ADOPTION OF INFORMATION TECHNOLOGIES IN SELECTED MEDICAL LIBRARIES IN ILORIN METROPOLIS, KWARA STATE, NIGERIA

By

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CERTIFICATION

This is to certify that this project titled **"*Adoption of Information Technologies in Selected Medical Libraries in Ilorin Metropolis, Kwara State, Nigeria*"** by Ademola Janet Ifeoluwa meet the regulations guiding the award in National Diploma in Kwara State Polytechnic Ilorin and is approved.

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DEDICATION

This project is dedicated to God for being my ultimate source of strength and inspiration. In Him, I derived all powers needed to live, weather the storms and become an embodiment of hope to myself and the people around me.

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Abstract

This study assessed the adoption of information technologies in selected medical libraries in Ilorin metropolis, Kwara State, Nigeria. Case study method was adopted to focus on the medical libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Nigeria. The population comprises 19 personnel of the two medical libraries. Thus, census enumeration sampling was adopted. Questionnaire was used to gather data from the respondents. Findings revealed that electronic information resources, e-mails, Internet and databases have been adopted. Findings further showed that e-mail, chat assistance and reference services are performed on IT. More so, it was revealed that IT has been highly adopted for electronic contents creation, e-mail and chat assistance. Findings also showed that IT adoption in medical libraries IT enhances effective bibliographic control of information resources and cost-effective. Lack of ICT and other infrastructural facilities, lack of funds and poor maintenance culture affect the adoption of IT in the library. This study concludes that IT adoption in medical libraries enhances the operations and services of understudied medical libraries. One of the recommendations of this study is that management of the understudied medical libraries should endeavour to be employing librarians with sound knowledge of medical or health librarianship or train their current workforce on it.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Information is the main part of people's lives in information societies. Finding information that is essential for survival and affects decision-making. The community and people without the necessary information will not be able to advance towards their goals and even their daily lives. One of the information needs of people in everyday life is the need for health information. Health information includes a wide range of information, including information about sicknesses, how to prevent them and their initial treatment, which is one of the main concerns for many people (Dastani, Mokhtarzadeh, Nasirzadeh & Delshad, 2019). Access to health information helps train health care and choose healthy lifestyles. Supporting society's access to health information causes a change in the philosophy of health care that leads to the national development of health (Adeyoyin & Oyewusi, 2015).

One of the sources of having access to medical information are medical libraries. The medical libraries are places that have provided a way out in providing easy access to well censored, accurate and timely medical information. The medical library today is the most reliable source of information available to medical and health practitioners. The present growth in information technology has made it a necessity for medical libraries to move towards incorporating the use of modern information technologies in carrying out their numerous daily activities, such as collecting, organising, storing, retrieving and disseminating medical information to clients (Onifade & Bolarinwa, 2019).

The main objective of the medical libraries is to provide the information needs of the target users generally and specifically to meet their education, research and patient care missions, through acquisition of resources that can support teaching, learning and research. The library today must be able to provide unhindered access to global biomedical information sources and assists clientele to keep abreast of knowledge and information in their specialties. This necessitate why medical libraries strive to provide a conducive environment where users can study, seek and create information or explore new knowledge sources. Medical libraries are to provide services to complement the teaching, learning and research activities of their institution. Hence, the study intent to find out if the various libraries under study meets up with the objectives of providing on-line information sources in the libraries (Unobe, Yusufu & Shehu, 2018).

The establishment of medical libraries in Nigerian universities was a result of delivery effective health information services to support meaningful higher or professional medical education, which could foster delivery of health care services. As a domain for information storage, retrieval dissemination in university, medical library stands to defend its position at all times (Ebong, Ozoh & Nwachukwu, 2019). Medical libraries have always been closely associated with the collection, dissemination and use of medical data and information to enhance the efficiency of medical care delivery services. Therefore, the ability of the medical libraries to carry out this function effectively depends on availability and accessibility of information resources in print and non-print (e-resources especially) formats (Unobe, Yusufu & Shehu, 2018).

Information technology is a broad term used to describe any communication device or application, encompassing radio, television, cellular phones, computer and network hardwires and software's satellites systems and so on. The idea of ICT revolves on how information and communication are manipulated or handled. Information technologies are the machines used to

process, store and transmit information which can be numeric, text or graphic form (Ojo, 2015). Today, information tends to be available at the tip of our fingers with the availability of the World Wide Web including censored and uncensored information thereby making access to right information and providing the right services through information technologies (Onifade & Bolarinwa, 2019).

Nongo (2020) asserted that for medical libraries to satisfy users' information need in this century, they need to modify their facilities and services rendered to users. The information technologies that can enhance operations and services such as electronic cataloging, acquisition, inter-library loaning, OPAC, electronic circulation functions using the digital management software, cloud computing, 3D printers and WAN/LAN, access to information through databases, library software, computer hard discs, flash drives, CD-ROM s, floppy discs, optical discs, and computer hardware. social media facilities include: Library Blogs, Media sharing, Podcasts and Wi-Fi should be put in place.

Bhattacharjee and Siha (2016) observed that IT has enhanced the generation of quicker as well as better information, stating further that prior to the advent of ICT, information search used to take a huge amount of time because of the volume of information non-electronic or analog form. IT adoption in library operations and the required skills with which to use them in medical libraries are the core drivers of service delivery in modern medical librarianship (Ikolo, 2020). This makes Ikolo (2022) to recommend that training of medical librarians in information systems and technology usage is imperative. Thus, investigating how information technology has enhanced the operations and services of libraries influences why this study will assess the adoption of information technologies in selected medical libraries in Ilorin metropolis, Kwara State, Nigeria

by focusing on the medical libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria.

1.2 Statement of the Problem

Medical libraries, as libraries established to meet the information needs of medical and health personnel are highly important to vibrant and robust medical services in every society. Most especially in this age where information technologies have drastically revolutionised services of medical libraries by availing them machines and apparatuses they can deploy to create, gather, organise, process, manipulate, store, preserve and conserve, locate, retrieve, disseminate and utilise information. Through information technologies, the services of medical libraries have been redefined and enhanced to meet the information needs of contemporary users, regardless of locations.

Despite the importance of information technologies to the services of medical libraries, it has been observed by this researcher and also reported in studies by Musa, Adamu, Nongo and Sadiku (2019) and Abdoh, Udoudoh and Babalola (2022) that it is difficult for librarians in medical libraries in Nigeria to adopt information technologies because of inadequate funding, inadequate professional staff, apprehension that technologies will overtake the job of librarians, inadequate technological skills and absence of indigenous technologies that can be adopted for tailor-made information services of Nigerian medical personnel.

The need to explore the problems these challenges posed to the adoption of information technologies in medical libraries justifies why this study will be assessing the adoption of information technologies in selected medical libraries in Ilorin metropolis by focusing on the

medical libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria.

1.3 Objectives of the Study

The main objective of this study is to assess the adoption of information technologies in selected medical libraries in Ilorin metropolis, Kwara State, Nigeria.

The specific objectives are to:

1. Find out the information technologies adopted in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria,
2. Know the services information technologies are adopted for in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria,
3. Know the level of adoption of information technologies for services in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria,
4. Explore the benefits of adopting information technologies in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria, and;
5. Explore the challenges to the adoption of information technologies in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria.

1.4 Research Questions

This study intends to answer the following questions:

1. What are the information technologies adopted in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria?
2. What are the services information technologies are adopted for in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria?
3. What is the level of adoption of information technologies for services in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria?
4. What are the benefits of adopting information technologies in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria?
5. What are the challenges to the adoption of information technologies in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria?

1.5 Significance of the Study

This study will be of high importance to every institution having medical libraries, information professionals working in medical libraries or interested in medical libraries, members of the Medical Librarians of Nigeria, health professionals, indigenous IT experts and policy and decision makers in Nigeria by revealing the state-of-the-art of the adoption of IT in medical

libraries and providing insights on the way forward to enhance and strengthen the adoption of IT in Nigerian medical libraries.

Every institution having medical libraries will benefit from this study by discovering some IT tools they can adopt for their library operations and services and also learn how those IT tools can be applied for their services. Also, they will discover the benefits they can derive from adopting IT for their services and in a situation where they have adopted IT, the strategies to overcoming the hindrances to the efficient and effective adoption of IT will shared in this study. Furthermore, information professionals and members of the Medical Librarians of Nigeria will also find this study important because they will know the IT already adopted in medical libraries for delivering of services to the users.

More so, this study will be valuable to health professionals by revealing to them, the services that can be rendered to them in medical libraries through the IT. In the same vein, the indigenous IT experts will know the problems associated with the IT adopted for services in medical libraries, which may motivate them to design, develop and manufacture IT gadgets suitable for local needs of librarians in medical libraries. Above all, this study will recommend to the policy and decision makers strategies that can be implemented to ease the adoption of IT in medical libraries.

