

**DIGITISATION OF INFORMATION RESOURCES IN MUSTAPHA ABBA LIBRARY,
FEDERAL COLLEGE OF EDUCATION, YOLA**

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**A PROJECT SUBMITTED TO DEPARTMENT OF LIBRARY AND INFORMATION
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AWARD OF BACHELOR OF SCIENCE (B.LS.) DEGREE
IN LIBRARY SCIENCES OF MODIBBO ADAMA
UNIVERSITY YOLA,**

JULY, 2021

DECLARATION

I certify that this Project was done by me and the work embodied in this project is original and has not, in anywhere, been submitted for any other diploma or degree of this University or any other institution. All references cited have been duly acknowledged

JOSHUA, Rimamsikwe

And

RAYMOND, Glory

Date

DEDICATION

I sincerely dedicate this work to the God Almighty for His kindness, love, protection and guidance throughout this course of study.

APPOVAL PAGE

This project entitled “the prospects and challenges of digitisation of academic library resources for effective information service delivery in federal college of education, Yola library” meets the regulations governing the award of Bachelor of Science (B. LIS.) degree in library sciences of the Modibbo Adama University, Yola and is approved for its contribution to knowledge and literary presentation

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We also wish to express our immense gratitude to our indefatigable and indomitable, parents, we will ever be grateful to you. Finally, we must not fail to acknowledge with profound gratitude to our loving siblings whose support, encouragement, understanding and care boosted our desire to complete this work.

ABSTRACT

The aim of this research is to investigate the prospects and challenges of digitisation of academic library resources for effective information service delivery in Federal College of Education, Yola Library. Academic libraries are duly bound to acquire, preserve and disseminate information for whatever source, hence there is the need for such sources of information to be kept preserved and made available in a more convenient and accessible format. The literature reviewed focused on the general overview of services in libraries. Copies of the questionnaire were administered to the staff of FCE Library. The data obtained through the questionnaire were presented in tables and analysed using frequency, simple percentage and the mean. Based on the findings we therefore conclude that, FCE Yola library is connected with internet, with inadequate computers and audio visual materials and that the FCE Yola library resources were digitised for the purpose of ease of access, multiple access and for preservation. The study further concludes that computers, printers, scanners were the most used facilities for digitisation of library resources in FCE Yola library. Meanwhile, the study also concludes that the staff of FCE Yola library possess digitisation skills such as computer skills, reprographic skills, ability to use barcode scanner, data input expert, out of the box thinkers and content engineer skills. To some extent. Inadequate internet service providers, inadequate ICT facilities, inadequate ICT skills, lack of policy framework on ICT, lack of training

personnel and epileptic power supply were the major challenges affecting digitisation of library resources in FCE Yola library.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Some of the challenges facing the successful digitisation of library resources in academic library environment, according to Pandey & Misra include constantly changing software and hardware, funding, technophobia, inadequate technology infrastructure, technical expertise amongst others. The traditional role of the library as simply a place of storage and preservation of books and other information materials has changed overwhelmingly since the advent of information and communication technologies (ICTs). Academic libraries are duly bound to acquire, preserve and disseminate information for whatever source, hence there is the need for such sources of information to be kept preserved and made available in a more convenient and accessible format. This however calls for digitisation which is the process of converting analog (print, caving, artifacts and so on) materials to digital/electronic format (Otubelu & Ume, 2015). Ndor (2007) sees digitisation in his own passion as turning information into binary digits. According to Ndor, it is the process of translating a piece of information such as books, sound recording, picture or video into bits. Gbaje (2007) asserted that digitisation could be viewed as the process of converting non-digital born documents into digital format which includes selection of collection/material, imaging or scanning, transcribing, creating markup and index, creating metadata, processing images, uploading to the web, preserving and maintaining archival media.

Digitisation of library resources is the process of converting analogue information to a digital format (Feather & Sturges, 2003). According to Feather and Sturges, it is one of the newest

methods of managing information resources in the new information age, whereby information technology has assisted in making information accessible to people even in their homes. Traditional library materials in the form of books, papers, manuscripts, documents, etc. are converted into electronic formats; images (such as photographs or maps) are converted into digital representations using some type of scanning device (or digitiser) so that they can be displayed and manipulated on a screen. Digital institutional resources such as these, manuscripts, special monographs, research papers, or images are of very high value to academic institutions. Cooperation, automation and building of the digital library - all for the enhancement of service delivery in support of teaching and research - are the principal drivers that will shape the collective future of libraries as suppliers of information to the scholarly world (Carr, 2000).

Academic Libraries are at the fore front of providing information services to respective communities' in order to support their teaching, learning and research needs. Although most university libraries in Africa also extend their services to users from outside the university community. Effective delivery of information services that meet the needs and aspirations of citizens, decision-makers and life-long learners is a long standing goal of the information profession. The role of librarians is to support, enrich and provide superb services in person and online. This study, therefore, investigates the information service delivery methods available in academic libraries in Nigeria, the strategies in place and new ones that could be developed.

Academic libraries are duly bound to acquire, preserve and disseminate information for whatever source to its clientele, in this information age. This has led to academic libraries in Africa and Nigeria in particular, to embark on integration of technology in their operations. This serve as a mechanism for improvement and development especially in a situation where attention is drawn to the academic contents and ways of preserving them for future use. Otubelu and Ume (2015)

opined that, there is need for such sources of information to be kept, preserved and made available in a more convenient and accessible formats. Prolonging the life-span of information resources and knowledge assets of man is better carried out with information and communication technology (ICT) for easy access to and dissemination of information resources for effective service delivery.

Oyedun in Krubu and Osawaru (2011) defines academic libraries as those libraries that are mainly found in tertiary institutions; they are established to support learning, teaching and research processes. Academic libraries can be regarded as the focal point or heartbeat of its parent institution as they are primarily established to provide information resources to support the academic programmes. Igwesi (2010) noted that proper fulfillment of this role provides a sound basis for the transmission and advancement of knowledge. Over the past few years, academic libraries have been affected by advancement in information and communication technology (ICT) and its application to libraries. Its introduction has revolutionised the way information is packaged, processed, stored, retrieved and disseminated but also, how users seek and access information in the twenty-first century.

A number of scholars have defined the concept of digitisation differently. According to Gbaje (2017), digitisation is the process of converting non-digital born documents into digital format. Witten and Bridge (2013) defined it as the process of taking traditional library materials that are in the form of books and papers and converting them into electronic form where they can be stored and manipulated by a computer. Thus, digitisation entails all the sequence involved in the course of converting conventional information materials into machine readable format (digital format). Digitisation therefore involves more than the conversion of prints document to digital formats but includes policy enactment, planning and budgeting, acquisition of appropriate technology, scanning, uploading to the web or repository, preserving, maintaining archival media and the

organisation of the digital content into a navigable format (flexible and compatible programmes) for increased access and effective service delivery of the digital content to the target audience.

The digitisation of academic library resources and the intellectual output of an institution has a lot of invaluable benefits such as increasing the visibility of the library's resources, improve services delivery to the myriad of users, enhanced access to current and vast amount of information from remote sites/location as users can easily access library resources from different parts of the world no matter the distance; flexibility of information search and retrieval; it ensures better preservation of library resources by a reduced handling of the original print materials and alleviating the problems normally associated with conventional library environment such as mutilation of information resources, theft, space constraints, scarcity or limited number of copies, limited hour of operation and poor storage environment normally associated with the manual preservation. It is a veritable information source of e-learning and it offers a platform for collaboration and interoperability of libraries globally.

According to Akintunde and Anjo (2012), the idea of institutional repository in Nigeria is a current theme in tertiary institutions that have seen it as a necessity for making available their institution resources, thereby increasing their visibility and better ranking of the World Universities in particular. They further stated that this has been a healthy competition because more and more of the institutions have been devising creative means to increasing their digital contents in the public domain (online), resulting in more Nigerian contents on the internet, and particularly more openness and share-ability of institutional resources. The digitisation of library resources and research outputs of an institution is a step in the right direction, since the aim and overall objective is to preserve and improve access to library resources. The manual system of searching for information sources and utilisation in the conventional library does not permit multiple uses of the

same materials by different users. It is also inefficient and time consuming, space constraints unlike the online library system (digital library). Hence, the need to exploit the benefits of digitisation and digital library system to provide online services as well as enhancing effective and efficient information service delivery in the twenty-first century.

Brief History of FCE, Yola Library

The college library was established at the college in 1974 as an integral part and a key pillar in the laying of a concrete foundation, which can support the goals, objectives, and aspirations of the college. The college library has 4 professionals librarians, 10 Library Officers and 13 Intermediate and junior staff. Its mandate includes the provision, sustenance and promotion of library products and services to the college community to enhance and promote the goals and objectives of the college. The College Library Vision is to be a realistic and efficient provider of a focused, modern library services to support a realistic and attractive future for the college. The College Library aims to help in the efforts to instill the values of hard-work responsiveness to users, discipline and team work to ensure that staff are committed to achieving the desired goals and objectives of the college and the community at large. One of the strengths of the college library is the institutional support it enjoys which ensures commitment to deploy resources for its development. Librarians at F.C.E. Yola Library respond to questions submitted to Ask-A-Librarian. Usually a response will be sent to patrons e-mail within 24 hours, response time however depends on when a question is received. Reference librarians check the e-mail service several times during the library's working hours. F.C.E. Yola Library hours of operation are posted on the library's Web site. As an academic library, our primary role is to promote information literacy by directing our clients to authoritative sources of information and teaching them how to use those sources. Online reference services at F.C.E. Yola Library are primarily provided for the F.C.E.

