IMPACT OF INFORMATION COMMUNICATION TECHNOLOGY ON THE ACQUISITION OF LIBRARY MATERIALS IN THE FEDERAL POLYTECHNIC OKO LIBRARY

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Abstract

The objective of the study was to examine the impact of Information Communication Technology on the acquisition of library materials in Federal Polytechnic, Oko. Specifically, the study identified the impact of ICT on the acquisition of library materials and the challenges of employing ICT in the acquisition of library materials. The study was guided by three research questions. A descriptive survey research method was used to elicit responses from the entire population of 30 library staff of Federal Polytechnic Oko Library. The instrument for data collection was a questionnaire. The data were analyzed using descriptive statistics (mean scores and frequencies). The findings revealed that cost savings as a result of using ICT for material acquisition; positive impact of ICT on the acquisition of library materials and improved efficiency of library material acquisition are the impact of ICT on the acquisition of library materials. The challenges identified were budget constraints and lack of staff training. The recommendations of this study include: the training of staff on ICT applications, the upgrade of ICT infrastructure, and addressing the challenges facing ICT implementation, like budget constraints and technical issues among others. ICT has greatly impacted the acquisition of library materials, and its effect can be seen in the increased efficiency of library acquisition, real-time inventory management, and speed or fastness in acquisition procedures, which should consistently be maintained by management. This study represents a fresh empirical investigation into the impact of Information Communication Technology on the acquisition of library materials in the Federal Polytechnic Oko library.

KEYWORDS: Library, Library Materials, Acquisition of Library Materials, Information, Information and Communication Technology (ICT)

Introduction

A library is a dynamic, inclusive, and technology-enabled information hub that provides access to diverse resources, services, and spaces to support knowledge creation, learning, research, and community engagement. In the words of Acheampongand De-Graft (2020), a library is a building or room containing a collection of books for the public or a specific group, providing access to these resources for research and education. Ahmed and Sheikh (2020) described a library as an institution that provides users with access to information resources, both physical and digital, and supports information literacy and lifelong learning. It is an organization that collects, organizes, and preserves information resources in various formats like print, digital, and multimedia (Orakpor and Omoruyi,2022). A library is a place where books, information, and knowledge are gathered and made accessible for the education and entertainment of individuals.

Library materials are resources collected and maintained by the library to support information needs. Library materials are resources, physical or digital, that provide information, education, or entertainment collected and maintained by libraries. They are the resources and collections the library makes available in the library to satisfy the information needs of the users and to aid teaching, learning, and research (Orakpor, Ilika and Ofor, 2020). The process involved in getting these materials and making them available in the library is called library acquisition. Library acquisition is of great essence for building up effective library collections. The library materials to acquire in the library are made up of both tangible and intangible resources such as books, journals, databases, and digital repositories. They are books, media, and digital resources that libraries provide for learning, research, and information. The process by which these materials are procured in the library is called library acquisition.

. This involves the sourcing of different information resources for the library. Acquisition of library materials is the actual procurement of information materials; it is important in library services because no service can be rendered if the information materials are not procured so, it serves as bedrock in the library management.

The need to upgrade and improve the processes involved in making information resources available to library users gave rise to the need to use information and communication technologies (ICTs) in library acquisition. According to Ahmed and Sheikh (2020), ICT refers to

the hardware and software that are used for processing, storing and transmitting information. It is the integration of technologies to manage,process and communicate information.

