

INFORMATION AND COMMUNICATION TECHNOLOGY INTEGRATION IN LIBRARY SERVICES: A MEASURE TO DECLINING LIBRARY PATRONAGE AMONG STAFF AND STUDENTS IN FEDERAL POLYTECHNIC, BIDA LIBRARY

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Abstract

Purpose: This research was conducted to investigate Information and Communication Technology (ICT) Integration in Library Services: A Measure to Declining Library Patronage among Staff and Students in Federal Polytechnic, Bida.

Design/Methodology/Approach: The study adopted descriptive survey research design. It is guided by three research objectives that sought answers on: level of patronage to library services, types of available ICT facilities and challenges associated with the use of available ICT facilities. The population of the study was forty-eight library staff, where total enumeration was applied in choosing sample size. Structured questionnaire was used as the research instrument for data collection. Out of forty-eight copies of questionnaire administered, only thirty-eight were retrieved and found usable. Data collected were analyzed using frequency counts, mean and standard deviation.

Findings: The research findings showed that there is indeed a very low level of patronage to library services among staff and students. The staff strongly agreed that adequate integration of ICT in library services would improve library patronage among staff and students. The study revealed that computer system, storage devices, printer, scanning machine, photocopier, etc. are ICT facilities available in the library. Meanwhile, library website, e-mail/social media platforms, online public access catalogue, library management software, institutional repository and closed and open access online database subscription are required. The challenges associated with the use of ICT facilities to library services include instability in power supply and inadequate ICT skills among others.

Implication: Having discovered the low level of patronage on library services, there is every indication that the integration of Information and Communication Technology to library services will improve the level of patronage and vice versa.

Originality/Value: In order to overcome the poor library patronage among staff and students, it is recommended that current trends of technology integration be leveraged upon in library operation and services. The originality of this paper lies in the fact that it has not published elsewhere.

Keywords: Information and Communication Technology, Library Service, Library Patronage

Paper type: Empirical research

Introduction

Libraries are recognized as essential instruments for societal and national development. They are a vital facilitator in education as they help in fostering reading culture, literacy, learning and research. Academic libraries serve users in any academic environment be it universities, polytechnics, colleges of education and monotechnics. Invariably, academic

libraries are the heart of the learning community, providing a place for students, research scholars, teachers and faculty members for teaching, learning and research.

Polytechnics are institutions that help in the quest for technological and economic growth. It is an institution of higher learning, with the primary responsibility of

producing technical manpower needed for industrial growth especially in Nigeria. Polytechnic education places a strong emphasis on practical based learning and attachment of requisite skill acquisition in every facet of course delivery. Ayankola and Busari (2024) state that polytechnics in Nigeria are set up to impart knowledge and necessary technical skills for provision of competent and well skilled labour force for industrial and technological development.

In addition to their academic knowledge, every polytechnic staff is to acquire interpersonal skills, communication and presentation skills as well as problem solving skills to enhance their productivity and also assist their students to be able to compete with their contemporaries, globally. For the purpose of career and professional growth, academic staff are to conduct research, publish scholarly articles, teach classes, counsel their students and also serve in various committees.

The major aim of bringing library and its services close to users is to identify current and potential users and begin to develop a relationship with them. Polytechnic libraries can achieve such relationship with their users through the use of Information and Communication Technology (ICT). The use of ICT has steadily increased in

all life spheres, including economic, social, political and cultural; hence, the library is not an exception. The gradual introduction and advanced extensive use of such technological inventions as personal computers, cell phones and internet has impacted every aspect of life, making it incredible to provide awareness to library users (Umar, 2017).

Hence, in the provision of various library services, the integration of Information and Communication is adjudged to have influence on the level of patronage. It is based on this background that this study is carried out.