Yola community and will often refer users to electronic resources requiring F.C.E. Yola authentication (user name and password). These electronic resources are available remotely from F.C.E. Yola Library website. A high level of confidentiality is maintained in keeping with ALA's Policy on Confidentiality of Library Records (1986) and Policy Concerning Confidentiality of Personally Identifiable Information about Library Users (1991). F.C.E. Yola Library staff will not respond to any informal request by a third party for personally identifiable information about any library user. Such information includes reference interviews and e-mail requests for information.

1.2 Statement of the Problem

Today, academic libraries are struggling to keep their place as the major sources of inquiry in the face of emerging digital technology. Library consumers (especially the digital natives) have high expectations from the librarians and information professionals than ever before in order to access the right information and knowledge in the right format and at the right time from wherever they are (Jain, 2013). The invaluable importance of library digitisation such as; it improves speedy access to library materials, several users can access the same information materials the same time without hindrance, it eliminate the problem of distance, improves library visibility and effective preservation of library resource and improved library services, etc, have made this become one of the major force for change in academic libraries in the digital age for the adoption of ICT and digitisation of library resources.

Although an impressive effort has been made by Nigerian academic libraries in digitising their local contents all over the country, yet progress has been significantly slow. However, scholars have observed that, it is always misleading to assume that the introduction of computer-based library (digital library system) provides perfect and trouble free information management possibilities. These perceived problems could be attributed to a number of challenges. Knowledge

of these challenges is essential for any institution to be aware of in the course of digitising its collections. It is obvious that there is still a gap which needs to be filled in order to achieve effective digitisation initiatives in academic libraries in the country. Hence, the need for this study, which intends to examine the prospects and challenges of digitisation of academic library resources for effective information services delivery in federal college of education Yola.

1.3 Aim and Objectives of the Study

The aim of this research is to investigate the digitisation of information resources in Mustapha Abba Library, Federal College of Education, Yola. The specific objectives include to:

- i. Determine the types of information resources been digitised in Mustapha Abba Library.
- ii. Ascertain the purpose of digitising library resources for information service delivery in Mustapha Abba Library.
- iii. Reveal the facilities and equipment used for digitisation for information service delivery in Mustapha Abba Library.
- iv. Ascertain the level of digitisation skills possessed by the library staff in Mustapha Abba Library.
- v. Identify the challenges affecting the digitisation of library resources in Mustapha Abba Library.

1.4 Research Questions

To achieve the foregoing objective, the following research questions are asked.

- i. What are the types of information resources being digitised in Mustapha Abba Library?
- ii. What are the purposes for digitising library resources for information service delivery in Mustapha Abba Library?

- iii. Are there facilities and equipment's for digitisation in libraries in Mustapha Abba Library?
- iv. What is the level of digitisation skills possessed by the library staff in Mustapha Abba Library?
- v. What are the challenges or problems affecting the digitisation of library resources in Mustapha Abba Library?

1.5 Scope of the Study

This research is on the digitisation of information resources in Mustapha Abba Library, Federal College of Education, Yola. It covers the Federal College of Education Yola Library. Furthermore, the study will unravel: purpose, facilities used in digitisation; types of resources digitised, extent of digitisation skills possessed by the library staff under study and challenges associated with the digitisation of library resources from 2015-2020.

1.6 Significance of the Study

This research work will be of benefit to library administrator, library system analyst, digital library management staff and research in FCE Yola. The essential value of digitisation of academic library resources in FCE Yola library are the ability to preserve information resources, providing a platform for share-ability and duplicity of data; quick access to information in a digital format from remote location. In view of this, it is hoped that; The finding of this research work will be of benefit to the library administrators, library system analysts and digital library management staff; library scholars and researchers, student of LIS profession and the general library users in FCE Yola library.

The findings of this study will help library heads/administrators of FCE Yola library to adopt effective strategies that will help them enhance their digitisation practices in libraries. The

system analysts and digital library management staff (and managers) will also find this work useful. This is because it is expected that the findings of this work will be useful as to the best practices involved in digitisation process, designs, programming and their formation of strategies that could better enhances digitisation. Furthermore, the findings of this study will be useful to the college management board, library head and the entire library staff of FCE Yola library as it will help to reveal to them the extent of the digitisation project in their library. In addition, the findings of this study will be of benefit to the library users (library community) as it will reveal to them the various library materials that are available for digitisation and when fully digitised will enable them carryout effective teaching, learning and research activities. This work will be a vital source material to researchers (LIS researchers) especially in the area of digitisation of library resources, as it will help in widening their horizon in the knowledge of digitisation in libraries. It is also hoped that the finding of the research will serve as a template for further study to be carried out in the area of digitisation.

1.7 Limitations of the Study

The researchers encountered a number of problems in the course of carrying out this study. The time frame to carry out the study was rather too short; there was also financial constraint and access to relevant information sources were major challenges encountered.

1.8 Operational Definition of Terms

Digitisation: This entails all the sequence involved in the course of converting conventional information materials into machine readable format (digital format).

Digital Library: Is a collection of documents in organised electronic form, available on the internet or on CD ROM disk.

Institutional Repository: A repository established and managed by public or private institution.

Academic Library: Academic library can be defined as libraries attached to tertiary institutions with the primary aim of supporting its learning, teaching and research activities.

Information and Communication Technology (ICT): It is an omnibus term that combines computer and telecommunication technology; it is concerned with the technology used in handling, acquiring, processing, storing and disseminating information.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 Introduction

This chapter reviews related and relevant literature on the topic. The review has been presented under the following subheadings:

- The types of information resources being digitized
- The purposes for digitising library resources for information service delivery
- Facilities and equipment's for digitisation in libraries
- The level of digitisation skills possessed by the library staff
- The challenges or problems affecting the digitisation of library resources

2.2 Conceptual Framework:

2.2.1 Types of Information Resources Being Digitized

Academic Libraries are at the fore front of providing information services to respective communities' in order to support their teaching, learning and research needs. Although most university libraries in Africa also extend their services to users from outside the university community. Effective delivery of information services that meet the needs and aspirations of citizens, decision-makers and life-long learners is a long standing goal of the information profession. The role of librarians is to support, enrich and provide superb services in person and online. This study, therefore, investigates the information service delivery methods available in academic libraries in Nigeria, the strategies in place and new ones that could be developed. Higher education in Nigeria is primarily tied to man power development and this could only be achieved through the effective use of the resources and services of academic libraries. Leo (2010) sees academic libraries as integral part of the institutions. Without the library the institution cannot

realize both its general and specific aims and objectives which among others include; teaching, research, publication and conservation of knowledge. In similar view Dollah (2012) defines academics libraries as libraries attached to universities and colleges serving the teaching, learning and research needs of the staff and students.

Accordingly, Daniel (2018) quoting Edeka defines information service to involve the in-depth analysis of the intellectual content of the literature of specialized subject area and its systematic organization and dissemination in form of bibliographies, indexes, abstracts, reviews, journals, current contents and other alerting reporting journal literature for the use of specialists. However, the academic reference librarians have to live above average in facing their challenge of providing services to the academic community because they are information driven. The librarians need to understand the needs of the consumer of information he provides. He should focus on what the patrons would like and how to deliver this rather than training the consumer to what the library offers. Bicknell (2014) argues that if the librarian tries to find out the actual information needs of users, the patron may be encouraged to follow-up question. If the reference librarian ensures that patrons find out what is needed the interaction is more likely to be a success. According to Bicknell the environment is also very important for reference transaction. Reference transaction should take place in conducive environments. This can have positive impact on the user, and the transaction can also be successful. In line with the above argument Lawal (2011) agrees that the functions of Nigeria reference librarian are two fold namely; assistance and instruction in library use, and location of library materials. The role of the reference librarian cannot be over emphasised as the reputation of modern academic libraries to a large extent depends on the ability of the librarian to meet up with current challenges of quality reference services. Therefore, reference librarian in the

context of this work is the librarian with professional knowledge that provides assistance, answer queries posed by users in search of information in an academic library.

Historically, libraries have been described as the storehouse of knowledge and been organised along traditional and functional lines of acquisition, cataloguing and loan services. The invention of printing in the mid-15th century, the wide distribution of books by the 16th century, the growth of literacy among middle classes in the 17th and 18th centuries and the 19th century's mass education movement increased both the amount of the demand for information. As early as the mid-18th century, people were complaining there simply was too much to read, too much to know (Katz, 2002). Library resource for effective services delivery arose in the late nineteenth and early twentieth centuries in response to several forces and trends, including:

- a. An increase in the number and variety of information resources available in Libraries and outside,
- b. An increase in the complexity of those information resources,
- c. These increases (above) combined together made it more difficult for people to find the resource they were looking for, and to find the information they needed within that resource, and
- d. An increase in the number and diversity of people using libraries (particularly public libraries), leading to a wider range of information needs, enquiries, and sophistication in the search for information (Janes, 2012).

