inventories, manages barcode systems and sends alert for overdue.

Overall, ICT has made collection management more efficient, user-driven and sustainable, shifting libraries from manual, shelf based system to dynamic digital work flows

Methodology

The research employed descriptive survey research design. This survey is a research method used to describe the characteristics, opinions, behaviours or perceptions of a population or sample as they currently exist. This is appropriate because the study seeks to ascertain the practices, challenges and perception regarding ICT use in collection development. The study was carried out in three selected academic libraries in Oyo State, Nigeria. These libraries are the Library of Ladoke Akintola University of Technology (LAUTECH), Ogbomoso; the Library of Emmanuel Alayande University of Education, Oyo; and the Library of The Polytechnic, Ibadan. The population of the study consisted of all library staff in the three selected academic libraries in Oyo State. The total population was eighty (80) respondents distributed as follows: Ladoke Akintola University of Technology Library, Ogbomoso 35, Emmanuel Alayande University of Education Library, Oyo 23, The Polytechnic, Ibadan Library 22. The library staff were considered appropriate respondents because they are directly involved in library operations and collection development activities and possess adequate knowledge of ICT utilization within their respective libraries.

The researcher adopted the total enumeration sampling technique. Therefore, all the eighty (80) library staff from the three selected academic libraries were used as respondents for the study. The instrument



used for data collection was a structured questionnaire designed by the researcher based on the objectives and research questions of the study

Interpretation of Results

Research Question 1: To what extent is ICT utilized in library collection development in the selected academic libraries in Oyo State?

Item	Mean	SD	Decision
Computers are used in collection development activities	3.45	0.68	Accepted
Internet facilities are regularly used for selecting resources	3.38	0.74	Accepted
Electronic databases are utilized in collection development	3.21	0.82	Accepted
Library management software is used in managing collections	3.40	0.71	Accepted
ICT tools are frequently used for acquiring and evaluating resources	3.28	0.79	Accepted
Grand Mean	3.34	0.75	Accepted

Table 1: revealed the extent of ICT utilization in library collection development among the selected academic libraries. The result showed that the respondents agreed that computers are used in collection development activities with a mean score of 3.45 and a standard deviation of 0.68. The table further showed that internet facilities are regularly used for selecting information resources with a mean score of 3.38 and a standard deviation of 0.74. The result also indicated that electronic databases are utilized in collection development processes with a mean score of 3.21 and a standard deviation of 0.82. The table further revealed that library management software is used in managing library collections with a mean score of 3.40 and a standard deviation of 0.71. The result equally showed that ICT tools are frequently used for acquiring and evaluating library resources with a mean score of 3.28 and a standard deviation of 0.79. The grand mean score of 3.34 and standard deviation of 0.75 indicate a high level of ICT utilization in library collection development in the selected academic libraries. Since the grand mean is higher than the criterion mean of 2.50, it can be concluded that ICT is extensively utilized in collection development activities. The findings suggest that the selected libraries have embraced ICT in various aspects of collection development, thereby enhancing operational efficiency and improving access to information resources.

Research Question 2: What influence does ICT have on library collection development in the selected academic libraries?

Table 2: Impact of ICT on library collection development

Item	Mean	SD	Decision
ICT improves selection of relevant information resources	3.56	0.63	Accepted
ICT enhances access to electronic information resources	3.61	0.59	Accepted
ICT increases efficiency of collection management	3.48	0.67	Accepted
ICT improves resource sharing among libraries	3.35	0.76	Accepted
ICT contributes to overall development of library collections	3.58	0.61	Accepted
Grand Mean	3.52	0.65	Accepted

Table 2: presented the impact of ICT on library collection development in the selected academic libraries. The findings revealed that ICT has improved the selection of relevant information resources with a mean score of 3.56 and a standard deviation of 0.63. The result further showed that ICT enhances access to electronic information resources with a mean score of 3.61 and a standard deviation of 0.59. The table also indicated that ICT increases the efficiency of collection management with a mean score of 3.48 and a standard deviation of 0.67. The result further revealed that ICT improves resource sharing and collaboration with other libraries with a mean score of 3.35 and a standard deviation of 0.76. The table equally showed that ICT contributes to the overall development of library collections with a mean score of 3.58 and a standard deviation of 0.61.



The grand mean score of 3.52 and standard deviation of 0.65 indicate that ICT was perceived to improve library collection development in the selected academic libraries. Since the grand mean exceeds the criterion mean of 2.50, it can be concluded that ICT has greatly enhanced collection development activities and improved the quality of information resources available to users.

Research Question 3: What challenges affect the effective utilization of ICT in library collection development?