Statement of the Problem

The essence of employing ICT in the acquisition of library materials is numerous for instance, it helps in the efficient selection and acquisition of materials, hence the manual process, which delays the acquisition process, would be minimized, allowing unlimited access to information resources. Unfortunately, it has been observed with utter dismay that S.R. Ranganathan's 2nd law of the library, which is every reader his book, seems not to be achieved due to the unnecessarily rigorous processes taken to acquire books in libraries, which have made acquisition processes slow, inefficient and ineffective in some libraries. It is widely observed that the information needs of some library users may not be effectively met, perhaps because some information materials cannot be acquired because of the process being delayed, and this leaves information seekers unsatisfied. If this situation is not addressed, it could lead to inefficient selection and acquisition processes as well as limited access to information resources needed by the users. Therefore, there is need for the use of ICT in the library acquisition process to enable access to a wider range of information resources. It is against this background that the study sought to examine the impact of ICT on the acquisition of library materials in the Federal Polytechnic Oko, which is a Nigerian polytechnic located in Oko, Orumba North Local Government Area, Anambra State, established in 1979.

Objective of the Study

The general objective of this study was to examine the impact of ICT on the acquisition of library materials in Federal Polytechnic Oko, specifically, the study sought to:

1. Identify the methods employed by the Federal Polytechnic Library in the application of ICT in the acquisition of library materials;

2. Ascertain the impacts of ICT on the acquisition of library materials;

3. Identify the challenges of employing ICT in the acquisition of library materials.

Research Questions

The study was guided by three research questions below:

1. What are the methods employed by the Federal Polytechnic Oko Library in the application of ICT in the acquisition of library materials?
2. What are the impacts of ICT on the acquisition of library materials?
3. What are the challenges of employing ICT in the acquisition of library materials?

Literature review

Methods of the application of ICT in the acquisition of library materials

Library acquisition involves evaluating, selecting, ordering, and obtaining the library materials. Acquisition refers to the obtaining of assets or skills and getting something. Library materials are obtained or brought into the library through library acquisition. Ahmed and Sheikh (2020) opined that library materials acquisition refers to the systematic process by which libraries select and acquire new resources, both physical and digital, to expand and update their collections. This process is central to maintaining the relevance and accessibility of the presentation of the library in response to user needs. There are different steps in the acquisition process; they are the needs assessment, selection, ordering, receipt and processing, and evaluation. All of these methods can be achieved easily through the use of ICT.

An online book ordering system, as Ogundokun, Oladele, and Misra (2021) revealed, is a system that allows customers to purchase books online from a seller's website. Its advantages include convenience and speed, real-time inventory checking, and reduced processing time. In addition, Kavitha and Valarmathy (2022) stated that an Electronic Resources Management System (ERMS) simplifies the organization of an online library, making it more efficient and effective. This method of ICT application has its advantages that include: centralized management, automated tracking and reporting, and improved resource discovery.

Integrated Library Management System (ILMS) is another method of applying ICT in library acquisition. Avila (2024) explained that the ILMS revolutionizes library management by incorporating modern technologies, fostering automation, and enhancing user engagement, bridging traditional services and digital expectations. An integrated management system is comprehensive software that manages library operations such as acquisitions, cataloging, circulation, and serials. It streamlines workflows and enhances patron services.

Open-source software (OSS) is another method of ICT application, in the words of Ahmed and Sheikh (2020), it is free and available under an open-source license for study, change, and distribution to anyone for any purpose. Bala (2024) also opined that digital repositories in academic libraries serve as a central location for storing, organizing, and promoting research and teaching materials with benefits and challenges ranging from preservation to accessibility. Libraries also make use of digital repositories for the acquisition of materials. Digital repositories refer to digital repositories of institutions that store and make accessible to their users, the digital contents (e-theses, research papers, images).

Finally, Stothmann (2024), in his findings, noted that JSTOR's Evidence-Based Acquisition (EBA) model offers cost-effective access for libraries, with 75% participation fees for funding the acquisition of selected titles for perpetual access. E-book platforms serve as intermediaries between libraries and publishers, offering access to large collections of digital books. It is an Online Platform that provides access to e-books. It is characterized by convenience and accessibility, space-saving, and multi-user access.

