

ADOPTION OF DIGITAL TECHNOLOGIES AND LIBRARIANS' SERVICE DELIVERY IN FEDERAL UNIVERSITY LIBRARIES IN SOUTH-EAST, NIGERIA

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ABSTRACT

The study examined adoption of digital technologies and librarian's service delivery in federal university libraries in South-East, Nigeria. Four objectives, and four research guided the study. The correlational survey research design was adopted for the study. A total of one hundred and fifty two (152) librarians from six federal university libraries, in South-East, Nigeria were used for the study population. Census sampling technique was adopted to select the entire population. Questionnaire was used as the instrument of data collection, titled: Adoption of Digital Technologies and Librarians Service Delivery (ADTLSD). Data were collected and analyzed using Pearson Product Moment Correlation (PPMC). Out of 152 copies of instrument distributed, 143 were found valid for analysis. The findings of the study revealed that cloud computing ($r=.604$; $p<0.05$), has significant relationship with librarian's service delivery of libraries in federal university libraries in South-East, Nigeria. It was found that radio identification frequency (RFID) ($r=.836$; $p<0.05$), virtual reference service (VRS) ($r=.578$; $p<0.05$), electronic resource management ($r=.948$; $p<0.05$), respectively, also have significant relationship with librarian's service delivery of libraries in federal university in South-East, Nigeria. The study concludes that the advances in technology have greatly affected libraries, especially in transforming the ways federal university libraries operate, provide services, and interact with users. The study recommends, among others, that these university libraries should explore and invest in the integration of cloud computing, considering their advantages in facilitating remote access and increasing user satisfaction, basically for service delivery.

Keywords: Digital Technologies, Librarians, Library Services, Service Delivery

INTRODUCTION

Development of digital technology has influenced various aspects of the society in ways through which information is delivered. In recent years, digital technologies have transformed various aspects of the society, influencing how information and its resources are accessed, stored, shared and utilized. These changes have dramatically transformed knowledge institutions and information service delivery have recorded greater speed and coverage. Anuradha (2017) acknowledged that the adoption of digital technologies has facilitated effective management of services and ensured the standardization of services dispensed in libraries. Digital technologies are aggregate of advanced development in information and communication technologies (ICTs) that are applied and used in the entire process of managing data, information sharing, knowledge generation, acquisition, organization, preservation, and dissemination. This implies that, all technological innovations that are involved in creating, processing and enhancing communication of information are digital technologies. Although, the adoption, and integration of these technologies may appear expensive, but along the line the cost effectiveness and corresponding usefulness in terms of streamlining processes, increasing efficiency, improving productivity and the ease of use for competitive advantage will be observed.

Dipti (2023) assert that this shift encompasses a broad spectrum, ranging from the digitization of archival materials to the implementation of advanced technologies in library operations, as it increase the availability of library services for citizens and organizations; bringing and regulating

framework in line with the goals of libraries and the needs of developing the system and management of libraries, among others. Devaki and Delvam (2022) explained that the university library is a library that has been established, supported, and controlled by a university to satisfy the information needs of its faculty members and students, as well as to support initiatives for instructional research and services. Notably, the university library serves all its requirement, including teaching, research, and the creation of new knowledge and the transfer of knowledge and culture from one generation to the next. As such, the effectiveness of any university depends largely upon the state of health and excellence of its library, which is its lifeblood. The demand of the 21st century and the expectations thereof presupposes that the type of services to be rendered by academic libraries are gradually moving away from the traditional and routine activities of library services to a livelier dynamic and challenging services delivery system anchored on technology.