Historians of library resource for effective services delivery usually trace modern concepts of reference work to Samuel Green's 1876 paper, *Personal Relations between Librarians and readers*, later published in *American Library Journal* (now *Library Journal*) (Bopp and Smith,

2011). While it is doubtful that Green actually invented the idea of library resource for effective services delivery for library Users, he was the first to speak publicly about the concept and was the first to discuss it in writing. In both his speech to the first meeting of the American Library Association and his article, Green discussed the need for librarians actively to assist members of their communities in using library resources. While the term reference did not evolve until several decades later (Rothstein, 1953), the publication of Green's article helped to popularised the new concept of reference service.

2.2.2 The Purpose of Digitising Library Resources in Academic Libraries

The word is fast changing: academic libraries are now responding to these global changes by adopting digitisation, digital library and institutional digital repositories in their various institutions. Digitisation being one of the important aspects of current global information trends fit into the library and information services for effective information dissemination, preservation of information resources and facilitating the integration of library services into the learning process of academic institution (Otubelu & Ume, 2015). It also makes library's resources available electronically, users can access the library digitized resources from their offices and halls of residence even when the library is physically closed. Most libraries are digitising materials which might not be lost in the future, such as old manuscripts, research projects, photo images, analogue maps, non - live musical recordings, government official gazettes and several other historical records, making high quality digital unpagged available electronically will reduce wear and tear of fragile items.

Pinnell-Stephens (2005) reported the digitisation of two oral history resources in Alaska,

USA to ensure preservation and greater access. Liu (2004) reported that libraries usually digitise the archive of newspapers, artifacts, maps, coins, art, music, children's literature, historical records and images of international and cultural interests such digital collections will allow the public researchers to view, read and hear the photographs, speeches and documents. The search mechanisms for information in the traditional library set- up are very slow and inefficient. This makes accessing materials in these libraries to necessitate physical contact by users. If these libraries become digitised, such library resources can be accessed online without stress. Digitisation improves access to library resources. Digital projects allow users to search for collections rapidly and comprehensively from anywhere at any time. Users can access the same material at the same time without hindrance. It also removes the problem of distance, as user do not have to travel to libraries that posse the hard copies of library materials before they can access and use such materials for learning, teaching and research works (Eke, 2011). However, the proliferation of electronic information; the dwindling budget for acquisition of library stocks; the desire to access materials in remote locations; the quest for collaboration, partnerships and resource sharing; and the ever increasing cost of preserving analogue materials, and so on are some of the forces that prompted digitisation of archives and records (Pandey & Misra, 2014). The aim of digitising library materials is for preservation and easy access by any user or researcher. Digitisation improves access to library resources. By digitising library collections, information will be accessible to all instead of a group of researchers. Digital projects allow users to search for collections rapidly and comprehensively from anywhere at any time. Digitisation makes the invisible to be visible. Several users can access the same material the same time without hindrance. It also removes the problem of distance, as users do not have to travel to libraries that possess the

hard copies of library materials before they can access and use such materials (Fabunmi, Paris & Fabunmi, 2006).

This entails that the digital library would be open at any time for consultation of materials. Materials uploaded on the website are always there for people to consult, except when erased by the website administrator. Library materials especially old manuscripts, photo images, theses, and musical recordings etc that are in danger of being lost in the future and which are mostly historical and valuable needs to be preserved for future use. There are different purposes for digitisation. Stefano (2001) highlighted that one of the advantages of digitisation is the ability to search for an item electronically. It is noted that rather than scan through table of contents in a book or newspaper, you can do a quick electronic search and find what you are looking for in seconds. It saves the time of researchers, students and corporations (Turock & Friedrich, 2010). This implies that a large number of users can access a single material at the same time. This also saves time and it goes in line with Ranganathan's fourth law of library science which states: "save the time of the reader".

Furthermore, digitisation also helps to reduce handling and use of fragile documents. Old theses such as theses of the university's first graduates of 1964 which have been steadily used for the past forty-five years have brown brittle. As these invaluable resources become old, they need less handling and an effective backup is established (Musa, 2012). Information services: Edoke (2013) describes this as activities that involve the in-depth analysis of the intellectual content of literature of specialist subject area and its systematic organisation and dissemination in form of bibliographies, indexes, abstracts, review journals, current contents and other alerting reporting, and journal literature for the use of specialists. The reference section plays an important role in provision of this information services that will inform the teaching staff, students and researchers

in their areas of interest. Display service: Citing Amah, Suleiman (1999) states that “every library should be able to display its new books, document and serial materials on racks at the beginning of every month”. Display racks are usually stationed at a strategic position within the reference section of academic libraries for users’ view. In consonance with this view, Edeka (2013) opines that, display helps to “sell” library services to users. The physical location of the library if arrived from point of view of convenience to user is perhaps the best way of drawing attention to the library services. He further stressed that; a display is the technique of collecting and arranging the information resources (books, serials, articles, theses, photographs, diagrams etc) on central theme in a prominent place for a short time in order to attract the attention and arouse the interest of users in the topic presented. This is necessary because the academic reference section owes the user to provide up-to-date accurate and relevant information for academic excellence, hence this service must be sustained. Inter-library lending services: Harrods’ Librarian Glossary describes inter-library lending as “schemes where by users of one library or information system may request their services to borrow from other library system materials not held in their own library system. Edeka (2013) observes that in 1971, Ibadan and Ile-ife entered into cooperative arrangement; the objective was to enable the young universities in Benin City to expose itself to the relatively rich information resources at the University of Ibadan. However, with technological development, inter-lending services among reference librarians in academic library are made easy, because request can be processed electronically and it is faster when both borrowing and lending libraries belong to the same electronic utility. The essence of engaging in inter-library services among academic reference librarians is to enrich its collections and provide improved and qualitative services to users.

2.2.3 Facilities and Equipment Used for Digitisation in Academic Libraries

In the light of the recent developments in Information Communication Technologies (ICTs) and the rapid rate of information explosion, libraries and librarians have been charged with the responsibility of embracing and inculcating the use of these technologies in library services and processes. This has led to the need for the transfer of its existing print resources to formats and/or mediums readable with the use of these information and communication technologies. Digitisation refers to a wide variety of steps involved in the process of conversions and making of historical and other materials globally accessible through the application of digital processes (Otubelu and Ume, 2015). In striving for survival, libraries all over the world are fast embracing digitisation processes of its resources to enhance its survival mechanism and increase its relevance in this era of gross information explosion and accessibility mediums. Mohammed (2009) noted that the development of ICT and its subsequent integration in library and information services have a greater impact on libraries and the level of its service delivery to the community. Digitisation involves the transfer of tangible information materials to digital format; thus protecting the original item from damage while providing public access to materials that might otherwise be restricted as a result of location differences (Yaya & Adeeko, 2016). This definition brings into cognisance the aspect of digitisation which sought to ensure the posterity of information bearing materials without necessarily restricting access and use by the general public. Furthermore, Akintunde and Anjo (2012) In Igwe and Uzuegbu (2013) pictures digitisation as the process of preserving, liberalizing and internationalising access to documents with the ultimate aim of improving their usability by converting them into digital form.

In response to the threats to libraries in this ICT era such as the internet, it has become the primary objective of every library to involve in the digitisation of its resources. The term digitisation has

earned a lot of research interest over the years. In the words of Baker (2007), digitisation refers to “convert content from a tangible, analog form into a digital electronic representation of that content”. In agreement Omotayo and Aboyade (2009), asserts that “digitisation refers to all the steps involved in the process of making collections of historical and other materials available online”. They further stated that digitisation is not limited to libraries but also to other categories of information dissemination centers. Digitisation addresses three main needs of libraries (Tuna, Zogo & Demirelli, 2013). These needs, according to Tuna, Zogo and Demirelli, (2013) are: preserving the document, making the document more accessible and ensuring reusability of the document. Digitisation is an electronic process of converging information from a print format to a digital format (Egberongbe, 2016). Igwe and Uzuegbu (2013) defined digitisation as “the transformation of an object from analog to digital.” They further noted that in the course of the ICT era several new technologies have emerged and are still emerging allowing the digitisation of various formats of information materials such as artifacts documents photographs sound recordings etc. Quoting Akintunde and Anjo (2012), Igwe and Uzuegbu (2013) defined digitisation as the process of preserving, liberalising and internationalising access to documents with the ultimate aim of improving their usability by converting them into digital form. Fabumi, Paris and Fabumi (2008) in their work see digitisation as “the conversion of documents and art into digital images”. Thus, from the definitions portrayed by these authors it can be deduced that digitisation is a planned and systematic process of transforming hardcopies of information resources to its electronic formats say softcopy. Planning is the brainchild of every successful project be it library related or otherwise. In planning for digitisation of library resources it is pertinent to inculcate the Copyright law its provision and limitations to such process.