1.6 Scope and Limitation of the Study

This study will assess the adoption of information technologies in medical libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria. Going by the nature of this study, its participants will be personnel of the two aforementioned medical libraries in Kwara State, Nigeria.

1.7 Operational Definition of Terms

Adoption: This is an act of choosing and making use of information technologies in libraries of Kwara State Teaching Hospital Library, Kwara State College of Nursing Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria.

Kwara State College of Nursing: This is a tertiary institution of learning in Kwara State, Nigeria, owned by the state government, where the adoption of information technologies in its medical library will be assessed.

University of Ilorin Teaching Hospital: This is a general hospital in Ilorin, Kwara State, Nigeria, owned and managed by University of Ilorin, where the adoption of information technologies in its medical library will be assessed.

Information technologies: These are gadgets, tools, machines or devices designed for the creation, organisation, processing, storage, preservation, conservation, manipulation, location, retrieval, dissemination and utilisation of information, which their adoption in the libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria, will be assessed.

Medical libraries: These are storehouses of information, (particularly those of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin) created and devoted to the collection and management of medical information in all formats, where their adoption of information technologies will be assessed.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter will review relevant literature on the subject understudying by citing the positions, assertions, submissions, observations and arguments of various authorities, researchers and scholars.

According to Issa (2012), review of related literature involves the collection of ideas, views, positions and opinions expressed in various writings of recognized authorities as well as findings of previous researches in one's area of investigation.

This chapter is therefore arranged in the following order, for the sake of easy comprehension:

2.2 Concept of medical libraries

2.3 Concept of information technologies

2.4 Information technologies adopted in medical libraries

2.5 Services information technologies are adopted for and levels of their adoption in medical libraries

2.6 Benefits of adopting information technologies in medical libraries

2.7 Challenges to the adoption of information technologies in medical libraries

2.8 Empirical reviews

2.2 Concept of Medical Libraries

Medical libraries are regarded as a special library whose sole objective is for the purpose of providing the medical information and knowledge resources vital to the achievement of goals and objectives medical and health institutions and agencies. As a repository of knowledge, libraries in healthcare institutions ought to play a leading role in knowledge-based information management. Essentially, the information professional (librarian) is to use his professional skills of information access, retrieval and packaging coupled with computer literacy to provide support services to researchers especially in the area of bibliographies compilation, literature searches of relevant health information, and clinical information in aid of patient care and others (Oduqole, Idowu & Ladipo, 2012).

According to Anyaoku (2016), medical libraries are institutions for health information dissemination and access. They are set up to collect, organize and disseminate health and well-being information in a health, hospital or academic setting. They support medical doctors, nurses, pharmacists, other allied health professionals and students in learning, knowledge acquisition and research through provision of information resources that cover all areas of medical specialties.

The medical libraries are libraries found in hospitals, medical schools, and in medical or health associations. These libraries continued the author, are designed to assist physicians, health professionals, medical students, patients, consumers and medical researchers in locating health and scientific information to improve, update, access and evaluate health care services. The objectives for setting up the library include collection development in terms of resources and

services, selection processes, library orientation cum instruction, and above all, the organization of these library resources (Okeke, Eze, Eze & Asogwa, 2017).

Medical libraries are primarily designed to serve the information needs of medical scientists, students and research scholars, and their collections are built around medical sciences subjects' interests. Medical libraries could be seen as a special library that is attached to any medical institution that is primarily designed to cater for the information need of the medical practitioners such as Doctors, nurses, laboratory staff, patients, medical students, all allied medical professionals and researchers in medical and health related matters. Such libraries help users to keep abreast of new developments in the medical field (Ebong, Ozoh & Nwachukwu, 2019).

Medical libraries are established to support medical and health organisations in meeting the people's information needs. In recognising the reasons why medical libraries are important, Naem, Ahmed and Khan (2013) categorised the type of information needed by medical/health practitioners according to the situations that give rise to such needs. The first category is the clinical information needs, and the second category is non-clinical information needs. They classified the information needs as "Those generated by a specific case or individual (diagnostic, referral, pharmaceutical needs, etc.) and those of a general nature (research reports, grant information, statistical data, policies, directives, etc.)". It is assumed, that the first type refers to clinical information needs as it is in reference to patient care, and the second type indicates non-clinical information needs as it may be for purposes other than patient care such as teaching, and managerial purposes.

The clinical health information needs in the context of patient care include basic information about a patient's medical history, diagnosis and treatment information. Bhattacharjee and Siha

(2016) provided more information of information. According to them they include “diagnosis”, “physical signs/symptoms”, “treatment”, “lab tests”, “drug information”, “referral” and “provide information to family”. Therefore, the clinical information needs are the kind of information that is likely to be needed with reference to patient care and to support the clinical decision making of health workers.

The non-clinical health information in which doctors have a wide range of information needs apart from clinical needs. This kind of information is more likely to be generated for purposes other than the patient care, such as education and management. However, the majority of the research has concentrated on the clinical information needs. Non-clinical information needs, such as information needed to achieve educational objectives can involve real practice with patient cases (the real practice of medical students in the hospital with the patient, which requires that doctors who are involved in such programmed should collect important information on the patient, such information may result in patient care management, though the main aim is to collect information that is useful in the educational context) (Musa, Adamu, Nongo & Sadiku, 2019).

2.3 Concept of Information Technologies

Information technology stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals), computers as well as necessary software, its storage and the audio-visual systems, which enable all users to access, store, transmit, and manipulate information (Albert, 2017). The term IT is also used to refer to the combination of audio-visual and telephone networks with computer networks through a single cabling or link system. There are large economic incentives (huge cost savings due to elimination

of the telephone network) to merge the telephone network with the computer network system using a single unified system of cabling, signal distribution and management.

IT has no universal definition as the concepts, methods and applications involved in ICT are constantly evolving on an almost daily basis. The broadness of IT covers any product that will store, retrieve, manipulate, transmit or receive information electronically in a digital form e.g. personal computers, digital television, email and even the modern-day robots. IT (information technology – or technologies) is an umbrella term that includes any device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning (Chandler & Daniel, 2012).

IT is the study, design, development, application, implementation, support or the management of computer-based information systems. The term is commonly used as a synonym for computers and computer networks, but it also encompasses other information distribution technologies such as television and telephones (Chandler & Daniel, 2012; Albert, 2017). IT is the digital processing and utilisation of information by the use of electronic computers. It comprises the use of machines and electronic media for the storage, retrieval, conversion and transmission of information (Okauru, 2011).

IT is much more than computers and the Internet or even telephony, even though the digital divide and issues of Internet governance were much of the focus of IT based industries (International Telecommunications Union [ITU], 2015). Applications of IT can be divided under two broad categories. The first are those largely dependent on traditional telecommunications networks (including the Internet) that enable on-demand communications to provide information tailored to the user's convenience and needs. How that information is processed, whether it is

used at all, and whether it is transformed into knowledge is left to the human user who asked for that information in the first place (ITU, 2015). The second group of IT applications, for want of a more appropriate name, we shall call Human Independent, where information is processed and decisions are arrived on the basis of some criteria without human intervention at the time of decision making. These can be nearly passive systems, or part of a larger system (embedded ICT).

IT implies communication and therefore it becomes obvious that the two terms are synonymous (Jimoh & Igwe, 2011). IT and ICT as synonymous terms are mainly used in educational and governmental circles. ICT is an umbrella term that includes all technologies for the manipulation and communication of information. ICT encompasses any medium to record information (magnetic tape/disk, optical disks (CD/DVD), flash memory, etc.); technology for broadcasting information - radio, television; and technology for communicating through voice and sound or images - microphone, camera, loudspeaker, and telephone to cellular phones. Thus, IT makes more explicit that technologies such as broadcasting and wireless mobile telecommunications are included with electronic technologies and means of capturing, processing, storing and disseminating information between sources, terminals, persons and organisations (ITU, 2016).

2.4 Information Technologies Adopted in Medical Libraries

Information technology facilities are numerous; however, some that can be used to enhance service delivery in the medical libraries include computer systems, scanners, telephone, photocopier, magnetic tape, bar code reader, audio-visual, e-book/journals, internet connectivity CD/DVD Rom, Email, Printer, SmartCard digital camera and others (Ojo, 2015). Recently, it has been established that apart from HINARI, there are so many other resources that can be

contacted by many medical researchers on the internet; they include, web 2.0 and social media tools. Social media and Web 2.0 represent the World Wide Web functionality and tools now utilized by individuals and businesses to connect people in order to boost their knowledge and their ability to learn, share information, facilitate commerce, and influence broad communities. A variety of social media and web 2.0 concepts and tools including social networks, blogs, wikis, podcasts (Oduwole, Idowu & Ladipo, 2016).

