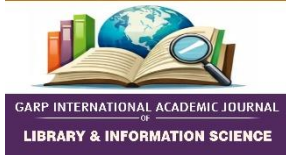


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LIBRARIANS' PREPAREDNESS AND PERCEPTIONS TOWARDS ADOPTION OF EMERGING TECHNOLOGIES FOR INFORMATION SERVICE DELIVERY IN PUBLIC LIBRARIES IN NIGERIA

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Abstract

The purpose of the study is to investigate the level of librarians' preparedness and perception towards adoption of emerging technologies for information service delivery in public university libraries in Nigeria. Questionnaire was used to collect data from 204 librarians from 20 public universities in Nigeria. The results show that the librarian's readiness to adopt emerging technologies into library services is on a high level. The majority of the librarians strongly agree and agree that adopting emerging technologies will give easy access to library resources and services from anywhere with an internet connection, will take the library services to the next level, adopting emerging technologies like robotics will lead to loss of job, university management do not support the adoption because they feel finance will be involved, and one should be cautioned in replacing important people's task with technologies because new technologies are to a large extent not dependable or reliable. The study also revealed that more than half of the university libraries have modern computers but does not have stable Internet connectivity, stable power supply in the library, and lack skilled ICT librarians. The findings can guide Nigerian libraries in strategic planning for the integration of emerging technologies to deliver library services.

Keywords: Emerging technologies, librarians, information service delivery, universities, Nigeria

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Introduction

Recently, emerging technologies such as blockchain, cloud computing and Internet of Things (IoT), and a host of others have increasingly been adopted by various organizations to manage information resources while other organizations are slow to adopt them. The influx of technology-based support services has improved service delivery in a faster and more accurate way in libraries, which gives credence to the usefulness of proposed emerging technologies for libraries (Omosor, 2014). Technologies like digital storytelling, (Princh Blogspot, 2020), library bookmark application, big data, and Internet of Things (IoT) (Kaladhar & Rao, 2018) have been introduced into libraries recently. Other newly introduced technologies in libraries include augmented reality (AR), virtual reality (VR) (Pope, 2018); QR (quick response) barcode technology, gamification, cloud computing, enabled integrated library management system which also houses OPAC, social media applications and artificial intelligence (AI), robotics (Odeyemi, 2019), ambient intelligence and data mining have currently been introduced into university libraries making the libraries smarter, improving work capabilities of staff, satisfying customer needs, and bridging the information gap, a tremendous positive impact as reported (Gul & Bano, 2019). Artificial intelligence has been regarded as the fourth industrial revolution (Park, 2019). AI are machines that can reason, make decisions, learn and interact like humans (CILIP, 2021). According to Holmes, et al. (2019), AI can be regarded as computer programmes that carry out tasks that require intelligence when done by humans. The study by Hassa (2020) identified smart library, cloud computing, institutional repositories, RFID technologies, QR code, library automation, robotics, ML algorithms, OPAC, library automation SOUL software Virtual Reference Services (VRS) and semantics technologies as emerging technologies utilized in libraries operated for academic sake across the globe.

Technology often is constantly linked to getting concrete outcomes, eliminating some challenges, doing some operations using amazing skills (Lubanga & Mumba, 2021). Nevertheless, it becomes the duty of academic librarians to identify and understand these technologies to match their libraries with the expectation of their users, thereby developing required technological skills. Innovative technologies such as blockchain, cloud computing and IoT can be some of the ways to deal with the challenges of managing and delivery information resources and services within university libraries as

they will ensure that library information resources can be stored, managed properly and accessible anywhere. While technology trends are rising exponentially, it is obvious that librarians may not be able to incorporate every single trend in their libraries. Therefore, they must choose the technology in such a way that will help them in a long run keeping in mind the information priorities of their users. However, the academic library should be the primary centre where these technologies should be experienced practically or in the form of a document, to remain at the forefront of technology in a higher learning institution.

In the recent years, the latest technologies have been introduced into library systems the advancement in technology has provided numerous library solutions. Knowledge of these emerging technologies is more necessary for library professionals in order to introduce and accept the most recent trends in libraries. University libraries are expected to position themselves to take this advantage by implementing innovative technologies to manage and deliver information services. These technologies can be leveraged to give end-users the most recent and up-to-date information. Studies on emerging technology use in libraries especially university libraries in Nigeria are limited, with most of them largely reviews, opinionated papers, focused on only one or two (Emiri, 2019) Oluwole & Adeyinka, 2020) or non-empirical studies. Although modern technologies offer a great deal of opportunities for libraries, but the level of adoption of these technologies is low in university libraries in Nigeria. Therefore, this study will bring to light the level of librarians' preparedness to adopt these emerging technologies to deliver library services in university libraries in Nigeria.

Statement of the problem

Recently, modern technologies such as blockchain, cloud computing and Internet of Things (IoT), and a host of others have increasingly been adopted by various organizations to manage information resources while other organizations are slow to adopt them. University libraries are expected to position themselves to take this advantage by implementing innovative technologies to manage and deliver information services. These technologies can be leveraged to give end-users the most recent and up-to-date information. Studies on emerging technology use in libraries especially university libraries in Nigeria are limited, with most of them

largely reviews, opinionated papers, focused on only one or two (Emiri, 2019; Oluwole & Adeyinka, 2020) or non-empirical studies. Some of the available one includes Omosor (2014) who only reported generally on new technology with no specifics. Chukwueke and Onuoha (2019) paper also only reviewed emerging technologies and it wasn't empirical. Amogu and Okezie (2019) recently advocated for the adoption of emerging technologies, however, it is not clear if any of such plea has been considered.