Resource Sharing and Service Delivery: According to the Feather and Sturges (2003) resource sharing is “a mode of co-operation where library resources and functions are shared in common by a number of libraries”. Igwe and Uzuegbu (2013) asserts that it is an activity that results from an agreement formal or informal among libraries usually a consortium or library network to share collections data facilities personnel for the benefit of their users and to reduce the expense of collection development. Digitisation holds the advantage of providing a platform for duplicity of data and library networking. Prestige and visibility: digitisation can bring about prestige respect and visibility to a collection of information resources that is unique and of global importance. This is made true as information on the internet is viral unlike that in a library with controlled access and usage. Technological development: the availability of technological advancements in ICT calls for libraries and information centres to embrace the drives in technological development to their benefits. Thus digitisation is a contributory factor in building ICT era.

Okore (2019) observes that, resources can be people, equipment, facilities for funding or any other aid required for the completion of a project. However for the purpose of this work the resources for information services refer to all resources that are required to facilitate services in academic libraries. These include:

- i. Facilities /infrastructures: These are equipment, structure and tools that are required to achieve the stated objective of the reference section of academic libraries. These include: a good accommodation to house the collection, a well ventilated building, air condition, tables, chairs, catalogue cabinet, shelves and photocopy machines.
- ii. Personnel: This is one of the critical resources in the service of academic libraries, because no matter the amount of resources owned by the library it will amount to nothing except there are qualified personnel to initiate, mediate, select, and organise a balanced collection of materials to

meet the information needs of the clientele. Therefore, the role of a librarian is critical in providing effective services in academic libraries.

iii. Reference sources: Okey (2016) observes that “reference sources are consulted most frequently than others for specific information, rather than being read from cover to cover”. They contain facts that have been brought together from various sources and are organised for quick and easy use in the library and have alphabetical and chronological arrangement. Reference sources are specifically compiled to provide answers to any type of query that might be raised by the user of a library. They contain facts and rarely contain opinions. Reference sources are not meant to be read from cover to cover like other book materials Aina (2014). Dictionary for Library and Information Science (2004) defines reference sources as any publication from which authoritative information may be obtained, including but not limited to reference books, catalog, records, printed indexes and abstracting services, and bibliographic data bases. Therefore, for the purpose of this work reference sources can be defined as documents that are consulted when necessary in order to supply specific information desired by library users. Reference sources can appear in both printed and electronic formats.

2.2.4 The Level of Digitisation Skills Possessed by the Library Staff in Academic Libraries

The level of digital services according to Mittal (2017) notes that qualified personnel are synonymous with effective digital services. The personnel is the vital element in effective promotion of digital services. In the same vein Fard (2012) remarks that the digital librarians represent the reference services and act as the key to the effective use of digital materials in the library. However, speaking on availability of library materials, Omoniwa (2016) states that “the information aspect of the library services is that of collecting, synthesizing and disseminating up-to-date, accurate and unbiased relevant information available in books, periodicals, bulletins,

guides abstracts, indexes, bibliographies, and non-book formats which can be stored and retrieved whenever needed. Hence the effectiveness of digital and information services is measured by the competency of the librarian as well as the availability of current information materials in providing efficient and effective services in academic libraries. Information and communication technologies have made the use of reference materials and the nature of reference work considerably more effective. Brown (2014) agreed that on-line access tool such as OPAC, specialised indexes; directories etc provide access to bibliographic sources information about the net. In the same vein, Kavulya (2014) stresses that, “access to adequate library resources is essential to the attainment of superior academic skills”. Exposure to electronic databases, up-to-date books and state-of-the art facilities engenders in the user the confidence and assurance that the library is a place to constantly visit. In a related view Ozioko (2015) and Nwanchukwu (2015) advise that end users must possess some skills. Ojedokun (2001) also confirmed this as he discovered that students at the University of Botswana lacked skills and this greatly impeded their meaningful exploration of the internet. Conclusively, Nkiko (2007) observed that user education must be practically oriented where users of digital services are taught library skill, internet surfing techniques. Deducing from the above opinion, it is obvious that information and communication technologies and user education plays a greater role in measuring the effectiveness of digital services in academic libraries.

2.2.5 The Challenges Affecting the Digitisation of Library Resources in Academic Libraries

Challenges of Digitisation of Library Resources Selecting Documents: In an age of information explosion and information pollution, librarians are in a dilemma about what type of records not to be digitised. The documents in high demand today may become obsolete even tomorrow because of the vast developments in the subject, printing and publishing industry. A digitised documents deselected from the collection is lost forever. To overcome the problem, librarians should seek the

advice of subject experts in each field and users of the library about the importance of each and every record and from this list selection of records for digitisation can be done. Copyrights: The issues regarding copyright rise serious matters before librarians in digitisation. Research scholars usually include graphs, data from books and journals without prior permission of the author. In a digital library, users are always demanding back issues of journals and rare historical archives for which the library has no copyright. This may lead to serious dissatisfaction about digitisation among users, as a final solution to this matter, librarians must be given permission to digitise copyrights works in connection with digitisation. Longevity of Storage Media: Many of the storage media praised by people all over the world may become less useful only long after they become unreadable. Thus documents digitised and stored in such media become useless and their maintenance will be more difficult than print media. The digital archival media today used are magnetic tapes, CD – Rom discs and DVDs. From the scene magnetic tapes disappeared because of their short life due to demagnetisation, material decay and oxidation. During 1980's CD – ROMS emerged into the field and boasted of a longer life span of 30 -100 years. Nowadays most of the CD's go to the way of 5 1/4 diskettes. DVD having several standards pushed CD's behind the screen. The changes and improvements of storage medium put serious questions about the future of digitised materials and their alteration. Funding: Digital projects are expensive. Digitisation of archival library automation requires enormous funding due to frequent hardware and software upgrades, and increasing cost of subscription to electronic databases. Apart from inadequate fund to train archivists in African, training of archivists in digitisation a preservation of electronic format creates a herculean problem. A well-funded digitisation project assures new and improved services and sustainability of the project. Technophobia: Due to inadequate skills on information technology many traditional librarians and activists are conservative and have

phobia for computers. Because of generation gaps between the new and old professionals, computers are perceived as a threat to their status as experts. Thus, they find it difficult to cope or measure up with the requirement of the electronic/ digital age, and at the same time too reluctant to jettison the old practices for new one. Successful application of information handling technologies requires an ability to overcome staff and personal resistance to such innovation

In spite of development in Information Communication Technology, which has revolutionised librarianship, many of the academic libraries find it difficult in providing functional state of the art equipment. Oketunji (2015) confirmed that application of computers to library and information activities in Nigeria has been more of dream than reality. Mabawonku (2012) maintains that many libraries in Nigeria do not have access to internet facilities. In this information age where Hi-tech information systems have pervasively influenced all fields of human endeavour, conterminous with customers, frustration and dissatisfaction. The academic community anywhere is the greatest beneficiary of Hi-tech innovation, Communication has been made easy in the area of e-mail and other postal systems, study, research and publication. The academic community should play important role of transforming the community into information society because they have the knowledge to do so. In line with the above views, Igun (2016) notes that, academic institution anywhere in developed countries have internet communication, but in developing countries academics institutions, the lecturers and students are handicapped in this area of accessibility and availability of internet facilities, the effort of the institutions and the government put into the provision of internet have not yet been reflected in educational standard of academic community. Users need serene and airy environment that promotes concentration and mental alertness. It is pertinent to note that many academic libraries in the country are too noisy for meaningful study for lack of functional fans and air conditioners. Where they exist; they are hampered by frequent

power outage and absence of standby generator. In affirmation Bicknell in Ifeoma (2016) noted that, environment is also very important for reference transaction. Reference transaction should take place in a conducive environment. This can have positive impact on the user; the transaction can also be successful. Furthermore, many academic libraries lack good infrastructure such as good reading tables and chairs, shelves, catalog cabinet, lack of adequate space for reading and housing of reading materials. These affect the smooth running of services. The reference service is an important service that requires well equipped and furnished environment that will encourage user's patronage.

The computer must be networked, integrated and applied in the performance of routine activities. This system allows the use of online public access catalogue. ICT permits users to retrieve materials through several access points beyond the traditional author, title and subject. Proper networking makes it possible for users to login from remote locations, thus accessing the catalogue, and making reservations without physically coming to the library building. Hence both the staff and the users should be trained to have the skill of using these technologies in retrieval of information for their study and research. This will go a long way in enhancing reference service delivery to users of academic libraries. Since knowledge is power, the users of these resources should be provided with adequate knowledge in gaining access to the wide range of resources. According to Jordan (1995) advise that, academic libraries should provide access to their reference collection through improved reference services, increase exposure to library materials and improved assistance in many other ways; In relation with above view, Nkiko (2016) agrees that all heads of academic libraries must show high level of assertiveness and dynamism, persuading other policy- makers to give prominence to the teaching of use of library. It must be more practical oriented where students and staff are taught library skills, internet surfing techniques, information

literacy, referencing styles, computer appreciation and general use of audiovisual equipment. For students, appropriate credit units should be earned. The trainer must of necessity be above the trainee. This imposes serious responsibility for capacity building on the reference librarians and the entire library. Therefore, full utilisation of resources can only be achieved if the users of the academic library are aware of the services and the location of the resources in the library. Another important strategy is the finance. According to Annekwe (2017), lack of money makes impossible to maintain any form of library operations and services. Also where finance is inadequate the efficiency of the services is bound to be adversely affected. In the same vein, Igbo (2016) affirms that, finance is the bedrock of every organisation, including the academic library. For libraries to achieve the objectives for which they were established, it is very important that money should be made available. This is because it is through money that procurement and processing of materials, hiring of personnel, purchasing and maintenance of equipment are made. Hence academic reference services should be supported with enough funds so as to cope with challenges of reference and information service delivery to users. Therefore, this service has to be rendered by a qualified and trained reference librarian who is equipped with the basic knowledge of reference resources, selection tools, method of acquisition, organisation, preservation as well as dissemination of information to its clientele. Olanlokun (2013) stresses that, the quality of staff usually reflect quality of services provided. The personnel must be professionally competent and motivated to provide efficient services.