The university library landscape has been altered and reshaped by the information technology across the globe, where in the present, information in any format can be accessed anywhere and anytime on campus. Hence, the traditional method of gathering, storing, organizing, retrieval and dissemination of information is considered highly inadequate to cope with the avalanche of information available to library users from varied and diverse sources. These has necessitated alternative service delivery mechanism and has made information today in any format to be accessed anywhere and anytime on campus (Scott, 2014). As such, there is a clear paradigm shift from manual ways of carrying out information services powered by analog data to electronic ways of accessing and retrieving information powered by electronic gadgets, through information and communication technology. Libraries in the digital age are redecorated libraries with updated amenities, encourage collaboration, share and develop communities, take feedback from users, encourage mutual communication and publicize events, services and news with digital technologies. The adoption and integration of these technologies results in introduction of innovative library resources and user services particularly in university libraries. Digital technologies like cloud computing are one of the digital technologies used, basically due to its potential to assist in the process of information access, improve collaboration and reinvent traditional IT structures. Cloud computing denotes the applications and functions that operate on distributed networks which use virtual resources and are accessed through networking standards and internet protocols. The metaphor 'cloud' in this context signifies the guide networks of applications and hardware for availing services to clients by internet (Srivastava & Verma, 2015). Hence, cloud computing technologies permit sharing and use of services and resources using the web instead of having them on native servers or individual devices (Aher, et al, 2016). This has consequently compelled academic libraries to integrate cloud technologies and other digital technologies in offering information services to their users. Radio Resource Frequency Identification (RFID) is another digital technology that university libraries also employ and is increasingly used in libraries to maintain facilities in a changing environment. RFID system consists of three main factors; a bitsy radio transponder (label), a radio receiver and a transmitter (Yusuf, et al 2023). RFID is a form of technology which is used to identify physical objects like books, automatically, by using radio waves. Digital technologies by libraries promises a solution that could make it possible to inventory hundreds of thousands of items in their collections in days instead of months. In addition, it allows patrons to access store check-out and return library collection automatically at any time of the day. Technological developments have also affected not only the format and sources of the information libraries use to provide reference service, but also where we provide reference service. With the development of technology, especially internet technology, libraries have developed virtual (or digital) reference services (VRS) to provide efficient and effective reference services to patrons in and out of the library and even to users not in the library's usual service community. This service may extend when the library is closed and can help improve performance and service delivery. Additionally, technological advancements bring new changes and modifications to knowledge management in the form of electronic resources, digital repositories, digital databases, and digital preservation, among others. The impact of these new technologies is felt by libraries in every aspect.

This connotes the imminent transformation of university libraries which have been influenced by technological development and the new demands from library users, to accommodate the 21st century model of information needs, service delivery and continue to pursue modern technologies to meet user's needs (Stielow, 2014). Also, the library operations are drastically changing, and her services have continued to undergo a great change, which has created an active library services, backup and standby functions. For the university library to be where its users are, they must fully recognize the fact that most library services are now in cyberspace and are not affected by opening and closing hours. What this means is that the library user is a major stakeholder in library services and must be taken into consideration when making decisions on library services for library users. This new technological environment for libraries is highly dynamic. The new environment has given birth to digital technologies and this new scenario has become more convergence than before. Interestingly the University library renovations, additions, and infrastructural facilities are taking place to accommodate software installations, thus, adopting digital technologies is one of the keys to disseminate information efficiently and sustain service delivery. Arguably, the implementation of modern technologies into library processes has brought library and information user's services to a new level. The library digital model of today makes it possible to conduct a full-fledged dialogue with distant users and allow them to access library services at the same level as those readers who work with information directly in book collections (Ibrahim, 2015). This scenario occurs in almost all the federal university libraries in South East where infrastructures are put in place to address the needs of the users, bringing together technology, content, and services in the library environment and digital space that results in an environment different from that of a typical traditional library. It is against this background that this study attempt to investigate the adoption of digital technologies and librarians' service delivery in federal university libraries in South-East zone of Nigeria.

