Facilitating Conditions, Social Influence, and the Use of Library Technology by Academic Librarians in the Federal Capital Territory, Abuja

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Certification

This is to certify that this thesis was carried out by **Victoria Deyeh OGUNMOLA** with Matriculation Number **LCU/PG/002305** a student in the Department of Information Management under my supervision in the Faculty of Communication and Information Science, Lead City University, Ibadan, Nigeria.

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Dedication

This thesis is dedicated to God Almighty for His sufficient grace over my life.

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Abstract

The use of technology has become non-negotiable for academic libraries aiming to provide cutting edge services to their clientele. However, evidence shows that the use of technology by library personnel may depend on various factors. This study therefore investigates the influence of facilitating conditions and social influence on the use of library technology by academic librarians in Federal Capital Territory, Abuja Nigeria. The study adopted a descriptive research survey design. The population of the study consists of all library personnel (Librarians and Library Officers) in universities in the Federal Capital Territory, Abuja. Total enumeration was used due to the size of the population. A structured questionnaire adapted from existing studies was used for data collection. The Cronbach alpha value for the dimensions are; facilitating condition (0.83), and social influence (0.81). The test of hypothesis revealed that facilitating ($R2 = 0.265$, $p<0.05$) and social influence ($R2 = 0.305$, $p<0.05$) individually have significant influence on the use of technology among the respondents. Similarly, it was also found that both variables have combined significant influence ($R2 = 0.421$, $p<0.05$) on the use of technology. The study concluded that there are still some underlying factors that must be addressed before academic libraries in the FCT can reach the level of technology use that will enable them provide world class library services. It was therefore recommended that Universities in the FCT have to work hand in hand with the management of their academic libraries to invest in relevant technologies needed in the provision of modern information services

Keywords: Library Services, Library Technology, Facilitating Conditions, Social Influence, Technology Use,

Word Count: 251

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Chapter One

Introduction

1.1 Background to the Study

The use of technology for library service delivery by academic libraries is important for various reasons but they may not be able to effectively use these resources due to the influence of several factors that include facilitating conditions and social influence. Academic librarians are supposed to be model professionals setting the pace for other types of libraries in the use of technology for library service delivery. Librarianship as a profession has become heavily reliant on information technology and academic libraries are expected to play a leading role in the adoption of technology in carrying out library and information services provision activities. Academic librarians are expected to be able to use library management systems, web portals, digital referencing tools, digital library applications, cloud computing and other technologies relating to library activities[1].

For instance, researchers opined that the modern-day academic library is a digital hub for digital education, or technology-assisted education because they are often expected to provide the essential resources, space, and facilities for the members of the academic community involved in the use of learning technologies. The use of digital technology, the development of a new scholarly communication model, the transformation of teaching and learning styles and research paradigms, the enrichment of digital academic products, all of these push the contents and methods of library services to keep up with the times, and all of these reshape the new states of library spaces, resources, and

services[2]. The need to meet these demands has expanded the purpose and the expected frequency of use of library technology for 21st-century academic librarians.

The librarians can make use of technology for various purposes such as library management systems to manage both print and electronic library collection, creation of information products such as indexes and abstracts as well as rendering remote library and information services to various user groups by leveraging various technology and the internet. In addition to this, academic librarians are also expected to be able to use web portal applications to interact with other libraries in the country, for various purposes such as library cooperation, resource sharing and to form consortia for the purpose of achieving collective bargaining in subscribing to digital information resources[3].

The use of library technology by academic librarians also covers the use of cloud computing applications to safeguard various sensitive information and document in digital format. Maintaining the resources available in electronic formats also demands the use of digital library applications to manage information resources created in digital format or those that have been digitized due to the values that are attributed to their information contents. The ability to use these technologies will not only raise the profile of academic librarians but also lead to large improvements in library service provision and increased patronage of the library by users who will be satisfied with the library services.

In addition to the core or traditional library services for which librarians can use technology the new environment in which libraries operate means that academic librarians have to use technology for collaborating with faculty in research, teaching, and scholarship. indeed researchers have opined that traditional library services such as

reference services, charging and discharging, etc collection management are rapidly losing their status as primary responsibilities of librarians, while new functions related to research support, data management, bibliometrics, digital initiatives, scholarly communication, and user experience are increasingly becoming part of the academic librarians responsibilities[4]. While librarians in many institutions have adopted some of the new functions and are in the process of reinventing their roles, others are in the early stages of doing so.

However, the available evidence points to the fact that the majority of academic librarians in Nigeria are not renowned for their use of technology in carrying out their activities[6]. Many librarians have been reported to abandon the technology that has been acquired at a huge cost to the library management and continue to use the manual systems despite the fact that it is slow, error-prone, and time-consuming. Many academic librarians have also failed to take advantage of several open-source software available that can make their job easier. This reluctance to adopt technologies in the provision of library and information services among academic librarians may be due to facilitating conditions and social influence that surround the use of technology among librarians

Facilitating condition and social influence are constructs from the Unified Theory of Acceptance and Use of Technology (UTAUT), one of the popular models used to measure the likelihood of technology acceptance and use among various categories of people. Facilitating conditions measure the perception of potential technology users regarding the availability of necessary facilities, technical support, and personal skills required to make use of new technology. This means that facilitating conditions in the context of academic librarians refers to their perception of necessary infrastructure,

technical support, and training opportunities that have been put in place by academic libraries to make it easy for their personnel to make use of relevant library technology for the provision of library and information services in academic libraries. Perhaps the key among the three construct of facilitating conditions as outlined in this study is the perception of the available infrastructural support.

The use of technology in academic libraries, as well as in any other organization, depends greatly on the availability of the necessary infrastructure or the perception among the personnel that the organization can provide the needed infrastructure for the effective use of information technology. The infrastructural facilities in the context of library technology use include the availability of high speed internet, constant power supply, computer systems and other relevant devices such as tablets, mobile phones, laptops and other relevant resources necessary for effective use of technologies in the provision of academic library services. Researchers have observed that academic librarians would be encouraged to use technologies in the provision of library services when the libraries they work for are able to provide facilities such as; adequate computers, high internet bandwidth, regular power supply and a generally friendly environment for the use of technologies among others[7].

In addition, when academic librarians are assured that they can use their preferred technology in a seamless in the library with the relevant technical support whenever they face any challenges. The use of technology demands that users are able to get the necessary help when they need to solve emerging issues[8]. The introduction of library technology into Nigerian libraries have been plagued with lack of technical support which have affected its success. The reason for failure of the first library technology such

as Alice for Windows, X-Lib, TinLIb and others have been attributed to the refusal of the developers to release the source code or provide prompt technical support when there are issues with the software[9]. The result of this is that librarians were always frustrated with the software and, in time, they revert back to the use of manual services. However, the challenges of technical support also persist with the emergence of open source software.

Open source software development have led to the development of library software such as Koha integrated library software, institutional repository software and other technologies in the library that librarians can use for free. In addition, these software also have sources codes which means that they can be modified and customized to fit the needs of each library[10]. However, the software have also failed to gain ground in Nigeria as expected due to a lack of technical support. Effective library automation demands that the majority, if not all librarians make use of technology to deliver library services and carry out library routines. However, not all librarians can become tech experts so there is a need for academic libraries to engage the services of Information Technology experts either permanently or on a contract basis to provide support whenever these professionals need help in solving issues relating to the use of technologies.

Studies on the use of library technology in Nigerian academic libraries have indicated that many libraries lack adequate infrastructure to drive the effective utilization of the available technologies. Some libraries do not have adequate computers, some lack constant power supply while in some libraries, the internet connection is either nonexistent or too slow to facilitate the seamless use of library technologies. When all of the necessary infrastructures is not put in place, it can negatively affect the use of library technologies as the constant downtime would discourage academic librarians from

making use of the technologies and instead revert to the use of manual systems. No matter the level of technical support available, the exposure of academic librarians to training and development regarding the use of library technologies is also a key determinant of technology use among academic librarians.

The key component of library automation projects is training[11]. Academic librarians are expected to deploy technologies to meet the needs of various categories of users such as students, lecturers, and researchers whose information needs are constantly evolving. So they need to be knowledgeable in various technologies in order to deliver satisfactory service to their users. However, they are often constrained by inadequate training. It is vital that librarians should be provided with opportunities to upgrade their knowledge and skills and that they supplement their core skills with the new technology that is available. An academic librarian's skills are vital in managing collection development and delivering quality services to their users.

Technological advancement in all fields of human endeavor is relentless so it is essential that academic librarians are constantly in tune with the changes and the new technological innovations emerging in their field. The impact of technological advancements on libraries affects library structure because the changes may cause reorganization of the responsibilities of librarians within the departments. This implies that existing librarians need to be exposed to continuous learning initiatives in order to embrace new job functions and changes. Effective use of technology for academic library services requires librarians to have up-to-date knowledge and skills in the use of these technologies. The knowledge and skills can only be acquired through training and development[12].

Training in the use of library technology is the introduction of academic librarians to the rudiments of each relevant technology by experts in the use of the technologies. The training can be in the form of orientation which includes sensitizing academic librarians on the importance and benefits of using the technology. This type of training is important because it helps change the mindset of academic librarians who may have technophobia or who would prefer the other manual system because of uncertainties concerning the advantages and disadvantages of moving to a new system. Orientation is thus an important aspect of training provided to encourage academic librarians to make use of library technology. The provision and effectiveness of this training will influence the intention of the academic librarians to use library technology.

The orientation should be followed by technical training on the use of the system. However, while training and capacity building for librarians targeted towards the use of library technologies have become an integral part of some academic libraries, there are still many libraries in Nigeria where academic librarians do not have access to training which can adversely affect the use of library technology. In addition, while training and other aspects of facilitating conditions such as infrastructure and technical support have been identified as factors in the use of technology by library, there are others such as the social influence that motivate or discourage academic librarians from using technology.

Social influence on the other hand focus on the perception of individuals about the opinions and expectation of people they respect and people who are close to them regarding the use of a particular technology. Both of these can determine technology use among librarians. Researchers have indicated that academic librarians, like other human beings, are influenced by the opinion of people around them when making decisions

about the use of technology[13]. In measuring social influence researchers often look at the metrics such as organization policy, mentoring and peer influence. All of these have been examined in one form or the other as part of the social influence on the acceptance of technology among librarians[14].

Organizational policy refers to the existing rules or practices in particular academic libraries as dictated by their parent institutions. For instance, the majority of universities have taken to the use of online learning management platforms during and after the COVID-19 pandemic. This demands that teaching and learning activities are carried out on digital platforms. Many academic libraries have had to adjust to the 'new normal by raising their level of technology application in the provision of library services [15,16]. Academic librarians working in this environment may be encouraged to take up the use of technology based on the perceived expectation from their organisations. However, even when the organization policy demands it, some librarians may lack the motivation to use library technology. This is where the role of mentoring comes in.

Mentoring is a process where a professional who has acquired a lot of knowledge over the years through experience, understands the needs of others who are desirous of acquiring similar knowledge and is willing to pass such knowledge to them. The knowledgeable and experienced professional is the mentor while the young librarian seeking knowledge and experience is the mentee[17]. Mentors are experienced professionals who are well-versed in the use of library technology and have decided to encourage younger librarians or newly employed librarians to make use of technology to boost their productivity. Mentors serve as role models to other librarians whom they train, motivate, and challenge to become better professionals[18]. The impact of these factors is

expected to be seen in the readiness of academic librarians to make use of the various library technologies available to them. However, the studies that have been conducted to determine factors affecting the use of technology among academic librarians have yielded various results which makes it imperative to examine the influence of facilitating conditions and social influence on the use of library technology by academic librarians in the Federal Capital Territory, Abuja.

1.2 Statement of the Problem

Technology use by librarians is no longer a debatable issue as ICT has permeated key aspects of the information profession[19]. The use of technology enhances information access, effective information resources management, and improved prestige for librarians who would be seen by their clients as very relevant. As a result, when librarians continue with the manual services, it makes it impossible to render innovative and beneficial services that libraries are set up to render. It also portrays the library as archaic, ineffective, and irrelevant. This has made the use of technology a popular subject for researchers around the world.

However, while researchers have evaluated the use of technology by librarians in other types of libraries such as academic, special, school, and research libraries, the academic libraries in Federal Capital Territory, Nigeria, have not received the expected level of attention from researchers. In line with this, the study seeks to examine the use of library technologies by academic librarians in the Federal Capital Territory, Abuja Nigeria.

1.3 Aim and Objectives of the Study

The aim of this study is to investigate the influence of facilitating conditions and social influence on the use of library technology by academic librarians in Federal Capital Territory, Abuja Nigeria. The specific objectives of the study are to;

i. identify the level (purpose and frequency) of use of library technology among academic librarians in Federal Capital Territory, Abuja Nigeria.
ii. examine the level of facilitating conditions for the use of library technology among academic librarians in the Federal Capital Territory, Abuja Nigeria.
iii. identify the level of social influence to use library technologies among academic librarians in Federal Capital Territory, Nigeria.
iv. ascertain the influence of facilitating conditions on the use of library technology among academic librarians in Federal Capital Territory, Abuja Nigeria.
v. ascertain the contribution of social influence on the use of library technology among academic librarians in the Federal Capital Territory, Abuja Nigeria.
vi. determine the combined influence of facilitating conditions and social influence on the use of library technology among academic librarians in Federal Capital Territory, Abuja Nigeria.

1.4 Research Questions

These research questions guided the study.

1. What is the level of use of library technology among academic librarians in the Federal Capital Territory, Abuja Nigeria?
2. What is the level of facilitating conditions for the use of library technology among academic librarians in the Federal Capital Territory, Abuja Nigeria?
3. What is the level of social influence to use library technologies among academic

librarians in the Federal Capital Territory, Abuja Nigeria?

1.5 Hypotheses

The following hypotheses were tested at 0.05 level of significance**;**

$H_0$1: There were no significant influence of facilitating conditions on the use of library technology by academic librarians in the Federal Capital Territory, Abuja Nigeria

$H_0$2: There were no significant influence of social influence on the use of library technology by academic librarians in the Federal Capital Territory, Abuja Nigeria

$H_0$3: There is no joint influence of facilitating conditions and social influence on the use of library technology by academic librarians in the Federal Capital Territory, Abuja Nigeria

1.6 Significance of the Study

The study findings are expected to be of benefit to various categories of stakeholders such as Library management, academic librarians and various groups of library users. In addition, it contributes to existing literature by filling the information gap on the use of library technology by academic librarians within the Federal Capital Territory, Abuja.

Library management are responsible for making strategic decisions on how the library can better achieve its aim of enhance the creation of knowledge in the university environment. Having proper understanding of factors responsible for the use of

technology by the personnel will help them design the necessary interventions to ensure or promote effective use of technology to boost library services provisions.

Librarians in academic libraries will also benefit from the study findings as it will show the challenges, they and others are facing in the use of library technologies and the remedies that can be applied to solve the challenges. By providing empirical evidence of the factors affecting the use of library technologies, the librarians will also be able to identify areas that apply to them and understand that, if they struggle to make use of library technologies, they are not the only one. This is expected to encourage them to make efforts toward the use of library technologies. This will benefit them and their users.

The library users such as students, lecturers and researchers will also benefit from the expected improvement in the use of library technology to be caused by the recommendations to come at the end of this study. They will experience better library and information services which will make their academic activities easier and of better quality.

Finally, the study will be an addition to the available literature in the field of library and information science. It will be a worthy contribution to the theory and practice of library and information profession.

1.7 Scope of the Study

This study focused on the influence of Social Influence and Facilitating Conditions on Use of library technologies by librarians at Academic libraries in the Federal Capital Territory, Abuja Nigeria. The dependent variable is use of library technologies which is measured by frequency of use and purpose of use. the independent variables are facilitating conditions and social influence. Facilitating conditions are measured by

metrics such as availability of infrastructure, technical support, and staff training. Social influence is measured by metrics such as coercive influence, normative influence, and peer mimetic influence. The study will cover academic librarians in selected Universities within the Federal Capital Territory, Abuja. The universities are Baze University, Turkish Nile University, Veritas University, and the University of Abuja. The universities are therefore selected based on their availability for data collection and preliminary studies.

1.8 Limitation of the Study

The study face certain limitation in the area of data collection. The respondents were mainly reluctant in filling the research questionnaire. This prolonged the research period to some extent. The issues were however resolved through repeated visits to the libraries.

1.9 Operational Definition of Terms

Use of Library Technology: This refers to the use of library software such as Koha, Dspace etc for library services delivery by academic librarians in selected Universities within the Federal Capital Territory, Abuja.

Purpose of Use of Library Technology: this refers to the specific tasks such as cataloguing, reference services, document delivery etc for which academic librarians in selected Universities within the Federal Capital Territory, Abuja make use of library software such as Koha, Dspace etc.

Frequency of use; this refers to how often do the librarians use the technology it could be daily, weekly, monthly or never.

Facilitating Conditions: this refers to the perception about the adequateness of the available infrastructure to make use of library software such as Koha, Dspace etc for library services delivery by academic librarians in selected Universities within the Federal Capital Territory, Abuja.

Availability of Infrastructure*:* This refers to the infrastructure provided by academic libraries in FCT to support the use of library technology by academic librarians in selected Universities within the Federal Capital Territory, Abuja.

Technical Support: this refers to access to IT experts and professionals who can help academic librarians in selected Universities within the Federal Capital Territory, Abuja in the use of library technology.

Training and Development: this refers to regular attendance at seminars, conferences and workshop to enhance the ability of academic librarians in selected Universities within the Federal Capital Territory, Abuja.

Social Influence: This refers to the perception about the opinions of significant others such as library managers, mentors and colleagues on the use of library software such as Koha, Dspace etc for library services delivery.

Coercive Influence: this is the kind of social influence where stakeholders impose intense pressures like rules and regulation, sanctions and punishments on academic librarians in Universities within the Federal Capital Territory, Abuja to make use of library technology. **Normative Influence**: arises from expectations, values and norms and standards within the specific libraries in which academic librarians in Universities within the Federal Capital Territory, Abuja operate.

Mimetic Influence: this is the influence of competitors whose activities put pressure on academic librarians in Universities within the Federal Capital Territory, Abuja to make use of appropriate library technologies.

Endnotes

1. J.O. Kutu & O., Olajide, *Information Resources Availability, Utilisation and Job Performance of Academic Librarians in Selected University Libraries in North-Central Nigeria*. **Library Philosophy & Practice**, 2020.

2. T. Zhifang, & X., Huifang, *Digital Scholarship Skills and Librarian Training Toward Digital Scholarship Services: Case Studies of Academic Libraries in China*. Kuala Lumpur, Malaysia: IFLA, 2018. Pp.1-12.

3. A.I. Abayomi, & J.I., Ogungbeni, *Automation of Public Libraries in South West, Nigeria: Challenges and Way Forward*. **International Journal Applied Technologies in Library and Information Management,** 6(1). 2020.

4. A., Ducas, N. Michaud-Oystryk, & M., Speare, *Reinventing Ourselves: New and Emerging Roles of Academic Librarians in Canadian Research-Intensive Universities*. **College & Research Libraries**, 2020

5. A.I. Abayomi, & J.I., Ogungbeni, *Automation of Public Libraries in South West, Nigeria: Challenges and Way Forward*. **International Journal Applied Technologies in Library and Information Managemen***t*, 6(1). 2020.

6. S.A. Bello, & N.E., Chioma, *Globalisation of Library and Information Services: An Assessment of The Level of ICT Deployment in Academic Libraries in Oyo State, Nigeria*. **Library Philosophy and Practice**, *3881*, 2020. Pp.1-19.

7. G. Ifijeh, & F., Yusuf, *Covid–19 Pandemic and the Future of Nigeria's University System: The Quest for Libraries' Relevance*. **The Journal of Academic Librarianship,** *46*(6), 2020.P.102226.

8. D.P. Olagoke, & J.A., Kolawole, *Effect of Library Automation on Performance of Librarians in Private Universities in South-West Nigeria*. **In Information and Knowledge Management** Vol. 9, No. 5, 2019, Pp. 1-11

9. H.U., Emasealu, *Automation of Academic Libraries and Web Development: A Reverie or Reality*. **International Journal of Knowledge Content Development & Technology**, *9*(1), 2019. Pp.43-56.

10. T.A. Oladokun, & L.F., Kolawole, *Sustainability of Library Automation in Nigerian Libraries: KOHA Open-Source Software.* **Library Philosophy and Practice**, 2018.P.1.

11. L.F. Kolawole, & T.A., Oladokun, *Utilization of Open-Source Software in Nigeria Academic Libraries: Matters Arising*. **Cataloging & Classification Quarterly**, 59(4), 2021. Pp.399-407.

12. S., Abban, *Training and Development of Library Staff: A Case of Two University Libraries in Ghana*. **Library Philosophy and Practice**, 2018.P.0_1.

13. J.E., Andrews, H. Ward, & J., Yoon, *UTAUT as a Model for Understanding Intention to Adopt AI and Related Technologies among Librarians*. **The Journal of Academic Librarianship,** *47*(6), 2021. P.102437.

14. A.E.A., Dowdy, *Public Librarians' Adoption of Technology in Two Southeastern States*, Doctoral Dissertation, Walden University, 2020.

15. L., Wan, S. Xie, & A., Shu, *Toward an Understanding of University Students' Continued Intention to Use MOOCS: When UTAUT Model Meets TTF Model*. Sage Open, *10*(3), 2020. P.2158244020941858.

16. S.A., Raza, W., Qazi, K.A. Khan, & J., Salam, *Social Isolation and Acceptance of The Learning Management System (LMS) In the Time Of COVID-19 Pandemic: An Expansion of the UTAUT Model*. **Journal Of Educational Computing Research**, *59*(2), 2021. Pp.183-208.

17. S.T. Abolarinwa, & J.A. Yaya, *The Place of Mentoring in Developing Librarians' Leadership Competency*. **Asian Journal of Education and E-Learning**, 4(1) 2016, 7-14

18. C. O. Adekoya, & J.K., Fasae, *Mentorship in Librarianship: Meeting the Needs, Addressing the Challenges.* The Bottom Line**.** 2021.

19. N., Edewor, *Capacity Building Efforts to Develop Digital Innovation Competencies among Librarians in Nigeria.* **Journal of Library Administration**, *60*(3), 2020. Pp.316-330.

Chapter Two

Literature Review

The chapter presents a review of existing literature with a bearing on the subject of the current study. the review dwells on the main concept of the study ad derived from the study variables. The concepts are reviewed for their literal and implied meanings showing how each has evolved over the years. In addition, the review also explores the relationship between each variable and how they have been studied by various researchers all over the world. Another key focus of the research is the research methods and theoretical underpinning as well as the finding and conclusions reached in existing studies. This is done in order to show the gap that the current study intends to fill and provide a solid justification for conducting the study.