Okeke et al. (2017) explained that information technologies allow medical libraries to have access to electronic resources through computers and the internet which has been a wonder working tool in the case of research. The resources medical libraries are having access to include charts, maps, cassettes, diskettes, CD-ROM, micro card, microfiches and other microforms. All these contain vital information necessary for research. The Internet, which facilitates online access, is the interconnection of computers from different geographical locations. Databases are created by different organization on different subject fields, each of which is installed on a computer. Once such a system is connected to the network, a user from any part of the world can have access to such information applying the necessary procedures (Unobe, Yusufu & Shehu, 2018).

Anyaoku (2014) posited that information technologies have become very essential to the services of medical libraries. He argued that information resources of medical libraries can now be presented in soft copy such as CD-ROM, Databases, Internet Resources, Audio materials, Video materials, micro-forms, microfiches, computers, among others. Medical College Libraries provide physical or digital access to materials to its teaming medical students. Medical College Libraries have for long been facilitating access to resources in health, such as the famous

MEDLINE, PubMed and PubMed Central databases from the National Library of Medicine in the United States.

The Web 2.0 services tend to provide tools for helping users with their folksonomies. Examples of Web 2.0 and social media applications include communication (blogs, internet forums, Micro blogs etc), Collaboration (Wikis, social bookmarking and social news), Multimedia (photo sharing, video sharing and live casting) and entertainment (online gaming). The social bookmarking innovator automatically reminds users of previously deployed tags, suggests some tags, and notes tags used by others. Blogs are about posts not pages as we have in websites. Wikis are streams of conversation, revision, amendment and truncation. Podcasts shuttled between websites and RSS feeds, their contents can be saved, summarized, addressed, copied, quoted and built into new projects (Oduwole, Idowu & Ladipo, 2016).

The adoption of modern information technology adds new services to medical libraries; it enables medical library users to be aware of online journals, online databases and other information services like multimedia application and use of CD-ROM databases, OPAC and Internet Service, creation of in-house database of books, serials, digitization of projects and theses. This justifies why Bhardwaj and Walia (2012) stated that the reputation and status of any medical library depends on the quality of information services provided to clients. These days, it is difficult to ignore the advances and resolve to embed ICT, therefore medical libraries are encouraged to adapt the new mode of online information services through the use of CD-ROM database services, bibliographic database services, Internet services, OPAC services, references services, etc.

2.5 Services Information Technologies are Adopted for and Levels of their Adoption in Medical Libraries

Information services in medical libraries are those activities which the medical libraries engaged in as to serve their users well. These services involved adopting strategies which not only attract users but also make them use the medical library. Information services are those functions a medical library performs in a bid to serve their users better. This involves information dissemination which is a design mapped out to reach the information needs of various users at their level. The services are channelled towards yielding fruitful results to information seekers. They are designed in modified form for information seekers (Okeke, Eze & Ani, 2019).

Medical libraries have adopted information technologies for book and serial acquisitions, transaction, classification and cataloguing, reference service, user orientation service, circulation service, inter library loan, document delivery service, electronic contents, e-mail and chat assistance, web 2.0 interactive sharing, bibliographic service and photocopies services (Ilo, Beetseh & Ameh, 2016). The services of medical librarians include lending services, interlibrary loan services, document delivery, preservation services, provision of seating and study facilities, reference services, current awareness service exhibition and displays, library publications, users' education, information literacy programme, literature search, selective dissemination of information, referral service, translation service, extension and outreach services and rental of premises. These myriads of roles were the sole responsibility of medical librarians (Ojo, 2015).

IT can be applied to every section of the medical library for example in the cataloguing and classification, ICT has imparted on a number of ways. Yusuf (2009), opined that computers have affected the way cataloguing is being done and by whom. He stressed that though cataloguing is the sole responsibility of professional librarian in most libraries now para-professionals usually

called library officers are involved. ICT has helped in resource sharing in the area of sharing catalogue data. Cataloguers are moving into new roles are as they attempt providing enhanced access to new resources. Online public access catalogue (OPAC) is now the practice of many libraries while some are still loyal to the traditional cataloguing and classification of serials.

In the circulation section, application of ITs is also evident, computer can be used to perform same library operations such as taking patrons (library users) and staff biodata, charging and discharging, statistics of patron, book borrowed, book returned, books not returned, patrons eligible for fine. In a computerised library, users can check whether the book they need is available in the library. Photo camera can also be strategically located in the library to monitor the security of library materials. The application of ICT has also extended its tentacles to serials management. Serials are any publication issued in successive parts appearing at regular or irregular intervals but as a rule intended to be continued indefinitely. Serials include journals, memoirs, annuals monographs, magazines, newspaper etc. It may be in print or electronic book format. The advent of IT has opened the way for library services to use IT facilities for acquiring, processing and dissemination of information in serials.

Some specific services information technologies can be adopted for in medical libraries include:

1. **Inter library loan, cooperation and networking:** The terms “library cooperation” and “Library networking” are often used interchangeable to describe formal and informal cooperation and partnership for resources sharing activities in libraries. These systems of library cooperation are to systematically transmit information in versatile human and technical networks among libraries in order to enhance knowledge and sharing of resources with the aid of digital technologies (Ahmed, Umar & Dewa, 2020). In the

inter-library loan and document delivery services, periodical articles can be transmitted instantly. The library can also enjoy the services of inter-library loan in order to enrich the collection and provide improved and qualitative services to users (Atanda & Uchendu, 2019). Generally, the system refers to information sharing or lending through computer and telecommunication links which transmit information or data from one library to another. The areas of cooperation include manpower, technical assistance, or information materials.

2. **Bibliographic verification and documentation services:** In organizing reference services, bibliography and documentation services should also be made available. Atanda and Uchendu (2019) described bibliographic verification as the use of bibliographic tools for purpose of verifying the correctness and completeness of the used information. He further stressed that these verifications provide information about publications. To achieve this, the reference librarian consults and searches both manual and electronic versions of standard bibliographic works. Some bibliographic tools may include abstracts and indexes, gazettes, encyclopedias, almanacs, catalogues, bibliographies etc. while documentation services may include monthly list of additions, reading lists, documentation list, subject bibliographies etc. on the topics of seminars, conferences, research projects etc., and documentation list of contents (Atanda & Uchendu, 2019).

3. **Selective dissemination of information (SDI):** This is a personal information service provided for notifying library users about latest information on a specified topic or subject. It's the provision of scientific information to individuals or corporate users on predetermined subjects. It's a personalized service directed towards the individuals, homogeneous group and it subject coverage may be specific or broad, searches based on

user's query (Ahmed, Umar & Dewa, 2020). SDI are documented list on a specific topic/subject, it may be free of charges or commercial. It may be using local databases or external databases. Some of it features includes: It keep user abreast with latest developments in area of interest. It answers specific user query. It saves user's time by speed and accuracy. It encourages the library patron to visit and use the new in the library resources. It's made selection of documents print/electronic easily.

4. **Database searching:** Medical librarians help users get information by searching various databases on the internet (Unegbu, 2013). Databases maybe online or offline. Some of the databases are EBSCo Host, FEDORA, ScienceDirect, AGORA, etc.

5. **Referral services:** According to Atanda and Uchendu (2019), this service can also be called information services. It is the process of identifying resources and agencies with special services or information needed by library users or information seekers, and the ability of the libraries, from time to time, to refer these users to these agencies or organizations for the purpose of satisfying their information need. Libraries from time to time receive a good number of reference and information enquiries whose range is usually very long i.e. from general to specific. Majority of reference and information queries by users received at the reference desk can be answered through ready reference tools such as dictionaries, directories, encyclopedias, handbooks and manuals, atlases and gazetteers, indexes and bibliographies, etc.

6. **Current awareness services (CAS):** This is a service for alerting users on new publications acquired by the library. It's a service directed towards all users of the library services, these may include accession list (a list of recent acquisitions), bibliographies,

literature surveys, table of contents of periodicals received in the library, current awareness bulletin, etc. Current awareness service is a source of information dissemination. For example, current pages selected in newspapers, magazines, periodicals, or textbooks are produce via photocopy and sent to the users. It involves daily, weekly supplied information or within the period of one week. Indeed, library's current (Ahmed, Umar & Dewa, 2020).

7. **User education and information literacy:** These are processes of training the library users (patrons) to be acquainted with the procedure of using the resources in the library so that they can access, retrieve and use information with little or minimum delay. Several programmes are organized by the libraries for their patrons in order to acquire the skills necessary for them to function in the 21st century these are: library orientation, formal instruction through course offered by general studies in higher education such as GSE Library studies, GNS Information science, Digital literacies skills etc. During these programmes, library users are to learn rules and regulations governing operations and use of the library. These rules contain dos and don'ts, membership, loan of library materials, prohibition, vandalism, mutilation, theft and its effects, punishment for various offences, etc., (Yaji, Ahmed & Jegbefume, 2019). However, users are also taught how to access, retrieve, store, evaluate, use information, cross-referencing and cite bibliographies for proper referencing (Ahmed, Umar & Dewa, 2020).