Impact of ICT on the acquisition of library materials

There are different components of ICT which include: hardware and software (Jayakanth, Byrappa, and Minj, 2022). Hardware is physical devices that make up a computer system, such as the CPU, memory, and storage devices. It provides the physical infrastructure for ICT systems and enables the processing, storage, and communication of information. Orakpor and Omonuyi (2022) pointed out that hardware refers to the physical components of a computer system or other electronic device while, the software serves as a bridge between computer users and computers allowing machines to be operated with user instructions.

The integration of ICT in library acquisition processes has been shown to significantly improve efficiency and productivity. ICT enables the automation of simultaneous processing of multiple orders, streamlining tasks and reducing manual labor. This automation capability allows library staff to manage acquisitions more efficiently, freeing up time for higher-value tasks and ultimately enhancing the overall effectiveness of the operations of the library.

The implementation of ICT in library acquisition processes significantly enhances the efficiency and effectiveness of library service delivery because, as highlighted by Jayakanth and Minj (2022), ICT facilitates automatic error checking, further guaranteeing the accuracy of acquisition materials to a great extent. Migration of ICT-based services to a cloud platform significantly reduces downtime due to power or network outages, making libraries more efficient and reliable. Jayakanth and Minj (2022) accept that it enables remote access, electronic invoicing, and streamlined financial transactions, reducing paperwork and accelerating acquisition cycles; this enhances collaboration and user experience. ICT drives efficiency in library acquisition, automating tasks, streamlining workflows, and enhancing accuracy, resulting in faster and cost-effective resource acquisition.

The integration of ICT in library acquisition processes significantly improves communication and acquisition processes because, as noted by Kavitha and Valarmathy (2022) ICT facilitates electronic communication with vendors, publishers, and library staff, enabling seamless exchange of information and streamlined workflows. . Ibeh, et.al (2025) also stated that ICT integration in library services significantly impacts academic performance and user satisfaction. It is widely accepted that ICT enables real-time tracking of library acquisitions, including orders, shipments, and inventory because according to the findings of Edom and Ihim (2021) ICT has significantly impacted academic library service delivery, making it faster and more efficient but challenges like poor staff attitudes, lack of skill and equipment maintenance hinder the application of ICT in library services.

ICT integration in academic libraries as opined by Pagora (2024) enhances the efficiency and effectiveness of service delivery, resource sharing, and information access while also providing marketing opportunities and enhancing user experience. More so, the integration of ICT in library acquisition has transformed traditional libraries into dynamic information centers, that enable access to a broader range of resources beyond physical collections because ICT

allows libraries to acquire, organize, and disseminate information in various formats (Garg, Hassan and Gupter, 2023). They further revealed that the use of ICT in academic libraries has transformed academic libraries into intellectual information centers which help to promote worldwide access to data and information resources.

From the reviewed literature it has been observed that the impact of ICT on library acquisition includes enhanced access to information, cost saving, improved accuracy, increased efficiency, and faster access to digital information. This can be seen from the assertions of some researchers like Garg, Hassan, and Gupter (2023) assertion which revealed that Koha, version 22.11 is cost-effective and minimally an ICT-intensive solution for managing e-resources of libraries, they believe that the implementation of integrated library systems and automation has shown to be cost-effective, reducing the need for manual processes and enabling libraries to provide more services with the same or fewer resources.

Challenges of employing ICT in the acquisition of library materials

Implementing ICT in library acquisition faces numerous challenges; some of these include:

Infrastructure Limitations: Outdated hardware and software, network security concerns, and system compatibility challenges hinder effective ICT use in library acquisition. Garg, Hussan, and Gupta (2023) revealed the need to upgrade the systems because if they are outdated and inadequate, it can limit the utilization of the ICT tools and systems for acquisition.

Network Security Concerns can put library data at risk, which means that the acquisition process can be affected. Berba (2020) opined that inadequate network security checks can cause network security threats. Preventing network-related damages in higher education institutions requires robust security measures and continuous monitoring.

Financial Challenges: Effective budget planning and resource allocation are crucial. Libraries need updated hardware and software, but most times, the cost implications are high; hence, libraries are constrained in making effective investments that would enhance effective library acquisition processes (Berba, 2020).