Although modern technologies offer a great deal of opportunities for libraries, but the level of adoption of these technologies is low in university libraries in Nigeria. It also appears that, only little academic research has been conducted on the application of modern technologies with practically nothing conducted on the level of adoption of these emerging technologies with the aim of improving understanding of these expanding technologies by the library and information sciences profession. Therefore, to fill the gap, this study will be the first empirical study in Nigeria to report on the level of librarians' preparedness and adoption of emerging technologies in university libraries in Nigeria.

Research questions

1. What is the level of librarian's readiness to in-corporate emerging technologies into library service delivery?
2. What are the librarians' perceptions towards the adoption of emerging technologies for service delivery in the university libraries in Nigeria?
3. What is the level of availability of infrastructure to use emerging technologies in the university libraries?
4. What are the perceived challenges in adopting emerging technologies in the university libraries in Nigeria?

Objectives(s) of the study

1. To find out librarian's readiness to in-corporate emerging technologies into library service delivery.
2. To examine the librarians' perception towards adoption of emerging technologies for service delivery in university libraries of Nigeria
3. To ascertain if these emerging technologies have been adopted for service delivery in the university libraries in Nigeria.
4. To identify perceived challenges in adopting the emerging technologies in the university libraries in Nigeria.

Literature review

Adoption of emerging technologies in university libraries.

Emerging technologies provide librarians with a unique opportunity to substantially enhance user centered services and to facilitate and promote collaboration between libraries and their users (Saibakumo, 2021). Emerging technologies provide opportunities for library professionals in identifying, collecting, organizing, customizing and delivering information products and services in a range of formats and varieties to the user community both on demand and anticipation at physical and virtual environments in real time (Owate & Iroeze, 2023). Chingath (2020) investigated the integration and seamless functioning of technology in libraries and reported major technology developments such as Robotics, Drones, Blockchain, Big Data and Mobile Apps as well as their use and application in libraries. Barathi, Loganathan and Rajan (2017) explained in their paper how technology advancements have enhanced information management and library services. By offering an overview of the difficulties connected to integrating and using emerging technologies and innovative practices inside libraries, this study will fill a gap in the digital library project management literature. Web-based services, implementation of new technologies have greatly pampered the users. Technology that is still developing helps to identify, evaluate, and implement the use of existing and new technology in the management and services of libraries. Challenges arising from library services and management, as well as technological improvements, must be updated on a regular basis to keep up with the fast-paced world. The study by Chingath (2020) revealed that all of the technologies in libraries have viability, such as the development of an encrypted database, speaking robots and flying books, etc. The introduction of these technologies will contribute to a larger improvement in library services. The study by Saibakumo (2021) reported the degree to which new technologies are understood, adopted, favoured and ready to be included in academic library operations in Nigeria. Owate and Iroeze (2023) studied the usage of emerging technologies in academic libraries for effective service delivery in public university institution in Rivers State, Nigeria and found that many technologies have emerged for the consumption of library Information Professionals but are not yet fully provided for use in some public libraries operated for academic sake and when some are even provided, the extent of utilization is still low.

According to Saibakumo (2021) the long-term survival and support of academic libraries in the technological society depends on the expansion and upgrading of information services. In academic libraries, technological developments have pushed libraries to take all-embracing, user-friendly, and technology-driven methods to delivery. Chingath (2020) studied the integration and seamless functioning of emerging technologies in libraries. The author also covered major technology developments such as Robotics, Drones, Blockchain, Big Data and Mobile Apps, internet of things (ToTs) as well as their use and application in libraries. The fields and services of the library for which the technology may apply were also reported in the study. According to Funmilayo and Ayo (2020) the emerging technologies in library and IT services have led to the occurrence of several changes, as well as social expectations of librarians and information professionals. Current emerging technologies are helping libraries and library professionals improve their quality of services and products (Funmilayo & Ayo, 2020). Iwhiwhu and Okorodudu (2012) reports that libraries may meet users' information needs by acquiring, organizing, managing and making relevant information resources delivered through modern technologies. These innovative technologies can bring about changes in the administration, management, preservation and access to information. According to Nongo (2020), medical and academic libraries over the world are increasingly deploying modern technologies in their activities and operations, and they have come to rely on a growing array of these technologies to create, store and manage their records. Mwaniki (2017) studied the future of academic libraries in terms of emerging user requirements, new skills for staff and services provided. The literature of the study demonstrates the development of new technologies and their effects on professionals, library services and new user requirements. Innovative technologies adoption in Nigerian libraries has been challenging (Newa & Mwantimwa, 2019). It has been noted that most libraries do not have adequate ICTs infrastructure to exploit potentials of appropriate technologies. Challenges such as; inadequate ICT infrastructures, unreliable power supply, network problem and collapse of software system which facing libraries in using ICTs raise the questions on how they manage electronic resources in the libraries (Ambira, 2016).

In this wireless and interconnected era, the most practical way to accomplish new aims and targets is by adopting advanced innovative technologies within

the day-to-day library operations (Chukwueke & Onuoha, 2019). Libraries and librarians are trying everything possible to catch up with the trend in the digital world. The present-day information environment is highly ICT-driven. That is, there is high level of dependence on new technological innovations to offer dynamic and cutting-edge information services that meet the changing needs of the users. For libraries to seamlessly provide effective information services that meet up with the current challenges, there is need for the adoption and integration of innovative technologies such as artificial intelligence, Robotics, Drones, Blockchain, Big Data and Mobile Apps, internet of things (ToTs) etc. For example, the introduction of artificial intelligence to university libraries in Nigeria was first witnessed by the University of Lagos in June 2020 through a donation from Platform Capital. The robots (Roboscholar), which are "cloud-based intelligent humanoid robots have the following features: face recognition, surveillance technology, Open API, data management, advert & promotion, book shelf management, research, customizable, and entry validation" (University of Lagos, 2020).