2.3 Review of Empirical Studies

Types of Information Services Delivery in Academic Library

Emezie and Nwaohiri (2013) conducted a study on 21st century librarians and effective information service delivery. This article describes the nature of the 21st century and the changing

role of academic libraries in the new millennium. It sheds light on the development of hybrid libraries as a panacea for meeting the information needs of twenty first century library users who exhibit much dexterity in using new technologies. It further explores emerging trends in information provision which can be employed by 21st century librarians to reposition the academic library for effective service delivery. Lack of competency, lack of technology literacy and inadequate power supply were highlighted as some of the challenges that hinder effective service delivery. The article submits that librarians should make efforts to acquire 21st century skills through personal training so as to be relevant and defend their profession since funds mapped for training are not always adequate. It is a known fact that libraries have witnessed significant changes in recent years. This change which is brought about by information and communication technologies has impacted on the mode of providing information services. The traditional methods of information dissemination have given way to electronic means of communication. While the developments and application of ICT in library operations have improved and facilitated the dissemination of information and access, it has equally provided new roles in information provision, dissemination and transfer. The librarian no longer plays a passive role rather he assumes an active role

In Adekanye (2016) on “public Relations in Nigerian University libraries: a critical appraisal”. The researcher adopted survey research design employed the questionnaire and mailed 8 items to 49 universities libraries in Nigeria. The sample population comprised conventional and specialized federal, state and private Universities. The aim was to determine their size of collections, printed promotional materials, promotional efforts and other public relations activities. Data from the study was analysed by use of frequency and simple percentages. It reveals that 81.25% of the libraries studied published quarterly accession list of their collection while the remaining 18.75%

do so annually. 90.62% of the respondents reported that the use of posters was not applicable in their libraries, among other findings which in a nutshell show that most Nigerian University Libraries have not done much in the area of printed promotional activities to publicize the services of their libraries. Following the findings, recommendations were proffered, some of which are; that there should be marketing and promotional plans in place in the libraries; that University librarians should use various marketing techniques to enable them understand the needs of the users and to plan effectively to meet those needs; the libraries should have written communications, marketing and promotions policy to enable it to undertake a planned promotion of its services to its community.

Purpose of Digitising Library Resources in Academic Library

Bassey and Iyishu (2017) undertook a study on Reprographic services in academic libraries in Cross River State: state -of-the art. The purpose of the study was to determine the use of reprographic service in academic library in the state. The study adopted survey research design. The instruments adopted for the study were observation and interviews. Stratified and simple random sampling technique were used in the selection of 500 users for the study (220 users from UNICAL, 160 from FCE, Obudu and 120 users from CRUTECH) Finding reveal that no academic libraries in Cross River State, Nigeria officially renders reprographic services in academic libraries. Statistically, it was found to be significantly lower than average. The study recommended that reprographic services should be encouraged in all academic libraries investigated, and elsewhere in order to reduce theft and mutilation of materials by users, library authorities should procure reprographic machines and keep them in strategic areas in the libraries to enable users to photocopy library materials especially reference and serial materials that cannot be loaned out to users. The above study adopted an instrument that will also be admitted in the current study, though

the investigation was carried out in different area of study, but reprographic services is also one of the services offered by the reference section of the academic libraries, the study was also undertake in different geo-political zone.

Facilities and Equipment Used for Digitisation

Lawrence (2015) research on Marketing of Academic Library Services for Effective Service Delivery in Delta State University Library. This research work examined the Marketing of Academic Library Services for Effective Service Delivery in Delta State University Library comprising of the three campuses (Abraka, Anwai and Oleh) of the Institution. In order to do justice to this research work, the researcher examined various definitions of marketing as proposed by renowned and seasoned professionals in the field of Marketing and Librarianship. This research work also examined marketing functions/strategies or activities that enables academic librarians to achieve an effective service delivery. This work made use of the descriptive survey research design based on its objectivity, completeness of coverage and its provision of a sound basis for efficiency and accuracy in decision making. Also this research work highlights the various services rendered by Delta State University Library, the extent of marketing of its services, channels used in marketing of its services, benefits associated with marketing of its services and the challenges encountered by librarians of Delta State University Library when marketing its services. The research work also analyzed, discussed and drew conclusion and recommendations on the possible ways of marketing academic library services for an effective service delivery.

Nneji (2018) conducted a study on Digitisation of academic library resources: A case study of Donal E. U. Ekong Library. This study investigated the digitization of academic library resources in University of Port Harcourt. Five research objectives guided the study. The research design adopted for this study was a descriptive survey. The total population for this study was thirteen

(13) library staff involved in digital library practices. As a result of the concise population, there was no sampling. The instrument for data collection was questionnaire. A total of thirteen questionnaires were distributed and distribution recorded a 100% return rate. Data were analysed using descriptive statistical tools (frequency tables and mean scores). From the analysis, the findings revealed that the need for digitisation of library resources are majorly to preserving endangered collections, increasing the visibility of institutional outputs, enhance timeless access to library information resources and promote interlibrary cooperation. The result shows that the digitisation of library resources in Donald E. U. Ekong library is at a very high extent and the librarians involved in the digitisation of library resources are competent and possesses the necessary skills required. Digitisation of library resources is challenged by several factors such as power supply, security of databases, infrastructure to contain the digitisation process, staff capacity to manage the process, users' dependency in traditional library resources, etc. and that the strategies for enhancing digitisation of library resources include the installation of alternative to power supply such as standby power generating set, solar power system, utility power systems, etc., installation of anti-virus, malware and hacks proof software, inclusion of digitisation sections while planning for library buildings, library user education should include skills needed for use of digital libraries. The study concluded that in order to remain relevant in the present digital environment, libraries especially in developing countries should make every effort to digitize their local content for preservation and easy access.

Level of Digitisation Skills Possess by the Library Staff

Toyo (2017) conducted a study on Library Resources' Digitisation and Its Impact on the Services of Academic Libraries: The Case of John Harris Library, University of Benin. This research investigated the impacts of library resources digitisation on the services of academic libraries using

John Harris Library, University of Benin, Benin City. As part of the study, research questions were formulated so as to achieve the aim and specific objectives of the study; also various literatures of scholars and authors in the field were reviewed. In order to achieve the purpose and objectives of this study, questionnaire was designed to elicit information from the respondents. The sample size for the study was forty-seven (47) library staff (professional and para-professional) which is 100% of the total population. After the total collection of data, critical analysis of the study was carried out and the major findings revealed the following: the major reasons for the digitisation of library resources at John Harris Library include the need to preserve library resources for long use and to have better search and retrieval facilities for library materials; that the main benefits of digitising library resources are that digitisation enables greater access to collections of all types and give the ability to search for library resources electronically without difficulties among others; that the impacts of digitised library resources on the services of academic libraries include helping to offer more online services to library users and providing quick and easy methods of delivering services to them and that there are many challenges facing digitisation of library resources in academic libraries. These include deterioration of digital media, funding, inadequate technology infrastructures, technological obsolescence and constantly changing hardware and software amongst others. Finally, the study was concluded that despite the tremendous benefits accrued to digitisation, both to library staff and users as well as library services, the challenges facing digitisation processes in academic libraries makes it a discouraging process.

Challenges Affecting the Digitisation of Library Resources in Academic Library

Fabunmi, Paris and Fabunmi (2009) conducted a study on digitization of Library Resources: Challenges and Implications for Policy and Planning. This paper examines the concept of digitisation, its purposes and the process of digitisation of library resources. The cognitive

flexibility, relational communication and non-verbal immediacy communication theories were used for illustration. It also discusses the challenges often encountered during digitisation and the implications for planning and policy. Digitisation implies conversion of documents and art works into digital images. Digital images here mean electronic copies of documents. Digitisation is a process in which materials are converted from the hard copies to electronic copies. The major purposes of digitalization are: to enhance access and improve preservation of library materials. A number of challenges are encountered in the process of digitising library materials. These challenges include human and technical problems, which have implications for planning and policy. It was concluded that digitisation is an essential task in modern day libraries, because of the current challenges, and the need to go digital, that is, provide online services.