Staff Training: The findings of Mushin, Mwantimwa, and Wema (2024) revealed that librarians lack the ICT skills and knowledge needed to effectively implement embedded librarianship, requiring both long-term and short-term ICT training; hence, the essence of investing in staff development ensures smooth ICT integration. There is a need for librarians to understand these challenges so that libraries can develop strategies to overcome them and harness the full potential of ICT in library acquisition.

Methodology

This study adopted a descriptive survey design to examine the impact of ICT on the acquisition of library materials in the Federal Polytechnic Oko library. A total of 30 library staff members of the library were used for the study.The instrument for data collection was a questionnaire, with 15 items to elicit responses from the population. 30 copies of the questionnaire were distributed and all were collected. The data collected for this study were analyzed using frequency counts and mean scores and presented in frequency tables, with the adoption of a criterion mean point of (2.50) used to analyze tables 1, 2, and 4. This implies that any item with a mean score of 2.50 and above was regarded as agreed, while items with mean scores below 2.50 were regarded as disagreed. Furthermore, the real limit of numbers was used in answering research question 3. The following scale was adopted; mean scores 3.50-4.00-Very High Extent; 2.50-3.49- High Extent; 2.00-2.29 Low Extent and 1.00-1.99 - Very Low Extent.

Results and discussion

Research question 1

What are the methods employed by Federal Polytechnic Oko Library in the application of information and communication technology in the acquisition of library materials?

Table 1: Mean scores rating on methods of the application of ICT in acquisition

S/N	ITEM STATEMENTS	SA	A	D	SD	X	DECISION
1.	Online ordering	27	2	0	1	3.83	Agreed
2.	E-book platforms	23	6	0	1	3.70	Agreed
3.	Integrated library management system	22	7	0	1	3.67	Agreed

4.	digital repositories	21	9	0	0	3.70	Agreed
5.	open-source software	20	9	1	0	3.63	Agreed
6.	Electronic resource management system	19	10	1	0	3.60	Agreed
	Cluster Mean					**3.68**	Agreed

Note: **SA** = Strongly Agree; **A** = Agree; **D** = Disagree; S**D** = Strongly Disagree

Table 1 presented data from responses by library staff on methods of the application of ICT in acquisition. The results revealed that online ordering was the highest item with a mean score of (3.83) which is an indication that the respondents strongly agreed with the item. Second was the e-book platform with a mean score of (3.70); which has the same mean score as digital repositories. This was followed closely by integrated library management systems with a mean of (3.67). Next was open-source software, which has a mean score of (3.63) and lastly, the electronic resource management system with a mean score of (3.60). The cluster mean was (3.68); which is an indication that all the listed items like online ordering, e-book platforms, and others, were accepted as the methods employed in the application of ICT in the acquisition of library materials.

These findings are in agreement with Ogundokun, Oladele, and Misra (2021) who revealed that online ordering is a method of ICT application in an acquisition that allows customers to purchase books online from a seller's website. Kavitha and Valarmathy (2022) supported the finding with their assertion that an Electronic Resources Management System (ERMS) simplifies the organization of an online library, making it more efficient and effective. This method of ICT application has its advantages that include: centralized management, automated tracking and reporting, and improved resource discovery.

Research Question 2

What are the impacts of Information Communication Technology on the acquisition of library materials?

Table 2: Mean score rating on the impact of ICT on the acquisition of library materials.