Yusuf et al. (2022) examined the adoption of artificial intelligence for effective library services in Nigerian academic libraries, by conceptualizing and tracking the genesis of AI. The study affirmed the benefits of utilizing AI in library functions. Such benefits include user friendliness, unlimited functions and capabilities, ability to perform complex tasks et cetera. It also identified the problems library management encounter in the process of utilizing AI namely: inadequate funds, technological barriers, job loss and so on. In conclusion, the authors noted that the utilization of artificial intelligence in library and information centres is creating new standard for effective and efficient service provision in the library.

The adoption of Information and Communication Technology (ICT) has revolutionized the way academic libraries operate (Bosco, 2025). To enables academic libraries to play their vital role, studies have identified a number of challenges primarily revolving around inadequate funding, poor infrastructural facilities and equipment like erratic power supply and low bandwidth, lack of technical manpower, and technological obsolescence. There is also the challenge of institutional and policy issues where management lack of effective policy for ICT and the strategies for implementation of such policies which results in many libraries operating without strategic, long-term ICT policies, (Ojohwoh, 2016). While some of these challenges could be local others are multidimensional like Financial

Constraints, High Costs of procuring hardware, licensing of digital databases, maintenance and required equipment for effective provisions of services. At the level of management, there is personnel inhibition coupled with critical shortage of librarians with the specialized technical skills needed to manage digital repositories, troubleshoot networks, or instruct users effectively (Agwuna, Ibeh, Mukokebe and Anyaegbunam, 2024). Managerial impediment has been identified as one of the major challenges to ICT adoption and effectiveness in libraries in Nigeria (Usman, 2024) such that integration of ICT is faced with a lot of constraints especially in maintenance where support from management and persisting infrastructural deficiencies, especially in power supply, internet connectivity and outdated equipment, significantly hamper ICT integration efforts (Usman, 2024, Nonum and Nonum, 2023).

Methodology

The study adopted a descriptive survey design and the population covered all librarians in 20 universities (Federal and State) in Nigeria.

Questionnaire was designed to collect data from the librarians in the 20 university libraries in Nigeria. The copies of the questionnaire were distributed to librarians in the 20 universities with the help of research assistants. Convenient sampling technique was used to select the respondents in the 20 universities in Nigeria. Considering the present security situation of Nigeria, the data collection was a big challenge as the researcher and the research assistants visited universities to collect data. Data collection started January 2026 and ended April 2026. In total, 204 librarians from 20 universities responded to the study. The quantitative data was analyzed using simple percentages while the qualitative data collected was analyzed using thematic method. The responses were grouped according to similar topics and presented in the discussion section together.