8. **Indexing and abstracting services (IAS):** These are services that provide access to information and knowledge. It's a process whereby recently published periodicals such as newspapers are brought together in a specific subject or discipline. While, an abstract is design to help readers to decide whether to read original document or not. Sometimes, a

well-prepared abstract serves as a substitute for the original document. Indexing is a systematic process of arranging of entries designed to enable information users to locate items in a document easily. Indexing and abstracting services are essential tools that helps users to overcome language barrier, keep them abreast with current development in their subject fields, and solve their research problems. Indexing and abstracting are done or published in almost all the subject or discipline and now a days are available via machine readable form via CD-ROM products or online on the internets as databases. Some of these free databases are (PubMed), and for subscription are (chemical abstracts services etc). Moreover, most libraries select a specific subject for indexing and abstracting (Adetoro, 2017; Dala & Ahmed, 2019).

9. **Reprographic services:** The reprographic facilities in the library fulfills the basic reference and information services such as preservation of reading materials issued on poor quality paper, providing reading materials issued on poor quality paper; reduction of storage problem; increasing the accessibility of documents which are unique or a few in number; providing a means of publication for specialist material that are uneconomic to commercial publishing; and the content of a newly received periodicals may be duplicated (or reproduced in many copies) and sent to the readers for their information (Atanda & Uchendu, 2019).

10. **Resource sharing:** Ezeh (2020) defines resource sharing as a term used to describe organized attempt by libraries to share materials and services cooperatively so as to provide one another with resources that might otherwise not be available to an individual institution. It represents an attempt to expand the availability of specialized, expensive, or just plain not-owned resources beyond the bounds of a single institution. Resource

sharing is the common use by two or more libraries of each other's assets, whether they are equipment, staff, knowledge and expertise, materials facilities, and/or information resources. There are needs for resource sharing which include explosion in published output, increase in bibliographic access of literature through internet and off-line databases on CDs, and in many cases decreasing library budgets along with high cost of published output had made it virtually impossible for libraries and documentation/information centers to fulfill information needs of their primary clientele.

11. **Document delivery services:** These services are important services due to the rising document prices and budgetary constraints on libraries, which makes them unable to purchase more and new documents. A library that does not have certain required documents among its collection may borrow, through the inter-library loan, from other libraries in the neighbourhood and supply or make available to the users at the earliest and required time. Because no single library or information centre can be self-sufficient in its collection and all the resources that can be demanded of them; to this regard, libraries appreciate the need to look for co-operation from other libraries or information centers in order to provide services to their clientele (Atanda & Uchendu, 2019).

It is not an exaggeration to say that information technology availability and its effectiveness may facilitate its use. His reason was that there is a wider portfolio of information sources from which scientists and other researchers can choose on the different aspects and components covering scientific, technological and medical research. There are progress and support from donor agencies in uplifting numerous public organizations and libraries through the supply of computers for both Internet connectivity and CD-Rom searches. The gesture has positively

influenced medical research in Nigeria, and like any other developing country, it is improving due to access to quality research techniques (Unobe, Yusufu & Shehu, 2018).

2.6 Benefits of Adopting Information Technologies in Medical Libraries

The shift from print to electronic information sources as a result of advances in information technologies (ITs) affords users with availability of a vast array of information (Unobe, Yusufu & Shehu, 2018). IT facilitates the information storage, retrieval, acquisition, searching, viewing and information handling. The main function of ICT is availability of right information to the user at the right time for appeasing his thrust of knowledge. For instance, online cataloguing is one of the major changes that IT has brought to cataloguing. Online cataloguing is method where you locate and copy catalogue data on-line through international computer networks. For cataloguers and classifier that have embraced the new technology it is no longer common to see newly acquired information resources held-up in the cataloguing unit for months. According to him the "blacklog syndrome" is fast-dying in most Nigeria libraries particularly for those whose have gained access to online catalogue.

Ugwuona, Eze and Oyovwevotu (2016) posit that the emergence of information technologies has allowed medical libraries to manage networks of knowledge resources and centres and act as a hub to support access to health information since communication and sharing knowledge are integral part of their activities. Moreover, advances in information and communication technology (ICT) provide a new platform for health information dissemination in the form of mobile health (m-health) information (Ezema, 2016). This is achieved with the Internet, which is used for information retrieval to support research activities in research institutes/health institutions (Abolarinwa, Adewoyin & Aderanti, 2015). The internet is very useful for health

information dissemination and guidance and also provides needed information that is up to date (Uzoagba, Egneti & Oyam, 2017).

Information technology has also led to increased work productivity among medical librarians. Alabi (2018) stated that digital services in the University of Jos, Plateau State, Nigeria, have proven useful in increasing the number of books processed in the Cataloguing and Classification Section from as low as 5% to 50%. It has also empowered cataloguers to embark on integrated operations and resource sharing.

Universally, medical libraries have taken the advantage of the IT to improve their operations and services. Akidi (2017) affirmed that the impact of IT on cataloguing stems from the computerization of subject cataloguing, cataloguing-in-publication (CIP), data copying; online cataloguing; cataloguing on the web; and searching thesaurus online, which is another system of technology-based subject cataloguing. Nwosu (2013) submitted that in today's cataloguing, IT have changed the profile of what cataloguers and classifiers do, as well as their environments.

IT has allowed new features integrated into the information services in medical libraries. Arinola, Adigun, Oladeji and Adekunjo (2012) stressed the benefits of IT on operations and services of medical libraries by noting that it has brought a lasting relief to the stress of manual operations and services, which are prone to human errors. Onuoha and Chukwueke (2022) posited that one of the prospects of IT to services of medical libraries is about efficiency and effectiveness in resource sharing, easy and increased accessibility, reliable storage, accuracy, resource availability, reduced duplication of efforts, cost-effectiveness (Arinola et al., 2012).

Onuoha and Chukwueke (2022) specifically identified resource sharing as an important prospect of IT in medical libraries. They stressed that through technology-based resource sharing,

information and records are now readily available and there is a serious reduction in effort duplication among cataloguers. Akidi and Okezie (2018) on their part affirmed that IT enhances effective bibliographic control of information resources, which can equally be seen in the areas of online cataloguing, copy cataloguing, use of online public access catalogue (OPAC), production and use of machine-readable catalogue, among others.

2.7 Challenges to the Adoption of Information Technologies in Medical libraries

Studies have revealed that the adoption of IT in medical libraries has been hindered by several factors. Adebayo (2013) found lack of IT skills of medical librarians, insufficient number of professional medical librarians and lack of knowledge of computer language such as the MARC and Dublin Core. Obiozor-Ekeze (2016) also found similar factors such as poor automation of libraries, under-staffing which slows down the pace of working at the varied departments of medical libraries, lack of knowledge of current trends of digital tools and problem of irregular power supply.

Nwosu (2013) asserted that the adoption of IT in medical libraries has opened a new vista of challenges for medical librarians. The challenges involved difficulty in accommodating the technological innovation with data created using the old rules. He further stressed that the rapid change in information materials from print to digital and electronic formats challenges on learning how to work in broader digital environments such as digital repositories. Eze (2016) on his own part sees lack of fund in libraries, lack of ICT and other infrastructural facilities, inadequate number of professionals and lack of ICT skills and training as the banes of applications of technologies for cataloguing and classification.

Orbin and Aina (2014) took the factors from practical perspective by noting that the use of archaic IT tools, inadequate knowledge of IT tools, poor knowledge of application of IT to library services, and shortage of trained professional staff. Also, Ntsiko (2013) agreed that inadequate continuous skills development and acquisition in technology-oriented operations and services hamper the adoption of IT in medical libraries.

Akidi and Okezie (2018) found inadequate funding, lack of adequate infrastructural facilities, incessant power outage, lack of Internet facility, inadequate bandwidth, lack of vendor technical support, lack of encouragement from the management, lack of maintenance culture, lack of digitally savvy medical librarians, lack of adequate staff training and staff indifference/technophobia and staff's rejection of library software package adopted as the challenges to the adoption of IT in medical libraries. Inyang and Agwunobi (2016) opined that lack of technological facilities, technological obsoleteness, lack of skilled staff, insufficient/lack of training and denial of best practices by library staff are the main constraints to the adoption of IT in libraries.

Onuoha and Chukwueke (2022) maintained the views that poor funding of library technical operations, inadequate technological facilities, inadequate technology-savvy of medical librarians, inadequate digital infrastructure, unstable power supply, frequent changes in technology, inadequate technical support, poor maintenance culture of technological facilities, changes in software applications in libraries, low Internet bandwidth, management problems and lack of continual training of cataloguers are some factors mitigating the adoption of IT in libraries.

2.9 Empirical Review

Medical librarians in Nigeria and globally have conducted series of studies on information resources, services and operations of medical libraries. Regarding the application, availability, utilisation and adoption of ICT/IT in medical libraries, many studies have also been conducted. Oduwole, Idowu and Ladipo (2012) examined the role played by the medical library and the information and communication technology (ICT) tools in medical research. The study highlighted the role of the medical library as an information resources centre in meeting the information needs of health professionals. The study also described information technology tools such as search engines and social networking tools that can be used by physician and health information professionals in decision making. The study advocated the formation of consortium by medical libraries in Nigeria and adequate funding of medical institutions by their parent bodies.