Problem Statement

Adoption of digital technologies in libraries implies the process of integrating various digital tools, resources and services in library operations to enhance access to information, improve services delivery, meet the changing needs of library users and adapt to the evolving information landscape in a digital age. Thus, the interface dialogue, structure and the nature of the functionality contribute to digital technologies effectiveness. The libraries are losing clientele; though they may visit the library to study, yet they are not utilizing library materials like they once completed decade prior. The researchers observed that library users in the study area seem to prefer going elsewhere for their information needs due to ineffective service delivery. In contemporary library environment, ensuring prompt and efficient delivering of library operational services relies on adoption of digital technologies. However, limited access to information resources, inefficient service delivery, reduced user engagement, inability to meet user expectation, and lack of technical support and shortage of skilled manpower to execute installation evolving technological and information needs are the observed problems resulting from not adopting digital technologies in library services. Also, there is decreased users' satisfaction, and inability to keep pace with technological advancements and diminished competitiveness in meeting modern information needs. This observed gap in literature and the declining interest in libraries and their services constitute the problem of this study. It is on this premises that the researcher investigates the adoption of digital technologies and librarians service delivery in federal university libraries in South-East, Nigeria

Aim and Objectives

The main purpose of the study was to investigate the adoption of digital technologies and librarians service delivery in federal universities libraries in South-East Zone of Nigeria. Specifically the study was designed to:

1. determine the relationship between Cloud computing and service delivery of librarians' in Federal University Libraries in South East, Nigeria.

2. ascertain the relationship between Radio Frequency Identification (RFID) and service delivery of librarians' in Federal University Libraries in South-East, Nigeria.
3. examine the relationship between Virtual Reference Service (VRS) and service delivery of librarians' in Federal University Libraries in South East, Nigeria.
4. establish the relationship between Electronic Resource Management and librarians' service delivery in Federal University Libraries in South East, Nigeria

Research Questions

To investigate the research problem, the following research questions were designed to collect relevant data:

1. What is the relationship between Cloud computing and librarians' service delivery of libraries in Federal University Libraries in South-East, Nigeria.?
2. What is the relationship between Radio Frequency Identification (RFID) and librarians' service delivery in Federal University Libraries in South-East, Nigeria.?
3. What is the relationship between Virtual Reference Service (VRS) and librarians' service delivery in Federal University Libraries in South-East, Nigeria.?
4. What is the relationship between Electronic Resources Management and librarians' service delivery in Federal University libraries in South-East, Nigeria.?

Review of Related Literature

Cloud Computing and Librarians' Service delivery

The presence of cloud computing first appeared in the third quarter of 2007 (Sun, et al, 2019), and the intensity of its use today is increasing. In addition, cloud computing is also known as the third revolutionary in the IT field after the invention of computers and the internet. The basic principle of cloud computing is to make a broad set of virtual servers available to a collection of resources and provide them to clients. Sahu (2015) affirmed that cloud computing is internet-based computing where virtual shared server provides software, infrastructure, platform devices and other resources and hosting to customers on a pay-as-you-use basis. Cloud computing uses the web (internet) and central remote servers to maintain data, software and application. In the same vein, cloud computing services are based on the facts that every single service session can be distinctively provided on the network once connection is established, thereby facilitating timely delivering of services, access to diverse resources, enhanced security measures, dedicated resources and greater customization. The commonly used cloud-based services include emails, social media, electronic databases, institutional repositories, and remote access, software and library management systems like Koha (Makori, 2016; Otieno, 2016). This means that library users can read books, conduct research regardless of their location. This offers libraries the prospect to lengthen their effect to users everywhere and all the time (Aharony, 2015). The cloud computing applicability to libraries serves as librarians' progressive response to a changing information environment and need to maintain their relevance in today's dynamic information driven society. In the meantime, libraries would optimize their services by deploying cloud computing through high computing power, location and device independency, high scalability, less maintenance, less indulgence in library activities, unlimited storage capacity, diverse support, faster deployment and development, greener library services, ubiquitous availability of library services, pay-per-use, reduced technology obsolescence and no capital investment.