2.1 Conceptual Review

2.1.1 Use of Library Technology Among Academic Librarians

2.1.2 Facilitating Conditions for the Use of Library Technology Among Academic Librarians

2.1.3 Social Influence to Use Library Technologies Among Academic Librarians

2.2 Theoretical Framework

2.2.1 Unified Technology Acceptance and Use Theory (UTAUT)

2.2.2 Institutional Theory

2.3 Review of Empirical Studies

2.3.1 Facilitating Conditions and the use of Library Technology Among Academic Librarians

2.3.2 Social Influence and the Use of Library Technology Among Academic Librarians

2.3.3 Facilitating Conditions and Social Influence and Use Library Technology Among Academic Librarians

2.4 Conceptual Model

2.5 Summary of Gap in Literature Reviewed

2.1 The Concept of Technology Use in Libraries

The concept of library technology is a wide which traces to renaissance era. Technology, in its basic sense has been with the library since the 17th century when the Munich royal was inundated with books confiscated from over two hundred monastic libraries from the Bavarian region. The royal librarians were so overwhelmed with the task of processing and organizing the large and diverse collection which led to the development of a real methodological and process-driven librarianship and technical systems for information organisation and retrieval[1]. The technology deployed to solve the Royal Library challenge has long ago given way to a more sophisticated digital technology which is often referred to as information and communication technology (ICT)

The traditional library has been superseded by the automated, electronic, virtual, and digital library as a result of the use of ICTs in the provision and management of library

services, which has had profound consequences on the information space and practice. The one-off challenge of having to deal with an avalanche of information resources is now the daily reality of modern libraries. There is no other type of library affected by this than the academic library which has to cater to the need of a dynamic and sophisticated group of information users with information needs as diverse as their population. Academic environments are expected to be information-rich environments where users expect to find the information resources, they for teaching, learning, and research, with as little fuss as possible. This has led to the application of technology into library services otherwise called library automation[2,3].

The automated library offers its patrons a vast array of services, surpassing the previous manual system in terms of ease and breadth of coverage. As a result of the application of technology in library operations, more information users are expected to be able to use library services for a variety of purposes, while others can have remote access to library-provided online information resources. Through the use of technology, librarians may fulfill their responsibilities with greater speed and pride. Library technology promotes speedier connection with other libraries, more efficient management of the library's physical and financial resources, and more potential for resource sharing and exchange[4]. Library technology also increases the librarian's efficiency and it depends on the use of appropriate library technologies.

From this basis, it is logical to conceptualized library technology as technologies used in performing core library tasks and delivery of traditional and emerging library services. There are various technologies that have been designed to deliver various services ranging from banking to healthcare delivery, traveling, education, and agriculture among

others. In the same vein, there are technologies that have been designed purposefully to deliver library and information services and to assist librarians in becoming more effective in their job. Researchers have identified library technology to include; library automation software, Digital library/Institutional repository software, learning management system software, electronic resource management system software, and content management software[5]. Examples of these technologies, include integrated library software, indexing software, radio frequency identifier (RFID), Online Public Access Catalogue (OPAC), Scholarly databases, institutional repositories, and many more[6,7]. These technologies will be the focus of this study and thus included in the review.

The traditional or old method of library operations and service delivery has been replaced by a system that is more effective, efficient, and faster. That is, with technology, librarians can now do more in less time. What is more, the services rendered are more relevant, accurate, and in-depth than what is possible with a manual system. An academic library's clients and staff alike will appreciate the time and energy-saving benefits of automated systems, as well as the elimination of redundant tasks and the improvement of efficiency in the delivery of library services[8,9].

For instance, compared to the old card catalogue cabinet, the use of the Online Public Access Catalogue (OPAC) facilitates the elimination of the time-consuming task of printing cards, allows for simultaneous access to library materials by multiple users, and facilitates the rapid retrieval of relevant information. In addition, the use of Z39 technology online and the opportunity for copy cataloguing it provides also guarantees that as many volumes of information resources as possible may be catalogued and categorised with minimal effort from library personnel[10].

It was noted by researchers that the use of technology in library operations simplifies the process of printing catalogue cards, allows cataloguers to enter data for each item on predesigned work-sheets, and makes it easy to make changes to entries without adding unnecessary pressure or time. All of this is possible with the help of dedicated library management software in place of disorganised paper logs. The application of library technology to library services such as cataloging, circulation, and acquisitions has also enhanced library management and service. It was also argued that in today's technology-driven culture, traditional library services based on human labour may be obsolete[11]. In line with these several studies have been conducted to evaluate the use of library technology by librarians from different parts of the world.

To better serve their clientele and remain relevant in the information age, libraries and information centers are turning to the use of technology and electronic information resources and services. Libraries' conventional resources are quickly being replaced by electronic media such as e-journals, CDROM databases, online databases, e-books, web-based resources, and other electronic media. It is impossible to overstate the importance of information and communications technology (ICT) applications in academic libraries in the modern covid era. Librarians are increasingly becoming aware that they must integrate technology into their operations or become relics of the past. ICT has entered libraries and their users in the form of tools or products, resources or infrastructure giving the users effective services and access to information in various formats regardless of location[12].

When researchers examined the use of library technology, the preferred term is ‘utilisation’. This is because librarians are expected to consider the utilitarian aspect of

the technology which contributes to service delivery. Scholars in the field of library and information science use the term utilization because the aim is always to measure the practical and goal-oriented use of library technology. In the context of LIS, the use of library technology focuses on the various purposes for which librarians can use technology. Librarians can make use of technology for various purposes such as library management systems to manage both print and electronic library collection, creation of information products such as indexes and abstracts as well as rendering remote library and information services to various users' groups by leveraging various technology and the internet. In addition to this, academic librarians are also expected to be able to use web portal applications to interact with other libraries in the country, for various such as library cooperation, resources sharing, and to form consortia for the purpose of achieving collective bargaining in subscribing to digital information resources[13]. The question thus is whether librarians are using the technology for the expected purposes and frequently enough for the impact of technology used to be obvious to the onlookers. The results on the use of library technology show a contradictory outcome. This is because some were found to be regular users of library technology.

Libraries in the developed world have been found to be regular and heavy users of technology. Institutions of higher learning in industrialised nations are spreading the word about the importance of adopting automated systems for libraries through a wide range of channels. Librarians now see the value of utilising Web 2.0 tools to encourage productive user interaction. Library 2.0 and Web 2.0 have been the topics of conferences conducted by librarians in the western world. This further encourages people to employ cutting-edge tools to do their jobs. It has been reported that librarians are now using

technology to perform library tasks and also to help patrons with using personal devices to access the library's digital collections, access to online databases, and instruction in a wide range of reading skills[14,15].

Public libraries in the United States are promoting digital services by adopting mobile libraries to increase patron use of e-books. The New York public library and many other public library systems in the United States of America are popular for their use of technology in connecting to diverse information user groups. The same trend can be seen in Europe with libraries, even in the remotest part of Europe paying great attention to library technology. These examples are provided to provide context for the use of technology in western libraries. If public libraries are so immersed in the use of technology, it can be imagined how far academic libraries have gone in that regard.

This is confirmed by a researcher who examined the prevalence of library technology in academic libraries in the US. It was reported that all US academic libraries provided some form of electronic service or online technological tool to their patrons. The librarians are skilled in the use of technology and they use technology in training information use on how to meet their informational needs in the digital environment. The purpose of using technology among librarians includes providing; Bibliographic instructions, library orientations, library tours, library instructions, tutorials, and the usage of online database searches are all part of the educational programming for accessing these services[16].

Researchers in Nigeria have demonstrated that academic libraries are usually at the forefront of technology adoption due to the nature of their clientele. As the operation in tertiary institutions where the major preoccupation is the advancement of the frontier of

knowledge, academic libraries are usually kept on their toes in order to meet the dynamic needs of their clientele[17]. This is true in both developed and developing countries. However, while the use of technology has been ingrained into every aspect of library and information services in advanced countries, the same cannot be said of developing countries such as Nigeria. Studies on the use of library technology has yielded mixed results. One of the purposes of using technology is in the security of library resources by ensuring that unauthorized clients do not take books and other resources away from the library.

The use of technology in library management starts right at the doorstep of the library. One of the technology users get in contact with first in the library is the radio frequency identifier (RFID). This technology is used mainly to prevent theft of library resources and can also be used on self-checkout in some libraries. However, researchers examined how two private colleges in Abuja, Nigeria, employ Radio Frequency Identification (RFID) technology for library theft detection. The findings revealed that all library infrastructure—including RFID labels, readers, portable readers, servers, antennas, the RFID label printer, and the external book return kiosk—was in place and operational in the two libraries. The researcher however pointed out that not many universities are using technologies such as RFID to safeguard their information resources[18].

This observation is shared by another scholar in Nigeria. The scholar observed that Nigerian libraries are increasingly integrating RFID systems into their operations. Libraries have been able to better accommodate their patrons as a result of the advent of this technology due to the vast potential for development it brings. Not only is RFID technology on the rise, but it is also superior in terms of protecting libraries, being both

easy to use and inexpensive. Nonetheless, the overall outcomes for the company have been quite positive. The scholar expressed optimism that more libraries will be able to affordably implement this technology for a variety of uses as the price of tags and related equipment continues to drop. It is undeniable that adopting this technology will raise the Library's profile and foster a more positive user attitude toward the institution. Now is the moment to use this adaptable and helpful technology in order to reap the benefits of higher productivity, tighter inventory management, higher service quality, and more ease of use for both employees and customers[19].

Researchers in India examined the rise in the application of information and communication technology in academic libraries. The study focused on library services, digitization, ICT resource use, consortium by libraries, RFID and barcode technology, Internet connection strength, and the challenges of implementing these ICTs. The study found an average level of library technology use is academic libraries studies. It was reported that the libraries make use of barcodes and RFID technologies. They also had CCTV cameras to prevent theft and mutilation of information resources[20]. Library technology are also used for other purposes in academic libraries.

Researchers in another region of India also surveyed the use information and communication technology (ICT) to provide services in academic libraries. They found that while ICT resources were available, there is no strategy in place to ensure effective use of these technologies. It was implied that the librarians lacked the required skills to make use of the systems and they were also unable to train library users on how to make effective use of the system. The result is that available technology are not frequently used by both librarians and library users[21]. The suggestion by this study is that availability of

library technology is not a guarantee that it will be used in the provision of library and information services. This is also demonstrated in other studies.

Researchers who conducted a survey of library technology use by librarians in Indian academic libraries also noted that, while several relevant technologies have been introduced to librarians through seminars and training, many of them are still not using discovery tools like blogs, wikis, social bookmarking, social networking collaboration technologies such as Mendeley, endnotes, Sotero etc. the scholars attributed this low use of technology to a lack of ICT skills and lack of awareness about relevant technologies[22]. Another technology used by librarians to simplify information services is the online public access catalogues (OPAC) which is the digital version of the card catalogue.

A study conducted on the use of OPAC by librarians in Nigerian academic libraries shows that, while the use of the OPAC has become commonplace in other countries and many of them have even shifted to discovery systems that operate as a federated search tool, Nigerian academic librarians have not even mastered the use of OPAC not to talk of a shift from OPACs to discovery systems. As a result, this research analyzed how well-prepared and knowledgeable Nigerian librarians felt about the transition from OPAC to a discovery system. This study uses a combination of qualitative and quantitative research techniques. Research shows that Nigerian librarians are not yet prepared to replace OPAC with a library discovery system. It was also demonstrated that Nigerian librarians knew relatively little about library discovery systems. The research found that Nigerian librarians were unprepared and ill-informed about making the switch from OPAC to a library discovery system[23]. The OPAC itself is a by-product of a library management system which has also been examined in detail by scholars all over the world.

Integrated Library Services (ILS) is a software, that, when combined with the necessary hardware and other peripherals, can be used to carry out normal library-related operations. Library management systems are designed to carry out library routines that were hitherto performed manually. By utilizing the library management system for library routines, librarians are able to swiftly and correctly gather, sort, and disseminate information[24]. Some of the most popular library management software around the world include: Koha, Milleniun, Sirsi Dynix, SLAM, Alexandria, Aleph, SOUL, LIBSYS WorldShare Management Services (WMS), and Sierra among many others[25]. These technologies come in two categories. There are those who come with a price tag. Those are call proprietary software. The other group are made available free of charge to the user[4].

The availability of open-source software has led to a boost in library automation, especially in developing countries such as Nigeria. However, this software has failed to radically increase the use of technology in academic libraries of developing countries as shown by various studies. One such study in Nigeria reported that libraries have acquired the basic infrastructure for the use of library technology by librarians. There are now computers in virtually all the libraries but many are yet to install even the freely available technologies such as OPAC, Dspace and Word press. As a result, majority of the respondents indicated low extent use of open source software for library services[5]. This study is supported by another study that examined the use of Koha Open source software in Nigerian libraries. The results of the study show that majority of university libraries in Nigeria are yet to achieve full automation. It is clear from data, that the cataloging module is the most extensively used, with 42%, followed by the circulation module at

33%, and the serials module at 26%. The acquisition module is used just by 15% of the libraries that have installed Koha[26].

While the literature is clear on the availability of various library technologies that can be used to boost the effectiveness of academic libraries and librarians, the result of the use of these technologies has been mixed. The majority seem not to make adequate use of library technologies even when they are available for free (open source) while others have reported making use of technology to provide better services.

2.1.2 Facilitating Conditions as a Concept in Technology Use

Facilitating conditions literarily means the existence of conditions that facilitates or encourage the achievement of an objective. As a construct of the Unified Theory of Acceptance and Use of Technology (UTAUT), it is used to describe "the extent to which a person feels that the organizational and technological infrastructure exists to enable usage of a particular technology" especially one that they are not used to previously[27]. It is a matter of perception on the part of the technology user in which they subjectively determine whether they can have access to the necessary infrastructure, technical support and training to enable them effectively make use of the new technology they are just being introduced to. This facto presumes that the first reaction to new technology is uncertainty and doubt.

People, including librarians are creatures of habit and they are usually comfortable with something that they are familiar with. Even when something apparently better is presented, there is always the doubt that it is too good to be true. As a result, people consider various factors in making the decision to accept or reject a new technology. This

has led to the development of various theories and models to explain the psychological cognitive process that goes into the decision process when accepting new technology. Facilitating condition as a construct of the UTAUT is made up of elements from previous models and theories of technology acceptance. It is a mix of "perceived behavioral control" from the TPB, C-TAM-TPB, "facilitating circumstances" from the MPCU, and "compatibility" from the IDT[28].

Researchers have argued that facilitating condition, contrary to what was found in the original research, has no effect on behavioural intention to use technology but do have an effect on user behaviour. The availability of adequate resources and assistance for individuals to make use of technology are examples of enabling. An individual's reluctance to adopt a technology may stem from a number of factors, including inadequate support, inadequate knowledge, a lack of resources, and a lack of timely help[29]. This means that when library personnel perceives no support in their bid to use technology, they may be reluctant to use it. On the other hand, when the support is there, they are more likely to make use of the technology. This seems to hold true irrespective of the complexity of the technology.

The perception of facilitating condition can also be affected by the age of the potential user. There is a general trend that older customers have more trouble responding to new and complicated information, which might hinder their ability to pick up new technologies[30]. Conditions associated with this challenge are sometimes linked to age-related declines in cognitive function and memory. Therefore, older librarians, in comparison to younger ones, tend to place a premium on the provision of sufficient

assistance[31]. Another factor to affect the perception of facilitating condition is the gender of the user

Compared to females, males are more likely to put up extra effort to achieve their goals despite the fact that they may encounter challenges along the way. females, on the other hand, are more likely to analyse the time and work that will be required to accomplish their objectives. It follows that males are less likely than women to wait for favourable conditions before considering adopting cutting-edge technologies. females, on the other hand, are more likely to rely on extraneous means of assistance. The need for assistance from others can be minimised when one gains experience because of increased familiarity with technology and improved understanding to help learning[29].

A scholar observed that the general opinion of technology has shifted from pessimistic to optimistic as it relates to the environmental impact of the industrial revolution. Furthermore, advanced technology has resulted in information that may be utilised to better services and products, the growth of the economy, and the interconnection of businesses[32]. However, the use of technology still requires the acquisition of skills.

Both people with ICT skills and those who lack them have to make use of technology in one way or the other. It is therefore a matter of helping them by creating environments that are conducive to learning. The resources/facilities to use technology, knowledge of technology usage, technology compatibility with other techniques used, and the availability to get help from others when using technology are the four indicators that make up the facilitating conditions[33].

This concept proposes that elements like as technical assistance, suitable computers, internet connections, availability of other important infrastructures, and digital reference services have a substantial effect on the behavioral intention to utilize a system[27]. Age and experience were shown to be the most important mediators of enabling circumstances. This suggests that adult users are more likely to require all supporting conditions than younger and more experienced information system users. This is further explained by the observation that, when effort expectation is present, facilitating conditions become insignificant in predicting behavioral intention. When users view the expected effort to be substantial, facilitating conditions may not entice them to utilize the system. This is explored in research on library and information anxiety in academic libraries[34]. However, assuming all other factors remain constant, facilitating conditions are essential for the acceptance and utilization of institutional repositories by all kinds of users. This is why various studies have been conducted to evaluate the availability of facilitating conditions in academic libraries.

Infrastructure has been recognized as the bedrock of technology adoption in academic libraries. Researchers have observed that libraries wishing to operate in the digital era must lay a solid foundation by providing computer systems, internet connection, cloud services, regular power supply, and a host of other facilities not related to the technology but which can make it pleasant to use the system such as air conditioners, comfortable furniture, inverters, uninterrupted power supply (UPS) and others[35]. Available literature seems has explored the availability of infrastructure to support technology adoption in academic libraries.

A study that focuses on the use of digital reference services by libraries in Nigeria evaluated the infrastructure that must be established by libraries. Nine fundamental ICT equipment and infrastructure were selected and enumerated to determine their presence in responding libraries. It was found that all the libraries have Internet connectivity. The majority of them also have integrated Library Management Software and a working library website. Other researchers have also reported that a moderate level of technology infrastructure is available in Nigerian academic libraries[36]. The availability of infrastructure is also expected to be accompanied by technical support to ensure long-term use.

In as much as librarians are expected to develop digital literacy skills to cope with the demands of 21st-century librarianship, they cannot transform to ICT experts overnight. It is therefore necessary that they have access to IT experts who can assist whenever they encounter any major issues in the use of library technology. Available studies show that many libraries, especially in developing countries, are usually deficient in the provision for technical support after the implementation of library technology. This is even more acute in the era of open-source software.

In the era when libraries make use of proprietary software, the necessary technical support is negotiated as part of the contract. That way, whenever an issue emerges in the course of using the technology, the experts from the software vendor or their agents can be contacted to provide the needed assistance. However, with the advent of open-source software which is made available to everyone at no cost. There is usually no one to negotiate with for technical support. To make it worse, some institutions also believe that

free software means that they do not have to invest any resources in maintenance and the occasional troubleshooting.

However, despite the fact that open source was created to cut back on the high price of library automation, it does not lead to the total elimination of cost. While there may be savings associated with open-source software's adoption and deployment, there's also the possibility that expenses related to training and the technology behind open-source might become an added cost. Researchers in Malaysia opined that while this may pose a challenge to private-owned tertiary institutions, the librarians in government-owned institutions are free from such concerns because of government-owned institutions' encouragement of the use of open-source software[37].

Researchers have also reported that training librarians for the use of modern technology is a big issue in libraries. Most librarians are at a disadvantage because the library school curriculum does not pay adequate attention to the use of technology. As a result, many librarians come to the job ill-prepared for the use of modern technology in their job. This means that they need on-the-job training in order to update their skills. However, this is often unavailable, inadequate, or irrelevant to the needs of modern librarians. For instance, a researcher who investigated the use of web technologies by librarians in Jordanian Universities found that, while the majority of the librarians are ready and willing to use library technology, they are been hampered by a lack of relevant digital literacy skills and the absence of training by their employers[38]. The same is reported by researchers in Nigeria who also found that few librarians are opportune to receive technology-oriented training from their employers.

Training is seen as an essential aspect of facilitating condition. This is demonstrated in a study which focused on the use of technology by academic librarians. The study observed that facilitating condition was considered a significant factor among the respondent before training was organized for them. However, after a few weeks of training, the respondents became less worried about facilitating conditions to the extent that facilitating conditions became insignificant in the use of technology by the respondents[39]. This finding can be understood from the perspective that training provided before the implementation of a particular technology in the library will clear all the doubts and clarify all issues that may be unclear to the librarians. Through training, the librarians are empowered, not only to use the new technology but to understand all the measures that have been put in place to ensure that they can make use of the new system without any worry.

As described by a scholar, "facilitating conditions" refers to users' perceptions of the required infrastructures to support the use of a given technology. The researcher argues that any external aid to learning that system users perceive coming from other people, organisations, or technology resource persons might be considered an enabling situation. Users of library technologies, including librarians, need to be made aware that they have access to expert, peer, and supervisor support when they run into problems. This is supported by another author who submitted that convenient access to organisational and administrative support is essential for adapting to online learning, and its absence will have an impact on users' intentions and actions[40]. Indeed, the Unified Theory of Acceptance and Use of Technology (UTAUT) identified a direct linear relationship between facilitating conditions, behavioural intention, and use behaviour[41].

However, recent studies have found that facilitating conditions, especially when not available, often conceal the relationship between behavioural intention and use behavior[42]. That is, it may make technology inaccessible and/or difficult to use which means that other factors such as effort expectance and performance expectancy are often cited as affecting technology use. more recent technology acceptance studies have rejected a direct relationship between facilitating conditions and the use of technology[43,44,45]. Additionally, a group of scholars explained that rather than having a direct impact on behavioural intention, the role of facilitating conditions is conveyed through effort expectancy. This means that facilitating conditions should be seen as making the use of technology easier which then encourages users to adopt the technology[46].

In contrast, another researcher discovered no association between effort expectancy and facilitating conditions in predicting behavioural intention[47]. The inclusion of alternative resources (such as application programme interfaces), the Internet, and mobile learning tools as part of the technical definition of the facilitating conditions has been included by researchers. Furthermore, 'after-sales services' or technical support and high internet bandwidth are also considered as parts of the factors that encourage the use of technology[48,49]. In essence, the facilitating conditions that is capable of predicting the use of technology by librarians in Nigeria are not evenly spread across the libraries. Some libraries can be regarded as being able to create an enabling environment that encourages their personnel to make use of technology while others have not been able to achieve this.

The study findings coming out of Nigeria indicate that many libraries lack the infrastructure necessary for the effective implementation of technology. It can also be deduced that many library managers still have a rudimentary understanding of what

constitutes library infrastructure in the modern era. In a study, library infrastructure was listed to include toilet facilities, library space, restaurant/coffee room, lighting and ventilations, parking space, catalogue system, fans, and air conditioners. According to researchers, infrastructure offers the essential structure upon which a rapid acceleration toward independent growth is not only feasible but assured and cummulative. As technology use in libraries became widespread, the conceptualization of infrastructure began to evolve in Nigerian library literature. A scholar described library infrastructure as consisting of the physical structures and technological resources that allow libraries to provide their services efficiently.