Amaechi, Enweani, And Eke (2018) conducted a study on challenges to Library and Information Services (LIS) Delivery in the 21st Century: the Situation in three Academic Libraries in Imo State, Nigeria. The paper examined the challenges to transforming library and information services (LIS) for effective service delivery in three academic libraries in Imo state. The survey method was adopted for this study with questionnaire as the instrument for data collection. The target population comprises of library and information science professionals in three academic libraries in Imo State Nigeria. Availability and purposive sampling techniques was used to select the participant. The generated data were analysed using descriptive statistics, frequency counts and percentage was well illustrated. The findings revealed the challenges to effective transformation of academic libraries in the 21st century to include: poor funding, indifferent attitudes of library managers, absence of well-defined and uniform library policies and non-compliance with the demands of ICT. Transformation of library and information centres is all about improving product and services offered in Nigerian libraries to meet the needs and demands of knowledge society.

Kumar (2016) study on challenges and opportunities for academic libraries in migrating to e-resources. The findings reveal that Digitalisation of library resources is presently a global phenomenon as well as new way of managing library collection especially in academic libraries. Paper discusses various reasons for Digitalisation also shed light on process and selection criteria for digitalisation. It also focuses on issues and challenges involved in the process of digitalisation in academic libraries such as legal aspects and finances. The present study examines the changing facets of e-resources and current practices with regard to acquisition, Selection, mode of procurement, Promotion, development policy, problems and future plans. It also highlights the methods involved in acquiring e-resources and preservation strategy, also establishes that there are challenges militating against the digitisation of academic libraries and concludes with the remarks that although digitisation is challenge still information professionals/librarians must meet with the practical skills and the vision to implement it in a controlled and manageable fashion.

Nnenna & Ume (2015) conducted a research on Digitisation of Library Resources in Academic Libraries: Challenges and Implication. The advent of information and communication technology (ICT) has made imperative that library holdings must be both in digital format and traditional format. Converting the analog library holdings to digital format is indeed a herculean task. This paper discusses these challenges and proffered solutions. With the advent of information and communication Technology and the internet facilities the traditional function of the library as a place for storage and preservation of library resources has changed dramatically. Academic libraries are duly bound to acquire, preserve and disseminate information for whatever source, hence there is need for such sources of information to be kept preserved and made available in a more convenient and accessible format, this call for digitisation which is the process of converting analog (print, caving, artifacts etc) materials to digital/electronic format. A number of scholars and

authorities have defined the concept differently. For instance Ndor (2007) sees digitisation in his own passion as turning information into binary digits. It refers to the process of translating a piece of information such as books, sound recording, picture or video into bits. Thus digitisation process can be accomplished through a variety of existing technology such as digital storage media, high speed scanners and high – band width networks, digital libraries have received a boost in the last few years. The dream of digitising the vast knowledge of mankind, and making it available online through institution repositories (IRS) and library website has now become a realizable goal for information professionals in Academic libraries. Digital libraries depend on digital content. There are information resources which are born digital, having created by computational technologies and never existing in analogue format, but the majority of holding offered by digital libraries according Tollee (2002) in Okeke, Udem, Onuwrah (2015) were created through the process of digitisation, that is, the conversion of an analogue signal or code into a digital signal or code. They do this by providing tremendous amount of information with a variety of digital tools.

2.3 Summary of Literature Review

The reviewed discusses the effective services deliveries in academic libraries. It sees the digital services as any assistance given to user which aids him or her easy access to information in the library. The literature reviewed focused on the general overview of services in libraries. It highlighted the types of services offered to include: Abstracting and indexing, inter- library loan services, user instruction services, selective dissemination of information (SDI) Photocopying services, displaying, Bibliographic services, information services and online services. It equally pointed out some resources for effective services, such as infrastructural facilities, personnel and the sources for library services i.e. Encyclopedias, Almanacs, dictionaries, directories, bibliographies, biographies, electronic sources etc. The review went further to review some

hindrances to effective services, this include: inadequate funding, lack of good infrastructure and environment, lack of trained personnel, inadequate and outdated reading materials. The literature review provide the way forward for this hindrances such as; the application of information and communication technologies in library services, provision of trained personnel, compulsory user instruction for staff and students of the library, etc. There have been some previous studies carried out in the area of effective services in academic libraries some were in this research work. It is important to note that there has not been any current in-depth study or research carried out on prosspect and challenges of digitalisation of library resources for effective information service delivery in academic library in Federal College of Education Yola to be specific. Such study is very useful especially to the library management to reawaken and provide an improved service to their users. This is the gap which this study intends to fill.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discussed the procedures that employed for the study. It is presented under the following sub-headings: research design, area of the study, population, sample and sampling technique, instrument for data collection, validation of the instrument, procedure for data collection and the method of data analysis.

3.2 Research Design

The study adopted the descriptive survey design. According to Nworgu (2006) descriptive survey design is a study that aims at collecting data on something and describing it in a systematic manner. On the other hand, Afolabi (1993), notes that survey research method involves gathering of data about a target population from a sample and generalising the findings obtained from analysis of the sample to entire population. The study which involves prospect and challenges of digitalisation of library resources for effective information service delivery in Federal College of Education Library, Yola, Library lends itself to descriptive survey because it involved observing and describing a situation in library services that involves a large population.

3.3 Population of the Study

The population of the study consisted of staff in e-Library, Technical Service Unit and Reserve Unit. e-library consist of 10 staff, technical unit consist of 5 staff and reserve unit consist of 5 staff making a total of 20 Librarians. All the above mentioned staff in the institution serve as the population for the study Nworgu (2006).

Table 3.1 Sample Population

| S/N | Number of unit | Population |
|--------------|--------------------|------------|
| 1 | e-library unit | 10 |
| 2 | Technical division | 5 |
| 3 | Reserve unit | 5 |
| Total | | 20 |

3.4 Sample and Sampling Technique

Due to the small number involved, the entire population of 20 staff in the e-Library, Technical Service and Reserve Units were used for the study. This technique is more appropriate because of the nature of population of staff of the institution for the study

3.5 Instrument for Data Collection

Questionnaire was used to generate data for the study. The questionnaires were constructed by the researchers based on the research questions earlier formulated to guide the study. The questionnaires are divided into three section, section A consist of the demographic characteristics of the respondent, section B consist of technology adoption on quality library service delivery, section C consist of general information about e-library

3.6 Method of Data Collection

Copies of the questionnaire were administered to the staff of FCE Library by the researcher through personal contact.

3.7 Method of Data Analysis

The data obtained through the questionnaire were presented in tables and analyse using frequency, simple percentage and the mean. Cluster in both questionnaires were opinion based with response

options of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). These were assign weighting of 4, 3, 2, and 1 respectively

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

In this chapter, results of the study are presented according to the research questions. Data relevant to each research questions are presented in tables and analysed using frequency, percentages and the mean. Frequency and percentages are used in tables 2 and 4, while the mean is used in tables 2 and 5. At the end of the chapter, a summary of major findings was presented.

4.2 Response Rate

Librarians were requested to indicate how often certain services were provided in their library. The data is presented in the table below

Table 4.1: Numbers of Questionnaire Distributed

| Option | Frequency | Percentage |
|---------------------------|------------------|-------------------|
| Questionnaire Distributed | 20 | 100 |
| Total | 20 | 100 |

Source: Field survey, 2021

As earlier indicated, the sample population for the study was 20 for both users and staff. Such was the number of questionnaires administered. This represents 100 percent of the total sample population of Librarians showing a reasonable high percentage.

4.3 Data Presentation and Results

Table 4.2: Demographic Characteristics of Respondents

| Option | Frequency | Percentage |
|----------------|-----------|------------|
| Gender | | |
| Male | 15 | 75 |
| Female | 5 | 25 |
| Total | 20 | 100 |
| Marital status | | |
| Single | 5 | 25 |
| Married | 10 | 50 |
| Others | 5 | 25 |
| Total | 20 | 100 |
| Age | | |
| 15-20 | 3 | 15 |
| 21-25 | 7 | 35 |
| 26 above | 10 | 50 |
| Total | 20 | 100 |

Source: Field survey, 2021

The above table showed the demographic characteristics of respondents for the gender of respondents, 15 were male representing 75%, while, 5 were female representing 25%. For the marital status, 5 respondents were single representing 25% respectively, while, 10 were married representing 50%. For age distribution of respondents 3 were 15-20 years of age representing 15%, 7 were 21-25 years of age representing 35% and 10 were 26 above years of age representing 50%

Research Question one: What are the types of information resources being digitized in Mustapha Abba Library?