Radio Frequency Identification (RFID) and Librarian's Service Delivery

The first RFID technology was developed by the Los Alamos scientific laboratories in 1979, since then the evolution of technology for RFID has grown from a simple technology to more advanced technology for the purpose of supply chain management on libraries. RFID is a radio wave-based method of item identification. The radio wave-based method is the key phrase of this statement. A tag that is a component of RFID technology and contains microchips stores data. The accession

number is often the key in libraries, with it, we can discover all the details about a book. The communication is obtained by the computer from the RFID reader, which in turn obtains it from the tags that store or carry the accession number. Shadid (2022), assert that the most common method of identification is to store a serial number that identifies a person or an object, along with maybe other information, on a microchip that is attached to an antenna (the chip and the antenna together are called and RFID transponder or an RFID tag). The reader converts radio waves from the RFID tag that are reflected into digital information that may be sent to computer to use. Thus, the RFID device must be scanned to retrieve the identifying information of the library materials being tagged using radio frequency or radio waves transmission such as: 2.45 GHz (Microwave Frequency), 125 KHz (Low Frequency), 13.5MHz (High Frequency) or 800-900 MHz (Ultra Frequency). Singh and Mahajan (2014) asserted that Radio Frequency Identification (RFID) is a technology that uses radio waves to systematically identify, track, sort or detect library buildings. It plays a vital role in the management of library collection and provides a platform to automate most of the duties performed by library staff. The adoption of RFID technology in libraries promises a solution that could make it possible to inventory of hundreds of thousands of library resources in days, instead of months. It allows users to borrow books and return them automatically at any time without assistance from library staff. Using the antenna to transmit integrated circuit data, the reader converts the radio waves that are reflected from the RFID tag into digital information. The data can now be received by computer that will analyze it (Ishola, 2023). Rajasekaran, et al (2022) explained that RFID based library management systems can be used in libraries for book identification, self-checkouts, anti-theft control and informing users about the status of the library. This adoption can result in significant labour, cost savings and enhancement of improved service delivery to library users

Virtual Reference Services and Librarian's Service Delivery

American Library Association's Reference & User Services Association (RUSA, 2004) as cited in Madu, et al, (2018) sees virtual reference as the reference service initiated electronically, often real time, where patrons employ computers or other internet technology to communicate with reference staff, without being physically present. Thus, such communication channels used frequently in virtual reference include chat, videoconferencing, and voice over IP, co-browsing, e-mail, and instant messaging. Nicol and Crook (2013) as cited in Mohammed et al (2015) identified two main factors that could give positive effects on virtual reference services. The two factors were the willingness of library users to use the service and the competencies of librarians to provide quality virtual reference services. They highlighted that the library user's preference and characteristics affect their use of the service in addition to the importance of support and training for librarians and staff, as well as their enthusiasm while working with virtual reference services. Virtual reference could be used when the concept being studied relates to any type of virtual services. The physical reference desk is no longer necessarily the focal point of interaction between libraries and their patrons. Instead, reference services are increasingly provided virtually. Virtual reference services occur when a question is received electronically and responded to electronically. These services among others include email, Ask a Librarian, online chat reference, videoconferencing, digital robots, and collaborative digital references. Hence, the main element of any VRS is answering of user's queries. Virtual reference is hence an advancement of the traditional reference services that is emerging as natural solution to meet the user's information needs in the changing environment. These services have become the backbone of many academic institutions, with reference to services. They are bridges between library resources and users, as they serve as a motivating factor to library users as they provide them with the opportunity to transmit, acquire or download, process and disseminate information on any subject of interest.

Electronic Resources Management and Librarian's Service Delivery

Electronic management or simply (ERM) refers broadly to an evolving array of problems, processes and practices associated with the management of electronic resources such as electronic journals,