Statement of the Problem

Integration and impact of Information and Communication Technology in library and information service provision cannot be over emphasized, especially in addressing ugly trends of declining library patronage among students and staff in any academic community. Information and Communication Technology is a necessity especially in the 21st century; therefore, having ICT in any academic library, especially to encourage usage of library services is a thing to work towards. It is observed that there is declining usage of library and its collections among staff and students in Federal Polytechnic, Bida. It is against this background that this research; 'Information and Communication

Technology Integration in Library Services: A Measure to Declining Library Patronage among Staff and Students' is embarked upon.

Objectives of the Study

This research aims to investigate Information and Communication Technology Integration in Library Services as Response to Declining Library Patronage among Staff and Students. However, the specific objectives are to:

1. determine level of patronage of library services among the staff and students.
2. Determine the types of available Information and Communication Technology that can encourage library patronage among staff and students.
3. find out challenges associated with the use of available information and communication technology facilities that can encourage library patronage among staff and students.

Literature Review

Library services, according to Olatunji (2023), are regarded as social services which are bound to stimulate the reading habit of the society, including people in the academic environment. Library services present a picture of remarkable variety and play an important role in the educational, economic, cultural and recreational life of the entire population. To be most functional, the services provided by the

library should correspond with the needs of its users because the user is the very reason for the existence of the library and ensures that the services so provided are exploited to the maximum. Library and information services are library activities that aim at disseminating desirable information to library users. Libraries have provided a range of services including current awareness service, selective dissemination of information, audio visual/multimedia service, e-library/internet service, online book reservation/online information service, user education/computer literacy skills service, photocopying/printing service, circulation/book loan service, reference service, inter library loan, etc. These services facilitate the inter-change of library information resource, promote the interoperability of library system and support national and international networking of libraries.

Information and Communication Technology integration in library services undeniably enhance service delivery and encourage users' patronage to library service. Awotona (2019) defined Information and Communication Technology as a diverse set of technological tools and resources used to communicate, create, disseminate, store, manage information and promote human activities. These technologies include;

computers, Internet, printer, scanner, photocopy machine, binding machine, laminating machine, broadcasting technologies, projector and telephony among others that are widely used in today's education field most especially in academic settings. Anyim (2021) stated that ICT constitute integration of computers, telecommunications and microelectronics used for acquisition, storage, retrieval, transfer and dissemination of information to a wider and dispersed audience. Libraries should expand these pursuits, after providing the important training necessary to its staff especially, to secure position in the digital environment and to advance on information delivery to the end users. With the recent wave of ICT in knowledge-based institutions, effective teaching and learning is almost impossible without application of various ICT based instructional resources. With the impact of ICT and other environmental changes, the role and concept of library service has to change and quickly. The range of services that take place outside the physical library is expanding due to the new technology. For libraries and information services to stay viable in the current climate, it is important that they adopt ICT to help meet institutional mission, goals and objectives. The aim of ICT integration in library services provision is to enhance patronage.

Odunola and Tella (2019) defined library patronage as the consultation or use of library information resources by users of the library either physically or via remote access. In essence they defined library patronage as simply the regular utilization of library services by the intended users. They reiterated that if library services and resources are not patronized by their intended users, then it means that there is little or no justification to the investment made to the library. According to Ibrahim and Wada (2021), the level of patronage of library is a good measure of how well libraries can facilitate teaching, learning and research activities. Jamogha and Jamogha (2022) opined that the essence of evaluating the patronage of a library is to gather useful information on whether the library is fulfilling its mandate and to also help in the reform of services provision, planning and the effective management of the library.

Several challenges were reported to have associated with the use of ICT facilities to provide library and information services. Uzoagba (2019) identified lack of good infrastructure in terms of epileptic power supply in Nigeria or low current which might result in damaging ICT equipment in the libraries. It was also discovered that lack of adequate bandwidth and appropriate anti-virus and other necessary software in academic libraries pose serious

threat to ICT use in the library. From the human resources point of view, Abiolu and Okere (2019) opined that lack of human capacity in the management of the ICT facilities in the libraries is a huge constraint. They also mentioned that inadequate skills of human resources, inadequate finance, power supply, system law, ICT literacy and inadequate ICTs infrastructure constitute the major challenges affecting adequate use of ICT products and services.