The table below showed the types of information resources been digitised

Table 4.3: Information resources been digitised in Mustapha Abba Library

| Option | Frequency | Percentage |
|----------------------------------------------------------|------------------|-------------------|
| Is your library have website? | | |
| Yes | 13 | 65 |
| No | 7 | 35 |
| Total | 20 | 100 |
| Is there digitized books in the library? | | |
| Yes | 7 | 35 |
| No | 13 | 65 |
| Total | 20 | 100 |
| Do you have computers in the library? | | |
| Yes | 11 | 55 |
| No | 9 | 45 |
| Total | 20 | 100 |
| Are the computers in the library adequate for all staff? | | |
| Yes | 5 | 25 |
| No | 15 | 75 |
| Total | 20 | 100 |
| Is there audio visual materials in the library? | | |
| Yes | 5 | 25 |
| No | 15 | 75 |
| Total | 20 | 100 |

Source: Field survey, 2021

The table above showed information resources in FCE Yola. 13 respondents representing 65% say the library have website, while, 7 representing 35% said not connected. 7 respondents representing 35% said there is digitised books in the library while, 13 representing 65% said no digitised books. 11 respondents representing 55% said there were computers in the library, while, 9 representing 45% said no computers in the library. 5 respondents representing 25% said computers in the library were adequate for all staff, while, 15 representing 75% said they were not adequate. 5 respondents representing 25% said there is audio visual materials in the library, while, 15 representing 75% said there were no audio visual materials in the library

Research Question two: What are the purposes for digitising library resources for information service delivery in Federal College of Education, Yola?

The purposes for digitising library resources for information service delivery in Mustapha Abba Library are shown in table 4.4 below

Table 4.4: Purpose of Digitising Library resources for information services delivery in FCE Yola Library NOTE: SA (strongly agree), A (agree), D (disagree) SD (strongly disagree)

| Purpose | SA | A | D | SD | Mean |
|------------------------------------------|-----------|----------|----------|-----------|-------------|
| Easy access to information resources | 10 | 5 | 3 | 2 | 3.28 |
| Multiple access to information resources | 8 | 6 | 5 | 1 | 3.14 |
| Preservation of information resources | 12 | 3 | 2 | 3 | 2.71 |
| Enable automation | 5 | 5 | 8 | 2 | 2.86 |
| Increase data quality | 2 | 6 | 8 | 4 | 2.63 |
| Intellectual control | 7 | 4 | 5 | 4 | 2.39 |

Source: Field survey, 2021

The table above showed that easy access to information resources, multiple access to information resources, preservation of information resources, automation and increase data quality had overall mean of 3.28, 3.14, 2.71, 2.86 and 2.63 respectively. Intellectual control is less often rendered as it attracted below the acceptable average of 2.50. This score is therefore rejected (R). The response follows the same trend with the mean scores. Easy access to information resources and multiple access to information resources remains the services most often rendered.

Research Question three: Are there facilities and equipment's for digitisation in libraries in Federal College of Education, Yola, Library?

The facilities and equipment's available for digitisation in libraries in Federal College of Education, Yola, Library are shown in table 4.5 below

Table 4.5: Facilities and equipment used for digitalisation for information service delivery in FCE Yola Library

| EQUIPTMENTS | YES F (%) | NO F (%) |
|----------------------|------------------|-----------------|
| Scanner | 15(75%) | 5(25%) |
| Barcode scanner | 11(55%) | 9(45%) |
| Computer | 18(90%) | 2(10%) |
| Camera | 7(35%) | 13(65%) |
| Printer | 12(60%) | 8(40%) |
| Reprographic system | 8(40%) | 12(60%) |
| Robotic book-scanner | 7(35%) | 13(60%) |
| Photo scanner | 5(25%) | 15(75%) |
| Sheet feed scanner | 14(70%) | 6(30%) |

Source: Field survey, 2021

The above table showed facilities and equipment available in the library. 15 respondents representing 75% said there is Scanner in the library, while 5 representing 25% said no. 11 representing 55% said they have Barcode scanner in your Library, while 9 representing 45% said no. 18 representing 90% said they have Computer in your Library, while 2 representing 10% said no. 7 representing 35% said there is Camera in your Library, while, 13 representing 65% said no. 12 representing 60% said there is Printer in your Library, while, 8 representing 40% said no. 8 representing 40% said there is Reprographic system in your Library, while 12 representing 60% said no. 7 representing 35% said they have Robotic book-scanner in your Library, while 13 representing 65% said no. 5 representing 25% said there is Photo scanner in your Library, while 15 representing 75% said no. 14 representing 70% said they have Sheet feed scanners in your Library, while, 6 representing 30% said no.

Research Question four: What is the level of digitisation skills possessed by the library staff in Federal College of Education, Yola, Library?

The digitisation skills possessed by the library staff in Federal College of Education, Yola, Library are shown in table 4.6 below

Table 4.6: Level of digitalisation skills possessed by the library staff in FCE Yola Library NOTE: VH (Very high), H (high), L (low), VL (Very low)

| Digitalisation skills | VH | H | L | VL | Mean |
|--------------------------------|-----------|----------|----------|-----------|-------------|
| Computer skills | 12 | 3 | 3 | 2 | 2.73 |
| Ability to use Barcode scanner | 9 | 7 | 2 | 2 | 2.74 |
| Reprographic literacy skills | 5 | 6 | 5 | 4 | 2.82 |
| Data fluency experts | 4 | 8 | 6 | 2 | 2.77 |
| Out-of-the-box thinkers | 10 | 5 | 4 | 1 | 2.65 |
| People skills manager | 11 | 5 | 3 | 1 | 2.47 |
| Content Engineer skills | 6 | 7 | 5 | 2 | 2.71 |

Source: Field survey, 2021

Out of the overall mean scores among library staff, only people skills manager falls below the average scores being 2.47. The highest overall mean scores were 2.82, 2.77, 2.74, 2.73 and 2.71 for reprographic literacy skills, data fluency experts, ability to use barcode scanner, computer skills and content engineer skills respectively, while, out-of-the-box thinkers has the average mean scores of 2.65.

Research Question five: What are the challenges or problems affecting the digitisation of library resources in Federal College of Education, Yola, Library?

The challenges or problems affecting the digitisation of library resources in Federal College of Education, Yola, Library are shown in table 4.7 below

Table 4.7: challenges affecting the digitisation of library resources in FCE Yola library

| CHALLENGES | YES F (%) | NO F (%) |
|---------------------------------------------------------|------------------|-----------------|
| Inadequate ICT facilities for staff | 17(85%) | 3(15%) |
| Inadequate and epileptic power supply | 12(60%) | 8(40%) |
| Inadequate ICT skills | 9(45%) | 11(55%) |
| Lack of policy frame work on ICT in the country | 11(55%) | 9(45%) |
| Inadequate of effective internet service provider (ISP) | 18(90%) | 2(10%) |
| Lack of capacity/competence | 1(5%) | 19(95%) |
| Lack of trained personnel | 2(10%) | 18(90%) |

Source: Field survey, 2021

The table above showed the challenges affecting the digitisation of information resources in FCE Yola Library. 17 respondents representing 85% said inadequate ICT facilities for staff at a time is the major challenge affecting digitisation of information resources, 3 respondents representing 15% said no. 12 respondents representing 60% said inadequate and epileptic power supply is the problem affecting digitisation, 8 respondents representing 40% said no. 9 respondents representing 45% hold that the challenges affecting digitisation is inadequate ICT skills, 11 respondents representing 55% said no. 11 respondents representing 55% said lack of policy framework on ICT is the challenges affecting digitisation, while 9 respondents representing 45% said no. 18

respondents representing 90% said inadequate number of effective internet service provider (ISP) is the major challenges affecting digitisation, 2 respondents representing 10% said no. 1 respondent representing 5% said lack of capacity/competence is the challenges affecting digitisation, 19 respondents representing 95% said no. 2 respondents representing 10% said lack of trained personnel is the challenges, while 18 respondents representing 90% said no respectively.

4.4 Summary of Findings

Based on the results obtained for this research, the following were the major findings;

- i. The study revealed that Mustapha Abba Library have website, with inadequate computers and audio visual materials.
- ii. The study further found that the FCE Yola library resources were digitised for the purpose of ease of access multiple access, multiple access to information resources, preservation of information resources, automation and increase data quality.
- iii. The study revealed that computers, printers, scanners were the most used facilities for digitisation of library resources in FCE Yola library.
- iv. Meanwhile, the study revealed that the staff of FCE Yola library possess digitisation skills such as computer skills, ability to use barcode scanner, reprographic literacy skills, out of the box thinkers and content engineer skills.
- v. Inadequate internet service providers, inadequate ICT facilities, inadequate ICT skills, epileptic power supply, lack of policy framework on ICT, inadequate number of internet service provider were the major challenges affecting digitisation of library resources in FCE Yola library.

4.5 Discussion of Findings

Data collected and analysed along this line shows that Mustapha Abba Library have website from the perspectives of both users and staff. It is no surprise that there are not digitised books in the library. This not very important as it would not go a long way to enhance the study and research endeavors of these groups of users. Computers services and audio visual materials are shown to be provided often in the institutions. These are listed together as reference services in Edoka (2000). These services must have been provided to make the periodicals accessible to users. These are very important because periodical articles would be lost without them. The journals for instance are a “hot cake” in research endeavours.

The list of service delivery shows that Easy access to information resources are readily available in the libraries. Multiple access to information resources attract the highest percentages followed by Enable automation and then Preservation of information resources. This result is not a surprise as these are the resources that readily come to mind when information service delivery or section is mentioned. It shows that the libraries, particularly their information service delivery sections are cut off from the information super highway which has democratised access to information around the world. Today emphasis has shifted from “owning to accesses” to information. Academic libraries in FCE Yola must exploit Man’s most impactful invention of all time-the internet otherwise they stand the risk of being left behind if they are not already there.