etc. Electronic resources imply those materials that require computer access whether through a personal computer mainframe or handheld mobile devices (tablet, laptop, book kindle, etc., that they may either be accessed remotely, via the internet or locally. (Raju & Krishna, 2016). Consequently, some electronic resource management practices, according to Breeding (2017) include back-end management tools for library staff and front-end management delivering access to users. Alabi (2018) pointed out that library services are embedded in electronic resources management. The deployment of this technology in its full capacity is to enhance the provision of unlimited access to information, as such most library operations and services have been redefined and redesigned, and thus, libraries can now operate round the clock providing services. An ERM system is basically a tool for librarians, but its impact also relates to end users. The information gathered in the ERM system can serve as starting point for user's interaction with e-resources. ERM system is very important for library users as it help to overcome the problem of diminishing budgets, increasing information needs of the academicians and the researches, publishing of newly generated knowledge in various forms and formats (Kumar & Singh, 2015). Achieving service delivery success through ERM means librarians must change how they think about their users and how they view the work relationship. ERM therefore, can help librarians and libraries to enhance their functions pertaining to service delivery, bringing benefits of cost saving, timeliness, efficiency, flexible services and collaboration in the library.

METHODOLOGY

The study adopted correlational research design. The population of the study was one hundred and fifty-two (152) comprising librarians in Michael Okpara University of Agriculture, Umudike, Nnamdi Azikiwe University, Awka, Alex Ekwueme University, Ndufu Alike, King David Umahi University of Medical Sciences, Uburu, University of Nigeria, Nsukka, and Federal University of Technology, Owerri. Total enumeration sampling technique was adopted to select the respondents. Questionnaire was used to gather data. Out of 152 copies of instrument distributed, 143 were found valid for analysis. The study was analyzed using Pearson Product Moment Correlation (PPMC).

RESULTS/FINDINGS

Research Question One: What is the relationship between Cloud computing and librarian service delivery of libraries in Federal university libraries in South-East, Nigeria.

Table 1: Summary of Pearson Product Moment Correlation (PPMC) on the relationship between cloud computing and librarians service delivery of libraries

	Cloud Computing	Librarians service delivery of libraries
Pearson Correlation	1	.604
Cloud Computing Sig. (2-tailed)		.000
N	143	143
Librarians service delivery of libraries		
Pearson Correlation	.604	1
ofSig. (2-tailed)	.000	
N	143	143

Table 1 showed the Correlation coefficient between cloud computing and librarians service delivery of libraries

Table 1 reveals the summary of Pearson Product Moment Correlation (PPMC) on the relationship between cloud computing and librarians service delivery of libraries in Federal Universities in South-East, Nigeria as positive and high ($r=.604$). This indicate a strong positive and high correlation, suggesting that as the integration of cloud computing is continuously applied, librarians service delivery are enhanced by university libraries in federal universities in South-east, Nigeria.

Research Question Two: What is the relationship between Radio Frequency Identification (RFID) and librarian service delivery in Federal university libraries in South-East, Nigeria?

Table 2: Summary of Pearson Product Moment Correlation (PPMC) on the relationship between Radio frequency identification (RFID) and Librarian's service delivery of libraries

		Radio Identification (RFID)	Frequency Librarians service delivery of libraries
Radio Frequency Identification (RFID)	Pearson Correlation	1	.836
	Sig. (2-tailed)		.000
	N	143	143
Librarians service delivery of libraries	Pearson Correlation	.836	1
	Sig. (2-tailed)	.000	
	N	143	143

Table 2. showed the Correlation coefficient between Radio Frequency Identification (RFID) and Librarians service delivery of libraries of libraries

Table 2 reveals the summary of Pearson Product Moment Correlation (PPMC) on the relationship between Radio frequency Identification (RFID) and Librarians service delivery of libraries in Federal Universities in South-East, Nigeria as positive and strong ($r=.836$). This suggests a positive correlation, indicating that effectively integration of radio frequency identification (RFID) corresponds to enhancing of librarians' service delivery of libraries in federal universities in South-East, Nigeria

Research Question Three: What is the relationship between Virtual Reference Service (VRS) and librarian service delivery in Federal university libraries in South-East, Nigeria?

Table 3: Summary of Pearson Product Moment Correlation (PPMC) on the relationship between Virtual references services (VRS) and Librarians service delivery of libraries

		Virtual Services (VRS)	Reference Librarians service delivery of libraries
Virtual Reference Services (VRS)	Pearson Correlation	1	.578
	Sig. (2-tailed)		.000
	N	143	143
Librarians service delivery of libraries	Pearson Correlation	.578	1
	Sig. (2-tailed)	.000	
	N	143	143

Table 3 showed the Correlation coefficient between Virtual Reference Services (VRS) and Librarians service delivery of libraries.