Methodology

Results and Discussion

Research Question 1: What is level of patronage to library services among staff and students?

Table 1: Level of Patronage to Library Services among Staff and Students

S/N	Item Statement	VHL (4)	HL (3)	LL (2)	VLL (1)	Sum	X (Mean)	SD
1	Current Awareness Service	6	2	15	15	75	1.97	1.04
2	Selective Dissemination of Information	3	3	15	17	68	1.79	0.89
3	Audio Visual/Multimedia Service	2	2	14	8	50	1.92	0.83
4	E-library/Internet Service	9	12	9	8	98	2.58	1.07
5	Online Book Reservation/Online Information Service	0	2	15	21	57	1.50	0.60
6	User Education/Computer Literacy Skills Service	17	5	4	12	103	2.71	1.32
7	Photocopying/Printing Service	18	13	4	3	122	3.21	0.92
8	Circulation/Book Loan Service	21	7	4	6	119	3.13	1.13
9	Reference Service	16	13	7	2	119	3.13	0.89
10	Inter Library Loan	0	0	0	38	38	1.00	0.00

Keys: VHL = Very High Level, HL = High Level, LL = Low Level, VLL = Very Low Level

In Table 1, the analysis of library service patronage among staff and students revealed that traditional services such as

Descriptive survey research design was adopted for this study. The population consists of forty-eight library staff in Federal Polytechnic, Bida. Total enumeration or census technique was used to study the entire population. Hence, forty-eight copies of structured questionnaire were administered as the research instrument. However, only thirty-eight were retrieved and used for analysis. Data collected were analysed using descriptive statistics such as the frequency counts, mean and standard deviation.

photocopying/printing (Mean = 3.21), circulation/book loan (Mean = 3.13), and reference services (Mean = 3.13) are the

most frequently utilized. In contrast, digital and specialized services like inter-library loan (Mean = 1.00), online book reservation (Mean = 1.50), and selective dissemination of information (Mean = 1.79) experience very low patronage, indicating either a lack of awareness or non-existence of services challenges. E-library/internet services (Mean = 2.58) and user education/computer literacy skills services (Mean = 2.71) show moderate usage, suggesting a growing interest in digital resources. The overall trend

highlights a strong reliance on physical materials and printing services, with limited engagement in digital and online resources. This suggests the need for increased awareness, improved accessibility, and training to enhance the utilization of digital library services.

Research Question 2: What are the types of available Information and Communication Technology that can encourage library patronage among staff and students?

Table 2: Types of Available Information and Communication Technology Facilities that can Encourage Library Patronage among Staff and Students

S/N	Available ICTs	Available	Not Available	Sum	X	SD
1	Computer System (Desktop/Laptop)	38	0	76	2.00	0.00
2	Storage Devices (Sharable)	25	13	63	1.66	0.47
3	Library Software	9	29	47	1.24	0.43
4	Printer	38	0	76	2.00	0.00
5	Scanning Machine	38	0	76	2.00	0.00
6	Photocopier	38	0	76	2.00	0.00
7	Server e.g. Mikrotic	33	5	71	1.87	0.34
8	Switches	23	15	61	1.61	0.49
9	Router	32	6	70	1.84	0.36
10	Multimedia Projector	36	2	74	1.95	0.22
11	Electronic Interactive Board	0	38	76	2.00	0.00
12	Digital/Video Camera	28	10	63	1.66	0.47
13	Closed Circuit Television (CCTV)	38	0	47	1.24	0.43
14	Television and satellite gadgets/accessories	38	0	76	2.00	0.00
15	Internet 24/7	26	12	76	2.00	0.00
16	Library Website/Portal	0	38	76	2.00	0.00
17	Library's E-mail/Social Media Platforms	0	38	71	1.87	0.34
18	Online Public Access Catalogue (OPAC)	0	38	61	1.61	0.49