Data analysed on above subject matter reveals that library orientation/instruction and ready equipment for digitisation are the most popular methods used for information service delivery. These are attested to by both users and staff alike. Library orientations when effectively carried out go a long way to ease the burden and pressure of prospective users could bring to bear on the

libraries/staff. Both groups of respondents are also agreed on the use of Computer, scanner, Barcode scanner and Printer. These equipments are most likely to be explored by academic staff and researches. It is often used to keep them aware of current developments in their areas of specializations.

Another important service often carried out in the institutions is reprographic service. This is more compelling given the reserved nature of the materials. A part from Jack's view (1985) quoted in Akanya (2006) that photocopying facilities reduce mutilation of books and theft to the barest minimum, it also generates revenue to the library. This is a welcome development because no matter the quality and quantity of materials, they are valueless if they cannot be accessed by users for whom they are meant. There is need to properly articulate and execute user instruction service among all category of users to ensure effective library service in general and service delivery in particular.

Majority of users in the schools are of the opinion that digitisation skills possessed by the library staff are not effective. However, majority of staff opined to the contrary. This calls for concern because the staff cannot stand as judges in their own case. This is in spite of resources and services agreed to be available or provided in the sections. It is true however, that mere availability of resources and services does not necessarily translate to effectiveness. On manual, some factors like recency, reputation of the authority and publishers, physical features, etc. should be considered. On staff, personal characteristics should be looked into. These include areas such as good knowledge of digital skills and services, approachability. Sound professional qualification, good public relations, availability, etc. Evaluation of staff helps to provide a feedback to them on their performances and to see areas to improve upon.

It was earlier established among users that ICT facilities for staff at a time, epileptic power supply, ICT skills, policy framework on ICTs in the country, capacity/competence and trained personnel in academic libraries in FCE Yola are not effective. Each of the phenomenon listed as possible challenges affecting the digitization of library resources in FCE Yola library was accented to as such by both users and staff except that the letter disagreed with, staff indifference and inadequate opening hours being among the challenges. Inadequate funding has remained a most irrepressible monster among the challenges to effective services. Most other factors are directly or indirectly linked to poor funding. This has made most academic libraries to stock outdated materials in their sections to the detriment of users. These issues were bemoaned earlier in Kantumoja (1992) and Olanlokun (2003). Other phenomena such as poor infrastructures, insufficient materials and outdated reference materials are obviously off-shots of poor funding. With adequate funding, necessary infrastructures, and sufficient and up- to-date reference materials would be provided.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMENDATION

5.1 Introduction

This chapter contains summary, conclusion and recommendations

5.2 Summary

Chapter one basically introduced the study by a brief background, the objective and scope of the study. Present a statement on the research problem and defined the various concept involved and also the structure of the study.

Chapter two focused on the literature review, scholarly literature related to types of information resources in academic libraries, the purpose of digitising library resources in academic libraries, facilities and equipment used for digitisation in academic libraries, the level of digitisation skills possessed by the library staff in academic libraries, the challenges affecting the digitisation of library resources in academic libraries and review of empirical studies on types of information services delivery in academic libraries, the purpose of digitising library resources in academic libraries, facilities and equipment used for digitisation in academic libraries, the level of digitisation skills possessed by the library staff in academic libraries and the challenges affecting the digitisation of library resources in academic libraries. Such study is very useful especially to the library management to reawaken and provide an improved service to their users. Hence the gap which this study had filled.

Chapter three discussed the procedures that will be employed for the study. It is presented under the following sub-headings: research design, area of the study, population, sample and sampling technique, instrument for data collection, validation of the instrument, procedure for data collection and the method of data analysis

In chapter four, results of the study are presented according to the research questions. Data relevant to each research questions are presented in tables and analysed using frequency, percentages and the mean. Frequency and percentages are used in tables 2 and 4, while the mean is used in tables 2 and 5. At the end of the chapter, a summary of major findings was presented and the findings were discussed

Chapter five contains the summary, conclusion and recommendations.

5.3 Conclusion

Based on the findings we therefore conclude that, Mustapha Abba Library have website, with inadequate computers and audio visual materials and that the FCE Yola library resources were digitised for the purpose of ease of access, multiple access and for preservation. the study further concludes that computers, printers, scanners were the most used facilities for digitisation of library resources in FCE Yola library. Meanwhile, the study also conclude that the staff of FCE Yola library possess digitisation skills to some extent. Inadequate internet service providers, inadequate ICT facilities and epileptic power supply were the major challenges affecting digitisation of library resources in FCE Yola library.

Implication

Based on the findings we therefore conclude that, Mustapha Abba Library have website, with inadequate computers. The inadequacy of computer in the library will affect the multiple access to information in the library. The staff of the library must possess digitisation skills to keep to a good standard operating in digitisation of information resources, inadequate internet service provider. Inadequate ICT facilities, inadequate ICT skills, epileptic power supply, lack of policy framework on ICT, inadequate number of internet service provider were the major challenges affecting

digitisation of library resources, these problems will affect the smooth functionality of digitisation in the library, the library have to address those problems to maintain good standard of digitisation.

5.4 Recommendations

Based on the findings and conclusions of the study, the following recommendations have been drawn.

- i. FCE Yola library should be connected with internet, adequate computers and audio visual materials to enhance proper reading and research.
- ii. The study further recommend that the FCE Yola library resources should be digitised for the purpose of ease of access multiple access and for preservation.
- iii. We also recomend that computers, printers, scanners should be the most used facilities for digitisation of library resources in FCE Yola library.
- iv. Meanwhile, the study further recommends that the staff of FCE Yola library should possess digitisation skills to for proper handling of digital materials.
- v. We also recommend that adequate internet service providers, adequate ICT facilities and epileptic power supply should be made available so as to reduce the major challenges affecting digitisation of library resources in FCE Yola library.

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Appendix

Department of library
and Information science,
Faculty of social science,
Modibbo Aama University,
Yola.

Dear Respondent

QUESTIONNAIRE

We are undergraduate students of the above named address, carrying out a research on the topic “Digitalisation of information resources in Mustapha Abba Library, Federal College of Education Yola, Adamawa State of Nigeria”. This questionnaire is designed to aid the collection of data for the research. Please provide the necessary information objectively as possible. Any information received shall be treated with strict confidentiality. They are meant for academic purposes only.

Thanks in anticipation of your cooperation

Joshua Rimamsikwe
LIS/15U/2660

Raymond Glory
LIS/15U/2382

Demographic data

1. What is your gender?

(a) Male (b) Female

2. Marital status

(a) Single (b) Married (c) Others

3. What is your age?

(a) 15-20 (b) 21-25 (c) 26 above **Types of Information resources in Mustapha Abba Library, FCE Yola.****Indicate by ticking Yes or No**

1. Do your library have website?

Yes No

2. Is there a digitised books in the library?

Yes No

3. Do you have computers in the library?

Yes No

4. Are the computers in the library adequate for all staff?

Yes No

5. Is there audio visual materials in the library?

Yes No

Please indicate the purpose of digitising library resources for information service delivery by ticking SA (Strongly agree); A (agree); D (Disagree); SD (Strongly disagree).

| Purpose | SA | A | D | SD |
|------------------------------------------|----|---|---|----|
| Easy access to information resources | | | | |
| Multiple access to information resources | | | | |
| Preservation of information resources | | | | |
| Enable automation | | | | |
| Increase data quality | | | | |
| Intellectual control | | | | |

Facilities and equipment used for digitising information resources in Mustapha Abba Library, FCE Yola

Are the below equipment available for digitising information resources in your library?

Please indicate by ticking Yes or No

| Equipment | Yes | No |
|----------------------|------------|-----------|
| Scanner | | |
| Barcode scanner | | |
| Computer | | |
| Camera | | |
| Printer | | |
| Reprographic system | | |
| Robotic book-scanner | | |
| Photo scanner | | |
| Sheet feed scanners | | |

Indicate the extent to which you ascertain the level of digitisation skills possessed by the library staff NOTE: VH (very high) H (high) L (low) VL (very low)

| Digitisation skills | VH | H | L | VL |
|--------------------------------|-----------|----------|----------|-----------|
| Computer skills | | | | |
| Ability to use barcode scanner | | | | |
| Reprographic literacy skills | | | | |
| Data fluency experts | | | | |
| Out-of-the-box thinkers | | | | |
| People skills manager | | | | |
| Content Engineer skills | | | | |

Challenges and problems affecting digitisation of information resources in Mustapha Abba Library, FCE Yola.

Are the challenges below affecting digitisation of information resources in your library?

Please indicate by ticking Yes or No

| Challenges | Yes | No |
|-----------------------------------------------------------------|------------|-----------|
| Inadequate ICT facilities for staff at a time | | |
| Inadequate and epileptic power supply | | |
| Inadequate ICT skill | | |
| Lack of Policy framework on ICTs in the country | | |
| Inadequate number of effective internet service providers (ISP) | | |
| Lack of capacity/competence | | |
| Lack of trained personnel | | |