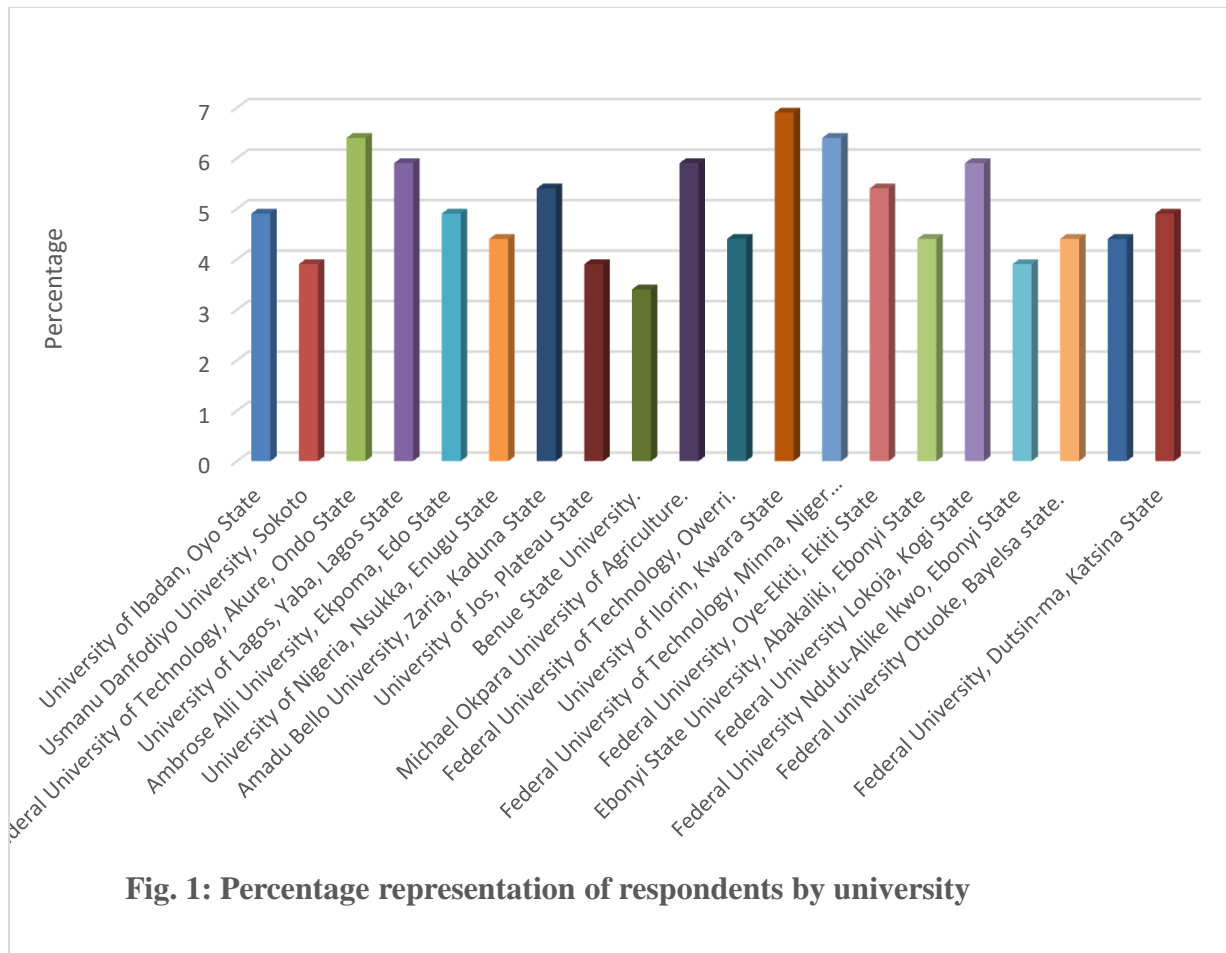
Results

Data was collected from 20 public (federal and state) universities in Nigeria. The list is presented in Table 1 below.

Section A: Biographical Data

Table 1: Number of respondents by universities and percentage representation in the study

S/N	Universities	Status	No of respondents	%
1	University of Ibadan, Oyo State	Federal	10	4.9
2	Usmanu Danfodiyo University, Sokoto	Federal	8	3.9
3	Federal University of Technology, Akure, Ondo State	Federal	13	6.4
4	University of Lagos, Yaba, Lagos State	Federal	12	5.9
5	Ambrose Alli University, Ekpoma, Edo State	State	10	4.9
6	University of Nigeria, Nsukka, Enugu State	Federal	9	4.4
7	Amadu Bello University, Zaria, Kaduna State	Federal	11	5.4
8	University of Jos, Plateau State	Federal	8	3.9
9	Benue State University.	State	7	3.4
10	Michael Okpara University of Agriculture.	Federal	12	5.9
11	Federal University of Technology, Owerri.	Federal	9	4.4
12	University of Ilorin, Kwara State	Federal	14	6.9
13	Federal University of Technology, Minna, Niger State	Federal	13	6.4
14	Federal University, Oye-Ekiti, Ekiti State	Federal	11	5.4
15	Ebonyi State University, Abakaliki, Ebonyi State	State	9	4.4
16	Federal University Lokoja, Kogi State	Federal	12	5.9
17	Federal University Ndufu-Alike Ikwo, Ebonyi State	Federal	8	3.9
18	Federal university Otuoke, Bayelsa state.	Federal	9	4.4
19	Nigeria Maritime University, Okerenkoko, Delta State.	Federal	9	4.4
20	Federal University, Dutsin-ma, Katsina State	Federal	10	4.9
	Total		204	100.0



Staff position/designation

The respondents were also asked to provide information about their current designations. Results in Table 2 shows that the highest number (69: 33.8% percent) that responded to the survey indicated as Librarian I, followed by Librarian II with 52 (25.5 percent) respondents and Assistant Librarians with 47 (23.0 percent) respondents.

Table 2: Showing staff position/designation

Staff designation	No. of respondents	Percentage
University Librarian	6	2.9
Deputy University Librarian	5	2.5
Principal Librarian	25	12.3
Librarian I	69	33.8
Librarian II	52	25.5
Assistant Librarian	47	23.0
Total	204	100%

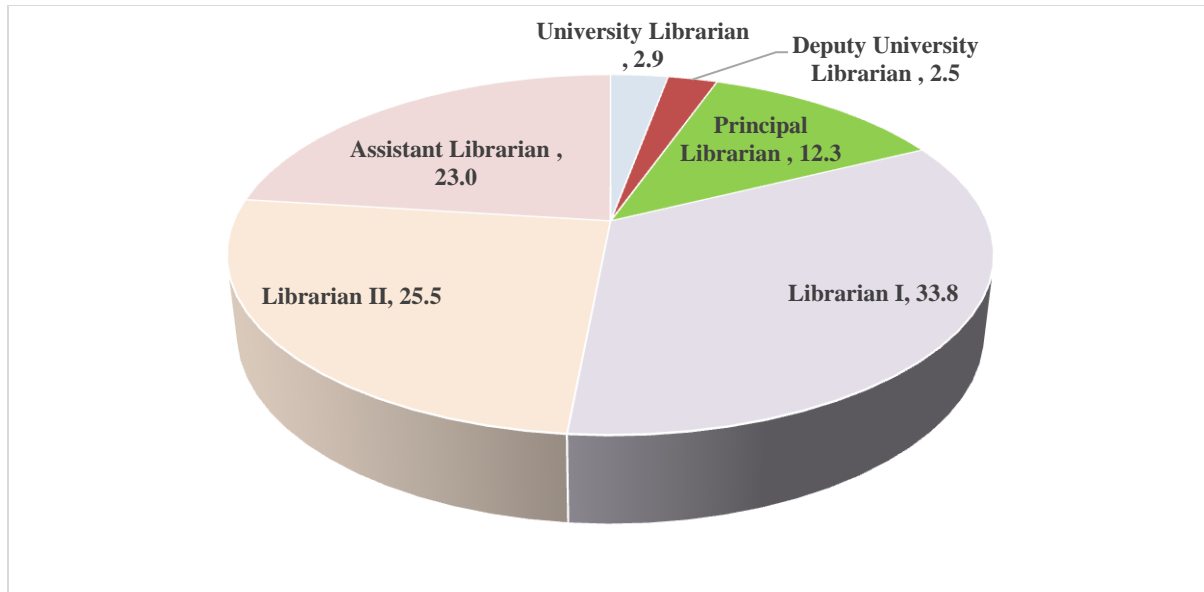


Fig. 2: Staff position/designation represented in the study

Gender distribution of respondents.