According to a group of scholars, the foremost library infrastructure in the modern age is information and communication technology (ICT) facilities. In addition, power generating set, electrical installations, furniture, fittings, information resources, library building, and are all regarded to be part of a library's infrastructure in this study. All of these are recognised as tools that improve a university's educational mission and scholarly pursuits. Teaching and research in higher education today require top-notch information and communications technology (ICT) infrastructure and facilities.

Since the Internet is now a necessary component of library infrastructure, scholars said that libraries in developed and some developing nations have risen to the challenge of utilising technology to improve the provision of information services in order to sustain library patronage. Services such as file transfer protocol (FTP), email, newsgroups, mailing lists, selective information dissemination, RSS Feed, frequently asked questions, asking a librarian, current awareness services, and SMS are all made possible by the widespread availability of the Internet in university libraries (SMS). In a similar vein,

researchers remarked that ICT is evolving into a flexible system that offers a vast library of content in a wide range of formats. Providing Internet connectivity to their patrons is a key reason why many libraries exist today.

Researchers, however, bemoaned the lack of information and communications technology (ICT) infrastructure and facilities in Nigerian academic libraries as a fundamental barrier to the effective of Nigerian academic libraries' information services. The availability of information technology (IT) in Nigerian academic libraries was investigated by researchers who found that just one of the seven universities in Kwara State has access to some library technologies. But the technologies were not always available due to technical difficulties with the internet services that the library had registered to through an agency. They pointed out that none of these amenities is available in most libraries. Lack of access to the Internet for library patrons seeking information is likely to result in subpar service and may increase the likelihood that librarians may be discouraged from using technology in library services provision[50].

Inequalities in the availability of library software, library websites, and electronic library services were found in a study Internet vs library: coping methods for academic librarians in Lagos State. According to the research, university libraries in Lagos State have extremely limited access to electronic information resources. Most university libraries in Nigeria have not yet fully implemented ICT due to a lack of resources, an unreliable power supply, or a lack of trained employees. Apart from the internet, electricity is another infrastructure that has eluded Nigerian academic libraries[51].

Researchers have complained about the often erratic supply of energy. Studies have lamented the unreliable electricity supply in Nigeria, another issue facing research

libraries. This has had a negative impact on the availability of electronic information resources and other Internet-based resources, which has contributed to the reluctance of librarians to adopt or continue the use of technology. This is because technologies are expected to speed up and simplify library services but when they are not always available or accessible due to a lack of a conducive environment, librarians may be discouraged from using them.

Library services rely heavily on the facilities available to them in order to provide its patrons with the best possible experience. There is a chance it might help librarians advance in their profession. However, the infrastructure of most Nigerian libraries has deteriorated in recent years. Some of the essential infrastructures that are necessary for the delivery of services and library operations, like ICT facilities, fans, and air conditioners, were not available. As a result of some of the necessary infrastructure being down, users were left feeling disappointed and the librarians were made to look incompetent[52].

Researchers have also bemoaned the lack of computerization, infrastructure, and human capacity in academic libraries as the main obstacles to the use of information and communication technologies (ICT). The failure of libraries in providing their personnel with the necessary facilitating conditions is de-motivating, increasing the likelihood of stress, frustration, and disengagement. Librarians may be less likely to leave their positions if they have the resources they need to do their jobs well, so it is in the interest of library administration to make that possible.

Most university libraries in Nigeria have decaying library infrastructure which hinders the use of technology in the delivery of library services to students and the growth of

librarians' careers. So it can be said that the facilitating condition for the use of technology among librarians is not available to an extent that can stimulate widespread adoption of library technology among those who were initially not inclined to adopt them. However, while facilitating condition has been found not the sole factor in the adoption of technology by various people such as librarians. The use of technology can also be affected by social influence existing around the individual.

2.1.3 Social Influence as Concept in Technology Use

In addition to facilitating conditions, performance expectancy, and effort expectance, social influence is another main construct of the UTAUT theory. Social influence is regarded as the extent to which a potential user of a new technology perceives that others whose opinions matter to them expect them to use the technology[53]. Social influence as a construct was derived from the knowledge that human beings are social animals and they often tend to behave in conformity with their society. It is well-established that descriptive norms significantly influence individuals' propensity to adopt new technologies. This means that the mere expression of interest by others can induce an individual to adopt new technology.

Social influence, therefore, measures the influence of key stakeholders on the adoption of technology. The construct explores the process through which individuals are influenced to reinforce or modify their thoughts, feelings, attitudes, or behaviours as a result of interaction with others who are perceived to be similar, desirable, or expert. The construct is not novel to UTAUT as it was a combination of the elements from existing models and theories. It incorporates the 'subjective norm' from TRA, TAM2, TPB, and C-TAM-TPB, 'social factors' from MPCU, and 'image' from IDT.

Social influence is all about the psychological factors that prompt people to adopt or reject an information system. It has been shown that individuals are motivated to conform to a set of behavior or hold an opinion due to the need to; comply with the social norm, identifying with a particular group or to achieve a sense of belonging to a desired group[42].

Social influence is different from 'peer pressure' as it captures the influence of various groups of stakeholders within the 'society' or environment in which an individual operates. In compliance, individuals adopt a behaviour to avoid punishment or earn rewards; in identification, one wants to establish or maintain a satisfying self-defining relationship to another person or group and in internalisation, an individual accepts influence because it is in line with their value system.

It is not limited to just what friends or colleagues think but also, employers, superiors, co-workers, regulatory bodies, and others whose opinions matter to the individual think. The basic reason why this opinion may matter can be traced to the human need for acceptance and validation. A librarian, for instance, wishes to be seen as such and if the professional requirements include the use oBN?<L necessary and relevant.

Individuals' adoption and use of technology are impacted by several types of social norms, which have been conceptualised by academics based on evidence demonstrating the existence of subjective norms, injunctive norms, and descriptive norms. When individuals speak of "subjective norms," they are referring to the societal pressures or expectations they feel to engage in or refrain from engaging in particular behaviours[54].

Important are both injunctive norms (which pertain to society's approval or the perceived prevalence of positive/negative attitudes toward a certain behaviour) and descriptive norms (which refer to the popularity/perceived prevalence of a particular behaviour. Subjective norms focus more on perceived social pressures from specific others, such as 'important' others, whereas descriptive and injunctive norms indicate the popularity of a behaviour or perceptions of others' prevalent attitudes towards behaviours when they involve a relatively larger and more ambiguous target group[55].

Studies have shown that people often follow the popular opinion which choosing technology such as mobile phones, internet service providers, messaging apps, game consoles, and other technologies[56,57]. A greater prevalence in the thoughts of prospective users indicates that they are more likely to regard the behaviour in the issue as normal or acceptable. Individuals are more inclined to subscribe to prevalent standards of technology adoption if such behaviours have become institutionalised as typical or conventional. That is, librarians working in an environment where everyone is expected to make use of technology would not hesitate to adopt a relevant technology. This is the role of injunctive norms which inform adaptors about the prevalent societal attitude toward the technology, which influences their own perspectives on the technology.

It influences how individuals want to utilise the technology after they accept it, as well as how they actually employ it. Adopters are, on the other hand, influenced by subjective standards since they learn what their loved ones expect of them in terms of their behaviour around technology. Subjective norms explain why individuals do something, such as adopt new technology, in addition to objective variables such as the efficacy or utility of those technologies. Subjective and injunctive norms have been observed to

positively connect with individuals' intentions to engage with Facebook page commercials and individuals' intentions to view online video advertisements[58].

According to the UTAUT model, social influence is the only independent variable moderated by age, gender, experience, and voluntariness. What this implies is that every individual, no matter their age, gender or experience is susceptible to the influence of their significant other. What can be different is the fact that those who are significant to an individual may not be significant to others. The way around this for researchers is to examine social influence in the context of shared, experience, aspiration, interest, and other similar criteria. From this perspective, social influence is better investigated in the organisational context.

Researchers have therefore explored social influence within the organizational complex. This actually is more relevant for studying the use of technology for work purposes by a group of people such as academic librarians. In this line, researchers have examined social influence in the context of organisations using the institutional theory[59]. As social influence is conceptualized as the extent to which individual perceive that those whose opinion matter expect them to use a particular, technology, it is logical to the nature of this influence. This is because 'expectation to use' is an external stimuli different from intrinsic motivation. It means that the expectations of 'significant others' can be coercive, normative, or mimetic[60].

Social influence can be exerted in form of coercive pressure in the shape of both formal and informal demands exerted on an individual by a more powerful person or group to adopt that person's or group's own practices, behaviours, or views. On the organisational level, official or informal coercive pressure can be generated by a number of sources,

including regulatory bodies, consumers, suppliers, and other powerful actors. For instance, the emergence of the COVID-19 pandemic had led to the adoption of learning management systems by many tertiary institutions. During this period lecturers, librarians, students, and other personnel in tertiary institutions were expected to make use of remote learning technology[61].

In this instance, there is an element of coercive influence as lecturers and students who would normally not use remote learning applications started adopting them because 'those who were important' to them expected them to use the technology [62],[63]. As noted in the study which examined patients' acceptance and use of online medical portals, the research allows for the possibility that healthcare professionals may exert some sort of pressure on the patients to make use of the portals. As authoritative figures, healthcare professionals may use subtle persuasion techniques to encourage patients to use their health portals for communication. In the same way, professionals such as academic librarians are also subjected to regulatory pressure in the delivery of their core mandates. Apart from the demand of parent institutions, regulatory bodies such as the National University Commission (NUC) often mandate academic libraries to make use of scholarly databases, online public access catalogue (OPAC), and internet technology. This may 'force' librarians to adopt the technology. In these cases, the social influence appears in form of coercive pressure which offers the threat of sanction for non-compliance. Social influence can also be experienced in the form of normative pressure.

Normative pressure is the opposite of coercive pressure. It comes out of the desire of an individual to conform to the 'normal' or usual practice in a particular organisation. According to institutional theory, a social actor is more likely to follow the lead of a large

group of players in carrying out an action, behaviour, or belief. This imitation is never forced nor deliberate; rather, it gradually gains acceptance as the norm, the "correct" method[64]. Normative pressure focuses on the influence of others to adopt a behaviour or viewpoint[65]. In a situation where an individual gets to a new society, organisation or field, he/she is more likely to follow the practices and opinions demonstrated by pace setters or veterans in the field. In some cases, this may even be colleagues and compatriots who have adopted a particular technology to gain an edge in their work

Librarians attend conferences and seminars where they interact with colleagues far and wide. They also collaborate with colleagues from all over the world. During these interactions, it often happens that ideas are exchanged, practices are evaluated and innovations are discussed. These environments sway librarians towards the adoption of technology when others are discussing how useful a particular technology is and the benefits they are already enjoying from the use of the technology. In addition, the impression of being the odd one out can also encourage librarians to adopt technology and also recommend it to their libraries. It is also pertinent to point out that coercive pressure can also become normative pressure after the majority have become used to it.

From another point of view, what is coercive pressure for some experienced academic librarians who were trained on traditional, print-based librarianship may be a normative pressure on young and newly recruited librarians who have been prepared right from library schools on the importance of technology adoption in librarianship. Such an individual would thus view the adoption of technology as a necessary effort needed to conform to the demands of modern librarianship. The third type of pressure embedded in social influence is mimetic pressure

Mimetic pressure refers to the phenomena in which people intentionally mimic the actions of more powerful people. People tend to mimic the acts of someone they like because they think doing so will lead to the same kind of success. It is also thought that it is safer to mimic the actions of well-known people in a network than to try something new and "untested"[66]. Mimetic pressure in the organizational context often comes from the need to compete, keep up with or stay ahead of the competition as the case may be. Mimetic pressure develops when organisations and institutions battle it out to discover who can achieve the best results[52]. One of the strategies used by organisations to gain an advantage is the adoption of similar or superior technology.

In a competitive environment, organisations are often compelled to react to the moves being made by the competitors or in the case of academic libraries and librarians, the changes in their operational environment. A scholar pointed out organisations and individuals often feel they should adopt technologies because their rivals are doing so. Librarians now operate in a digital environment where the use of technology has been widely embraced by the clients they aim to serve. In addition, the internet has become a formidable competition to the library and unless the library makes attempt to adapt to the technology, it will lose its clients and consequently, its relevance.

Mimetic pressure, therefore, drives librarians to adopt technology because employers and parent institutions are demanding technology-based services. In addition, information users are becoming technologically savvy and are choosing internet-offered digital resources which are more accessible than printed resources in the library. Academic library users are also demanding services beyond traditional library services. These

include digital reference services, information, and digital literacy training, data management services, digital scholarship, and many more.

All of the services mentioned above require the use of technology which makes it imperative for libraries and librarians to accept the use of relevant technologies. Knowing that if the library does not provide the services, the users will simply look to the internet is making many librarians reconsider their reluctance to accept technology in their operation. Mimetic pressure is therefore borne out of healthy competition and it is seen as the most effective instrument for ensuring top-notch performance by librarians in academic libraries. Experts have observed that librarians can benefit from strong mimetic pressures to adopt advanced technologies in the provision of library services by looking at new advances in information services provision and seeking a way to ensure that they are able to continue playing their role as authentic sources of dependable, organized, easily accessible and retrievable information resources.

Social influence, therefore, comes in the form of various pressure that can be coercive, normative, or mimetic. These three forms of pressures are properly embedded in the definition of social influence as the extent to which a potential technology adopter perceives that those whose opinion he/she values expect him/her to make use of that particular technology. Experts have thus interpreted this to include employers and regulatory bodies who exert some level of influence on how professions such as librarians in being practiced. Coercive comes in when people are punished for not complying with the rules and regulations. However, when the librarian feels that they should toe the line that is already being followed by the successful superiors, they are under normative

pressure and when they choose to go out of their way to adopt new technology to rival their competition, then it mimetic pressure.

Both facilitating condition and social influence are constructs from the unified technology acceptance and use technology (UTAUT). As constructs derived from eight existing models, it is not surprising that they are compatible with other theories such as the institutional theory which is used to properly contextualized the constructs. As facilitating comes from the organisation and the employee so does social influence emerges from various sources such as the organisation, regulatory bodies, competing information sources all of which are fighting to get into the limelight. The two constructs are further outlined in the UTAUT theory on which this study is anchored

2.2 Theoretical Framework

A theoretical framework can be defined as a set of interrelated constructs and propositions that present a systematic view of the phenomenon by specifying relations among variables, and explaining what has been done and what has been said on a topic. It is "a structure that guides research by relying on a formal theory, constructed by using an established, coherent explanation of certain phenomena and relationships. Within a research study, a theoretical framework gives a researcher structure and boundaries within which to work. It is the lens through which literature is reviewed and discussed[56]. It helps the researcher in all the critical aspects of research such as creating research questions, choosing the research design, and formulating hypotheses.

The theoretical framework also helps the researcher determines the concepts to be measured and the statistical relationships to look for. It also helps the researcher to comprehend and conceptualize the relationships among the elements that influence, affect,

or predict the events or outcomes specified by the researcher. A theoretical framework presents itself more like a checklist of factors relevant to various aspects of implementation within a research process[57]. The theoretical framework "has implications for every decision made in the research process". Thus, it becomes the base upon which the investigation aims to fill in the gap in knowledge within a particular field. The study will be anchored on the Unified Theory of Acceptance and Use of Technology (UTAUT) which will be extended by the Institutional theory.

2.2.1 The Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) was developed by Venkatesh, Morris, Davis, and Davis in the year 2003[67]. It evaluates users' interaction with information technologies and predicts the subsequent usage of new technologies. Its development was based on 32 variables drawn from eight related technology acceptance theories and models. The theory was formulated specifically to create an integrated theory that will not be affected by the shortcomings of the fragmented theories and models which can only measure aspects of why individuals accept and use technology[67].

All the variables that made up the existing models were compressed into four determinants: performance expectancy, effort expectancy, social influence, and facilitating conditions. These were regarded as key variables in predicting technology use. All of these constructs are moderated by age, gender, experience, and voluntariness as shown in Figure 2.1.

Performance expectancy is defined as "the degree to which an individual believes that using a technology will help him or her to carry out their assigned task better". This

construct is not new as it is known as 'perceived usefulness' in TAM and C-TAM-TPB, 'extrinsic motivation' in MM, 'Job-fit' in MPCU, 'relative advantage' in IDT, and 'outcome expectations' in SCT. It means that academic library personnel will evaluate any new technology they are being introduced to determine whether it will help them carry out library services quicker, easier, and with better results. Performance expectancy is regarded as the most significant predictor of behavioural intention, moderated by age and gender. In the original study, it was found that male and younger subjects were more comfortable with new technology.

This suggests that newly recruited male library personnel are more likely to view new technology as relevant to their work than female and more experienced librarians who are used to the traditional ways of carrying out library routines. In addition, female librarians are often regarded as more reserved when it comes to testing out new technology. However, this influence of demographics varies between developed and developing countries. These disparities show that although performance expectancy is a good predictor of behavioural intention, moderating factors are to be understood as an influence of culture and should not be neglected[34].

Effort expectancy is the degree of ease that potential users attribute to the use of a new technology[63]. It means the level of effort technology users expects to put into the use of new technology. The construct is a synthesis of elements of other models and theories such as; Perceived ease of use (TAM/TAM2), Complexity (MPCU), and Ease Of Use (IDT). This construct is based on the assumption that academic library personnel would only use technologies that require the least effort on their part. As a result, they would adopt an easier-to-use technology and abandon the technologies considered difficult to

use even if such technology offers many advantages. Like other constructs of the UTAUT, demographic factors such as age, gender and experience are moderating factors for effort expectancy. It was found that behavioural intention to use a technology is lower for women, older library personnel, and those with limited experience. These categories are more likely to perceive technology as complex and difficult to use. The authors posit that effort expectancy is significant in the early stages of engaging with a system and gets slower as users continue to interact with the system[34].

Social influence determines the extent to which a potential user of a technology perceives that others whose opinions matter to them expect them to use the technology. It measures the influence of key stakeholders on the adoption of technology among various groups of users. The construct explores the process through which individuals are influenced to reinforce or modify their thoughts, feelings, attitudes, or behaviours as a result of interaction with others who are perceived to be similar, desirable, or expert. In the context of this study, social influence explains how library personnel are encouraged to accept technology through the influence of various stakeholders such as employers, colleagues, industry regulators, and professional associations.

The construct is not novel to UTAUT as it was a combination of elements from existing models and theories. It incorporates the 'subjective norm' from TRA, TAM2, TPB and C-TAM-TPB, 'social factors' from MPCU, and 'image' from IDT, the construct is all about the psychological factors that prompt people to adopt or reject an information system. It has been shown that library personnel, just like other members of society, are motivated to conform to a set of behaviour or hold an opinion due to the need to; comply with the social norm, identify with a particular group or achieve a sense of belonging to

the desired group[42]. In compliance, library personnel may adopt a recommended to avoid punishment (being sacked) or earn rewards (being promoted). Also, library personnel may choose to adopt technology show that they are moving along with the trend in their profession and to show library users, especially the youths, who prefer digital services, that the library is also in step with the times. According to the model, social influence is the only independent variable moderated by age, gender, experience and voluntariness. This is interesting as it suggests that social influence, when strong enough can affect any library personnel irrespective of age and gender. When the social influence is strong, even those who had no interest or skills to use technology will be compelled to learn. This can be seen in the tacit acceptance today that even the smallest library must have a few computers and an internet connection to provide access to online resources. The provision of these services is a direct challenge to library personnel to ensure that they use the technology to meet the information needs of the users.

Facilitating conditions refer to "the degree to which an individual believes that an organisational and technical infrastructure exists to support the use of a particular technology"[64]. It was also a combination of elements from preexisting models and theories. It is the combination of 'perceived behavioural control' from TPB, C-TAM-TPB, 'facilitating conditions' from MPCU, and 'compatibility' from IDT[65]. This construct posits that factors such as technical support, adequate computers, internet connections, availability of other relevant infrastructures, training, and mentoring provided for library personnel have a significant impact on their behavioural intention to use a new technology[66,67].

This is very important to library personnel who have been trained to use the manual mode of services. Whenever a new technology is introduced, the natural assumption is that it will be complex to use. As a result, library personnel makes the assessment of whether there will be technical support, regular power supply, and internet connection (where applicable). They would also like to know if training would be provided to equip them with the skills to use the new technology. The other aspect is mentoring. When library personnel are aware of mentors and mentoring opportunities designed to help them in the use of new technology, they are more likely to be ready to adopt it than when this is not seen to be available.

It was however found that age and experience are the significant moderators for facilitating conditions. This implies that adult academic library personnel may need all facilitating conditions to be present more than young and experienced ones. This is further explained by the finding facilitating conditions become non-significant in predicting behavioural intention when effort expectancy is present. When academic library personnel perceives the effort expectancy to be high, facilitating conditions may not attract them to use the technology[68,69]. However, all things being equal, facilitating conditions are critical for the adoption and use of library technology by academic library personnel. The absence of these conditions is largely responsible for the challenges and hindrances facing technology adoption in developing countries[67].