S/N	ITEM STATEMENTS	SA	A	D	SD	X	DECISION
7.	ICT positively impacts the acquisition of library materials	23	7	0	0	3.77	Agreed
8.	Improved efficiency of library material acquisition	20	9	1	0	3.63	Agreed
9.	Cost savings as a result of using ICT for material acquisition	27	2	0	1	3.83	Agreed
10.	Faster processing of acquisition procedures	18	11	1	0	3.56	Agreed
11	Real-time inventory management	20	9	1	0	3.63	Agreed
	Cluster Mean					**3.68**	Agreed

Note: **SA** = Strongly Agree; **A** = Agree; **D** = Disagree; S**D** = Strongly Disagree

Table 2, revealed that the respondents agreed that all the item statements like: cost saving as a result of using ICT for material acquisition; ICT positively impact the acquisition of library materials and improved efficiency of library material acquisition are the impact of ICT on the acquisition of library materials, with a cluster mean of (3.68). The accepted item statements have the following mean scores: ICT positively impacts the acquisition of library materials (3.77); improved efficiency of library material acquisition (3.63); cost saving as a result of using ICT for material acquisition (3.83); faster processing of acquisition procedure (3.56) and real-time inventory management (3.63).

This finding aligns with the assertion of Pagora (2024) that ICT integration in academic libraries enhances the efficiency and effectiveness of service delivery, resource sharing, and information access while also providing marketing opportunities and enhancing user experience. More so, the integration of ICT in library acquisition as asserted by some researchers like Garg, Hussan, and Gupta (2023) has transformed traditional libraries into dynamic information centers, enabling access to a broader range of resources beyond physical collections, because ICT allows libraries to acquire, organize and disseminate information in various formats.

Research Question 3

What are the challenges of employing Information and Communication Technology in the acquisition of library materials?

Table 3: Mean score rating on the challenges of employing ICT in the acquisition of library materials.

S/n	ITEM STATEMENTS	SA	A	D	SD	X	DECISION
17	Technical Issues	23	7	0	0	3.77	Agreed
18	Lack of staff training in the application of ICT in the acquisition of library materials	21	9	0	0	3.70	Agreed
19	Lack of adequate finances	18	11	1	0	3.56	Agreed
20	Lack of adequate infrastructure	17	12	0	1	3.50	Agreed
	Cluster Mean					**3.63**	Agreed

Note: **SA** = Strongly Agree; **A** = Agree; **D** =Disagree; **D** = Strongly Disagree

Table 3, presented the responses to four items on the challenges of employing ICT in the acquisition of library materials. The table revealed a total agreement among the respondents on the challenges of employing ICT in the acquisition of library materials with a cluster mean of (3.63) which is above the criterion mean of (2.50), hence the agreement on challenges of employing ICT in the acquisition of library materials include: technical issues, lack of staff training in the application of ICT in the acquisition, lack of adequate finances and lack of adequate infrastructure.

This finding is consistent with Mushin; Mwantimwa and Wema's (2024) assertion that librarians lack the ICT skills and knowledge needed to effectively implement embedded librarianship, requiring both long-term and short-term ICT training; hence, the essence of investing in staff development to ensure smooth ICT integration. It also agreed with the result of other researchers that insufficient ICT infrastructure, poor internet bandwidth, and financial

constraints hinder the full implementation of ICT in library acquisition processes. (Berba, 2020 Garg, Hassan and Gupta, 2023).

Conclusion

The study examined the impact of ICT on the acquisition of library materials in Federal Polytechnic Oko Library and revealed that the application of Information Communication Technology (ICT) in the acquisition of library materials at Federal Polytechnic Oko has made positive impact; like enhancement of cost saving and faster processing of acquisition procedure. Despite the challenges such as technical issues, staff training needs, and budget constraints, ICT has great impact on the acquisition processes, enabling real-time inventory management and improved efficiency of library material acquisition.

Recommendations

In the light of the findings, the study recommended that management should invest in modern ICT methods of acquiring library materials to facilitate efficient library acquisition processes. They should also provide regular training programs for staff on ICT applications in library acquisition.

Moreover, management should address the ICT challenges by developing strategies to overcome challenges such as quality concerns, lack of adequate finances, and technical issues. Finally, they should enhance the acquisition process by using ICT to analyze user needs and preferences, to acquire materials that meet those needs.

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