Out of the 204 respondents, 125 (61.8 percent) indicated as females, while 78 (38.2 percent) indicated as males (Table 3).

Table 3: Showing gender distribution of respondents

Gender	No of respondents	Percentage
Males	126	61.8%
Females	78	38.2%
Total	204	100%

Section B:

The level of librarian’s readiness to incorporate emerging technologies into library service delivery.

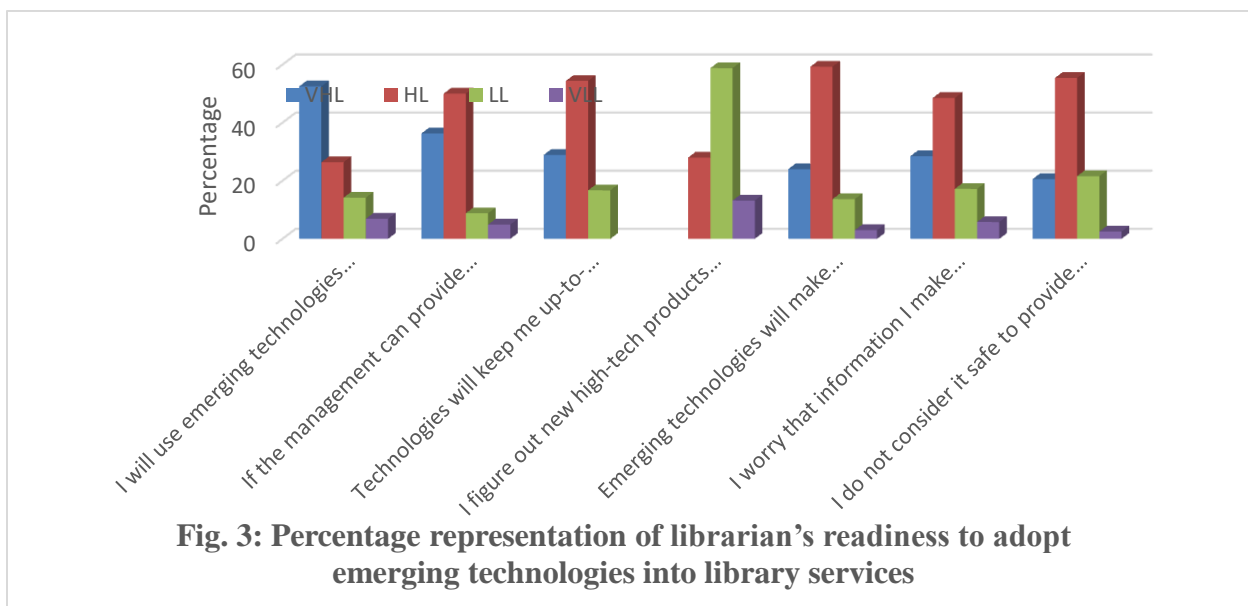
Respondents were asked to indicate their level of readiness to adopt emerging technologies from a scale of Very high level (VHL), high level (HL), low level (LL), and very low level (VLL) in Table 4. Results in Table 4 shows that more than half (107: 52.5%) of the respondents revealed that they are ready with a very high level to use emerging technologies because it will contribute to quality service delivery. Half (102: 50.0%) of the respondents indicated they are ready with a high level to use emerging technologies if the management can provide training. More than half (111: 54.4%) of the respondents also indicated that they are ready with high level to use emerging

technologies because it will keep them up-to-date of new trends in their career irrespective of location and time. On the other hand, more than half (120: 58.8%) of the respondents indicated that to a low level they can figure out new high-tech products and services without help from others. More than half (121: 59.3%) of the respondents indicated that they are ready with a high level to use emerging technologies because it will make them more efficient and productive in their personal life and career. Almost half (99: 48.5%) of the respondents to a high level worry that information they make available over the Internet could be misused or used against them by others. More than half (113: 55.4%) of the respondents to a high level do not consider it safe to provide personal information over Internet platforms. The results show that the librarian’s

readiness to adopt emerging technologies into library services is on a high level.

Table 4 showing level of the librarian’s readiness to adopt emerging technologies into library services

S/N	ITEMS	VHL	HL	LL	VLL
1	I will use emerging technologies because it will contribute to quality service delivery.	107 (52.5%)	54 (26.4%)	29 (14.2%)	14 (6.9%)
2	If the management can provide training, I will be ready to use emerging technologies.	74 (36.3%)	102 (50.0%)	18 (8.8%)	10 (4.9%)
3	Technologies will keep me up-to-date of new trends in my career irrespective of location and time	59 (28.9%)	111 (54.4%)	34 (16.7%)	-
4	I figure out new high-tech products and services without help from others.	-	57 (28.0%)	120 (58.8%)	27 (13.2%)
5	Emerging technologies will make me more efficient and productive in my personal life and career, so I am ready.	49 (24.0%)	121 (59.3%)	28 (13.7%)	6 (3.0%)
6	I worry that information I make available over the Internet could be misused or used against me by others	58 (28.5%)	99 (48.5%)	35 (17.2%)	12 (5.8%)
7.	I do not consider it safe to provide personal information over Internet platforms.	42 (20.6%)	113 (55.4%)	44 (21.6%)	5 (2.5%)



Perception of Librarians towards the adoption of emerging technologies for service delivery in university libraries in Nigeria.