19	Koha/Alexandria/VTLS Library Management Software	0	38	70	1.84	0.36
20	Institutional Repository (IR) e.g. DSpace	0	38	74	1.95	0.22
21	Database for Offline Digital Library	38	0	76	2.00	0.00
22	Closed and Open Access Online Database Subscription e.g. Scopus, ProQuest, EbscoHost, PubMed, Web of Science, Science Direct, JSTOR, Cambridge Core, IEEE Xplore, DOAJ etc.	7	31	63	1.66	0.47

Table 2 reveals significant gaps in the availability of ICT resources in the library, despite the presence of essential hardware; computer systems (Mean = 2.00), printers (Mean = 2.00), scanners (Mean = 2.00), photocopiers (Mean = 2.00), and storage devices (Mean = 1.66) are widely available, ensuring basic document processing and printing services. However, critical digital infrastructure such as library software (Mean = 1.24), online public access catalogues (OPAC) (Mean = 1.61), library management software (Mean = 1.84), and institutional repositories (Mean = 1.95) are completely lacking. Similarly, the electronic interactive board, library website/portal, and social media platforms (all with Mean = 2.00 but marked as not available) indicate a lack of online engagement and digital accessibility. While networking devices such as servers

(Mean = 1.87), switches (Mean = 1.61), and routers (Mean = 1.84) exist, the absence of 24/7 internet access, online databases (Mean = 1.66), and a functional library management system severely limits digital library services. The findings suggest that while the library is equipped with basic ICT hardware, the lack of essential digital resources, online services, and automation tools hampers full digital transformation and efficient digital service delivery. Investing in library software, online databases, and internet infrastructure is crucial to improving access and patronage.

Research Question 3: What are the challenges associated with the use of available information and communication technology facilities that can encourage library patronage among staff and students?

Table 3: Challenges Associated with the use of Available Information and Communication Technology Facilities that can Encourage Library Patronage among Staff and Students

S/N	Item Statements	SA	A	D	SD	Sum	X	SD
		4	3	2	1			

1	Users Reluctance to Use ICT Facilities in the Library	20	10	4	4	122	3.21	1.00
2	Instability in Power Supply and Inadequate ICT Skills among Library Staff	20	15	2	1	130	3.42	0.71
3	Lack of Internet Connectivity/Facility in the Library	15	15	4	4	117	3.08	0.96
4	Obsolescence of the Hardware and Software Facilities in the Library	8	9	10	11	90	2.37	1.11
5	High Cost of Subscription to Online Database	25	13	0	0	139	3.66	0.47
6	Inadequacy of the ICT Facilities in the library	15	13	5	5	114	3.00	1.03
7	Lack of Social Media Platform for Library Users	15	16	6	1	121	3.18	0.79
8	Lack of Library Website/Portal	38	0	0	0	152	4.00	0.00
9	Non Availability of Library Management Software (e.g. Koha, Alexandria, VTLS Virtua etc.)	38	0	0	0	152	4.00	0.00
10	Non Availability of Institutional Repository (D-Space)	38	0	0	0	152	4.00	0.00

Key: SA=Strongly Agreed, A=Agreed, D=Disagreed, SD=Strongly Disagreed

The table highlights the challenges associated with using available ICT facilities to encourage library patronage among staff and students in Federal Polytechnic, Bida. Key findings indicate that critical ICT tools such as a library website/portal, library management software (e.g., Koha, Alexandria, VTLS Virtua), and institutional repository (e.g., D-Space) were entirely unavailable ($X = 4.00$, $SD = 0.00$), representing significant barriers to effective library services. Challenges such as users' reluctance to use ICT facilities ($X = 3.21$, $SD = 1.00$), instability in power supply and inadequate ICT skills among library staff ($X = 3.42$, $SD = 0.71$), and lack of internet connectivity/facility in the library ($X = 3.08$, $SD = 0.96$) were highly rated,

indicating widespread agreement on their adverse effects. Additional challenges included obsolete hardware and software ($X = 2.37$, $SD = 1.11$), lack of social media platforms for library users ($X = 3.18$, $SD = 0.79$), and inadequacy of ICT facilities ($X = 3.00$, $SD = 1.03$). Moreover, high subscription costs to online databases ($X = 3.66$, $SD = 0.47$) were identified as another critical barrier. These findings underscore the need to address infrastructural deficiencies, upgrade ICT tools, and ensure adequate training and internet connectivity to enhance library patronage effectively.