Table 3 reveals the summary of Pearson Product Moment Correlation (PPMC) on the relationship between Virtual Reference Services (VRS) and Librarians service delivery of libraries in Federal Universities in South-East, Nigeria as positive and strong ($r=.578$). This suggests a positive and moderate correlation between virtual reference services (VRS) and librarian's service delivery in the context of university libraries in federal universities in South-east, Nigeria.

Research Question Four: What is the relationship between Electronic Resources Management (ERM) and librarian service delivery in Federal university libraries in South-East, Nigeria.

Table 4: Summary of Pearson Product Moment Correlation (PPMC) on the relationship between electronic resources management (ERM) and librarian's service delivery of libraries

		Electronic management (ERM)	resources Librarians service delivery of libraries
Electronic Resources	Pearson Correlation	1	.948
	Sig. (2-tailed)		.000

Management (ERM)	N	143	143
Librarians service delivery of libraries	Pearson Correlation	.948	1
	Sig. (2-tailed)	.000	
	N	143	143

Table 4: showed the Correlation coefficient between electronic resources management (ERM) and librarian's service delivery of libraries.

Table 4. reveals the summary of Pearson Product Moment Correlation (PPMC) on the relationship between electronic resource management (ERM) and librarians service delivery of libraries in Federal Universities in South-East, Nigeria as positive and strong ($r=.948$). This suggests a positive and strong correlation, indicating the connection between electronic resources management and librarian's service delivery of libraries in federal universities in South-east, Nigeria.

Discussion of Findings

Cloud computing and Librarian Service Delivery of Libraries in Federal Universities in South-East, Nigeria

Findings of the study reveal the existence of a significant and positive relationship between cloud computing and librarian service delivery of libraries in federal universities in South-East, Nigeria. The implication of the finding of this study is that university libraries require cloud computing to facilitate collaboration among librarians, researchers, and students. Therefore, the findings of this study are quite expected considering the fact most libraries are identifying best practices and emerging trends in facilitating remote access to library resources, to improve their services. This result shows a considerable level of digital technologies by libraries in federal universities in south-east, Nigeria. The findings of this present study agree with the study of Omehia and Tom-George (2020) who sought to assess cloud computing technologies for library service delivery. The study revealed that cloud computing as an emerging trend in contemporary librarianship has been amazing, especially its advantages over computing with central processing unit (CPU) accessed with desktop. Thus, deducing from the above, it is right to state that university libraries and librarians need to be fully ready to deploy various technology and constantly apply cloud computing to deliver services incorporated in any of the following nomenclature: data storage, computation (processing power), and networking, especially now that cloud computing has shown to be a major determinant in the integration of different aspects and facets of the library operations in enhancing service delivery.

Radio Frequency Identification (RFID) and Librarian Service Delivery of Libraries in Federal Universities in South-East, Nigeria

From the results, there is a significant and positive association between radio frequency identification (RFID) and librarian service delivery of libraries in federal universities in south-east, Nigeria. This finding is not surprisingly considering that radio frequency identification (RFID) plays a pivotal role in saving librarians time by automating their tasks. Therefore, the nexus between radio frequency identification and librarians' service delivery of libraries points to the fact that RFID is essential in the acquisition and retention of a person's knowledge. The findings of these study corroborate the report of Komalasari, et al (2023) investigated radio frequency identification (RFID) technology devices in library services: improving education services. . It was revealed that the adoption of RFID technology has increased service standards and promotes digital-based libraries, with a level of customer satisfaction with the use of RFID technology devices in circulation service. Because the database shows whether a book is available at the library, students can use it to search for it, and if it is, pick it up there. This reasons, amongst others, necessitates the adoption of Radio frequency Identification (RFID) by libraries in Nigeria, particularly, South-east, Nigeria, considering their relationship with enhanced service delivery.