Results in Table 4 reveal that the majority (170: 83.3%) strongly agree and agree that using emerging technologies will give easy access to library resources and services from anywhere with an internet connection. The majorities (182: 89.2%) of the respondents strongly agree and agree that adopting emerging technologies will take the library

services to the next level. The majorities (177: 86.7%) of the respondents strongly agree and agree that absence of facilities will not let them adopt some of the emerging technologies. The majority (164: 80.4%) of the respondents strongly agrees and agrees that adopting some of the emerging technologies like robotics will lead to loss of job. The

majorities (190: 93.1%) of the respondents strongly agree and agree that their university management do not support the adoption because they feel finance will be involved. The majorities (190: 93.1%) of the respondents strongly agree and agree that before they can adopt these technologies, librarians need to upgrade their skills. The majorities (178: 87.2%) of the respondents strongly agree and agree

that management policies don't permit quick adoption of these technologies. Out of the 204 respondents, 131 (64.2%) strongly agree and agree that one should be cautioned in replacing important people's task with technologies because new technologies are to a large extent not dependable or reliable.

Table 5: Perception of librarians towards adoption of emerging technologies in Nigeria

Statements	SA	A	D	SD
It will give easy access to library resources and services from anywhere with an internet connection	112 (54.9%)	58 (28.4%)	22 (10.8%)	12 (5.9%)
Adopting emerging technologies will take the library services to the next level	148 (72.5%)	34 (16.7%)	12 (5.9%)	10 (4.9%)
Absence of facilities will not let us adopt some of the emerging technologies.	90 (44.1%)	87 (42.6%)	23 (11.3%)	4 (2.0%)
Adopting some of the emerging technologies like robotics will lead to loss of job	63 (30.9%)	101 (49.5%)	31 (15.2%)	9 (4.4%)
University Management do not support the adoption because they feel finance will be involved.	122 (59.8%)	68 (33.3%)	14 (6.9%)	-
Before we can adopt these technologies, librarians need to upgrade their skills.	140 (68.6%)	50 (24.6%)	6 (2.9%)	8 (3.9%)
Management policies don't permit quick adoption of these technologies.	76 (37.2%)	102 (50.0%)	24 (11.8%)	2 (1.0%)
One should be cautioned in replacing important people's task with technologies because new technologies are to a large extent not dependable or reliable.	43 (21.1%)	88 (43.1%)	53 (26.0%)	20 (9.8%)

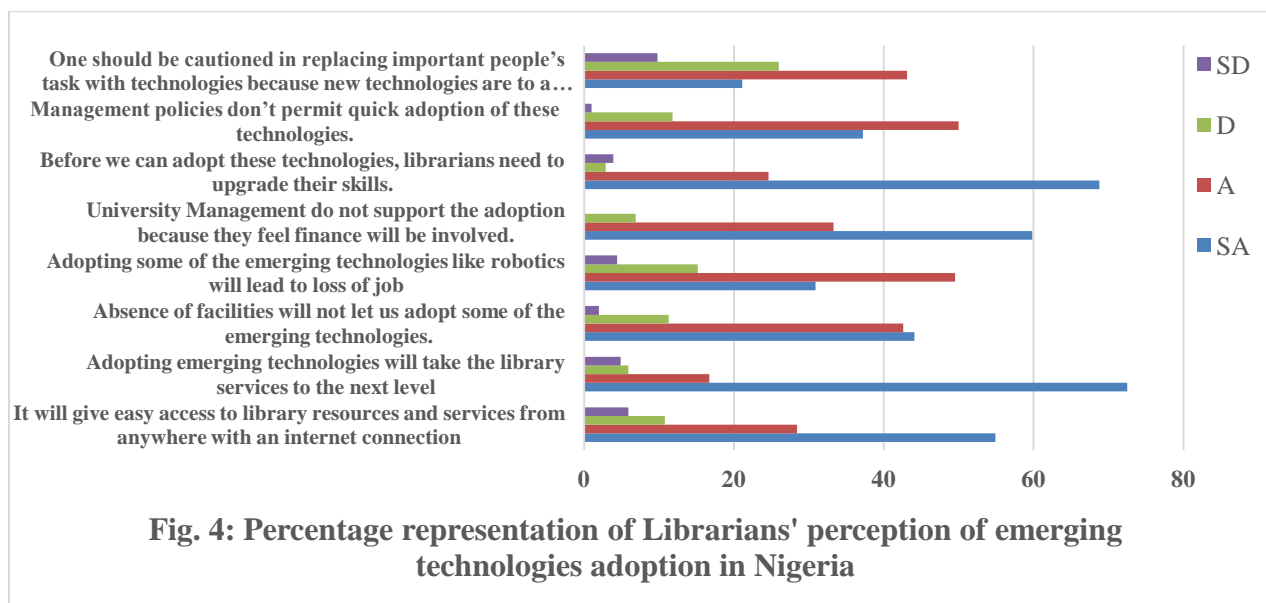


Fig. 4: Percentage representation of Librarians' perception of emerging technologies adoption in Nigeria

Level of availability of infrastructure to use emerging technologies.

Results in Table 5 reveal that modern computers are available (137: 67.2%) in most of the university libraries. The majority (150: 73.5%) of the respondents indicated that stable Internet connectivity is not available in their university libraries. More than half (115: 56.4%) of the respondents indicated that stable power supply is not available in the library. More than half (115: 56.4%) of the respondents indicated that skilled ICT librarians are not available in their university libraries. The results show that more than half of the university libraries have modern computers but does not have stable Internet connectivity, stable power supply in the library, and lack skilled ICT librarians.