Ikolo (2020) investigated the availability of Information and Communication Technology (ICT) tools and skills for their use in operations in medical libraries in Nigeria. A descriptive research design was adopted. The instrument used for data collection was a structured questionnaire administered to a population consisting of 379 medical librarians, 246 were retrieved and found usable questionnaires Results – Findings revealed the availability of most ICT tools to a moderate extent. Mobile phones, Internet connectivity, computers, OPAC, printers, E-mail are the tools that were mostly available. The medical librarians studied have high level of ICT skills in areas such as social networking, Internet use, search engine use, search for e-resources, use of email, Web based forum and database use skills, however, the study revealed a low level of use of ICT tools to carry out medical library operations. Lack of and inadequate funding, erratic power supply, erratic Internet access, lack of trainer/training for ICT application and insufficient

technical support for maintenance of ICT tools are the major hindrances to the use of ICT tools for library operations in Nigeria.

Unobe, Yusufu and Shehu (2018) investigated the use of on-line information sources in Federal Universities' Medical Libraries in North West Geo-Political Zone of Nigeria. Survey research method was adopted for the study and the total populations studied were three thousand five hundred forty-five (3545). Three research questions. A proportionate stratified procedure was used to select 405 respondents out of the total of 3545 population, 405 copiesof questionnaires were administered out of which 374 were duly completed and returned. The instruments used for data collection were close ended questionnaires which was categorised into two (for users and staff). The study revealed that online information sources provisions such as online databases and electronic alert were not adequately provided and therefore are not commonly used.

Nongo (2020) investigated contemporary technologies for effective retrieval of information in medical college libraries in Benue and Kwara States of Nigeria. The study adopted descriptive survey, with a population of 1035 comprising medical students from the two states. The sample size is 207; a proportionate stratified random sampling technique was used to select 207 medical students at 20% stratum representing each medical college. The questionnaire titled "Contemporary technologies for effective retrieval of information in medical college libraries in Benue and Kwara States" were distributed, and 200 were returned valid for data analysis representing a return rate of 96%. The data collected were analysed using descriptive statistics of Mean and standard deviation. The findings show that the medical libraries understudied, to a high extent, have one form of contemporary technological information resources or the other.

Adeoye, Oladapo, Abimbola & Tomomowo-Ayodele (2019) conducted a study to determine the adoption and utilization of ICT for preservation and conservation of serial publications in LAUTECH Medical Library and LAUTECH Teaching Hospital Library, Osogbo. The research design used for the study was descriptive survey, the population of the study which constituted all library staff in these libraries were 35. Total population sampling method was employed in this study. The results were collated and analyzed using tables and percentages. The study concluded that despite the low use of ICT for the serials' functions, it has been shown to reduce the rigor in serials publication; ease of selection, acquisition and processing difficulties. Generally, the adoption of ICT for preservation and conservation of serials has helped to reduce serials function and reduced the cost for acquiring serials. The work recommended that: university library funding bodies should provide adequate resources to libraries to enable them procure ICT facilities which have been proved to enhance serials accessibility.

Abolarinwa, Adewoyin and Aderanti (2015) examined the knowledge of availability, use and challenges of Information Communication Technology (ICT) by the staff of the Nigerian Institute of Medical Research (NIMR) using a descriptive survey design. Participants include all the 299 research and non-research staff of NIMR. Instrument used was a self-structured questionnaire which was administered to all and has a return rate of 154 (52%). The findings of the study revealed that 110 (72.8%) which constituted the majority of the respondents, affirmed positively that they are aware of the availability of ICT facilities in NIMR library. However, those that are not aware of the availability of ICTs seem not to be informed or failed to appreciate it usefulness to their profession. Poor internet signal/slow server and inadequate provision of full internet connectivity was the leading problem encountered by the respondents.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter will explain the methods the researcher will use to obtain data needed for solving the problems being investigated. Most importantly, this chapter will espouse the justifications for adopting the methods used in conducting this study.

Hence, this chapter will be organised under the following sub-headings:

3.2 Research design

3.3 Population of the study

3.4 Sample size and sampling technique

3.5 Instrument for data collection

3.6 Validity and reliability of the instrument

3.7 Procedure for Administration of the instrument

3.8 Method of Data Analysis

3.2 Research Design

Research design is to indicate the ways to be followed or patterns of how a study will be conducted. Case study method will be adopted for this study. The reason for adopting case study is because it would avail the researcher the opportunity of focusing on the medical libraries of

Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Nigeria, with the aim of finding out their adoption of information technologies.

3.3 Population of the Study

Population is the total area, environment, scope or aspect a study is expected to cover. According to Issa (2012), population of a study is referred to as all the members or elements of a particular group of people, animals, or things in a defined area. Hence, the population of this study will be 19 personnel of the library of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin.

3.3 Sample and Sampling Techniques

Sample is the unit, portion or element of the population, which will provide data that are relevant to the study. In this study, census enumerative will be adopted. The reason for adopting census enumerative is because the respondents are not much and the researcher can obtain data from them, provided they are available at the time of administering the data collection instrument.

3.5 Instrument for Data Collection

This study will adopt questionnaire and interview to collect data from respondents. Issa (2012) explains questionnaire as a data collection instrument containing series of questions and other prompt responses for the purpose of gathering information from library users. The questionnaire will be titled ***"Questionnaire on adoption of information technologies in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria."*** The questionnaire will be arranged into six major sections, with each section containing the options relevant to the objectives of this study.

On the other hand, interview will be used to obtain information from the Chief Librarians of the two medical libraries under investigation. Semi-structured interview will be held with them. the reason for the choice of semi-structured interview is to allow the researcher to offer the interviewees some options they can respond with and also add their own opinions or information to what is given to them.

3.6 Validity and Reliability of the Instrument

Validity refers to the extent at which an instrument accurately measures what it intends to measure (Li, 2016). The questionnaire will be given to two subject experts for assessment of the quality of presentation of the contents of the variables the researcher wishes to measure. Their expert opinions will be effected before the questionnaire is presented to the supervisor for assessment and corrections, before its onward administration to the respondents.

However, reliability refers to the extent at which an instrument yields consistent results. Internal consistency will be used to assess the extent of differences within the test items by exploring the same construct that produce similar results (Thomas, 2022).

3.7 Procedure for Administration of Instrument

The designed questionnaire will be administered to the respondents by the student researcher and one research assistant. The researcher will administer the questionnaire to the personnel of Afe Babalola University Medical Library alone, while he will be supported by the assistants to administer questionnaire to personnel of Federal Teaching Hospital, Ido-Ekiti, Kwara State, Nigeria.

On the aspect of the interview, the researcher to fix appointments with the Chief Librarians of the two medical libraries and the interview will be held in accordance with the conditions given by the respondents.

3.8 Method of Data Analysis

Data collected will be presented in simple percentage and frequency tables and analysed by using the IBM SPSS Statistics. The reason for the choice of simple percentage and frequency tables is because it allows presentation, analysis and comparison of multiple attitude, opinion and ideas which can enhance easy understanding of tables and the data they contained. The opinions generated through the interviews will be used in the discussion of findings to support the data contained in the tables.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter is concerned with the analysis of data collected, presentation of results and discussion of findings. The chapter is presented under the following sub-headings:

4.2 Questionnaire distribution and response rate

4.3 Demographic information of respondents

4.4 Presentation, analysis, discussion and interpretations of results

4.2 Questionnaire distribution and response rate

All the 19 questionnaires distributed to the respondents were adequately filled and suitable for analysis. The filled questionnaire represents 100% return rate. The return is adequate for analysis and discussion going by the position of Cleave (2020) that a questionnaire's response rate is suitable for analysis if the response rate is 50% or higher.

4.3 Demographic information of the respondents

Table 1: Characteristics of the respondents

Items		F	%
Gender	Male	8	42.1
	Female	11	57.9
	Total	**19**	**100**
Age range	21-30 years	3	15.8
	31-40 years	10	52.6
	41-50 years	5	26.3
	51-60 years	1	5.3
	61 years and above	0	0.0
	Total	**19**	**100**
Marital status	Single	4	21.1
	Married	13	68.4
	Divorced	1	5.3
	Widow	1	5.3
	Total	**19**	**100**
Respondent institution	University of Ilorin Teaching Hospital Library	11	57.9
	Kwara State Teaching Hosipital Library	8	42.1
	Total	**19**	**100**
Academic qualification	ND	2	10.5
	HND	4	21.1
	BLIS	9	47.4
	MLIS	3	15.8
	PhD	1	5.3
	Total	**19**	**100**
Work experience	Less than 5 years	2	10.5
	6-10 years	6	31.6
	11-15 years	8	42.1
	16-20 years	3	15.8
	21-25 years	0	0.0
	26 years and above	0	0.0
	Total	**19**	**100**

Table 1 shows that majority 11 (57.9%) of the respondents are from females, followed by 8 (42.1%) who are males. Majority of the respondents 10 (52.6%) falls with 31 – 40 years age,

followed by 5 (26.3%) for 41 – 50 years; 3 (15.8%) for 21 – 30 years and 1 (5.3%) for 51 -60 years. Furthermore, 13 (68.4%) are married, 4 (21.1%) are single, while 1 (5.3%) is divorced and widowed respectively.