The UTAUT was considered the most appropriate theoretical framework on which to base this study because it has been empirically tested and validated in various studies that focused on user acceptance of information systems and institutional repositories perfectly fitting the profile of an information system[72]. Furthermore, the UTAUT was presented as

the best model to be applied in studies of complex technologies and employees in organisations undergoing technological changes, a common facing modern organizations and institutions in the present world of constant technological advancement. Moreover, the adoption of UTAUT to serve as the theoretical model for this study is the fact that it has incorporated the main strengths of the most popular models and theories all of which have been found to have one shortcoming or the other[68]

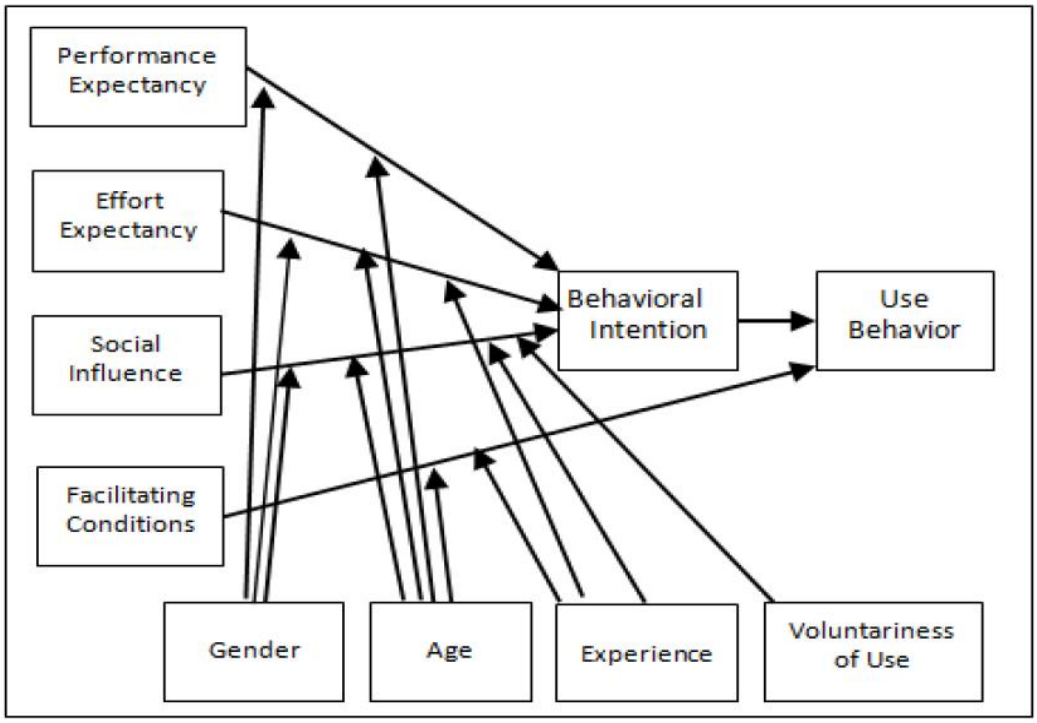

Figure 2.1: The Unified Theory of Acceptance and Use of Technology (UTAUT)[67]

2.2.2 Institutional Theory

The focus of the institutional theory is on the more long-lasting and fundamental features of social order. It examines the ways in which social structures including schemes, rules, conventions, and routines are institutionalised as de facto governing principles for members of a given society. There are several versions, but the one most relevant to the current study is the Institutional theory introduced by Meyer and Rowan in 1977. It argued that symbolic activities and external influences, rather than practical ones, were more important in the formation and evolution of organisations. The theory challenged the existing theories which held that organizational competencies are the sole factor behind organisation development. The theory posits that the changes and developments witnessed or experienced are due to several internal and external influences. The theory

identified three types of pressure that can bring about changes in an organisation. These are normative pressure, coercive pressure, and mimetic pressure[56]

Coercive Pressure: Coercive pressure, according to institutional theory, focuses on internal behaviours and other multifactor difficulties. Coercive pressure is exerted by regulatory bodies, superiors, and others with the legal or moral power to drive change in an organisation. Organisations are pressured by external stakeholders, such as governments and NGOs, to adopt new technologies. Organisations must adhere to certain guiding regulations and requirements. The institutional theory posits that organisations' statutory and primary responsibilities may be influenced by coercion. Institutions such as the National University Commission (NUC), the Librarians Registration Councils of Nigeria (LRCN), international donors, and others can exert coercive pressure on tertiary institutions and their libraries to adopt the technology. This is then passed on to the librarians who have to adapt to technology use in order to avoid sanctions.

Research shows that many people have been forced to acquire skills or certifications needed by their employers in order to avoid sanctions or to gain certain benefits. For instance, many people were forced to adopt the cashless payment method due to the decision of banks to penalize those who came into the bank to withdraw money. Another example is the Joint Admission and Matriculation Board Examinations in Nigeria, which has forced many students to learn how to use online educational management applications. It is also possible that librarians can be influenced to adopt technology for fear of losing their jobs or being unable to secure employment and career advancement. Social influence on Librarians can also come in the form of normative pressure.

Normative Pressure: Normative pressure derives from some practices that have become the norm in a certain environment or profession. Cultural expectations have normative force because actors feel obligated to uphold them, frequently due to their professional associations. Pressure to conform to standards is largely the result of the emergence of the professions. University education and the individual's network or organisation that they work for both contribute to professionalisation pressures[69]. Individuals in society often mirror the behaviours of their peers without realising it or, more commonly, because they believe it to be the best course of action. It turns technology adoption into a criterion for 'belonging'. Suppliers, customers, associations like company trade unions, the media, and other social actors all exert normative pressure on organisations. Normative pressures are often seen to originate from organisations like labour unions and other types of associations. Because normative constraints influence socially compliant attitudes and actions, it is thought of as a driving element impacting norms and the sense of responsibility in new organisations and among young professionals[70]. In the context of librarians, they may feel the pressure to adopt technology because all their colleagues and other people in their profession also use technology. When the use of technology becomes a 'social symbol' in a profession, every member will be under pressure to adopt and use it.

Mimetic Pressure: The concept of "mimetic pressure" describes the perceived benefit of imitating the actions of other referent actors when such actions or forms are correlated with success. This pressure comes into relevance when organisations and individuals are in a constant state of rivalry to achieve better results. Although adopting a technology may require some adjustment, it is often considered worthy because of the benefit it has

conferred on others and which the individual beliefs he/she may also enjoy. As a result of the influence of mimetic force, individuals and groups naturally look to one another as role models for appropriate actions and norms. Because of the department head's expertise, the workers under his or her supervision may look up to him or her as a leader or role model. When leaders and veterans in a profession embrace and adopt new technology, it is almost certain that followers may follow suit if they see a path to success (i.e., improved performance) by doing so. Employees that are willing to embrace the new technology do so because they anticipate greater productivity gains and enhanced opportunities for monetary and non-monetary recognition and advancement as a result of their early adoption. Employees may replicate the results of those who have already adopted new technology[71, 72].

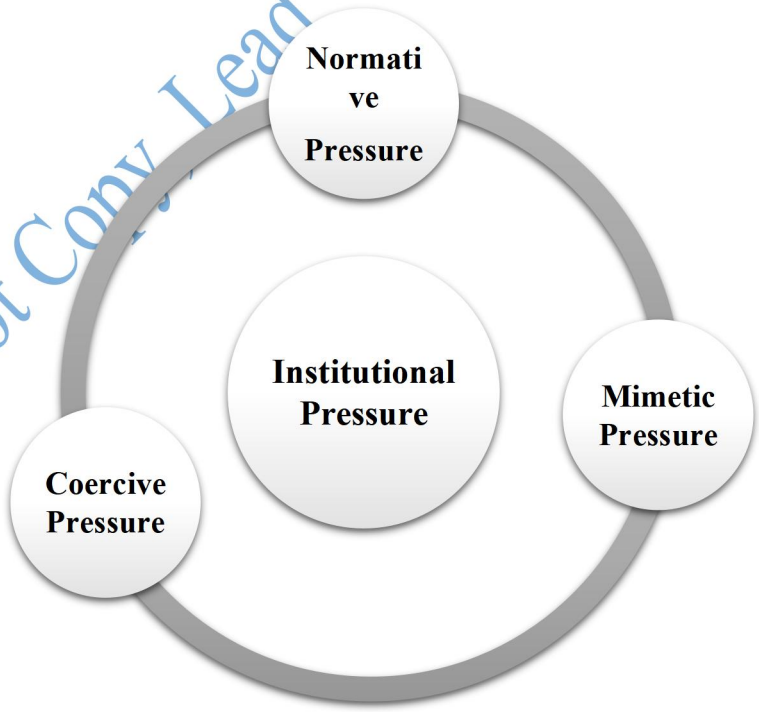

Figure 2.2: Institutional Pressure[73]

2.3 Review of Empirical Studies

2.3.1 Facilitating Conditions and the Use of Library Technology

Studies on technology adoption have shown that the decision to adopt a particular technology by any user all over the world is not random. Technology users usually put a lot of consideration into the decision to accept a technology that they have not been using previously. The acceptance and use of technology by various categories of users according to the UTAUT is based on the existence of enabling environment or facilitating conditions. Studies have therefore been conducted to measure the real impact of facilitating conditions on the use of various types of technology among various categories of users, including librarians from all over the world.

One technology that has been examined for its adoption is e-government technology. Naturally, governance and the interface with people all over the world have been conducted manually especially, in developing countries. While many countries in the western world have been using technologies to render government services, others in the developing world are just making the change and this is often met with skepticism among the citizens. A study conducted in Saudi Arabia found that there are a number of potential roadblocks to the Saudi government's aim to digitise all government services, including individuals' lack of experience with the electronic versions of these services. Researchers in Saudi Arabia sought to know what variables motivate workers at small scale businesses in the country to make use of e-government services. The paper examined the

role of facilitating conditions on the adoption of e-government services by small and medium-sized enterprises (SMEs) in Saudi Arabia.

The study adopted a survey research methodology to study a population of 91,894 small businesses and 44,7987 employees of these businesses. However, 1169 participants were systematically selected as the sample. A five-point scale questionnaire was used for data collection. the results showed that the respondents have the resources necessary (Mean =3.32), the knowledge necessary (Mean = 3.32), find the technology compatible with other technologies they have used (Mean = 3.37) and they can get help from others when having difficulties using the technology (Mean = 3.22). overall, the mean score for facilitating conditions among respondents was 3.31, which suggests that respondents are comfortable utilising the technology. The study also found that facilitating condition has an insignificant direct impact on technology use among the respondents ($\beta = 0.174$, $t = 4.047$, $p = 0.00$). this means that facilitating condition has an effect on behavioural intention to use technology which in itself is directly related to the use of relevant technologies[74]. This finding was also replicated by studies in other locations.

A group of researchers from Malaysia presented a basic model derived from the literature on information systems (IS) and user behaviour in order to analyse how ease-of-use influences users' propensity to remain loyal to the online educational management platform. The study adopted a survey research method and the study population included 500 students at a private university in Malaysia. The quantitative data collected was analysed using inferential statistics. The findings demonstrate that facilitating conditions significantly affect the intention of the students to continue using the educational management platform ($t= 6.312$; $p = 0.001$)[75]. The researchers interpreted the implication

of this finding to mean that developers of information systems must ensure that they attain full comprehension of facilitating conditions and their subsequent impact on the continuation intention to use any technology they are introducing. Equally important for providers of information systems is enhancing users' impressions and, thus, adoption of the technology.

Another research conducted in Indonesia delves into the habits of users and the enabling variables that contribute to the success of Indonesia's Online Learning Platforms (OLPs). The researchers pointed out that the successful implementation and maximum benefit from educational technology depend on students' comfort with and use of the technology. The elements of facilitating conditions and user behaviours are taken into account in this quantitative analysis based on a survey of 254 users of the technology. Partial Least Square-Structural Equation Modeling was used to assess two study hypotheses. The use of Cronbach's Alpha, path coefficient, AVE, R-squared, and the T-test was also implemented. The findings revealed that there was a statistically significant correlation between facilitating conditions and the intention to behave in a certain way ($t = 4.207$, $p < 0.05$). This result is primarily attributable to the availability of resources required for adopting OLP technology. Infrastructures such as pervasive Internet success, mobile device accessibility, and reasonable file sizes that influence download times all contribute to the accessibility of these publications[76].

Researchers in Germany examined the elements that have an effect on the widespread implementation of inter-organizational information systems in the Latin American and Caribbean region maritime sector. A survey research method was adopted for the study. Descriptive analysis and a Principal Components Analysis were used to interpret the data.

This study is unique among the studies reviewed as it clearly outlines the relevant facilitating conditions in the context of the maritime sector. This is done to properly pinpoint which of the facilitating conditions is actually significant.

Among the facilitating conditions identified in the study are; political will which is necessary to implement a novel system that will replace something which a lot of people are already familiar with. Another is stakeholder collaboration. This speaks to the collaboration among public and private actors involved in the processes. This is also relevant in organisation as all key stakeholders have to work together to achieve specific aims. There is also quality Information. The availability of accurate, reliable, pertinent, handy, well-timed, and easy-to-use information for the stakeholders is also considered a facilitating condition. The study also identified proper regulations or policies which guide the implementation and use of the technology. Most importantly, there should be necessary complementary technologies to support data collection, transmission, and exchange among the system users or points of use.

Other facilitating conditions identified in the study included of expectations management, clarity of purpose, training, and overhaul of the existing protocols to accommodate the new ways of operation established by the new system. Expectation management is of great importance to avoid the overselling that can lead to higher expectations and eventual disappointment and disillusionment which attended the knowledge that technology is not actually as magical as it was advertised to be. This can be of help in preventing discouragement when the user faces the slightest challenge in the use of a particular technology.

Several other researchers have also examined the influence of facilitating conditions and other constructs of the UTAUT on the adoption of various technologies by various individuals in various contexts. A scholar from the Caribbean examined the determinants of the use of mobile learning applications by students in Barbados. The study adopted the quantitative survey research method with the population comprising of 600 undergraduates at the University of the West Indies. A questionnaire was used as the research instrument The study was anchored on the UTAUT theory which comprises facilitating conditions and other constructs. The analysis of the that showed that almost four out of five respondents (77%) said that a smartphone was their most-used mobile device. In addition, the study showed that the intent to adopt mobile learning applications among the students was determined by facilitating conditions (r=.47), and effort expectancy (r=.27). It follows that respondents' expectations of how well their mobile devices will work have a strong bearing on whether or not they will actually make use of those devices for mobile learning[77]. This study shows that facilitating conditions, even if they are expected to be provided by the users are important to the use of new technology. This was further shown in the findings of a related study.

Researchers from Malaysia examined the factors influencing the decision of students to use mobile technologies for educational purposes. The study was also a survey research based on quantitative data collected from 400 systematically sampled students from four technical universities in the country. A structured questionnaire was used as the main data collection instrument. The analysis of the finding showed that only 22% of respondents used their mobile devices for educational purposes on a somewhat regular basis. The researcher attributed this low use of mobile learning applications to a lack of facilitating

conditions as the application were not mobile-friend. This was however reported as performance expectations (r=-.513) which were found to be significant[78]. The implication of the findings of this study is that facilitating conditions should be properly conceptualized so that researchers would not simply report its manifestation in the difficulty users may face due to lack of facilitating conditions

The influence of UTAUT model constructs such as facilitating conditions was also examined by researchers in Turkey. The study surveyed 491 students at the University of Sakarya in Turkey to determine their attitudes toward mobile learning. They factored in the students' expectations for their own success, their own level of effort, and the factors that made mobile learning more appealing. The results of the multiple regression analysis showed that each of the three components strongly predicted the respondents' behavioural intention to use mobile learning. When considered separately, the beta values for the variables were as follows: performance expectancy (=.389), effort expectancy (=.210), and facilitating conditions (=.043)[79]. although facilitating condition seems to be the least significant in this study, it can be understood from the perspective that Turkey is a technologically advanced country compared to Africa so it is possible that infrastructural challenges in using technologies are not common.

In a related study conducted in Malaysia which is not technologically as advanced as Turkey facilitating condition was found to be the more significant predictor of technology use. The researchers investigated the use of technology among accounting students at Malaysian universities. The study specifically considered the influence of performance expectations, effort expectations, and facilitating conditions on mobile learning among students. The study sample consisted of 150 undergraduate students. A questionnaire

adapted from the UTAUT model was used as a data collection instrument. The results demonstrated a positive correlation between performance expectation (r=.266), effort expectation (r=.582), facilitating conditions (r=.643), and the use of mobile learning applications among the students[80]. Compared to the previous study, when facilitating condition is unavailable, it becomes a big issue that can affect the use of the necessary technology

This was further confirmed in another study conducted in Taiwan to investigate the influence of factors like performance expectancy, effort expectancy, and facilitating environments on the behavioural intention of using mobile payments among college students. The study adopted a quantitative research method for the study. the study sample was made of 174 systematically selected undergraduate students. Data was collected using a validated questionnaire and a convenience sample strategy. Only effort expectancy (r=-0.096) among the three UTAUT criteria was found to be negatively related to the practice of making mobile payments. The study found that the likelihood of making a mobile payment is positively related to enabling circumstances (r=0.510)[81]. The study concluded that, unless stakeholders put structure in place to ensure easy access to and use of technology, the technology may not gain wide acceptance. Similar findings were reported in African studies, particularly by Nigerian scholars

In a related study conducted in Nigeria's North Central Geo-Political Zone, researchers examined the attitudes and preparedness for mobile learning use among the student. Students' intentions to adopt mobile learning were investigated not only in terms of their perceptions and levels of preparedness but also in terms of their expectations regarding the outcomes of their efforts and the situations in which they are most likely to succeed.

The study found that respondents' performance expectations (r=.105), effort expectations (r=.242), and mobile learning conditions (r=.452) substantially influenced their intention to employ mobile learning. The authors concluded that the facilitating conditions available in the user's environments are crucial to student preparation and acceptance of mobile learning[82]. This was further confirmed in an experimental study that focused on the actual user experience.

A group of researchers from Australia conducted an experimental study to determine the influence of facilitating conditions and other constructs on the adoption of 2D barcode readers by students in an Australian university. The study population was drawn from undergraduate students from an Australian institution who volunteered to take part in a lab experiment (106). Participants were randomly allocated to two groups; (high, low) experience and (high, low) facilitating conditions. The participants in the high-experience group were directed to attempt to scan 2D barcodes using smartphones that had the researcher's 2D barcode reader application already pre-installed. Additionally, participants in this group were asked to create their own 2D barcodes using an internet tool for doing so, then scan those codes with the researcher's pre-installed app on their own smartphone.

On the other hand, the group with less expertise was told to view a video tutorial on how to create a 2D barcode reader and how to operate a 2D barcode reader application. This group's members did not use the application in a real trial. Participants were asked to self-report their mobile phone model, brand, or manufacturer in order to assess compatibility with the 2D barcode reader application being supplied, which was done in order to modify the conducive conditions. Participants in the poor facilitating conditions group

discovered that the application did not work on their mobile devices. Then they were told that they would have to go through a drawn-out and difficult installation process since the application was incompatible with their mobile devices. On the other hand, participants in high facilitating conditions discovered that the programme was compatible with their mobile devices, thus they were told that doing so would be simple and quick. The unique finding in this study is that, while facilitating conditions affect the use of technology, its influence can be moderated by experience[83].

The use of technology can be enhanced or hindered by the experience of the use. In some cases, even when all the facilitating conditions are available, some may not be able to use the technology while others will be able to use it even when they have to figure everything out by themselves. This was demonstrated in a study conducted by Nigerian scholars. The study experimented with a model that took into account librarians' ICT skills and their perceptions of how easy library technology is to use. Multiple stages of sampling were used in conjunction with a correlational study strategy to lower the sample size to an acceptable level. The population of the study was made up of professional librarians and library officers drawn from four different academic institutions in Nigeria. According to the findings, librarians' ICT skill ($r=0.302$, $p=.01$, $p < .05$) is an important predictor of their propensity to embrace new technologies. When librarians' ICT skill are lacking, they are more likely to find the use of technology difficult which will drastically restrict their ability to adopt library technology[84].

Researchers in Nigeria adopted the unified theory of acceptance and use of technology (UTAUT) to investigate what factors influence the willingness of lecturers' at Nigeria's public and private universities to incorporate ICTs into their classroom instruction. The

study opted for a mixed technique approach, using both questionnaires and semi-structured interviews. Empirical data was gathered from a sample of 267 respondents across three departments and 10 key informants in administrative roles at both the University of Ibadan and Covenant University, Ogun State. At the University of Ibadan, regression analysis revealed that only facilitating conditions (β=-0.345, t=-3.221, p= 0.002) significantly influenced the implementation of ICT in the classroom. However, at Covenant University, the usage of ICT by faculty is significantly influenced by both effort expectancy (β= 0.380, t = 3.116, p = 0.003) and FCs (β= -0.281, t = -2.327, p = 0.023). the researchers concluded that the success of technology usage in academic environments is dependent on the availability of relevant institutional policy, technological infrastructure, ease of use, funding, and organizational support[85].

The significance of facilitating conditions, especially institutional support was evident in the study, the respondents from private institutions seem to have more technical support than those in the public-owned universities. This makes the influence of facilitating conditions more pronounced at the University of Ibadan (p = 0.002) than at Covenant University (p = 0.023). The importance of organisational support can be seen in various studies conducted on the use of technology in libraries. This is because librarians were usually trained in the traditional method which often makes the transition to the digital method difficult for them. This is shown in a study conducted in Botswana.

Researchers in Botswana, motivated by the technology prevalence in modern society which has forced information providers to adopt new methods of delivery to keep up with the growing demand for data evaluated public librarians in Botswana with regard to their openness to implementing technological solutions for library management and

information sharing. The study adopted a survey research methodology. Data was collected from 21 people using an online survey through a combination of convenience and selective sampling. In addition, a mixed-methods strategy was utilised to gather both qualitative and quantitative information. This research shows that public libraries are prepared to include ICTs (information and communication technology) in their service offerings. Their heavy reliance on email and social media platforms is proof of this. However, there are still some of them who are resistant to the use of technology.

The responses of 46% of the respondents indicated that they may be resisting the use of technology. In addition, 31% of the librarians who responded reported that they avoid computers due to concerns about cyberbullying and technology dependence. The lack of adequate technological support in the library also cited by 54% of the respondents, making it clear that this is a major issue for librarians. Also, poor internet connection, lack of computers, a lack of timely technological help, and a lack of ICT skills among librarians are just some of the issues that have been uncovered as a result of these studies of Botswana's public libraries[86]. This lack of ICT skills is not limited to public libraries as it was also reported in academic libraries.

Researchers focused on university libraries in North Central Nigeria to evaluate the practice of library resource sharing is being conducted. Particularly, the study focused on the quality of their information and communication technology (ICT) infrastructures and the expertise of their staff members. The study employed a survey research design and the population consisted of sixty (60) librarians. The data were analysed using both descriptive and inferential statistics. The study found that (ICT) infrastructures that facilitate resource sharing in the sampled university libraries are irregularly distributed.

While 98% of the respondent reported having an e-library, and 97% said they had access to the Internet, the study found that most university libraries lacked teleconferencing and video conferencing facilities as well as other technologies that can facilitate effective communication between libraries engaged in resource sharing. According to the findings, university librarians should advocate for adequate funding of library computer systems, work to improve libraries' existing Information and Communication Technology (ICT) infrastructures, and implement training and retraining programmes for library staff rather than raise the bar on their ICT competence[87].

Researchers in India examined the rise in technology adoption in Indian academic libraries. The study attempted to trace the evolving patterns of information and communication technology (ICT) use in Indian academic libraries. It also addresses the problems encountered by librarians when attempting to implement these new fashions. This study which focused on a ten-year period (2005-2015) found that the rate of automation rose from 42% in 2005 to 100% in 2015. The libraries have automated all key routines such as cataloguing, acquisition, serial control, circulation, and OPAC management. Barcode and RFID technology are also being implemented in the libraries to speed up automated.

According to the results, a lack of funding and institutional support were the primary problem at six of the universities studied. Four of the libraries have issues with storage and access because of a lack of infrastructure, while three of the libraries have issues with a shortage of skilled labour. One university library is hampered by software restrictions, and five others have had slow internet connectivity, making it difficult to expand their collections. The absence of these facilitating conditions has limited the use of the library

software. The finding further buttresses the importance of facilitating conditions in the use of library technology[88].