Table 6: The level of availability of infrastructure to use emerging technologies

Infrastructural needs to use emerging technologies	Available	Not available
Modern Computers	137 (67.2%)	67(32.8%)
Stable Internet connectivity	54(26.5%)	150(73.5%)
Stable power supply in the library	89(43.6%)	115(56.4%)
Skilled ICT librarians	97(47.5%)	107(52.5%)

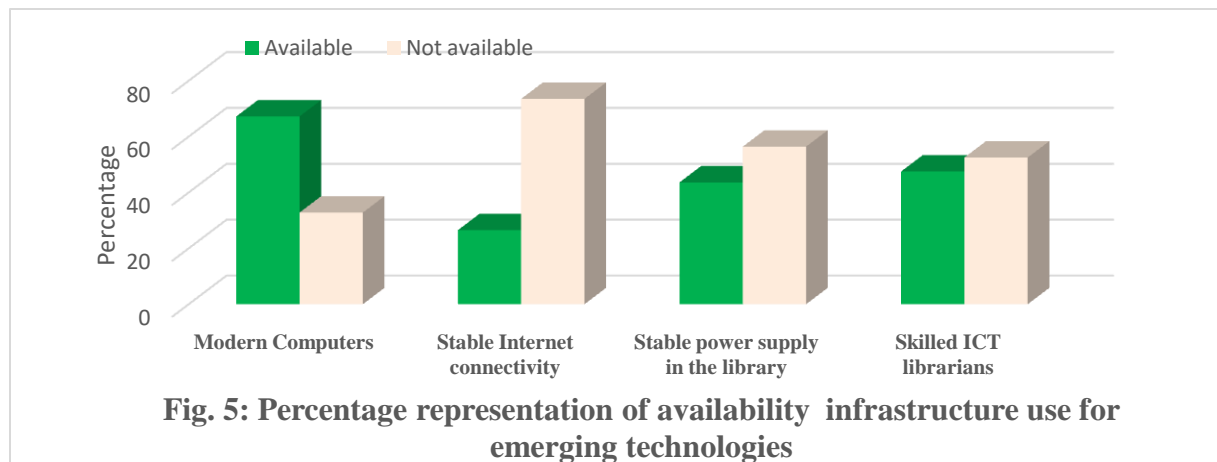


Fig. 5: Percentage representation of availability infrastructure use for emerging technologies

Perceived challenges that can hinder the adoption of emerging technologies in the university library.

Respondents were asked to mention some perceived challenges that can hinder the adoption of emerging technologies in the university library. The responses were sorted according to similar topics. Expensive nature of the facilities was the most mentioned by 179 (87.7%) respondents, followed by unreliable Internet connectivity with 163 (79.9%) respondents, inadequate ICT skilled librarians with 161 (78.9%) respondents, resistance to change among librarians with 148 (72.5%) respondents, technophobia with (122: 59.8%), concern about data security with 109 (53.4%).

Table 7 Perceived challenges that can hinder the adoption of emerging technologies.

Topics	No of responses	Rank order
Expensive nature of the facilities	179 (87.7%)	1 st
Unreliable Internet connectivity	163 (79.9%)	2 nd
Inadequate ICT skilled librarians	161 (78.9%)	3 rd
Resistance to change among librarians	148 (72.5%)	4 th
Technophobia	122 (59.8%)	5 th
Concern about data security	109 (53.4%)	6 th
Electric power inadequacy	95 (46.6%)	7 th
Low funding of academic libraries	85 (41.7%)	8 th

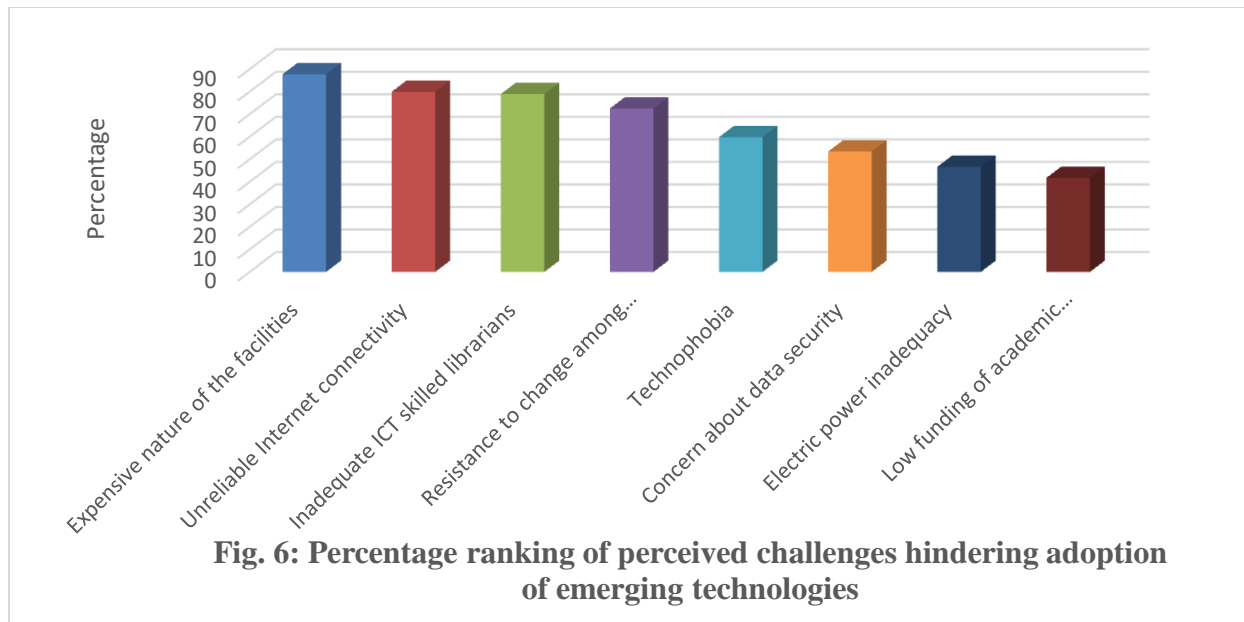


Fig. 6: Percentage ranking of perceived challenges hindering adoption of emerging technologies