More so, University of Ilorin Teaching Hospital is highly represented with 11 (57.9%) and Kwara State Teaching Hospital, having just 8 (42.1%). In addition, 9 (47.4%) are BLIS holders, followed by 4 (21.4%) for HND; 3 (15.8%) for MLIS, 2 (10.5%) for ND and 1 (5.3%) for PhD. Finally, 8 (42.1%) has 11 – 15 years' work experience, 6 (31.6%) has 6 – 10 years, 3 (15.8%) has 16 – 20 years, while 2 (10.5%) has less than 5 years.

4.4 Presentation, Analysis, Discussion and Interpretations of Results

4.4.1: Information technologies adopted in your libraries

Table 2: What are the information technologies adopted in your library?

	Yes		No			
Items	**F**	**%**	**F**	**%**	**M**	**SD**
Computer systems	14	73.7	5	26.3	1.26	0.45
Database	15	78.9	4	21.1	1.21	0.42
SmartCard	10	52.6	9	47.4	1.47	0.51
Digital cameras	11	57.9	8	42.1	1.42	0.51
Electronic information resources	16	84.2	3	15.8	1.16	0.38
Scanners	8	42.1	11	57.9	1.58	0.51
Telephones	11	57.9	8	42.1	1.42	0.51
Photocopiers	14	73.7	5	26.3	1.26	0.45
Storage devices	12	63.2	7	36.8	1.37	0.50
Barcode readers	11	57.9	8	42.1	1.42	0.51
Audio-visual resources	10	52.6	9	47.4	1.47	0.51
Internet	16	84.2	3	15.8	1.16	0.38
Printers	14	73.7	5	26.3	1.26	0.45
E-mails	16	84.2	3	15.8	1.16	0.36

Source: Researcher's Field Survey, 2024

Table 2 reveals that majority 16 (84.2%) of the respondents claimed that electronic information resources, e-mails and Internet have been respectively adopted in their libraries, followed by 15

(78.9%) for databases, while 14 (73.7%) for printers, photocopiers and computer systems. On the other hand, only 8 (42.1%) claimed scanners have been adopted in their libraries. The sum of findings is that the IT that have been adopted in the medical libraries understudied are electronic information resources, e-mails, Internet, databases, printers, photocopiers and computer systems.

Obviously, IT has held the sway of the operations and services in libraries in the 21st century. With peculiarity to medical libraries in Kwara State, Nigeria, it is interesting to find out that the most popular IT such as computer systems, electronic information resources, databases, Internet, e-mails, printers and others have been adopted, too. The import of this is that medical libraries in Kwara State are following the trend of integrating IT into their operations and services.

The adoption of electronic information resources, which include databases containing e-books, e-journals and e-magazines by medical libraries in Kwara State affirmed the points of Ojo (2015) that medical libraries have transformed their services by providing uninterrupted access to electronic information resources on several databases. Ojo (2015) submitted that some of the electronic information resources access on databases in medical libraries include HINARI, PubMed, Web of Science/Knowledge.

This study also revealed that Internet, computers and e-mails have been adopted in the medical libraries understudied. Unobe, Yusufu and Shehu (2018) acknowledged the importance of computers and Internet in medical libraries by asserting that the Internet facilitates online access to information resources such as databases and send e-mails through computers from different geographical locations.

The minimal adoption of scanners in the medical libraries understudied is consistent with the claims of authorities and researchers on the IT tools used in medical libraries. Anyaoku (2014);

Ojo (2015); Unobe, Yusufu and Shehu (2018) did not considered scanners to be IT tools worthy to be mentioned. Their point was that scanning functionalities are embedded in most of the contemporary printers; thus, there won't be needs for libraries to be purchasing scanners separately. This assertion of theirs can be relied on, since it was revealed in the findings that printers are among the major IT adopted in the understudied libraries.

4.4.2: Services information technologies are adopted for in libraries

Table 3: What are services information technologies are adopted for in your library?

Items	SA		A		D		SD		M	DR
	F	%	F	%	F	%	F	%		
Book and serial acquisitions service	13	68.4	3	15.8	2	10.5	1	5.3	3.47	**SA**
Classification and cataloguing	11	57.9	5	26.3	1	5.3	2	10.5	3.32	**SA**
Reference service	12	63.2	6	31.6	1	5.3	0	0.0	3.58	**SA**
User orientation	4	21.1	12	63.2	2	10.5	1	5.3	3.00	**A**
Circulation service	3	15.8	16	84.2	0	0.0	0	0.0	3.16	**A**
Inter-library loan	4	21.1	10	52.6	3	15.8	2	10.5	2.84	**A**
Document delivery	2	10.5	15	78.9	1	5.3	1	5.3	2.95	**A**
Electronic content creation	11	57.9	4	21.1	1	5.3	3	15.8	3.21	**A**
E-mail and chat assistance	13	68.4	5	26.3	1	5.3	0	0.0	3.63	**SA**
Web 2.0 interactive sharing	12	63.2	5	26.3	1	5.3	1	5.3	3.47	**SA**
Bibliographic service	2	10.5	12	63.2	1	5.3	4	21.1	2.63	**A**
Photocopying services	10	52.6	6	31.6	3	15.8	0	0.0	3.37	**SA**

Source: Researcher's Field Survey, 2024

Decision Rule: If mean is 1.0 to 1.74 = Strongly Disagree (SD); 1.75 to 2.49 = Disagree (D); 2.50 to 3.24 = Agree (A); 3.25 to 4.0 = Strongly Agree (SA).

Table 3 presents the data on the services IT are adopted for in the medical libraries understudied. The results reveal that the respondents strongly agreed to the adoption of e-mail and chat assistance ($\bar{X}$ = 3.63), followed by reference service ($\bar{X}$ = 3.58), web 2.0 interactive sharing and book and acquisition services ($\bar{X}$ = 3.47), photocopying services ($\bar{X}$ = 3.37) and cataloguing and classification ($\bar{X}$ = 3.32). This means that IT have been adopted for e-mail and chat assistance,

reference service, web 2.0 interactive sharing and book and acquisition services, photocopying services and cataloguing and classification.

Findings of this study are consistent with the position of Ilo, Beetseh and Ameh (2016) where they pointed that medical libraries have adopted information technologies for book and serial acquisitions, transaction, classification and cataloguing, reference service, user orientation service, circulation service, inter library loan, document delivery service, electronic contents, e-mail and chat assistance, web 2.0 interactive sharing, bibliographic service and photocopies services.

This study shows that the adoption of IT in medical libraries in Kwara State is encouraging and it is also interesting to discover that IT is being adopted for cataloguing and classification in the medical libraries understudied, particularly for cataloguing and classification. Okeke, Eze and Ani (2019) identified OPAC services as a growing aspect of cataloguing and classification that libraries cannot ignore. They submitted OPAC enhances cataloguing and classification and facilitates quick and timely access to the medical libraries' information resources.

The adoption of IT for reference services in the medical libraries understudied is also interesting. This affirms the notion of Atanda and Uchendu (2019) that medical libraries have started adopting the Internet, websites and chat assistance for discharging different reference services including bibliographic checking and documentation services, indexing and abstracting, selective dissemination of information, document delivery services, current awareness services, database searching and referral services.

4.4.3: Level of adoption of information technologies for services in libraries

Table 4: What is the level of adoption of information technologies in your library?

Items	VHA		HA		MA		NA			
	F	%	F	%	F	%	F	%	M	DR
Book and serial acquisitions service	9	47.4	8	42.1	2	10.5	0	0.0	3.37	VHA
Classification and cataloguing	11	57.9	4	21.1	4	21.1	0	0.0	3.37	VHA
Reference service	13	68.4	5	26.3	1	5.3	0	0.0	3.63	VHA
User orientation	4	21.1	12	63.2	2	10.5	1	5.3	3.00	HA
Circulation service	7	36.8	8	42.1	3	15.8	1	5.3	3.11	HA
Inter-library loan	9	47.4	6	31.6	4	21.1	0	0.0	3.26	VHA
Document delivery	4	21.1	12	63.2	1	5.3	2	10.5	2.95	HA
Electronic content creation	12	63.2	5	26.3	1	5.3	1	5.3	3.47	VHA
E-mail and chat assistance	10	52.6	7	36.8	2	10.5	0	0.0	3.42	VHA
Web 2.0 interactive sharing	8	42.1	11	57.9	0	0.0	0	0.0	3.42	VHA
Bibliographic service	10	52.6	6	31.6	2	10.5	1	5.3	3.32	VHA
Photocopying services	11	57.9	5	26.3	3	15.8	0	0.0	3.42	VHA

Source: Researcher's Field Survey, 2024

Decision Rule: If mean is 1.0 to 1.74 = Not Adopted (NA); 1.75 to 2.49 = Moderately Adopted (MA); 2.50 to 3.24 = Highly Adopted (HA); 3.25 to 4.0 = Very Highly Adopted (VHA).