Discussion of Findings

Level of Patronage to Library Services among Staff and Students?

The findings reveal that library patronage among staff and students is generally low,

particularly for digital and electronic services. Traditional library services such as photocopying, book loans, and reference services are more frequently used, whereas digital services like online book reservations, inter-library loans, and selective dissemination of information receive minimal patronage. This suggests that users may prefer conventional library services due to little integration of, or inadequate ICT infrastructure. This aligns with the findings of Oyedele and Grace (2021), who noted that inadequate technological infrastructure and limited awareness of digital library services often contribute to poor library usage. The low patronage of ICT-based library services suggests a need for increased sensitization and training on the benefits of utilizing digital resources.

Types of Available Information and Communication Technology Facilities that can Encourage Library Patronage among Staff and Students?

The results reveal significant gaps in the availability of ICT resources in the library. While basic ICT hardware such as computers, printers, scanners, and photocopiers are readily available, essential digital infrastructure like library software, OPAC, and library management systems are lacking. Furthermore, networking components such as servers

and routers exist but are not fully functional, and internet access remains limited. The lack of these essential digital tools likely contributes to the low utilization of e-library services. These gaps hinder the efficient delivery of library services. According to Agwu and Ifeanyi (2019), the availability of ICT resources in libraries directly influences the effectiveness of service delivery and user engagement. Without critical digital infrastructure, libraries may struggle to provide efficient and responsive services that meet the needs of modern users.

Challenges Associated with the Use of Available Information and Communication Technology Facilities that can Encourage Library Patronage among Staff and Students?

ICT facilities significantly improve library services by facilitating access to information, automating processes, and enhancing overall efficiency. Several challenges hinder their effective utilization in enhancing library patronage. The major issues identified include the absence of advanced digital infrastructure, limited internet access, and inadequate technical support. The lack of an institutional repository, OPAC, and online databases prevents the library from offering comprehensive digital services. This finding supports the argument by Okoro and Nwankwo (2017), who asserted that

poor ICT adoption in academic libraries, is often due to funding constraints, inadequate staff training, and infrastructural deficiencies.

Conclusion

The study revealed that traditional library services, such as book loans, reference services, and photocopying, are widely patronized among staff and students. However, digital services, including e-library and inter-library loans, are underutilized. This suggests a strong preference for traditional services while highlighting the need to improve the accessibility and functionality of digital offerings.

A variety of ICT tools, such as computers, printers, and scanning machines, are readily available to encourage library use. However, critical digital resources, including a functional library website, social media platforms, and library management systems, are entirely absent. Limited availability of internet services and online databases further limits the library's ability to meet modern demands. Several challenges hinder the effective use of ICT in library services. These include inadequate internet connectivity, power supply issues, outdated hardware and software, and the absence of critical digital tools. High subscription costs for online databases also pose a significant barrier. These challenges need to be addressed to

foster greater library patronage and improve service delivery.

Recommendations

Consequent on the findings of this study, the following recommendations are made.

1. The library should vigorously sensitize the polytechnic community on the available information services, especially in compliance with the current trends on ICT integration for users' information needs.
2. By improving access to information and facilitating seamless library operations, the library should lobby the Management to seriously invest in ICT driven academic library, especially to install institutional repository, Koha library management software and online database subscription.
3. The library should be thoroughly funded, enhanced capacity building, and improved internet connectivity in order to optimizing ICT integration in library services.

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