Discussion of findings

The level of librarian’s readiness to incorporate emerging technologies into library service delivery. The results show that the librarian’s readiness to adopt emerging technologies into library services is on a high level. This finding agrees with the findings of Subaveerapandiyan, et al (2025) who in their study examined the readiness of Nigerian libraries to integrate the Metaverse given the dynamic digital landscape and technological advancements. The results show a significant awareness of the metaverse among the Nigerian academic library professionals, with a high perceived priority for metaverse literacy. Similarly, Cooney (2020) investigated the level of awareness of emerging technologies among librarians in Nigerian universities and found that the librarians are aware of Cybrary, library websites, RFID, institutional repositories, social media, Internet of Things, use of Library Guide application, Integrated library management system and WebOPAC for effective service delivery and their relevance to university libraries. Saibakumo (2021) also found in his study that there was a strong level of awareness among Nigerian librarians towards many developing technologies (such as RFID, institutional repositories, Cybrary, library websites, social media, Internet of Things, use of Library Guide application, Integrated library management system and WebOPAC for effective service delivery) and their relevance to university libraries. Technology today plays a major role in every aspect of life. It has revolutionized the world by its massive impact on individuals, organizations, governments bodies, etc.

libraries, similarly, have transfigured themselves from time to time in providing the best possible service/products to their users.

Perception of Librarians towards the adoption of emerging technologies for service delivery

The study revealed that the majority of the librarians strongly agree and agree that adopting emerging technologies will give easy access to library resources and services from anywhere with an internet connection, will take the library services to the next level, absence of facilities will not let them adopt some of the emerging technologies, adopting emerging technologies like robotics will lead to loss of job, university management do not support the adoption because they feel finance will be involved, librarians need to upgrade their skills, management policies don’t permit quick adoption of these technologies, and one should be cautioned in replacing important people’s task with technologies because new technologies are to a large extent not dependable or reliable. This finding corroborates with the findings of Chingath (2020) who reported that the librarians feel the adoption of emerging technologies like Blockchain, Robotics, Drones, Mobile Apps and Big data and others would help to improve the library services to a greater extent.

Level of availability of infrastructure to use emerging technologies.

The results show that more than half of the university libraries have modern computers but does

not have stable Internet connectivity, stable power supply in the library, and lacked skilled ICT librarians. The findings show absence of stable Internet connectivity, power supply and lacked skilled ICT librarians in majority of the university libraries in Nigeria. Availability of technologies gives libraries the ability to offer improved customer-driven services to their users with skilled ICT librarians. Funmilayo and Ayo (2020) stressed that, librarians on practicing the use of these technologies must upgrade themselves with the latest online technologies utilized worldwide to be able to furnish library services effectively. This is necessary for the fact that any librarian who is unaware of emerging technology will be redundant and left behind. According to Bhargava and Gupta (2021), with the readiness to adopting emerging technologies, librarians need to be abreast with needed technological skills by training and re-training.

Perceived challenges that can hinder the adoption of emerging technologies.

When asked to mention the perceived challenges that can hinder the adoption of emerging technologies in the universality libraries. Expensive nature of the facilities was the most mentioned by respondents, followed by unreliable Internet connectivity, Inadequate ICT skilled librarians, resistance to change among librarians, technophobia and concern about data security. The findings agree with the findings of Bhargava and Gupta (2021) whose study revealed the challenges faced by Information Professionals in the practice of library services to include; lack of necessary skills and knowledge to effectively utilize emerging technologies, cyber security threats on the protection of sensitive information and library resources, lack of equitable access and usability of emerging technologies for all users and poor infrastructure/instructional facilities. There seems to be lack of necessary skills and knowledge to effectively utilize emerging technologies, cyber security threats on the protection of sensitive information and library resources. The development of new technology and adoption of emerging technologies requires libraries to develop new ways of exposing professionals to new technological abilities.

Conclusion

The findings show that the librarian's readiness to adopt emerging technologies into library services is on a high level. Since the trending technological advancement has brought a lot of changes to library and information services as well as societal

expectations from librarians/information experts, librarians' are expected to also change with the system in order to render user centric service by adapting to the trending web technologies being used globally to provide library services to people. This can only be possible with librarians ready to adopt and use the emerging technologies with modern facilities available in the university libraries with stable internet connectivity. The readiness to use these salient technologies will give university libraries salient opportunities to leverage on the utilization of these emerging technologies to seemingly develop new approaches and processes and services to meet the ever-growing demand of its committed users. Any librarian who is not ready or fail to keep abreast of the trending issues and adopt the latest technologies in rendering services to users will be left behind and redundant in the field of information science.

Recommendations.

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

1. Universities and their libraries need to have enough information infrastructure to provide access to information through emerging technologies.
2. Policies to guide the adoption and use of emerging technologies need to be formulated in the universities.
3. The universities should encourage training and re-training of librarians to effectively use emerging technologies.

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