In all the studies that have been reviewed so far, there is not one in which facilitating has accounted for 100% of the decision to adopt any kind of technology among any group of users. This indicates that there are other variables that may predict the use of technology by new adopters including academic librarians. Indeed, the UTAUT is made up of four constructs that can predict the use of technology which facilitating condition is one. Another construct that can predict the use of technology is social influence. The relationship between social influence and the use of technology is examined in the next section.

2.3.2 Social Influence and the Use of Library Technology

Social influence as a factor in the decision to adopt and use technology has been explored from various angles by researchers. While there is some sort of consensus on the significance of social influence on the adoption of technology among different categories of people, what or who constitutes 'significant others' has been interpreted in a variety of ways. What has been shown is that what constitutes social influence differs from one situation to another.

A researcher examined the role of social influence on the use of Weblogs by teachers in Indonesia. The study defined "social influence" as the extent to which an individual agrees with the importance that others attach to his or her using the new system. A person's willingness to adopt a new system is greatly bolstered by the positive reinforcement he receives from those around him. While blogs are popular in western

countries, their adoption in Asia and Africa is more recent. The preliminary research that was conducted to measure the acceptance of the blog as a learning media by some teachers of vocational schools in Malang using UTAUT found that the use of the blog quite successfully increased the motivation of teachers in teaching.

It was also found that social influence (78%) is a significant factor in the use of web blogs among teachers. It was also found that the social influence was derived from sources such as external personal influence (88%), employers' influence (88%), external assessors (66%), and influence of friends/colleagues (57%). The percentage of the various influencers confirms the definition of social influence as the perception that 'those whose opinions matter' want an individual to use the system. It can be seen that the influence of friends, while significant, is still the lowest for teachers[89].

Similarly, researchers examine the performance consistency of UTAUT when applied to a setting different than its original design by examining the application of an adapted UTAUT model to discover librarians' acceptance of the Radio-frequency Identification based Library Management System (RFID-LMS). The multiple regression method is used to establish the causal connections and significant levels among the five indicated constructs. In the end, the findings are compared to how well UTAUT performed, as described in the original article. Significant links were discovered between extraneous factors including attitude and self-efficacy, as well as UTAUT components and RFID-LMS adoption. The study found a significant relationship between social influence and self-efficacy ($r=.778$, $p<.001$). and effort expectancy and social Influence ($r=.640$, $p<.001$)[90]. The finding indicates that social influence can boost the self-efficacy of a potential technology user. This is can be said to perfectly explain how social influence

predict the use of technology. It is possible that when significant others express in an individual ability to use a particular system (self-efficacy) and also indicate to him/her that the technology is not difficult to use (effort expectancy), such individual will be encouraged to use the system.

A study was conducted to examine why college students use library mobile apps by combining the unified theory of acceptance and utilisation of technology (UTAUT) with the Task-Technology fit model. This study adopted a quantitative survey research design. The study sample consists of 363 undergraduate students who provided the study's data. Data analysis was conducted through structural equation modelling (SEM). The research findings show that users' behavioural intention to utilise library mobile applications is determined by performance expectancy, effort expectancy, social influence, and facilitating factors. The study found that social influence (β = 0:43; p, 0:001), and facilitating conditions (β = 0:26; p, 0:001) have a significant impact on behavioral intention of using library apps among the study respondents[91]. The implication of this study conducted among undergraduates is that it further validates the strength of social influence and facilitating conditions as predictors of technology adoption among various user categories.

In a related study, researchers examined how widely used e-books have become among university students in Kwara State, Nigeria. The study also adopted a quantitative survey method. The study population consist of three hundred (300) undergraduate students from universities in Kwara State, Nigeria. Both descriptive and inferential statistics were used in analyzing the empirical data collected through an adapted questionnaire. The results showed that there was a clear preference for electronic textbooks among students at

public and state institutions, but a clear preference for paper textbooks among students at private colleges. The study also found that the UTAUT model constructs are significant predictors of e-book use among students. Results showed that there is a significant link (Beta=0.155; p=0.012) between the social influence of others and the intention to use electronic books among Nigerian undergraduates. The study also found that facilitating conditions in terms of the availability of conducive settings, relevant equipment, and support (Beta=0.204; p0.001) is a significant predictor of e-book use among Nigerian undergraduates. Male students were highly influenced by their performance and effort expectations, whereas female students were significantly influenced by social influence and facilitating conditions[92]. The researchers recommended that librarians and other stakeholders must do all they can to increase the usage of electronic books by promoting a lecturer-student model and enhancing the user interface. There are also studies that have explored the role of social influence on technology by librarians and information professionals.

American researchers also conducted a study to investigate librarians' (both academic and public) interest in adopting various forms of artificial intelligence and related technologies. North American librarians' perspectives and aspirations about artificial intelligence were gathered through an online poll distributed via mailing lists maintained by professional library associations. The UTAUT theory was used to guide the research. The finding of the study research shows that, while the combination of the UTAUT is able to accurately predict librarians' intentions to use AI and associated technologies, social influence (SI) (r= 0.110 p = 0.092) did not significantly affect librarians' intention to use AI and related technologies[93].

Since the creation of the Technology Acceptance Model in 1989, investigating the impact of social influence on the behaviour of single Information Systems (IS) users has been one of the central problems of technology adoption research. This methodology adds to the current literature on adoption by presenting the findings of a literature review of all publications published in the top-ranked journals in the AIS and the AIS proceedings since 1989. Both theoretical and empirical IS researchers have yet to agree on how to describe and quantify social influence. Data from 149 studies shows that considering social impact is crucial when implementing a utilitarian IS and that using a unique metric for measuring impact is essential. It is also shown that the adoptee's level of autonomy and other characteristics like the timing of adoption (pre-adoption vs. post-adoption) do not attenuate the influence of social networks. (mandated vs. voluntary).[94]

2.3.3 Facilitating Conditions, Social Influence and the Use Library Technology

Researchers from Iran adopted the UTAUT-2 to examine the use of mobile devices for library services among Iranian university students. The research hypotheses were tested using a quantitative and correlational methodology. A total of 438 Western Iranian college students were used as the study's sample. All of the UTAUT-2 model's construct measures were taken from previously published research. Plus, the scales have been updated to better represent the importance of smartphones. Descriptive statistics, a Pearson's correlation test, multiple regression, and structural equation modelling in SPSS 23 and Amos were used to analyse the data. The study's findings revealed that students' behavioural intentions regarding the use of mobile devices in academic library services were significantly affected by factors including performance expectancy, effort expectancy, facilitating condition, social influence, hedonic motivation, habit, self-

efficacy, trust, and voluntary of variance[95]. The implication of this study is that both facilitating conditions and social influence are among the key factors determining the adoption of technologies in libraries. The are other studies that support this stance.

The study of how people interact with new technologies is expanding quickly across academic disciplines. A user's worldview or the advancement of a system are two of the most common motivators for embracing new technologies. It is widely agreed that these factors are crucial for a system to gain widespread user support. The purpose of this study is to use an extended version of the UTAUT model dubbed the OSIS-UTAUT model to the study of user acceptability of open-source library information systems like Koha. Both can make use of the UTAUT paradigm, which unifies theories of acceptance and technology adoption and use. In contrast to the user acceptance test's (UAT) emphasis on the system's functionality and technical features, the UTAUT model is commonly used to evaluate the system's "acceptance and use" by end users. In this research, librarians' satisfaction with Koha OSLIS is evaluated along dimensions beyond those originally considered in the UTAUT model: system success, user skills, and system cost (open-source library information system). The suggested framework, open source information system (OSIS). The model examines how performance expectancy (PE), effort expectancy (EE), social influence (SI), self-efficacy (SE), and attitude toward technology use (AUT) interact with system quality (SQ), information quality (IQ), Information technology skill (ITS), and cost (C) (ATUT). A total of 61 questions covering all ten components make up the survey's instrument.

Four experts validated the survey instrument in the first step. Respondents are Koha OSLIS librarians from a cross-section of Malaysian universities (both public and private).

Cronbach's alpha for a sample of 30 early adopters of Koha OSLIS, run in SPSS version 22, was more than 0.7. Since the sample has a kurtosis greater than zero, it has a left-tailed, aleptokurtic distribution with a heavier tail. We ran Partial Least Square (PLS) Professional version 3.0 software on a total of 215 replies. To test discriminant validity, bootstrapping is used. The final version of the instrument contains 56 measures after some were eliminated. The high R2 score suggests that the variables and data utilised to develop the suggested model are highly related to one another.

The percentage of variance in the dependent variable, users' satisfaction with the Koha open-source library information system, that can be attributed to factors outside of the study is 79%, as calculated using the R2 statistic. At least five of the hypothesised connections (AMUT, PEQ, SQ, SI, and IQ) were supported by the path analysis. For this data collection, we did not find support for the C, EE, ITS, or SE relationships. From the perspective of both user behaviour and system success, this research contributes to the measurement of user acceptability of open-sourcee library information systems. It is demonstrated that the OSIS-UTAUT model can be used to gauge librarians' satisfaction with Koha OSLIS. By gaining this insight, hopefully academic libraries will be better able to oversee the implementation and use of OSLIS[96].

Similarly, researchers from Pakistan conducted a mixed-method research methodology to examine the perception of Pakistani librarians about using Koha, an open-source library management system (OSILS). The survey technique was utilised in order to adopt a quantitative strategy. A questionnaire was sent out to a selected group of librarians in Pakistan in order to collect the necessary data. The data was analysed using a variety of methods, including the Pearson correlation coefficient, multiple regression, and stepwise

regression. The studies found that the adoption of Koha among the librarians is predicted by perceived usefulness and perceived ease of use both of which were linked to four external stimuli that include social (β=0.512), personal innovativeness, (β=0.503) and organizational readiness (β=0.452) for perceived usefulness and social influence (β=0.506), personal innovativeness (β=0.457), organizational readiness (β=0.411) for perceived ease of use[97]. The implication of this study is that social influence and organisation readiness (i.e facilitating conditions) may not directly influence the adoption of technology by the influencing the perception of ease of use and usefulness which are both established predictors of intention to use and actual use of technology

A group of researchers in Pakistan set out to learn more about academic librarians' motivations for adopting new technologies by focusing on their use of mobile apps. The Unified Theory of Acceptance and Use of Technology (UTAUT) served as inspiration for a theoretical framework built for this study. It was hypothesised that the intention to use mobile applications will be significantly related to five different constructs: expected performance, expected effort, perceived credibility, conducive conditions, and social influence. Data was gathered from 212 academic librarians in Pakistan using a survey study methodology. The outcomes showed that factors including performance expectations, effort expectations, and conducive environments all play a role in shaping future behaviour of the librarians regarding the use of technology[98].

Researchers examined the influence of facilitating conditions and social influence on the use of electronic records management systems by nurses in Ghana. The study was a survey research which was hinged on the Unified Theory of Acceptance and Use of Technology" (UTAUT) model. Six hundred and sixty nurses' responses were collected

via a electronic platform questionnaire. The statistical analysis was performed using AMOS Structural Equation Modelling (SEM) version 22.0. the study found that both facilitating conditions and social influence were statistically significant (p 0.001) as predictors of technology use among the nurses. Notably, both social influence (SI) and facilitating condition (FC) influenced nurses' use behaviour (UB) via behavioural intention (BI), which together accounted for 42% of the variation in nurses' plans to use the system. Similarly, both social influence (R^2 = 43.2) and behavioural intention (R^2 = 0.39.5) were significant predictors of nurses' willingness to use the system, together accounting for 52% of the variance in user behaviour[99]. This study has effectively shown that the combined influence of facilitating conditions and social influence is a significant predictor of technology use. This study is also relevant to this study as the technology under study is an information system the like of which is used in academic libraries. Researchers on the African continent have also been investigating factors determining technology adoption by librarians and other professionals.

In another study focused on the use of technology by Librarians in Ghana, researchers examined users' familiarity with, preference for, and drive to employ digital reference services in three randomly selected Ghanaian academic libraries. The study used a mixed-method research method with the respondents including a total of 30 academic librarians from 3 different libraries. The study found that, despite its perceived usefulness, traditional reference was usually favoured by the library users in three academic libraries surveyed. However, there was a spike in the usage of digital reference services right before examinations. Users preferred email over other digital platforms when it came to the popularity of digital reference services. Moreover, the results showed that the

respondents made use of digital reference services when they were away from school, with mobile phones being the most popular digital tool for doing so. In the end, it was determined that digital reference services greatly enhance library patrons' ability to make use of library resources[100].

A study conducted in Botswana investigated the perception of librarians in that country about their thoughts on Web 2.0 technology. The purpose of this study is to learn how librarians and library administrators at the University of Botswana understand Web 2.0 tools, how they might be used to improve library services, and whether or not they are willing to do so. In light of the limited size of the data pool, the researchers opted for a qualitative methodology. Those in the sample were mostly librarians and upper-level managers. The senior cadre was handpicked with the expectation that they already possess the requisite knowledge, experience, and contacts to do their jobs effectively. The survey specifically sought out the top tiers of librarians, including heads of departments and executives, as well as senior librarians. Qualitative approaches were used for analysis, and the findings were mapped against the Library Unified Theory of Acceptance and Use of Technology (UTAUT). The study found that library personnel have adopted and make personal use of some Web 2.0 applications like Facebook, but others like wikis, podcasts, Twitter, LinkedIn, and blogs have not caught on. The study also found that the librarians' adoption and use of Web 2.0 technology slowed down due to certain social influences and facilitating conditions[101].

Another study conducted in Ghana examined the impact of UTAUT constructs on library staff' and patrons' behavioural intentions towards the usage of social media in university libraries in Ghana. The study's theoretical framework was informed by the unified theory

of technology acceptance and utilisation (UTAUT). A cross-sectional survey design was adopted in the study. Quantitative data was collected from a total of 650 respondents by means of a structured questionnaire. T-test analysis (with Levene's Test for Equality of Variances) and structural equation modelling (SEM) were employed for statistical evaluations. The study found that demographics of library personnel and patrons had substantial mediating roles on characteristics impacting the intention to use and actual usage of social media in university libraries. The test of hypotheses revealed that performance expectancy ($\beta = 0.416, p<0.005$), effort expectancy ($p<0.005$; $\beta = 0.263$,) and facilitating conditions ($p<0.005$; $\beta = 0.181$) to behavioral intention and use behavior ($p<0.005$; $\beta = 0.196$) are all significantly moderated by gender. Unique within the Ghanaian university library setting, this study establishes the effect of user demographics on factors influencing social media use in the context of the UTAUT, adding fresh insights to methodological discussions to enhance practices and policies on social media adoption and use[102].

In Nigeria, researchers conducted a study to determine how librarians in South-West Nigeria are impacted by technology when it comes to exchanging information. The study used a descriptive survey design with a mixed techniques approach. Using a census/total enumeration method, a total of 108 librarians and 6 university librarians were surveyed. The study's theoretical foundation was the Unified Theory of Acceptance and Use of Technology (UTAUT). Questionnaires and in-person interviews were used to compile the data. SPSS was used to analyse the acquired quantitative data, while thematic content analysis was applied to the qualitative data. The results showed that 54 out of 91 respondents (53%) considered themselves to have a medium level of expertise in using

information and communication technologies, and that ICT aids librarians in locating the various elements pertinent to the sharing of knowledge (m=4.33) and enables rapid delivery and dissemination of information (m=4.21). Respondents agreed with the study's results that librarians' use of ICT has improved knowledge exchange[103].

In a related study, researchers examined the factors predicting the adoption of library technology by public librarians in Nigeria. The study was a survey research based on the UTAUT model. The result of data analysis showed that shows that social influence, and facilitating conditions, along with other constructs of UTAUT such as performance expectancy, effort expectancy, are significant predictors of technology adoption among public librarians the dependent variable, ($F(8, 193) = 14.195$, $p < .0005$). Performance expectancy, effort expectancy, social influence, enabling conditions, and behavioural intention to use new technology have been found to have a substantial predictive association. The equation for predicting behaviour is projected to take the form performance expectancy = effort expectancy = social influence = enabling conditions BI = -1.582% x (.254 x performance expectancy) - (.161 x effort expectancy) - (.120 x expected social influence) - (-1.582) (.149 x facilitating conditions)[104].

Researchers also examined the factors that determine the readiness of academic librarians in Nigeria to adopt emerging technologies such as big data technology. The study followed a quantitative survey research method. The population of the study consisted of library personnel across Nigeria. The sample was made up of three hundred and seventeen library personnel (317) and the research instrument was a structured questionnaire. The model's hypothesised connections were examined by means of Covariance-Based Structural Equation Modeling. The findings reveal that behavioural

intent to adopt big data technology is affected by performance expectancy, social influence, and facilitating conditions. In contrast, behavioural intentions to adopt big data technology are unaffected by individuals' expectations of the amount of effort required to do so. The researcher concluded that the study model may be useful in academic libraries because it explains half the variance in employees' stated intentions to use big data technology[105]. A similar trend was also reported in a study that examined the use of web technology among Nigerian librarians.

Another set of Nigerian librarians conducted a survey of librarians working in public libraries in Akwa Ibom State, Nigeria to learn about their experiences with and thoughts on Web 2.0 tools. Using a modified methodology, the study analysed librarians' conceptions of Web 2.0 technologies, evaluated the library's use of Web 2.0 tools, and pinpointed barriers to wider adoption of these technologies at six public libraries in Akwa Ibom State, Nigeria. The population of the study consisted of sixty (60) professional librarians. The study also adopted a total enumeration which means that the total population was employed as a sample given the manageable size of the. Descriptive statistics were used to examine the data acquired using a researcher-developed questionnaire in the forms of frequency counts, simple percentages, and charts. The results showed that most librarians believe Web 2.0 technologies are valuable and could improve their job performance; that Web tools are clear and easy to comprehend; and that colleagues, library patrons, host institutions, etc. expect them to use the tools. A relatively low adoption rate of web technologies was found, however, across the libraries in the study. High costs of technology, limited access to online resources, limited funding, a lack of librarian training, and tight ICT rules are the main obstacles to the widespread

implementation of Web 2.0 technologies in Akwa Ibom State's academic libraries. Appropriate resources should be allocated, workers should receive regular training and re-education, library buildings should be modernised to accommodate web 2.0 resources, etc. Suggestions for future research were made as well[106].

2.4 Conceptual Model

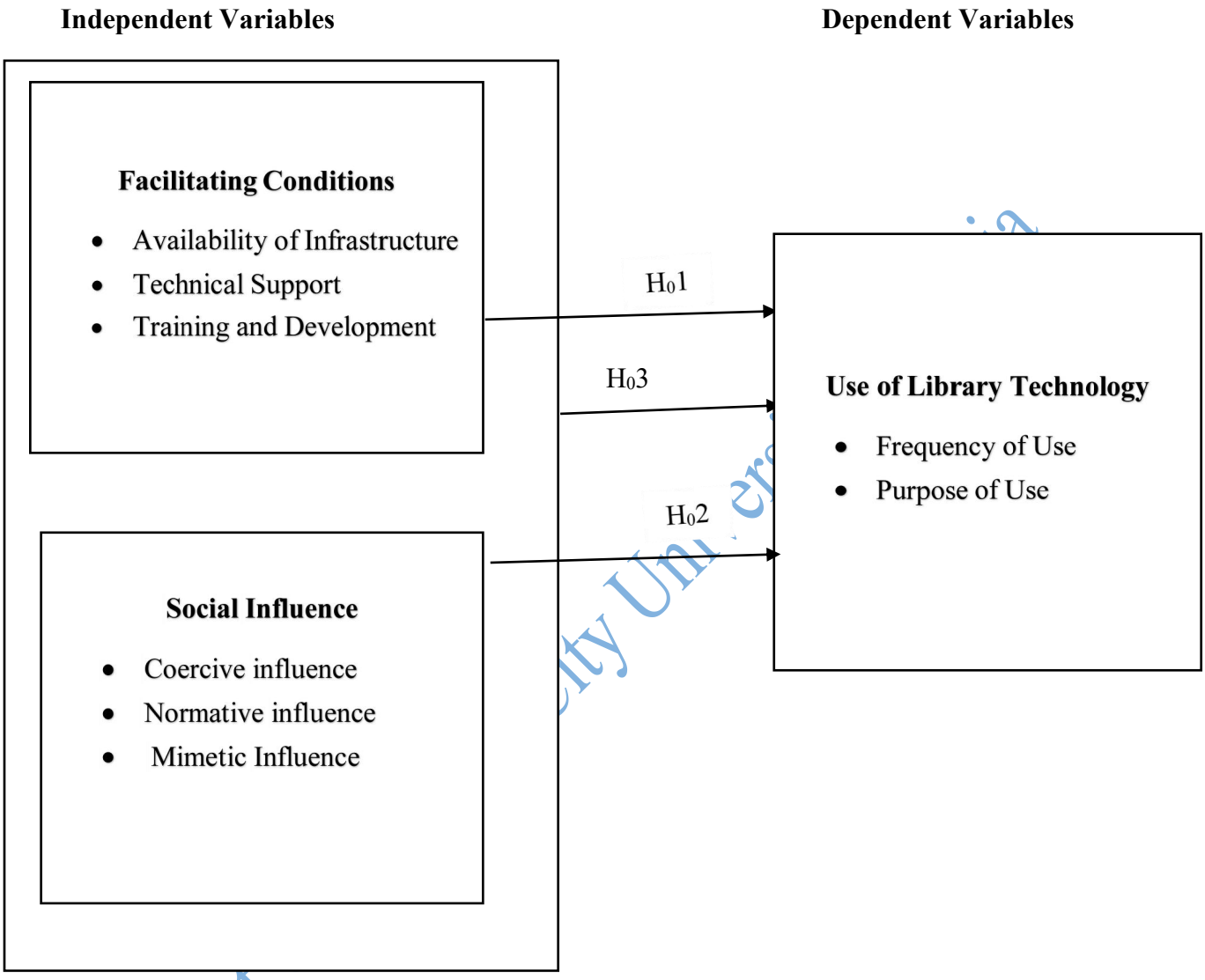

Figure 2.3: Conceptual Model for the Influence of Facilitating Conditions and Social Influence on the Use Library Technology by Academic Librarians.

Source: Researcher, 2023

The conceptual model outlines the relationship between the independent variables and the dependents variable. There are two independent variables, namely facilitating condition and social influence. The metrics for use of library technology and facilitating conditions were adapted from the Unified Theory of Acceptance and Use of Technology by Venkatesh and Bala[67, 68] . Facilitating condition is measured by three constructs namely;

availability of infrastructure, technical support, and training and Development. Social influence was also derived from the UTAUT but it has been expanded in this study by the institutional theory[63]. The constructs to measure social influence in this study are therefore derived from institutional theory[54]. These are; coercive influence, normative influence and mimetic influence. The independent variable is the use of library technology which is measured by frequency of use and purpose of use. Both metrics are derived from literature to represent the construct 'Use behaviour' in the UTAUT.