Virtual Reference Service (VRS) and Librarian Service Delivery of Libraries in Federal Universities in South-East, Nigeria.

As indicated in the findings of this study, there is a significant and moderate relationship between virtual reference service (VRS) and librarian service delivery of libraries in federal university libraries in South-East, Nigeria. While this result may be attributed to the unending proliferation of technology in the workplace and their adoption by many professionals and institutions including libraries, the outcome of this investigation shows that virtual reference service (VRS) satisfies the virtual community and enhance users' research experience. The implication of this result is that libraries have invested an enormous amount of fund in digital products and services, and to ensure that this fund is not wasted, reference librarians have had to modify old, more traditional reference strategies to help users take advantage of these new tool. The above findings are in line with the position of Yang and Dalal (2015) who conducted a study on web-based reference services in academic libraries among academic libraries and found virtual reference services are becoming more prominent among librarians, because it allows users to connect easily with librarians online. It can, therefore, be concluded that librarianship in this digital era combines the long-established discipline of library science with computer science and information retrieval, and the need to effectively serve the patrons has compelled university libraries and librarians to automate and adopt digital technologies and this has also shown in the enhancement of her services.

Electronic Resource Management and Librarian Service Delivery of Libraries in Federal Universities in South-East, Nigeria

It was pointed by the findings of this study that there is significant and positive relationship exist between electronic resource management and librarian service delivery of libraries in federal universities in south-east, Nigeria. This result has quelled the assumption of whether electronic resource management are effective tools for service delivery. Electronic resource management includes variety of publishing models, including OPACs, CD-ROMs, online databases, e-journals, e-books, internet resources, e-mail publishing, electronic link, and web publishing, etc., which may include text, numerical, and/or graphical data. The findings above buttresses earlier studies by Adegboye, et al, (2015) who investigated management of electronic resources in private universities in south-west, Nigeria and found that libraries can make life easier for their users by aggregating supply and demand; as electronic collections continue to grow exponentially in both size and use, ERM has emerged as a distinct activity within library unit, and a dedicated specialization for librarians. This is also similar to Prajapati (2016) who posited that the link to electronic resources management as a practices and software systems used by libraries help keep track of important information about electronic information resources, especially internet-based resources such as electronic journals, databases, and electronic books. Thus, this point to the fact that electronic resources management provides a comprehensive coverage of the issues, methods, theories and challenges connected with the provision of electronic resources in libraries, with emphasis on service delivery.

CONCLUSION

Digital technologies have revolutionized the way university libraries operate and deliver services to their users. It has empowered university libraries to adapt to the digital age, meet the changing needs of their patrons, and provide a more engaging and efficient library experience. However, this study has indicated that the adoption of digital technologies, such as cloud computing, radio frequency identification (RFID), Virtual reference services (VRS), and electronic resource management has a positive relationship with librarians' service delivery in university libraries. . Overall, digital technologies have transformed libraries into vibrant, dynamic hubs for learning, innovation, and community engagement. It is therefore imperative for university libraries and librarians to evolve the information needs of their academic community and provide a modern, user-

centric experience while facilitating collaboration and networking opportunities for global partnership and resource sharing.

RECOMMENDATIONS

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

1. That university libraries should explore and invest in the integration of cloud computing, considering their advantages in facilitating remote access and increasing user satisfaction, basically for service delivery
2. That university libraries should ensure that the radio frequency identification (RFID) is effectively integrated with the library's system and operations, as it enables real-time inventory tracking and prevents theft and misplacement of library materials as needed to enhance the effectiveness of the module for overall service delivery.
3. That university libraries should ensure that the VRS is user friendly, intuitive and provides timely and convenient support, to improve user experience, optimize workload for librarians' and ensure that the services are integrated with existing library services.
4. That university libraries should educate users on electronic resource access and usage, ensure consistent quality of electronic resources and continue to prioritize electronic resource management and delivery metrics to ensure that ERM remains strong and continue to drive positive outcome.

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