Table 4 presents the data on the level of adoption of IT for services in the medical libraries understudied. The results showed that IT is very highly adopted for reference services ($\bar{X}$ = 3.63), followed by electronic contents creation ($\bar{X}$ = 3.47), e-mail and chat assistance, web 2.0 interactive sharing and photocopying services ($\bar{X}$ = 3.42), cataloguing and classification and book and acquisition services ($\bar{X}$ = 3.37), bibliographic services ($\bar{X}$ = 3.32) and inter-library loan ($\bar{X}$ = 3.26). This implies that IT have been very highly adopted for reference services, electronic content creation, e-mail and chat assistance, photocopying services, web 2.0 interactive sharing, cataloguing and classification, book and acquisition services, bibliographic services and inter-library loan.

Findings of this study showed the relativity of the services and operations IT have been adopted for and that is why IT has been very highly adopted for those of the operations and services. Take the reference services for instance; it is a service carried out to connect a person in need of information with the information needed in the library. Therefore, it is not surprising to find out that web 2.0, e-mails and chat assistance, electronic contents creation and others have been adopted.

Similar narrative was also revealed in the aspect of books and acquisition services and cataloguing and classification. In the age of Integrated Library Management System (ILMS), where all library operations are performed and services rendered on a single software, it becomes enlightening to discover that the medical libraries understudied have adopted IT to a high extent to perform these operations and services.

The findings support the claims of Ahmed, Umar and Dewa (2020); Atanda and Uchendu (2019) that medical libraries have, to a great extent adopted IT to perform some library operations such as taking patrons (library users) and staff biodata, charging and discharging, statistics of patron, book borrowed, book returned, books not returned, patrons eligible for fine, security of the library resources and OPAC, copy cataloguing, acquiring, processing and dissemination of information.

4.4.4: Benefits of adopting information technologies in libraries

Table 5: What are the benefits of adopting information technologies in your library?

Items	SA		A		D		SD		M	DR
	F	%	F	%	F	%	F	%		
Affords users with availability of a vast array of information	10	52.6	6	31.6	3	15.8	0	0.0	3.37	SA
Facilitates efficiency in information handling	12	63.2	5	26.3	2	10.5	0	0.0	3.53	SA
Allows medical libraries to manage networks of knowledge resources	5	26.3	11	57.9	3	15.8	0	0.0	3.11	A
Provides a new platform for health information dissemination in the form of mobile health	7	36.8	9	47.4	3	15.8	0	0.0	3.21	A
Increases work productivity among medical librarians	11	57.9	5	26.3	2	10.5	1	5.3	3.37	SA
Allows new features integrated into the information services in medical libraries	11	57.9	5	26.3	3	15.8	0	0.0	3.42	SA
Facilitates easy and increased accessibility to information resources	11	57.9	7	36.8	1	5.3	0	0.0	3.53	SA
Reduces duplication of efforts	8	42.1	9	47.4	2	10.5	0	0.0	3.32	SA
Cost-effectiveness	12	63.2	5	26.3	2	10.5	0	0.0	3.53	SA
Enhances effective bibliographic control of information resources	13	68.4	4	21.1	2	10.5	0	0.0	3.58	SA

Source: Researcher's Field Survey, 2024

Decision Rule: If mean is 1.0 to 1.74 = Strongly Disagree (SD); 1.75 to 2.49 = Disagree (D); 2.50 to 3.24 = Agree (A); 3.25 to 4.0 = Strongly Agree (SA).

Table 5 presents the data on benefits of adopting IT in the medical libraries understudied. The results reveal that the respondents strongly agreed to the adoption of IT enhances effective bibliographic control of information resources ($\bar{X}$ = 3.58), followed by cost-effectiveness, facilitates easy and increased accessibility to information resources and facilitates efficiency in information handling ($\bar{X}$ = 3.53) respectively, allows new features integrated into the information services in medical libraries ($\bar{X}$ = 3.42), affords users with availability of a vast array of

information and increases work productivity among medical librarians ($\bar{X}$ = 3.37) respectively and reduces duplication of efforts ($\bar{X}$ = 3.32).

This means that the major benefits of adoption of IT in the medical libraries understudied are enhances effective bibliographic control of information resources, cost-effectiveness, facilitates easy and increased accessibility to information resources, facilitates efficiency in information handling, allows new features integrated into the information services in medical libraries, affords users with availability of a vast array of information, increases work productivity among medical librarians and reduces duplication of efforts.

These findings are validated the points of Unobe, Yusufu and Shehu (2018) where they asserted that the adoption IT in medical libraries affords users with availability of a vast array of information, facilitates the information storage, retrieval, acquisition, searching, viewing and information handling and availability of right information to the user at the right time for appeasing his thrust of knowledge. It also corroborates the claim of Alabi (2018) that IT has led to increased work productivity among medical librarians.

The introduction of new features to the library system and reductions of duplication of effort, particularly in cataloguing and classification, acquisition and book services served as the premises for Akidi (2017) to posit that the impact of IT on cataloguing stems from the computerization of subject cataloguing, cataloguing-in-publication (CIP), data copying; online cataloguing; cataloguing on the web; and searching thesaurus online, which is another system of technology-based subject cataloguing. IT has exponentially changed the profile of what cataloguers and classifiers do, as well as their environments.

4.4.5: Challenges to the adoption of information technologies in libraries

Table 6: What are the challenges to the adoption of information technologies in your library?

Items	SA		A		D		SD		M	DR
	F	%	F	%	F	%	F	%		
Poor automation of libraries	5	26.3	11	57.9	2	10.5	1	5.3	3.05	A
Lack of IT skills of medical librarians	11	57.9	4	21.1	3	15.8	1	5.3	3.32	SA
Insufficient number of professional, medical librarians	10	52.6	6	31.6	1	5.3	2	10.5	3.26	SA
Lack of knowledge of computer language	6	31.6	10	52.6	3	15.8	0	0.0	3.16	A
Inadequate staffing	t9	47.4	6	31.6	3	15.8	1	5.3	3.21	A
Irregular power supply	12	63.2	3	15.8	3	15.8	1	5.3	3.37	SA
Difficulty in accommodating the technological innovation with data created using the old rules	5	26.3	11	57.9	2	10.5	1	5.3	3.05	A
Lack of fund in libraries	11	57.9	6	31.6	2	10.5	0	0.0	3.47	SA
Lack of ICT and other infrastructural facilities	13	68.4	6	31.6	0	0.0	0	0.0	3.68	SA
Poor bandwidth	5	26.3	8	42.1	4	21.1	2	10.5	2.84	A
Lack of maintenance culture	11	57.9	6	31.6	2	10.5	0	0.0	3.47	SA
Lack of vendor technical support	7	36.8	10	52.6	2	10.5	0	0.0	3.26	SA
Lack of encouragement from the management	4	21.1	11	57.9	3	15.8	1	5.3	2.95	A
Staff indifference/technophobia	10	52.6	5	26.3	2	10.5	2	10.5	3.21	A

Source: Researcher's Field Survey, 2024

Decision Rule: If mean is 1.0 to 1.74 = Strongly Disagree (SD); 1.75 to 2.49 = Disagree (D); 2.50 to 3.24 = Agree (A); 3.25 to 4.0 = Strongly Agree (SA).

Table 6 presents the data on the challenges to the adoption of IT in the medical libraries understudied. The results indicated that the respondents strongly agreed that the challenges to the adoption of IT in their libraries are lack of ICT and other infrastructural facilities ($\bar{X}$ = 3.68), followed by lack of funds in libraries and poor maintenance culture ($\bar{X}$ = 3.47) respectively, irregular power supply ($\bar{X}$ = 3.37), lack of IT skills of medical librarians ($\bar{X}$ = 3.32), insufficient

number of professional, medical librarians and lack of vendor technical support ($\bar{X}$ = 3.26). This means that the major challenges to the adoption of IT in the medical libraries understudied are lack of ICT and other infrastructural facilities, lack of funds in libraries, poor maintenance culture, irregular power supply, lack of IT skills of medical librarians, insufficient number of professional, medical librarians and lack of vendor technical support.

These findings are similar to the reports of previous studies. Adebayo (2013) found lack of IT skills of medical librarians, insufficient number of professional medical librarians and lack of knowledge of computer language such as the MARC and Dublin Core. Obiozor-Ekeze (2016) also found similar factors such as poor automation of libraries, under-staffing as a significant factor that slows down the pace of working at the varied departments of medical libraries, lack of knowledge of current trends of digital tools and problem of irregular power supply.