Essentially, the model shows the relationships and assumptions on which the study is based. The first assumption which is that facilitating condition will influence the use of technology among academic library personnel in the FCT Abuja. That is when academic libraries provided the necessary facilities such as working computers, fast internet connection, relevant library software and regular power supply, librarians will be encouraged to make use of technology. Also when these are supported by mentoring from supervisors and senior colleagues as well as regular capacity development in the use of ICT, it will ensure the use of technology. On the other hand, when these facilitating conditions are not in place, librarians will not make use of library technology. This is presented as a null hypothesis which states that; there will be no significant influence of facilitating condition on the use of library technology by academic library personnel in FCT, Abuja. The model also shows that facilitating conditions may not be the only predictor of technology use among academic library personnel

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The model also links social influence to the use of technology by academic library personnel. From the model, it is implied that when academic library personnel are

exposed to three forms of influence. Coercive influence comes from employers and regulatory bodies who reward the use of technology and penalize non-use of technology. The other type of influence is normative influence. It can be from colleagues, friends, or the work environment pressure. It means everyone around the librarians or in their profession are already using technology. The third form of social influence is mimetic influence. It comes from trying to keep up with the competition or the market trend. For librarians, the competition is the internet and the information users who have taken to the use of digital resources is the market trend. It is assumed that when all these pressure are applied to library personnel, they will be pushed to use technology frequently and for various purposes. This is presented as a null hypothesis which states that; there will be no significant influence of social on the use of library technology by academic library personnel in FCT, Abuja. The third line connecting the models represents the third hypothesis.

The model also indicates that it might require the combination of both facilitating conditions and social influence to push academic library personnel to make use of library technology. This can be understood from various empirical studies that have been conducted in which no single variable can account for all the reasons for the adoption of technology. The study, therefore, formulate a third hypothesis which states that; there will be no significant combined influence of facilitating condition and social influence on the use of library technology by academic library personnel in FCT, Abuja.

2.5 Summary of Reviewed Literature

The literature review has shown the state of the matter as regards the adoption of technology by library personnel and other users across the world. The review shows that

technology has permeated every corner of human endeavour. There is no profession, occupation, or activity where technology has not been found useful. As a result of this, many technologies in use today have been designed to be used by different categories of users who can adapt each technology to meet their needs. As a result, there are technologies made for general use which are relevant to activities in a typical academic library.

There are also technologies that are designed specifically for the use of libraries as there are others designed for other professions such as medicine, archeology, military, etc. The review identified these technologies, the foremost of which is the integrated library management system. There are also others like the Online Public Access Catalogue (OPAC), institutional repositories, indexing applications, RFID, artificial intelligence, and others in that category that are being introduced in libraries all over the world. However, the availability of these technologies does not always lead to instant acceptance and use as they have come to disrupt years of tradition and familiar practice.

In line with this, researchers have examined the factors predicting the use of technology by librarians. As this study is mainly anchored on the Unified Theory of Acceptance and Use of Technology (UTAUT), the review focused on studies that have applied the theory. Several studies were found that have examined the construct of interest; i.e; facilitating condition and social influence. These have been used to examined the acceptance of technologies such as e-governance, learning management systems, banking applications, hospital management systems, library software, institutional repositories, e-books and other library resources. The theory has also been applied to the adoption of technology in public libraries and academic libraries beyond Nigeria.

The comprehensive review show that the result on influence of both facilitating conditions and social influence are mixed. While majority of the studies found the constructs to predict the use of technology among various categories of users, there are some that reports to the contrary. This has left a gap to be filled by examining the influence of these constructs in the context of a rarely studied location which is the academic institutions in FCT Abuja. In addition, majority of the studies focused on other technologies with only a handful considering the adoption of library technology by library personnel in the context of the UTAUT. Majority of studies who have applied the UTAUT are from other locations. This make it imperative to conduct this study in order to fill the knowledge gap.

Endnotes

[1] M.K., Buckland, *Library Technology In The Next 20 Years*. **Library Hi Tech**. Vol. 35 No. 1, 2017 Pp. 5-10

[2] M. Clayton, &, C., Batt*managing Library Automation.* **Routledge**. 2018.

[3] S., Sivankalai, *Awareness of Library Automation Among The Professionals In Academic Libraries At State Of Eritrea.* **International Journal of Academic Library and Information Science**, 8(1), 2020. Pp.17-21

[4] T.A. Oladokun, & L.F., Kolawole, *Sustainability of Library Automation In Nigerian Libraries: KOHA Open Source Software*. **Library Philosophy and Practice**, 2018. P.1.

[5] I.S., Njoku, *Use of Open-Source Technology For Effective Academic Libraries Services In Nigeria*. **Library Philosophy and Practice.** 2017.

[6] M.K., Stephens, *Review of Koha Library Software.* **TCB: Technical Services in Religion & Theology**, 30(2), 2022. Pp.7-9

[7] O. Okuonghae, & I., Idubor, *Assessment of the Use of Open Source Library Software In University Libraries In South-South Nigeria*. **SAU Science-Tech Journal**, 5(1), 2020. Pp.104-118.

[8] S., Hussaini R., Vashistha A. Jimoh & H. Jimah *Automation of Library Services For Enhanced Users' Satisfaction Of Information Resources In Academic Libraries In Nigeria. In: International Conference on Recent Innovation in Science, Engineering, Humanities and Management.* **CSMSS College Of Polytechnic, Kanchanwadi, Aurangabad, India**, 16 September 2017, Pp. 150–159

[9] J. *A* Nayana *Study on Library Automation Status Among the Aided College Libraries in Bengaluru***. Library Philosophy and Practice (E-Journal).** 3048. 2019 Available At: Https://Digitalcommons.Unl.Edu/Libphilprac/3048.

[10] I.E. Anyira *Need for Adoption of Koha Integrated Library Management Software in Nigerian Academic Libraries,* **Library Philosophy and Practice (E-Journal).** 4140. 2020. Available At: Https://Digitalcommons.Unl.Edu/Libphilprac/4140.

[11] D.P. Olakoge & J.A. Kolawole Effect *of Library Automation on Performance of Librarians in Private Universities in South-West Nigeria*. **Information And Knowledge Management**, 9(5), 2019, 1–11

[12] A.B. Shehu, & K.P., Singh, *A Study on The Application Of Information And Communication Technology In The University Libraries Of North-Central Nigeria*. **Library Philosophy and Practice**, 2022. Pp.1-11.

[13] A.I. Abayomi, & J.I., Ogungbeni, *Automation of Public Libraries in South West, Nigeria: Challenges and Way Forward.* **International Journal Applied Technologies in Library and Information Management**, 6(1). 2020

[14] Shahzad K., & A. Iqbal, *Barriers Faced by Library Professionals for Technology Adoption in University Libraries of Lahore, Pakistan*. **Library And Philosophy and Practice (E-Journal).;** 2020

[15] H., Moorefield-Lang, & A. Dubnjakovic, *Factors Influencing Intention to Introduce Accessibility in Makerspace Planning and Implementation*. **School Libraries Worldwide**, 26(2), 2020, 14.

[16] M., Pinto, R., Fernández-Pascual, D. Caballero-Mariscal, & D. Sales, *Information Literacy Trends in Higher Education (2006–2019): Visualizing The Emerging Field Of Mobile Information Literacy*. **Scientometrics**, 124(2), 2020. Pp.1479-1510.

[17] O.A. Adetunji, & T.A., Oladokun, *Effective Strategies for Sustainable Library Automation in Nigerian Academic Libraries: Preparing For „The New Normal" Caused By The COVID-19 Pandemic*. 2020.

[18] Y.S.,Amanyi, P.U. Akor, & E.C., Madu, *Use and Effects of Radio Frequency Identification (RFID) Technology on Theft Detection for Library Resources Management in Two Private Universities In Abuja, Nigeria.* I-**Manager's Journal on Wireless Communication Networks**, 7(2), 2018 P.19

[19] O.R., Omoadoni, *Impact of RFID (Radio Frequency Identification) Technology on Libraries*. **Library Philosophy and Practice,** 2019. Pp.1-10.

[20] T., Sabhapandit, *Development of ICT Application in The University Libraries of Assam: A Study*. **Library Philosophy and Practice**, 2019. Pp.1-11.

[21] P., John, & P. Balasubramanian, *Application and Uses of Information Communication Technology (ICT) In Academic Libraries with Reference to Arts and Science Colleges In Tirunelveli District, Tamil Nadu: A Stud*y. **Library Philosophy and Practice**, 2019, 1-12.

[22] M., Hussain H., Idrees, K., Faqir, & M. S. Haider, *Assessment of ICT Facilities in the Public Libraries of Khyber Pakhtunkhwa: A Descriptive Study*. **Library Philosophy and Practice**, 2021, 1-22.

[23] I.O. Adeyemi, & K.T., Omopupa, *Moving from OPAC To Discovery Systems: Nigerian Librarians' Perceived Knowledge and Readiness*. **Cataloging & Classification Quarterly**, 58(2), 2020. Pp.149-168.

[24] O.E., Yemi-Peters, V., Sokari, K.J., Olayemi, Z.A. Haliru, & U.G., Gama, *The Application of ICT In the Circulation Services of The University Library, Federal University, Lokoja-Kogi State, Nigeria*. **Library Philosophy and Practice**, 2019. Pp..

[25] B., Ray, & S. K. Singh, *Features and Use of Library Management Software Packages In The Libraries Of Gauhati University (GU) And Indian Institute Of Technology Guwahati* (IITG). **International Journal of Library And Information Studies** Vol.8(1), 2018

[26] L. F. Kolawole, & T. A. Oladokun *Utilization of Open-Source Software in Nigeria Academic Libraries: Matters Arising,* **Cataloging & Classification Quarterly**, 59:4, 2021, 399-407, DOI: 10.1080/01639374.2021.1919268

[27] S. A. Hamzat, & I. Mabawonku, *Influence of Performance Expectancy And Facilitating Conditions On Use Of Digital Library By Engineering Lecturers In Universities In South-West, Nigeria*. **Library Philosophy and Practice**, 2018, 1-16.

[28] M., Blut, A., Chong, Z., Tsiga, & V. Venkatesh, *Meta-Analysis of the Unified Theory of Acceptance And Use Of Technology (UTAUT): Challenging Its Validity And Charting A Research Agenda In The Red Ocean*. **Journal of the Association for Information Systems**, 2021.

[29] J., Kamaghe, E., Luhanga, & M. Kisangiri, *The Challenges of Adopting M-Learning Assistive Technologies for Visually Impaired Learners in Higher Learning Institution in Tanzania*. **International Journal of Emerging Technologies in Learning**, 15(1), 2020, 140-151. Https://Doi.Org/10.3991/Ijet.V15i01.11453

[30] S. H., Halili, & H. Sulaiman, *Factors Influencing the Rural Students' Acceptance Of Using ICT For Educational Purposes*. **Kasetsart Journal of Social Sciences**, 2018, 2019, 1-6. Https://Doi. Org/10.1016/J.Kjss.2017.12.022

[31] C., Pimmer, F., Brühlmann, T. D., Odetola, D. O., Oluwasola, O., Dipeolu, & A. J. Ajuwon, *Facilitating Professional Mobile Learning Communities with Instant Messaging*. **Computers and Education**, 128, 102-112. Https://Doi. Org/10.1016/J.Compedu.2018.09.005

[32] C., Choi, C., Kim, & C. Kim, *Towards Sustainable Environmental Policy and Management In The Fourth Industrial Revolution: Evidence From Big Data Analytics.* **Journal Of Asian Finance, Economics and Business**, 6(3), 2019, 185-192. Https:// Doi.Org/10.13106/Jafeb.2019.Vol6.No3.185

[33] R., Ambarwati, Y. D., Harja, & S. Thamrin, *The Role of Facilitating Conditions and User Habits: A Case of Indonesian Online Learning Platform*. **The Journal of Asian Finance, Economics and Business,** 7(10), 2020. 481-489.

[34] H. J. Kim, J.M. Lee & J.Y. Rha, *Understanding the Role of User Resistance on Mobile Learning Usage Among University Students.* **Computer. Education**. 113, 2017. 108–118. Doi: 10.1016/J.Compedu.2017.05.015

[35] F. O., Ajegbomogun, & O. B. Diyaolu, *Availability of Library Facilities, Knowledge Sharing as Determinants of Job Performance of Library Staff in Southwest Nigeria*. **Library Philosophy and Practice**, 1. 2018.

[36] C. U., Uzoigwe, & J. U. Eze, *The Perceived Benefits of Electronic/Digital Reference Services in Nigerian University Libraries: A Survey*. **International Journal of Knowledge Content Development & Technology**, 8(2), 2018. 49-65.

[37] Z. A. Mohideen, K. Kaur, S. Muhamad, N. A. W. Jan & A. B. Ahamadhu "*ITIL: Implementation And Service Management Best Practices In Malaysian Academic Libraries*," **International Journal Of Technology And Engineering Studies**, Vol. 3, No. 2, 2017, Pp. 65-73,

[38] F., Hamad, M. Al-Fadel, & H., Fakhouri, *The Effect of Librarians' Digital Skills on Technology Acceptance in Academic Libraries in Jordan*. **Journal Of Librarianship and Information Science**, 53(4), 2021. Pp.589-600.

[39] A., Tella, S. C., Ukwoma, & A. I. Kayode, *A Two Models Modification for Determining Cloud Computing Adoption for Web-Based Services in Academic Libraries in Nigeria*. **The Journal of Academic Librarianship,** 46(6), 2020. 102255.

[40] S. Iftakhar, *Google Classroom: What Works and How*? **Journal Of Education And Social Sciences**, 3, 2016, 12–18. Https://Www.Jesoc.Com/Wp-Content/Uploads/2016/03/KC3_35. Pdf,

[41] P., Jakkaew, & S. Hemrungrote, *The Use of UTAUT2 Model for Understanding Student Perceptions Using Google Classroom: A Case Study of Introduction To Information Technology Course*. In Proceedings of the 2017 International Conference on Digital Arts, Media And Technology 2017, Pp. 205–209. Http://Doi.Org/10.1109/Icdamt.2017.7904962

[42] Ö., Efiloğlu Kurt, & Ö. Tingöy, *The Acceptance and Use of a Virtual Learning Environment In Higher Education: An Empirical Study In Turkey, And The UK*. **International Journal of Educational Technology in Higher Education**, 14(26), 2017,1–15. Https://Doi.Org/10.1186/S41239-017-0064-Z

[43] J. A.,Kumar, B., Bervell, N., Annamalai, & S. Osman, *Behavioral Intention To Use Mobile Learning: Evaluating The Role Of Self-Efficacy, Subjective Norm, And Whatsapp Use Habit*. **IEEE Access**, 8,, 2020–208074. Https://Doi.Org/10.1109/ACCESS.2020.3037925

[44] K., Moorthy, T., Tzu Yee, L., Chun T'ing, & V. Vija Kumaran, *Habit and Hedonic Motivation Are The Strongest Influences In Mobile Learning Behaviours Among Higher Education Students In Malaysia*. **Australasian Journal of Educational Technology**, 35(4), 2019174–191. Https://Doi.Org/10.14742/Ajet.4432

[45] A.,Raman, & M. Rathakrishnan, *Blended Learning Via Google Classroom: English Language Students Experience Based On UTAUT Model And Flow Theory*. **Hamdard Islamicus,** XLIII(1).2020

[46] L. M., Maruping, H., Bala,, V., Venkatesh & S. A. Brown, *Going Beyond Intention: Integrating Behavioral Expectation Into The Unified Theory Of Acceptance And Use Of Technology*. **Journal Of the Association for Information Science and Technology**, 68(3), 2017, 623–637. Https://Doi.Org/10.1002/Asi.23699

[47] F., Huang, T., Teo, & R. Scherer, *Investigating the Antecedents Of University Students' Perceived Ease Of Using The Internet For Learning*. **Interactive Learning Environments**, 2020, 1–17. Https://Doi.Org/10.1080/10494820.2019.1710540

[48] R., Rahmad, M., Adria Wirda, N., Berutu, W., Lumbantoruan, & M. Sintong, *Google Classroom Implementation in Indonesian Higher Education*. **Journal Of Physics: Conference Series**, 1175(1), 2019, 1–6.

[49] A. A. A. Zwain, *Technological Innovativeness And Information Quality As Neoteric Predictors Of Users' Acceptance Of Learning Management System: An Expansion Of UTAUT2*. **Interactive Technology and Smart Education**, 16(3), 2019, 239–254

[50] S. U., Omeluzor, C. C., Nwosu, & U. E. Molkwu, *Effects of Library Infrastructure on Turnover Intentions of Librarians: A Study Of University Libraries In South-South And South-East Of Nigeri*a. **Library Philosophy and Practice (E-Journal).** 2018.

[51] E. S., Anaelobi, & E. C. Agim, *Tetfund Intervention and Development of University Libraries In South-East, Nigeria.* **Library And Information Perspectives and Research**, 1, 2019, 50-58.

[52] E. A., Awojobi, C. C.,Okoro, & Y. T. Babalola, *A SWOT Analysis Of Physical Infrastructure In Government-Owned University Libraries In Ogun State, Nigeria*. **South African Journal of Libraries and Information Science,** 86(2), (2020. 38-46.

[53] A.H. Brata, & F., Amalia, *Impact Analysis of Social Influence Factor on Using Free Blogs As Learning Media For Driving Teaching Motivational Factor*. In Proceedings Of The 4th International Conference On Frontiers Of Educational Technologies 2018, Pp. 29-33.

[54] Ö.F., Ursavaş, Y. Yalçın, & E., Bakır, *The Effect of Subjective Norms on Preservice and In-Service Teachers' Behavioural Intentions To Use Technology: A Multigroup Multimodel Study.* **British Journal of Educational Technology**, *50*(5), 2019. Pp.2501-2519.

[55] T. S. A. S., Ahmad, Z. S., Ramlan, & , S. K. Krishnan *Acceptance Of Google Classroom For Learning English Exit Test*. **International Journal Of Modern Languages And Applied Linguistics**, 4(1), 2020, 67–76. Https://Doi.Org/10.24191/Ijmal.V4i1.9504

[56] C. Yoon, "*Extending the TAM For Green IT: A Normative Perspective*." **Computers In Human Behavior** 2018.8 3: 129–139. Doi:10.1016/J.Chb.2018.01.032.

[57] J., Lee, M. Kim, C. D. Ham, & S. Kim. "*Do You Want Me To Watch This Ad On Social Media?: The Effects Of Norms On Online Video Ad Watching*." **Journal Of Marketing Communications** 23 (5): 2017, 456–472. Doi:10.1080/ 13527266.2016.1232303.

[58] K. J., Kim, D.-H. Shin, & E. Park. B. "*Can Coolness Predict Technology Adoption? Effects Of Perceived Coolness on User Acceptance Of Smartphones With Curved Screens*." **Cyberpsychology, Behavior, And Social Networking** 18 (9): 2015, 528–533. Doi:10.1089/Cyber. 2014.0675.

[59] A.A. Fauzi, & M.L., Sheng, *The Digitalization of Micro, Small, and Medium-Sized Enterprises (MSMES): An Institutional Theory Perspective*. **Journal Of Small Business Management**, 2020. Pp.1-26.

[60] K., Bozan, K. Parker, & B., Davey, *A Closer Look at the Social Influence Construct in The UTAUT Model: An Institutional Theory Based Approach to Investigate Health IT Adoption Patterns of the Elderly.* In *2016 49th Hawaii International Conference On System Sciences (HICSS)* **IEEE.** 2016, Pp. 3105-3114

[61] W.O., Oyediran, A.M., Omoare, M.A., Owoyemi, A.O. Adejobi, & R.B., Fasasi, *Prospects and Limitations of E-Learning Application in Private Tertiary Institutions Amidst COVID-19 Lockdown in Nigeria*. **Heliyon**, *6*(11), 2020.P.E05457.

[62] S.A., Raza, W., Qazi, K.A. Khan, & J., Salam, *Social Isolation and Acceptance of the Learning Management System (LMS) In the Time Of COVID-19 Pandemic: An Expansion of the UTAUT Model.* **Journal Of Educational Computing Research**, 59(2), 2021. Pp.183-208.

[63] B.T., Gamede, O.A. Ajani, & O.S., Afolabi, *Exploring the Adoption and Usage of Learning Management System as Alternative for Curriculum Delivery in South African Higher Education Institutions During COVID-19 Lockdown.* **International Journal of Higher Education,** 11(1), 2022. Pp.71-84.

[64] R.J., David, P.S. Tolbert, & Boghossian, J., *Institutional Theory in Organization Studies*. In **Oxford Research Encyclopedia of Business and Management**. 2019.

[65] D., Liu, W. Lu, & Y. Niu, *Extended Technology-Acceptance Model to Make Smart Construction Systems Successful.* **Journal of Construction Engineering and Management**, *144*(6), 2018. P.04018035.

[66] B., Latif, Z., Mahmood, O., Tze San, R. Mohd Said, & A., Bakhsh, *Coercive, Normative and Mimetic Pressures as Drivers of Environmental Management Accounting Adoption*. **Sustainability**, *12*(11), 2020. P.4506.

[67] V., Venkatesh, T.A. Sykes, & B X., Zhang, *'Just What the Doctor Ordered': A Revised UTAUT For EMR System Adoption and Use by Doctors.* In 2011 44th Hawaii International Conference on System Sciences. IEEE**. 2011**, Pp. 1-10

[68] V. Venkatesh, *Adoption and Use of AI Tools: A Research Agenda Grounded In UTAUT*. **Annals Of Operations Research**, *308*(1), 2022. Pp.641-652.

[69] B.G., Peters, *Institutional Theory in Political Science: The New Institutionalism*. **Edward Elgar Publishing**. 2019.

[70] A. L. V., Soares, L., Mendes-Filho, & U. Gretzel, *Technology Adoption in Hotels: Applying Institutional Theory to Tourism*. **Tourism Review**, 76(3), 2020, 669-680.

[71] M., Arshad, M., Farooq, S., Afzal, & O Farooq, *Adoption of Information Systems in Organizations: Understanding The Role Of Institutional Pressures In A Collectivist Culture*. **Journal Of Enterprise Information Management.** 2019.

[72] B. Latif, Z. Mahmood, O. Tze San, R. Mohd Said, & A. Bakhsh, *Coercive, Normative And Mimetic Pressures As Drivers Of Environmental Management Accounting Adoption*. **Sustainability**, 12(11), 2020, 4506.

[73] A. A. D. J., Alziady, & S. H. Enayah, *Studying the Effect of Institutional Pressures on The Intentions to Continue Green Information Technology Usage*. **Asian Journal of Sustainability and Social Responsibility**, 4(1), 2019, 1-20.

[74] M. S., Satar, & G. Alarifi, *Factors Of E-Business Adoption in Small and Medium Enterprises: Evidence From Saudi Arabia*. **Human Behavior and Emerging Technologies** Volume 2022.