Table 3: Challenges of effective utilization of ICT in library collection development

Item	Mean	SD	Decision
Inadequate funding affects ICT utilization	3.60	0.61	Accepted
Poor internet connectivity limits ICT utilization	3.44	0.72	Accepted
Inadequate ICT infrastructure hinders collection development	3.31	0.77	Accepted
Insufficient ICT skills among staff affect utilization	3.05	0.84	Accepted
Irregular power supply affects ICT utilization	3.66	0.57	Accepted
Grand Mean	3.41	0.70	Accepted

Table 3: revealed the challenges affecting the effective utilization of ICT in library collection development. The findings showed that inadequate funding affects ICT utilization with a mean score of 3.60 and a standard deviation of 0.61. The result further revealed that poor internet connectivity limits effective ICT utilization with a mean score of 3.44 and a standard deviation of 0.72. The table also showed that inadequate ICT infrastructure hinders collection development activities with a mean score of 3.31 and a standard deviation of 0.77. The findings further indicated that there is insufficient ICT skills among library staff affect ICT utilization with a mean score of 3.05 and a standard deviation of 0.84. The result also showed that irregular power supply affects the use of ICT in library collection development with a mean score of 3.66 and a standard deviation of 0.57. The grand mean score of 3.41 and standard deviation of 0.70 indicate that the respondents generally agreed that several challenges affect the effective utilization of ICT in library collection development. Since the grand mean is higher than the criterion mean of 2.50, it can be concluded that inadequate funding, poor internet connectivity, inadequate ICT infrastructure, insufficient ICT skills, and irregular power supply are major challenges confronting the effective use of ICT in the selected academic libraries.

Discussion of Findings

The findings of this study revealed that Information and Communication Technology (ICT) is highly utilized in library collection development in the three selected academic libraries in Oyo State, namely Ladoke Akintola University of Technology Library, Emmanuel Alayande University of Education Library, and The Polytechnic, Ibadan Library. The result showed that computers, internet facilities, electronic databases, library management software, and other ICT tools are extensively used in collection development activities. This finding suggests that the selected academic libraries have embraced technological innovations to improve the efficiency and effectiveness of their collection development processes. The finding is consistent with the study of Aina (2014), who reported that ICT has become an essential component of collection development in academic libraries because it facilitates information selection, acquisition, organization, and management.

The study further found that ICT was perceived to influence library collection development in the selected academic libraries. The finding supports the work of Johnson (2018), who reported that ICT has revolutionized collection development by enabling libraries to acquire and manage information resources more effectively. The positive impact recorded in this study indicates that ICT has become indispensable in modern library operations and has contributed significantly to the growth and development of academic library collections.

The findings also showed that several challenges affect the effective utilization of ICT in library collection development. Among the major challenges identified were inadequate funding, poor internet



connectivity, inadequate ICT infrastructure, insufficient ICT skills among library staff, and irregular power supply. This finding is in agreement with the study of Adomi and Kpangban (2010), who identified inadequate funding and poor technological infrastructure as major obstacles to ICT implementation in Nigerian libraries. Similarly, Okiy (2010) observed that unstable electricity supply and inadequate internet services remain significant barriers to effective ICT utilization in many academic libraries. The persistence of these challenges suggests that although academic libraries have embraced ICT, several infrastructural and financial constraints continue to limit its full potential in supporting collection development. The study further established a significant relationship between ICT utilization and library collection development in the selected academic libraries.

Conclusion and Recommendations

Conclusion

Based on the findings of this study, it can be concluded that Information and Communication Technology has become an indispensable component of modern library collection development. The utilization of ICT has been found to improve the processes of selecting, acquiring, organizing, managing, and providing access to information resources in academic libraries. The adoption of ICT was perceived to enable libraries to expand their collections beyond traditional print resources and has facilitated access to a wide range of electronic information resources required for teaching, learning, and research. The study also concludes that ICT contributes positively to the effectiveness and efficiency of collection development activities.

Recommendations

Based on the findings of the study, the following recommendations are made:

Library management should provide regular training and retraining programmes for library staff to improve their ICT competencies and enable them to utilize technological resources effectively.

Government and institutional authorities should allocate adequate funds to academic libraries for the acquisition, maintenance, and upgrading of ICT facilities and electronic information resources.

Academic libraries should improve internet connectivity and bandwidth to facilitate efficient access to online information resources and electronic databases.

Alternative power supply systems such as solar energy and standby generators should be provided to address the challenge of irregular electricity supply.

Libraries should strengthen collaboration and resource-sharing initiatives through library consortia and ICT-enabled networks to enhance collection development and reduce acquisition costs.

Library administrators should develop ICT policies that support sustainable technological development and encourage the effective integration of ICT into collection development activities.

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