Eze (2016) on his own part sees lack of fund in libraries, lack of ICT and other infrastructural facilities, inadequate number of professionals and lack of ICT skills and training as the banes of applications of IT in medical libraries. It also aligns with the claims of Orbin and Aina (2014) where they noted that the use of archaic IT tools, inadequate knowledge of IT tools, poor knowledge of application of IT to library services, and shortage of trained professional staff. Also, Ntsiko (2013) agreed that inadequate continuous skills development and acquisition in technology-oriented operations and services hamper the adoption of IT in medical libraries.

Above all, the findings summed the points of Onuoha and Chukwueke (2022) where they maintained the views that poor funding of library technical operations, inadequate technological facilities, inadequate technology-savvy of medical librarians, inadequate digital infrastructure, unstable power supply, frequent changes in technology, inadequate technical support, poor

maintenance culture of technological facilities, changes in software applications in libraries, low Internet bandwidth, management problems and lack of continual training on IT for medical librarians are some factors mitigating the adoption of IT in libraries.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarises the findings of this study, draws conclusion from those findings and makes appropriate recommendations. This chapter is arranged in the following order:

5.2 Summary of findings

5.3 Conclusion

5.4 Recommendations

5.2 Summary of findings

Results of this study revealed that:

1. The information technologies adopted in libraries Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library are electronic information resources, e-mails, Internet, databases, printers, photocopiers and computer systems.
2. The services information technologies are adopted for in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library are e-mail and chat assistance, reference service, web 2.0 interactive sharing, book and acquisition services, photocopying services and cataloguing and classification.
3. The level of adoption of information technologies for services in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library is very high for reference services, electronic content creation, e-mail and chat assistance,

photocopying services, web 2.0 interactive sharing, cataloguing and classification, book and acquisition services, bibliographic services and inter-library loan.

4. The benefits of adopting information technologies in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, are enhances effective bibliographic control of information resources, cost-effectiveness, facilitates easy and increased accessibility to information resources, facilitates efficiency in information handling and allows new features integrated into the information services in medical libraries.
5. The challenges to the adoption of information technologies in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library are lack of ICT and other infrastructural facilities, lack of funds in libraries, poor maintenance culture, irregular power supply, lack of IT skills of medical librarians, insufficient number of professional, medical librarians and lack of vendor technical support.

5.3 Conclusion

Information technologies have revolutionised the operations and services of all libraries. With respect to medical libraries in Kwara State, Nigeria, this study reveals that electronic information resources, e-mails, Internet, databases, printers, photocopiers and computer systems have been adopted to a very high extent to perform reference services, electronic content creation, e-mail and chat assistance, photocopying services, web 2.0 interactive sharing, cataloguing and classification, book and acquisition services and bibliographic services.

This contributes to the quality of the medical libraries understudied by enhancing effective bibliographic control of information resources, aiding cost-effectiveness of the library services,

facilitating easy and increased accessibility to information resources, facilitating efficiency in information handling and allowing new features integrated into the information services in medical libraries. however, these benefits cannot be optimised because of lack of ICT and other infrastructural facilities, lack of funds, poor maintenance culture, irregular power supply, lack of IT skills of medical librarians, insufficient number of professional, medical librarians and lack of vendor technical support.

5.4 Recommendations

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

1. Management of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library State should be adequately funding their medical libraries. This will make the libraries financially robust to provide adequate ICT infrastructure and facilities needed to enhance the library services.
2. Management of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library should endeavour to be employing librarians with sound knowledge of medical or health librarianship or train their current workforce on it. The expertise of the librarians will enable them to know how to adopt the right IT for services and operations of their libraries.
3. IT developers and manufacturers should endeavour to be offering technical support to medical libraries that adopted their technologies. This will help in utilising the adopted IT for a longer period, by avoiding damages or destructions of the tools adopted.
4. Librarians in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library should cultivate a positive maintenance culture towards IT

available in their libraries. This will help them maintain the working conditions of IT tools and saves their libraries from wasting money to be repeatedly purchasing the same IT.

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KWARA STATE POLYTECHNIC, ILORIN
INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGY
DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

Questionnaire on **"Adoption of information technologies in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin, Kwara State, Nigeria"**

Dear Respondent,

Request for Response to Questionnaire

I am an undergraduate of the above-named institution, carrying out research on the above-mentioned topic. My research is in partial fulfillment of the requirements for the award of National Diploma in Library and Information Science (ND).

Your assistance is hereby requested for timely completion of this questionnaire. I am assuring you that all data provided will be treated with utmost confidentiality and used for academic purpose only.

Thank you for your anticipated cooperation.

Researcher

Section A: Demographic Characteristics of Respondents

Kindly select the option of your choice by ticking from the answers below

1. Gender: Male ( ) Female ( )
2. Age range: 21 – 30 years ( ) 31 – 40 years ( ) 41 – 50 years ( )
   51 – 60 years ( ) 61 years and above ( )
3. Marital Status: Single-parent ( ) Married ( ) Divorced ( ) Widow ( )
4. Respondent library: Kwara State Teaching Hospital Library ( ) University of Ilorin Teaching Hospital Library ( )
5. Academic qualification: ND ( ) HND ( ) BLIS ( ) MLIS ( ) PhD ( )
6. Work experience: Less than 5 years ( ) 6 – 10 years ( ) 11 – 15 years ( )
   16 – 20 years ( ) 21 – 25 years ( ) 26 years and above ( )

Section B: Information technologies adopted in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin

What are the information technologies adopted in your library?

Kindly tick (✔) "yes" if you agree with the question and "no" if you disagree and tick as many statements as applicable

S/No	Options	Yes	No
1.	Computer systems, CD/DVD Rom, Email, Printer,		
2.	Databases		
3.	SmartCard		
4.	Digital cameras		

5.	Electronic information resources		
6.	Scanners		
7.	Telephones		
8.	Photocopiers		
9.	Storage devices		
10	Barcode readers		
11.	Audio-visual resources		
12.	Internet		
13.	Printers		
14.	E-mails		
Others, please specify…….			

Section C: Services information technologies are adopted for in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin

What are services information technologies are adopted for in your library?

Kindly tick (✔) SA for "Strongly Agree," A for "Agree," D for "Disagree" and SD for "Strongly Disagree."

S/No	Options	SA	A	D	SD
1.	Book and serial acquisitions service				
2.	Classification and cataloguing				
3.	Reference service				
4.	User orientation				
5.	Circulation service				
6.	Inter-library loan				
7.	Document delivery				
8.	Electronic content creation				
9.	E-mail and chat assistance				
10.	Web 2.0 interactive sharing				
11.	Bibliographic service				
12.	Photocopying services				
	Others, please specify……				

Section D: Level of adoption of information technologies for services in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin

What is the level of adoption of information technologies in your library?

Kindly tick (✔) VHA for "**Very Highly Adopted**," H for "**Highly Adopted**," MA for "**Moderately Adopted**" and NA for "**Not Adopted**"

S/No	Options	VHA	HA	MA	NA
1.	Book and serial acquisitions service				
2.	Classification and cataloguing				
3.	Reference service				
4.	User orientation				
5.	Circulation service				
6.	Inter-library loan				
7.	Document delivery				
8.	Electronic content creation				
9.	E-mail and chat assistance				
10.	Web 2.0 interactive sharing				
11.	Bibliographic service				
12.	Photocopying services				
	Others, please specify……..				

Section E: Benefits of adopting information technologies in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin

What are the benefits of adopting information technologies in your library?

S/No	Options	SA	A	D	SD
1.	Affords users with availability of a vast array of information				
2.	Facilitates efficiency in information handling				
3.	Allows medical libraries to manage networks of knowledge resources				
4.	Provides a new platform for health information dissemination in the form of mobile health				
5.	Increases work productivity among medical librarians				
6.	Allows new features integrated into the information services in medical libraries				
7.	Facilitates easy and increased accessibility to information resources				
8.	Reduces duplication of efforts				

9.	Cost-effectiveness				
10.	Enhances effective bibliographic control of information resources				
Others, please specify……					

Section F: Challenges to the adoption of information technologies in libraries of Kwara State Teaching Hospital Library and University of Ilorin Teaching Hospital Library, Ilorin

What are the challenges to the adoption of information technologies in your library?

Kindly tick (✔) SA for "Strongly Agree," A for "Agree," D for "Disagree" and SD for "Strongly Disagree."

S/No	Options	SA	A	D	SD
1.	Poor automation of libraries				
2.	Lack of IT skills of medical librarians				
3.	Insufficient number of professional, medical librarians				
4.	Lack of knowledge of computer language				
5.	Inadequate staffing				
6.	Irregular power supply				
7.	Difficulty in accommodating the technological innovation with data created using the old rules				
8.	Lack of fund in libraries				
9.	Lack of ICT and other infrastructural facilities				
10.	Poor bandwidth				
11.	Lack of maintenance culture				
12.	Lack of vendor technical support				
13.	Lack of encouragement from the management				
14.	Staff indifference/technophobia				
	Others, please specify……				