[75] Z. Kamarozaman, & F. Z. A. Razak, *The Role of Facilitating Condition In Enhancing User's Continuance Intention.* **Journal Of Physics: Conference Series** Vol. 1793, No. 1, 2021, P. 012022.

[76] R., Ambarwati, Y. D., Harja, & S. Thamrin, *The Role of Facilitating Conditions and User Habits: A Case of Indonesian Online Learning Platform*. **The Journal of Asian Finance, Economics and Business**, 7(10), 2020, 481-489

[77] A. M., Turki, & M. Sathiyanarayanan, *Importance of Mobile Learning in Improving the Quality of Educational-Information Systems In The Saudi Arabian High Schools*. In 2018 21st Saudi Computer Society National Computer Conference (NCC) IEEE. 2018, Pp. 1-5

[78] N.,Kim-Soon, M. A., Ibrahim, A. R., Ahmad, & N. M. X. Sirisa, *Factors Influencing Intention to Use Mobile Technologies for Learning Among Technical Universities Students*. Proceeding of the 26th International Business Information Management Association Conference, Madrid, Spain, 26, 2015, 2046-2057.

[79] N. G., Ugur, T., Koc, & M. Koc, *An Analysis of Mobile Learning Acceptance by College Students.* **Journal Of Educational and Instructional Studies**, 6(2), 2016, 39-49

[80] Z., Zainol, N. M., Yahaya, N., Yahaya, & N. N. B. M. Zain, *Factors Influencing Mobile Learning Among Higher Education Students In Malaysia.* **International Journal of Advanced Scientific Research and Management**, 2(8), 2017,86-91.

[81] M. L., Yeh, & Y. L. Tseng, *The College Students' Behavior Intention of Using Mobile Payments in Taiwan: An Exploratory Research*. Proceedings Of IASTEM International Conference, Singapore, 2nd -3rd, 2017, 1-6

[82] J. G., Chaka, & I. Govender, *Implementation of Mobile Learning Using a Social Network Platform: Facebook.* **Problems Of Education in the 21st Century**, 78(1), 2020, 24-47. 08086187195

[83] H., Mahardika, D., Thomas, M. T., Ewing, & A. Japutra, *Experience and Facilitating Conditions as Impediments to Consumers' New Technology Adoption*. **The International Review of Retail, Distribution and Consumer Research**, 29(1), 2019, 79-98.

[84] R., Izuagbe, N. A., Ibrahim, L. O., Ogiamien, O. R., Olawoyin, N. M., Nwokeoma, P. I., Ilo, & O. Osayande, *Effect of Perceived Ease of Use on Librarians' e-Skills: Basis For Library Technology Acceptance Intention.* **Library & Information Science Research**, 41(3), 2019. 100969.

[85] A. O., Alabi, & S. Mutula, *Information and Communication Technologies: Use and Factors for Success Amongst Academics in Private and Public Universities in Nigeria*. **South African Journal of Information Management**, 22(1), 2020. 1-8.

[86] L., Shonhe, *An Assessment of The Technology Readiness of Public Librarians in Botswana.* **Global Knowledge, Memory and Communication**. 2019. DOI 10.1108/GKMC-10-2018-0086

[87] T., Babatunde, J. A., Alhassan, & G. A. Babalola, *Information and Communication Technology Infrastructures and Staff Competence as Correlates of Effective Resource Sharing In University Libraries In North Central, Nigeria*. **Library Philosophy and Practice**, 2020, 1-15.

[88] T., Sabhapandit, *Development of ICT Application in The University Libraries of Assam: A Study.* **Library Philosophy and Practice**, 2019. Pp.1-11.

[89] A. H., Brata, & F. Amalia, *Impact Analysis of Social Influence Factor on Using Free Blogs as Learning Media for Driving Teaching Motivational Factor.* In Proceedings of the 4th International Conference On Frontiers Of Educational Technologies, 2018.Pp. 29-33.

[90] A.M., Zainab, K., Kiran, Karim N.H.A., & M., Sukmawati, *UTAUT'S Performance Consistency: Empirical Evidence from A Library Management System*. **Malaysian Journal of Library & Information Science,** *23*(1), 2018. Pp.17-32.

[91] I.S.H., Wai, S.S.Y., Ng, D.K.,Chiu, K.K. Ho, & P., Lo, *Exploring Undergraduate Students' Usage Pattern Of Mobile Apps For Education*. **Journal Of Librarianship and Information Science,** 50(1), 2018. Pp.34-47.

[92] F., Okocha, *Determinants of Electronic Book Adoption in Nigeria.* **DESIDOC Journal of Library & Information Technology**, 39(4), 2019. Pp.175-179.

[93] J. E., Andrews, H., Ward, & J. Yoon, *UTAUT As a Model for Understanding Intention to Adopt AI And Related Technologies Among Librarians.* **The Journal Of Academic Librarianship** 47, 2021,102437

[94] G.L., Mallmann, A.C.G. Maçada, & A., Eckhardt, *We Are Social: A Social Influence Perspective to Investigate Shadow IT Usage*. **In ECIS**, 2018, P. 190.

[95] F. Parhamnia, *Investigating Mobile Acceptance in Academic Library Services Based on Unified Theory of Acceptance and Use of Technology Model* (UTAUT-2). **The Journal of Academic Librarianship**, 48(5), 2022, 102570.

[96] Z. A. Mohideen *Librarians' Acceptance of Open Source Library Information System Using The Osis-UTAUT Model,* Phd Thesis, University Of Malaya, 2017.

[97] A., Khan, *Investigating the Factors Influencing Librarians' Intention Toward the Adoption of Koha-An Open-Source Integrated Library System in Pakistan*. **Library Philosophy and Practice,** 2020. Pp.1A-51.

[98] M. N., Masreka, & A. Husseinb, *Intention to Adopt Mobile Applications Services: A Study Among Pakistani Academic Librarians*. **International Journal of Innovation, Creativity and Change**, 15(3), 2021.

[99] L. L., Zhou, J., Owusu-Marfo, H., Asante Antwi, M. O., Antwi, A. D. T., Kachie, & S. Ampon-Wireko, *Assessment of the Social Influence and Facilitating Conditions That Support Nurses' Adoption of Hospital Electronic Information Management Systems (HEIMS) In Ghana Using the Unified Theory of Acceptance and Use of Technology (UTAUT) Model*. **BMC Medical Informatics and Decision Making**, 19(1),2019, 1-9.

[100] N. A., Serwaa, P. S., Dadzie, & C. M. Owusu-Ansah, *Awareness and Use of Digital Reference Services in Academic Libraries in Ghana*. **International Journal of Knowledge Content Development & Technology**, 12(Special), 2022. 7-29.

[101] A., Totolo, S. B., Comma, & M. Dimane, *Perceptions of University of Botswana Academic Staff on Web 2.0 Technology Adoption*. **Informatics Studies**, 4(1). 2018.

[102] M., Mensah, & O. B. Onyancha, *Demographic Factors Influencing the Adoption and Use of social media In University Libraries in Ghana: A Unified Theory Of Acceptance And Use Of Technology (UTAUT) Approach*. **Journal Of Electronic Resources Librarianship**, 33(3), 2021, 170-194.

[103] G., Quadri, & F. Garaba, *Perceived Effects of ICT On Knowledge Sharing Among Librarian in South-West Nigeria: A UTAUT Theoretical Approach*. **Journal Of Balkan Libraries Union**, 6(1), 2019, 38-46

[104] A.E.A., Dowdy, *Public Librarians' Adoption of Technology in Two Southeastern States* **Doctoral Dissertation, Walden University**. 2020.

[105] K. A., Owolabi, O. A., Adeleke, A., Tella, & Y. A. Mudasiru, *A Structural Equation Modeling Approach to Evaluating Library Personnel Intention to Adopt Big Data Technology In Nigerian Academic Libraries*. **Internet Reference Services Quarterly**, 25(4), 2021, 145-167...

[106] N.E., Akwang, *A Study of Librarians' Perceptions and Adoption Of Web 2.0 Technologies In Academic Libraries In Akwa Ibom State, Nigeria*. **The Journal of Academic Librarianship,** 47(2), 2021. P.102299

Chapter Three

Methodology

This chapter introduces the research methodology the study adopted. The chapter discusses all aspects of the research methodology such as the adopted research design, study population, sampling technique and sample size, and the research instruments to be used for data collection. In addition, the validity and reliability of the research instruments will be discussed as well as the data collection procedure and the specific method to be employed for data analysis

3.1 Research Design

The study adopted a descriptive research survey design. A descriptive survey design aims at collecting data on something and describing it in a systematic manner[1]. Similarly, the descriptive survey design of the correlation type best suits this study because the design will determine the relationship between the dependent variable (use of library technology) and the independent variable (facilitating conditions and social influence).

3.2 Population of the Study

The population of the study consists of all library personnel (Librarians and Library Officers) in universities in the Federal Capital Territory, Abuja. The universities are Baze University, Veritas University, University of Abuja, Nile University, and African University of Science and Technology. The population of Librarians in tertiary institution libraries is 97. The breakdown is shown in Table 3.1

Table 3.1 Population of the Study

S/N	Names of Tertiary Institutions	No. of Librarians
1	Baze University	16
2	University of Abuja	34
3	Veritas University	14
4	Turkish-Nile University	20
5	African University of Science and Technology	13
Total		97

Source: Field Observation, 2022

3.3 Sampling Technique and Sample Size

Total enumeration method was used for the study. It is a procedure that involves the collection of information from all the members of a given population. This is often used when the study population is within a manageable range as is the case in the present study. As a result, the entire study population constitute the sample meaning that the data collection instrument was administered on ninety-seven library personnel as indicated in Table 3.1

3.4 Description of the Research Instrument

The instrument for this study is a structured questionnaire adapted from the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Institutional Pressure Theory[2]. The questionnaire instrument is structured into four (4) sections; the sections

deals with the demographic information and the various variables of the study. The sections and their components are presented as follows:

Section A: the section has items on the demographic information of the respondents. Items in this section include age, gender, marital status, highest educational qualification, the job description of respondents, and work experience.

Section B: addresses the level of library technology use among the respondents. The section has two parts. One part focus on the frequency of using library technology while the second is about the purpose of using technology. Example of statements in the section include; I use library technology to render reference services

Section C: focuses on the social influence affecting librarians. The section was adapted from a study based on institutional theory[2]. The 13-item scale is modified and used to measure and identify the type of social influence affecting the librarians. All items were rated using the four-point Likert scale ranging from Disagree (1) Disagree (2) Agree (3) Strongly Agree (4). Examples of statements in the section include; The professional associations the researcher belong to require that he make use of library technology, All reputable academic libraries in Nigeria are known for using technology

Section D: addresses facilitating conditions in the academic libraries in Federal Capital, Nigeria. The questionnaire is adapted from the UTAUT questionnaire[3]. All items were answered using a 4-point Likert scale format ranging from Disagree (1) Disagree (2) Agree (3) Strongly Agree (4)1.

3.5 Validity of the Research Instrument

In order to ensure validity, the research instrument was submitted to the supervisor and other research professionals in the field of Library and Information Science for content and face validity, correction, and approval. Their inputs were considered and all suggestions will be considered to ensure the validity of the instrument.

3.6 Reliability of the Research Instrument

In ascertaining the reliability of the instrument, a pilot study was conducted. Twenty-five (25) copies of the instrument were administered to librarians from Bingham University, Nassarawa State which was not included in the study. Cronbach's alpha values was used to determine the reliability coefficient of each of the variables and for the whole instrument. The Cronbach alpha value for the dimensions are; facilitating condition (0.83), and social influence (0.81).

3.7 Administration of Research Instrument and Method of Data Collection

First, a letter of introduction was collected from the department of Information Management, Lead City University to facilitate access to the selected libraries for the purpose of data collection in the selected academic libraries. Consequently, the data for this study was collected by the researcher with the help of two trained research assistants. The researcher and the research assistants approached the respondents at their various offices at the academic libraries of these selected private universities to administer copies of the questionnaire. The data collection exercise lasted for five weeks.

3.8 Method of Data Analysis

The data collected was analysed using descriptive statistics such as frequency counts, percentages, means and standard deviation as well as inferential statistics. Research questions were analysed using descriptive statistics (frequencies, percentages and mean scores) while the hypotheses were analyzed using regression analysis. The first and second hypotheses were analysed using linear regression while the third hypothesis was analysed using multiple regression analysis. All the analyses were carried out with the aid of IBM Statistic Package for the Social Sciences Statistics.

Endnotes

1. D., Strijker, G. Bosworth, & G., Bouter, *Research Methods in Rural Studies: Qualitative, Quantitative and Mixed Methods*. **Journal of Rural Studies**, 78, 2020. Pp.262-270.

2. V. Venkatesh, *Adoption and Use of AI tools: A Research Agenda Grounded in UTAUT*. **Annals of Operations Research**, *308*(1), 2022. pp.641-652.

3. B. Latif, Z. Mahmood, O. Tze San, R. Mohd Said, & A. Bakhsh, *Coercive, Normative and Mimetic Pressures as Drivers of Environmental Management Accounting Adoption*. **Sustainability**, 12(11), 2020, 4506.

Chapter Four

Results and Discussion of Findings

The chapter presents the results of empirical data collected in this study. The research instrument, a structured questionnaire, was administered on 95 respondents from five universities in the Federal Capital Territory of Nigeria (Abuja). At the end of the study, 91 copies of the questionnaire were properly filled and returned. This constitutes 96% return rate which is considered adequate for generalisation. This chapter is structured into demographic analysis, presentation of the research questions and hypotheses. There is also a section for the discussion of the study findings. The decision rule for the descriptive is based on mean scores; mean scores between 0.1 – 1.9 are considered very low; 2.0 -2.49, low; 2.5- 2.99, moderate; 3.0-49 is high; and 3.5-4.0 is very high. In addition, the hypotheses are tested at 0.05 level of significance.

4.1 Demographic Information of the Respondents

Table 4.1: Demographic Analysis

Items		Frequency	Percentage
Name of Institution	University of Abuja	32	35.2
	Veritas University	14	15.4
	African University of Science & Tech	13	14.3
	NILE University	16	17.6
	BAZE University	16	17.6
	Total	**91**	**100.0**
Gender	MALE	37	40.7
	FEMALE	54	59.3
	Total	**91**	**100.0**
Age	25-29	18	19.8
	30-34	36	39.6
	35-39	33	36.3
	45+	4	4.4
	Total	**91**	**100.0**
Qualification	BSC	5	5.5
	MASTERS	82	90.1
	MPhil	1	1.1
	PhD	3	3.3
	Total	**91**	**100.0**
Department	Serials	4	4.4
	E-library	8	8.8
	Cataloguing	20	22.0
	Reader Services	30	33.0
	Other	4	4.4
	Reference/ Research	25	27.5
	Total	**91**	**100.0**

Source: Researcher's Fieldwork 2023

Table 4.1 presents the demographic analysis of the respondents. The data presented in the Table indicates that the majority of respondents are affiliated with University of Abuja (35.2%). This is followed by respondents from NILE, and BAZE Universities who both

have (17.6%) respectively. Others are from Veritas University (15.4%) and African University of Science & Technology (14.3%). The gender distribution reveals that females constitute a larger proportion (59.3%) of the cohort compared to males (40.7%). The gender distribution data underscores the importance of considering gender-related factors in further analyses and decision-making processes. The age distribution among the individuals shows that the highest representation is seen in the 30-34 age group (39.6%), followed by the 35-39 age group (36.3%). The inclusion of individuals aged 45 and above (4.4%) suggests diversity in terms of experience and possibly different stages of career development.

In terms of academic qualification, the distribution shows that the majority of respondents (90.1%) hold a master's degree. Additionally, a smaller percentage holds PhDs (3.3%), while Bachelor of Science (BSC) and Master of Philosophy (MPhil) holders each make up 5.5% and 1.1%, respectively. This distribution reflects a well-educated sample with a wide range of qualifications. The departmental distribution also indicate that Reader Services department has the highest representation (33%), followed closely by the cataloguing and classification department (22%). Other departments' represented in the study include Reference (27.5%), E-library (8.8%), and Others (4.4%) this distribution underscores the diversity of roles and responsibilities within the study sample.

4.2 Research Questions

4.2.1 What is the level of use of library technology among academic librarians in the Federal Capital Territory, Nigeria?

Table 4.2: Level of Use of Library Technology among Academic Librarians in the Federal Capital Territory, Nigeria

Frequency of Use	SA	A	D	SD	MEAN
I make use of library technology daily	38 (41.8 %)	32 (35.2%)	--	21 (23.1%)	2.96
I make use of library technology Twice a week	31 (34.1 %)	36 (39.6 %)	17 (18.7%)	7 (7.7 %)	3.00
I make use of library technology weekly	21 (23.1%)	35 (38.5%)	8 (8.8%)	27 (29.7 %)	2.55
I make use of library technology monthly	22 (24.2 %)	54 (59.3 %)	15 (16.0%)	--	3.08
I never make use of Library Technology	29 (31.9 %)	38 (41.8 %)	24 (26.4 %)	--	3.05
Weighted Mean					**2.93**
Purpose of Use					
I use library technology to organize library resources	21 (23.1%)	51 (56.0%)	-	19 (20.9%)	2.81
I use library technology to source for library resources	23 (25.3%)	61 (67.0%)	--	7 (7.7 %)	3.10
I use library technology to render reference services	19 (20.9%)	62 (68.1 %)	10 (11.0%)	(%)	3.10
I use library technology to preserve information resources	32 (35.2%)	51 (56.0%)	3 (3.3%)	5 (5.5%)	3.21
I use library technology for charging and discharging library materials	19 (20.9%)	39 (42.9%)	12 (13.2%)	21 (23.1%)	2.62
I use library technology to engage in interlibrary loan	20 (22.0 %)	19 (20.9%)	--	52 (57.1%)	2.13
I use library technology to organize information literacy programmes	39 (42.9 %)	32 (35.2%)	--	18 (19.8%)	3.03
Weighted Mean					**3.00**
Aggregate Mean					**2.96**

Decision Rule 0.1 – 1.9 = very low; 2.0 -2.49 =low; 2.5- 2.99 = moderate; 3.0-49 = high; and 3.5-4.0= very high Key: SA = Strongly Agree; A= Agree; D = Disagree; SD = Strongly Disagree.
Source: Fieldwork, 2023

Table 4.2 presents the responses on the level of use of library technology among academic librarians in the Federal Capital Territory, Nigeria. The level of use is measured under frequency and purpose of use. The first statement reveals that 41.8% of respondents make daily use of library technology, while 35.2% use it occasionally. On the contrary, 23.1% report not using it at all. The mean score for this statement is 2.96. This suggests that a significant portion of academic librarians in this region utilizes library technology on a daily or regular basis, but there is still room for increasing its adoption.

Furthermore 31 (34.1%) of respondents strongly agreed that they use library technology twice a week, while 36 (39.6%) also agreed. A smaller percentage, 17 (18.7%), disagreed while 7 (7.7%) strongly disagreed. The mean score for this statement is 3.00. This demonstrates a more consistent utilization of library technology compared to daily usage, with a substantial number using it weekly. For those who use library technology weekly, 21 (23.1%) strongly agreed that they make weekly use of library technology, 35 (38.5%) agreed to this, 8 (8 .8%) disagreed, and 27 (29.7%) strongly disagreed. The mean score for this statement is 2.55.

In addition the fourth statement presents data about the use of library technology monthly. The data showed that 22 (24.2%) of the respondents and 54 (59.3%) strongly agreed and agreed respectively to the use of library technology monthly. However, 15 (16.0%) disagreed with this meaning they use library technology more frequently. The mean score for this statement is 3.08 showing high level of monthly use. There are also some who

reported no use of library technology: The Table showed 29 (31.9%) strongly agreed that they never make use of library technology, 38 (41.8%) agreed to this, and 24 (26.4%) disagreed with this. The mean score for this statement is 3.05 showing that, while some never uses library technology, a majority do use it in some capacity. The weighted mean for this section is 2.93 indicating a moderate use of library technology.

The second part of Table 4.2 examines the purposes for which academic librarians use library technology. From the responses 21 (23.1%) use library technology to a 'very high extent in organizing library resource; 51 (56.0%), to a high extent while 19 (20.9%) of respondents indicate that they use library technology to organize library resources to a very low extent. This suggests a significant reliance on technology for efficient resource management, with a mean score of 2.81. In using library technology to source for library resources: 23 (25.3 %) of the respondents do this to a very high extent; 61 (67.0%) to high extent while only 7 (7.7 %) reported that they use library technology to source for library resources to a very low extent. This indicates a high level of technology-driven resource acquisition, with a mean score of 3.10.

Similarly, the use of technology for rendering reference services shows that 19 (20.9%) do the to a very high extent; 68.1% (62 individuals) to a high extent and 10 (11.0%) use library technology to render reference services to a low extent, underscoring its importance in supporting patrons. The mean score is 3.10. The use of library technology for preserving information resources also revealed that 51 (56.0%) of the respondents use technology for preserving information resources to high extent. This reflects its role in digital preservation efforts, with a mean score of 3.21. This is similar to the use of technology for charging and discharging library materials: 19 (20.9%) of the respondents

to a very high extent use technology for charging and discharging library materials; 39 (42.9%) also use it to a high extent. This suggests that technology is employed moderately in circulation of library resources, with a mean score of 2.62.

The data on the use of technology for interlibrary loan also revealed that majority of the respondents (57.1%) engage in interlibrary loan activities using technology to a very low extent. However, 20 (22.0 %) reported very high extent and 19 (20.9%) indicate that they do this to a high extent. The mean score of 2.13underscores low use of technology in resource sharing. The use of technology in organizing information literacy programmes is however higher with 39 (42.9%) to a very high extent use technology to organize information literacy programs and 32 (35.2%) do this to a high extent. This highlights the role of technology in educational initiatives, with a mean score of 3.03. The aggregate mean score across all statements is 2.96, indicating a moderate level of technology usage among academic librarians in the Federal Capital Territory, Nigeria.

4.2.2 What is the level of social influence to use library technologies among academic librarians in the Federal Capital Territory, Nigeria?

Table 4.3 Social Influence to Use Library Technologies among Academic Librarians in the Federal Capital Territory, Nigeria

Social Influence	SA	A	D	SD	MEAN
Normative Influence					
The professional associations I belong to require that I make use of library technology	38 (41.8%)	22 (24.2%)	25 (27.5 %)	6 (6.6%)	3.01
Other libraries that my library interacts with	40 (44.0 %)	36 (39.6 %)	7 (7.7 %)	8 (8.8 %)	3.19

expect me to use library technology					
The use of technology is generally accepted in the librarianship profession	25 (27.5 %)	23 (25.3 %)	33 (36.3 %)	10 (11.0 %)	2.69
Weighted Mean					**2.96**
Mimetic Influence	**SA**	**A**	**D**	**SD**	**MEAN**
All reputable academic libraries in Nigeria are known for using technology	25 (27.5 %)	--	59 (64.8 %)	7 (7.7 %)	3.20
The most prestigious academic libraries in Nigeria have set good examples in the use of technology	33 (36.3 %)	53 (58.2 %)	--	5 (5.5 %)	3.31
The most prestigious academic libraries in Nigeria have boosted library patronage in their institutions through the use of library technology	28 (30.8 %)	39 (42.9 %)	--	24 (26.4 %)	3.04
Many academic libraries have obtained competitive advantages by implementing library technology	55 (60.4 %)	36 (39.6 %)	--	--	3.60
Weighted Mean					**3.28**
Coercive Influence					
I may be sacked from my job if I don't know how to use library technology	46 (50.5 %)	41 (45.1 %)	--	4 (4.4 %)	3.46
Without the use of library technology, accrediting bodies will not approve courses in my university	48 (52.7 %)	36 (39.6 %)	--	7 (7.7 %)	3.45

Majority of library users will not use the library if the library cannot provide technology-based services	52 (57.1 %)	39 (42.9 %)	--	-	3.57
Weighted Mean					**3.49**
Average Mean					**3.24**

Decision Rule 0.1 – 1.9 = very low; 2.0 -2.49 =low; 2.5- 2.99 = moderate; 3.0-49 = high; and 3.5-4.0= very high Key: SA = Strongly Agree; A= Agree; D = Disagree; SD = Strongly Disagree.
Source: Fieldwork, 2023

The table 4.3 above presented provides a breakdown of responses related to the social influence in the use of library technology within a librarianship context. The responses are categorized based on three types of social influence: normative, mimetic, and coercive influence. Under the section of normative influence, 41.8% of the respondents strongly agreed that the professional associations they belong to require the use of library technology. To this item. 24.2% agree, 27.5% disagree, while 6.6% strongly disagree. In the same vein, 44% of the respondents strongly agree that other libraries that their library interacts with expect the use library technology; 39.6% also agree to this. Meanwhile, 7.7% of the respondents disagree and 8.8% strongly disagree.

Table 4.3 also showed that 27.5% of the respondents strongly agree that the use of technology is generally accepted in the librarianship profession; 25.3% agree to this. However, 36.3% disagree, 11% of the respondents strongly disagree. On the average, the weighted mean of the section is 2.96 indicating a moderate level of normative influence on the respondents.

The second section of Table 4.3 focuses on the mimetic pressure on the respondents. The first item state that 'All reputable academic libraries in Nigeria are known for using technology. The Table shows that 27.5% of the respondents strongly agree, 64.8% agree, while only 7.7% disagree. Similarly, 36.3% strongly agreed that the most prestigious

academic libraries in Nigeria have set good examples in the use of technology. Further, 58.2% agree while only 5.5% disagree to the statement. The table also showed that 30.8% strongly agreed that the most prestigious academic libraries in Nigeria have boosted library patronage in their institutions through the use of library technology to which 42.9% of the respondents also agreed. On the other hand, 26.4% of the respondents disagreed. Those who disagreed are however in the minority which means that a significant number of respondents believe that prestigious libraries' technology use leads to increased patronage. The final item in the section posits that many academic libraries have obtained competitive advantages by implementing library technology. The responses showed that 60.4% of the respondents strongly agree and 39.6% agree. On average, the weighted mean for mimetic influence is 3.28 which indicates a high level of mimetic pressure.

For coercive pressure, the table revealed that 50.5% strongly agreed that they may lose their job if they don't know how to use library technology. Instructively, 45.1% also agree, while only 4.4% disagree. This underscores the importance of technology competency in job security. For the second statement , without the use of library technology, accrediting bodies will not approve courses in my university; 52.7% strongly agree, 39.6% agree, 7.7% disagree. This indicated that majority of respondents agree that technology use is linked to course accreditation.

Similarly, 57.1% of the respondents strongly agreed that majority of library users will not use the library if the library cannot provide technology-based services; 42.9% also agreed to this. This also showed that a significant majority believe that technology-based services are vital for attracting library users. The average mean score across all categories

is 3.49 indicating a high level of coercive pressure. Overall, the aggregate mean score of social influence is 3.24. This indicates a high level of social influence collectively exerted by normative, mimetic, and coercive pressures on the respondents.

4.2.3 What is the level of facilitating conditions for the use of library technology among academic librarians in the Federal Capital Territory, Nigeria?

Table 4.4: Facilitating Conditions for the Use of Library Technology among Academic Librarians in the Federal Capital Territory, Nigeria

Facilitating Condition	SA	A	D	SD	Mean
Infrastructure Support					
I have access to resources such as laptops, mobile phones etc. to support my use of the library technology	40 (44.0 %)	36 (39.6 %)	--	15 (16.5 %)	3.27
My library provides a stable internet connection that makes it possible to use library technology	40 (44.0 %)	45 (49.5 %)	-	6 (6.6 %)	3.37
My library provides a stable electricity that makes it possible to use library technology	40 (44.0 %)	36 (39.6 %)	7 (7.7 %)	8 (8.8 %)	3.19
Weighted Mean					**3.27**
Technical Support					
My library's policy is clear on the use of library technology	26 (28.6 %)	56 (61.5 %)	--	9 (9.9 %)	3.19
My library has employed IT experts to solve any problems with hardware and software used for library services	29 (31.9%)	45 (49.5%)	11 (12.1%)	6 (6.6%)	3.07
There are other librarian who are expert who can assist me in the use of ICT	19 (20.9%)	39 (42.9 %)	12 (13.2 %)	21 (23.1 %)	2.98
Weighted mean					**3.08**

Training and Development	SA	A	D	SD	Mean
I have the support to acquire training in the use of library technology	31 (34.1 %)	41 (45.1 %)	5 (5.5 %)	14 (15.4 %)	3.19
I have access to mentors who can help me in the use of library technology	55 (60.4 %)	25 (27.5 %)	--	11 (12.1 %)	3.07
My library provides financial support for those who acquire digital skills for the use of library technology	37 (40.7 %)	39 (42.9 %)	12 (13.2 %)	3 (3.3 %)	2.98
Weighted Mean					**3.08**
Aggregate Mean					**3.14**

Decision Rule 0.1 – 1.9 = very low; 2.0 -2.49 =low; 2.5- 2.99 = moderate; 3.0-49 = high; and 3.5-4.0= very high Key: SA = Strongly Agree; A= Agree; D = Disagree; SD = Strongly Disagree.
Source: Fieldwork, 2023

Table 4.4 above presented provides a breakdown of responses related to the level of facilitating conditions for the use of library technology among academic librarians in the Federal Capital Territory, Nigeria. The facilitating conditions are discussed under three sections namely; Infrastructure Support, technical support and, training and development.

In the section of infrastructure support, 44.0% of respondents strongly agree that they have access to resources such as laptops, mobile phones, etc. to support the use of the library technology; 39.6% of respondents agree while 16.5% of respondents strongly disagree. The mean score for this statement is calculated to be 3.27. This suggests that, on average, respondents generally feel they have access to the necessary devices for using library technology. Similarly, 44.0% of respondents strongly agreed that their libraries provide a stable internet connection that makes it possible to use library technology; 49.5% of respondents agree to this while 6.6% of respondents strongly disagree. The

mean score for this statement is 3.37. This indicates that respondents are generally satisfied with the library's internet connection for technology use. Furthermore, 44% of respondents strongly agreed and 39.6% of them agreed that their libraries provide stable electricity that makes it possible to use library technology. Om the other hand, 7.7% of respondents disagree, while 8.8% strongly disagreed. The mean score for this statement is 3.19 indicating that the availability of stable electricity.

In the dimension of technical support, 28.6% of respondents strongly agreed that the library's policy is clear on the use of library technology while 61.5% of respondents agree to this. On the other hand, a minority {9.9%) of the respondents strongly disagreed. The mean score for this statement is 3.19. This indicates that, on average, respondents find the library's policy regarding technology use relatively clear. In addition, 31.9% of respondents strongly agreed and, 49.5% of respondents agreed respectively that their library has employed IT experts to solve any problems with hardware and software used for library services. Meanwhile, 12.1% of respondents disagree and 6.6% of respondents strongly disagree. The mean score for this statement is 3.07. This suggests that respondents generally perceive the presence of IT experts for technical problem-solving.

Furthermore, 20.9% of respondents strongly agree and 42.9% of respondents agree that there are other librarians who are experts who can assist them in the use of ICT". However, 13.2% of respondents disagree and 23.1% of respondents strongly disagree respectively. The mean score for this statement is 2.98 indicating a moderate availability of expert assistance for using information and communication technology. On average, the weighted mean for this section is 3.08 indicating a overall high technical support.

The third dimension is training and development. The section focuses on the availability of training and support for improving digital skills related to library technology use. The data presented shows that 34.1% of respondents strongly agree and 45.1% of respondents agree that they have the support to acquire training in the use of library technology. However, 5.5% of respondents disagree and 15.4% strongly disagree about training and development opportunities. The mean score for this statement is 3.19. This suggests that respondents generally perceive that they have the opportunity to receive training in library technology usage. Similarly, 60.4% of the respondents strongly agreed that they have access to mentors who can help in the use of library technology. The responses also showed that 27.5% of respondents agree, while 12.1% strongly disagree with the suggestion. The mean score for this statement is 3.07. This indicates that respondents generally perceive that they have access to mentors for technology-related guidance. Similarly, 40.7% of respondents strongly agree and 42.9% of respondents agree that their library provides financial support staff to acquire digital skills for the use of library technology". On the contrary, 13.2% of respondents disagree while 3.3% strongly disagree with the notion. The mean score for this statement is 2.98. This suggests a moderate perception of financial support for acquiring digital skills related to library technology.

Overall, the aggregate mean of facilitating condition is 3.14 which indicates a high level of perceived facilitating condition among the respondents.

4.3 Presentation of Hypotheses

4.3.1: Ho1: There will be no significant influence of Facilitating Conditions on the use of library technology by academic librarians in Federal Capital Territory, Nigeria

Table 4.5 Influence of Facilitating Conditions on the use of Library Technology by Academic Librarians in Federal Capital Territory, Nigeria

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.522[a]	.273	.265	3.65167

a. Predictors: (Constant), Facilitating Conditions

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	450.312	1	450.312	33.770	.000[b]
	Residual	1200.123	90	13.335		
	Total	1650.435	91			

a. Dependent Variable: Library Technology Use

b. Predictors: (Constant), Facilitating Conditions

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	23.828	3.470		6.867	.000
Facilitating Conditions	.468	.081	.522	5.811	.000

Source: Researcher's Fieldwork 2023

a. Dependent Variable: Library Technology Use

Table 4.6a-c presents the results of the regression analysis for the influence of facilitating conditions on the use of library technology by academic librarians in Federal Capital Territory, Nigeria. From the model summary, facilitating conditions has a positive significant relationship with the use of library technology by academic librarians in Federal Capital Territory, Nigeria ($R = 0.522$, $p<0.05$). The coefficient of determination (Adj. R^2) of 0. 273 shows that facilitating conditions explains 27.3% of the use of library technology by academic librarians in Federal Capital Territory, Nigeria, while the remaining 72.7% variation is explained by other variables not investigated in this study.

Similarly, the results of Analysis of Variance (ANOVA) indicating the overall model significance of regression test which revealed that facilitating conditions has a significant influence on the use of library technology by academic librarians in Federal Capital Territory, Nigeria. This can be explained by the F-value (33.770) and low p-value (0.000) which is statistically significant at 95% confidence interval. Hence, the result posited that facilitating conditions significantly influenced the use of library technology by academic librarians in Federal Capital Territory, Nigeria.

In addition, the results of regression coefficients table revealed that at 95% confidence level, a unit change in facilitating conditions will lead to a 0.468 increase in the use of library technology among the respondents, given that all other factors are held constant. On the strength of this result (Adj. $R^2 = 0.273$, F (1, 90) = 33.770, p= 0.000), this study rejects the null hypothesis one ($H_0 1$) which states that there will be no significant influence of facilitating conditions on the use of library technology by academic librarians in Federal Capital Territory, Nigeria.

4.3.2: Ho2: There will be no significant contribution of Social Influence on the use of library technology for academic librarians in the Federal Capital Territory, Nigeria

Table 4.6 Influence of Social Influence on the use of Library Technology by Academic Librarians in Federal Capital Territory, Nigeria

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.559[a]	.313	.305	3.60206

Source: Researcher's Fieldwork 2023

a. Predictors: (Constant), Social Influence

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	520.036	1	520.036	40.080	.000[b]
	Residual	1141.787	90	12.975		
	Total	1661.822	91			

a. Dependent Variable: Library Technology Use

b. Predictors: (Constant), Social Influence

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26.052	2.853		9.130	.000
	Social Influence	.501	.079	.559	6.331	.000

a. Dependent Variable: ICT Use

Table 4.6 presents the results of the regression analysis for the influence of social influence on the use of library technology by academic librarians in the Federal Capital Territory, Nigeria. From the results in the model summary, it is indicated that social influence has a positive significant influence on the use of library technology by academic librarians in the Federal Capital Territory, Nigeria ($R = 0.313$, $p<0.05$). The coefficient of determination (Adj. R2) of 0.305 shows that social influence explains 30.5% variance in the use of library technology among the respondents, while the remaining 69.5% variation is explained by other variables not investigated in this study. This is also supported by the ANOVA result.

The results of ANOVA (overall model significance) of regression test revealed that social influence has a significant influence on the use of library technology by academic librarians in the Federal Capital Territory, Nigeria. This can be explained by the F-value (40.080) and low p-value (0.000) which is statistically significant at 95% confidence interval.

In addition, the results of regression coefficients revealed that at 95% confidence level, a unit change in social influence will lead to a 0.501 increase in the use library technology by academic librarians in the Federal Capital Territory, Nigeria, given that all other factors are held constant. On the strength of this result (Adj. $R2 = 0.305$, $F(1, 88)= 40.080$, $p= 0.000$), this study rejects the null hypothesis two (H02) which states that there will be no significant influence of social influence on the use of library technology by academic librarians in the Federal Capital Territory, Nigeria.

4.2.3 Ho3: There is no combined influence of Social Influence and Facilitating Conditions on the use of library technology by academic librarians in Federal Capital Territory, Nigeria

Table 4.7 Combined Influence of Facilitating Conditions and Social Influence on the use of Library Technology by Academic Librarians in Federal Capital Territory, Nigeria

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
2	.659[b]	.434	.421	3.30207

. Predictors: (Constant), Facilitating Conditions, Social Influence

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	702.507	2	351.254	32.214	.000[c]
	Residual	915.906	84	10.904		
	Total	1618.414	86			

a. Dependent Variable: Library Technology Use

b. . Predictors: (Constant), Facilitating Conditions, Social Influence

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	15.925	3.544		4.494	.000
Facilitating Conditions	.351	.081	.386	4.349	.000
Social Influence	.362	.079	.407	4.582	.000

a. Dependent Variable: EHR Use

Table 4.7 presents the results of the multiple regression analysis for the combined influence of facilitating conditions and social influence on the use of library technology by academic librarians in Federal Capital Territory, Nigeria. From the results in the model summary table, facilitating conditions and social influence have a positive and significant influence on the use of library technology by the respondents ($R = 0.659$, $p<0.05$). The coefficient of determination (Adj. R^2) of 0.421 shows that facilitating conditions and social influence jointly explains 42.1 % of the variation in the use of library technology by the respondents while the remaining 57.9% variation is explained by other variables not investigated in this study.

Table 4.7b presents the results of ANOVA (overall model significance) of regression test which revealed that facilitating conditions and social influence have a significant influence on the use of library technology by the respondents. This can be explained by the F-value (32.214) and low p-value (0.000) which is statistically significant at 95% confidence interval. Hence, the result indicated that facilitating conditions and social influence have significant influence on the use of library technology by the respondents.

In addition, the results of regression coefficients in table 4.7c, revealed that facilitating conditions and social influence have significant influence on the use of library technology by the respondents. Specifically, the analysis showed that at 95% confidence level, a unit change in facilitating conditions will lead to a 0.351 increase in the use of library technology by the respondents, given that all other factors are held constant. Also, at 95% confidence level, a unit change in the social influence will lead to a 0.362 increase in the use of library technology by the respondents given that all other factors are held constant. In addition, both the independent variables examined facilitating conditions and social influence have significant combined effect on the use of library technology by the respondents. It is on the strength of this result (Adj. R^2 = 0.421, $F(2,84)$= 32.214, p= 0.000), this study rejects the null hypothesis three (H_03) which states that there will be no significant combined influence of facilitating conditions and social influence on the use of library technology by academic librarians in Federal Capital Territory, Nigeria.

4.4 Discussion of Findings

The study examined the influence of facilitating conditions and social influence on the use of library technology by academic librarians in Federal Capital Territory, Nigeria. Research questions were raised and hypotheses formulated to achieved the objectives of the study. The first research question seeks to find answers to the level of technology use among the respondents.

The study measured level of library technology use with the frequency and purpose of use. The study findings indicate a moderate level of technology usage among academic librarians in the Federal Capital Territory, Nigeria. The breakdown however shows that

the frequency of use is not as high as can be expected. This finding resonates with what has been found in previous studies. Studies have shown that Librarians make use of technology for various purposes such as library management systems to manage both print and electronic library collection, creation of information products such as indexes and abstracts as well as rendering remote library and information services to various users' groups by leveraging various technology and the internet. In addition to this, academic librarians are also expected to be able to use web portal applications to interact with other libraries in the country, for various such as library cooperation, resources sharing, and to form consortia for the purpose of achieving collective bargaining in subscribing to digital information resources[1].

The purpose of using technology among librarians as found in this study also reflects the purposes that have been identified by other researchers. Theses purposes include providing bibliographic instructions, library orientations, virtual library tours, library instructions, tutorials, and the usage of online database[2]. It has also been reported that librarians are now using technology to perform library tasks and also to help patrons with using personal devices to access the library's digital collections, access to online databases, and instruction in a wide range of reading skills[3,4].

However, the moderate level of library technology use found in this study is not as is generally reported in other Nigerian studies. Previous findings indicate that, while the use of technology has been ingrained into every aspect of library and information services in advanced countries, the same cannot be said of developing countries such as Nigeria. Studies on the use of library technology has yielded mixed results. One of the purposes of using technology is in the security of library resources by ensuring that unauthorized

clients do not take books and other resources away from the library. A Nigerian researcher however pointed out that not many Nigerian universities are using RFID technologies to safeguard their information resources[5]. Another study also found that Nigerian librarians are not yet prepared to replace OPAC with a library discovery system. It was also demonstrated that Nigerian librarians knew relatively little about library discovery systems. The research found that Nigerian librarians were unprepared and ill-informed about making the switch from OPAC to a library discovery system[6].

Even the availability of open-source software has failed to radically increase the use of technology in academic libraries of developing countries as shown by various studies. One such study in Nigeria reported that libraries have acquired the basic infrastructure for the use of library technology by librarians. Despite this, majority of the respondents indicated low extent use of open-source software for library services[5]. This study is supported by another study that examined the use of Koha Open-source software in Nigerian libraries. The results of the study show that majority of university libraries in Nigeria are yet to achieve full automation[7].

The average use of library technology seems to be a developing country issue as researchers who conducted a survey of library technology use by librarians in Indian academic libraries also noted that, while several relevant technologies have been introduced to librarians through seminars and training, many of them are still not using discovery tools like blogs, wikis, social bookmarking, social networking collaboration technologies such as Mendeley, endnotes, Sotero etc. the scholars attributed this low use of technology to a lack of ICT skills and lack of awareness about relevant technologies[8].

The second research question focused on the facilitating condition that can help in the use of library technology the by librarians. The study found a high level of perceived facilitating condition among the respondents. This is in line with some of the findings of previous studies while it also goes against other findings. For instance, a study that focuses on the use of digital reference services by libraries in Nigeria and found that all the libraries have support infrastructures such as internet connectivity, integrated Library Management Software and a working library website. Other researchers have also reported that a moderate level of technology infrastructure is available in Nigerian academic libraries[9].

The finding of other studies however indicates a lack of information and communications technology (ICT) infrastructure and facilities in Nigerian academic libraries. The availability of information technology (IT) in Nigerian academic libraries was investigated by researchers who found that just one of the seven universities in Kwara State has access to some library technologies. But the technologies were not always available due to technical difficulties with the internet services that the library had registered to through an agency[10,11].

Inequalities in the availability of library software, library websites, and electronic library services were found in another study. According to the research, university libraries in Lagos State have extremely limited access to electronic information resources. Most university libraries in Nigeria have not yet fully implemented ICT due to a lack of resources, an unreliable power supply, or a lack of trained employees. Apart from the internet, electricity is another infrastructure that has eluded Nigerian academic libraries[12].

Researchers have complained about the often erratic supply of energy. Studies have lamented the unreliable electricity supply in Nigeria, another issue facing research libraries. This has had a negative impact on the availability of electronic information resources and other Internet-based resources, which has contributed to the reluctance of librarians to adopt or continue the use of technology. This is because technologies are expected to speed up and simplify library services but when they are not always available or accessible due to a lack of a conducive environment, librarians may be discouraged from using them.

Library services rely heavily on the facilities available to them in order to provide its patrons with the best possible experience. There is a chance it might help librarians advance in their profession. However, the infrastructure of most Nigerian libraries has deteriorated in recent years. Some of the essential infrastructures that are necessary for the delivery of services and library operations, like ICT facilities, fans, and air conditioners, were not available. As a result of some of the necessary infrastructure being down, users were left feeling disappointed and the librarians were made to look incompetent[13].

similarly, while the current study have reported high availability of training opportunities for the librarians, other studies have reported unmet training and development needs. Researcher who investigated the use of web technologies by librarians in Jordanian Universities found that, while the majority of the librarians are ready and willing to use library technology, they are been hampered by a lack of relevant digital literacy skills and the absence of training by their employers[14]. The same is reported by researchers in

Nigeria who also found that few librarians are opportune to receive technology-oriented training from their employers.

This is demonstrated in a study which focused on the use of technology by academic librarians. The study observed that facilitating condition was considered a significant factor among the respondent before training was organized for them. However, after a few weeks of training, the respondents became less worried about facilitating conditions to the extent that facilitating conditions became insignificant in the use of technology by the respondents[15].

The third research question is about the social influence presence among the librarians. The study found a high level of social influence collectively exerted by normative, mimetic, and coercive influences on the respondents. This finding is in line with a related study which also averred that social influence can be exerted in form of coercive pressure in the shape of both formal and informal demands exerted on an individual by a more powerful person or group to adopt that person's or group's own practices, behaviours, or views. On the organisational level, official or informal coercive pressure can be generated by a number of sources, including regulatory bodies, consumers, suppliers, and other powerful actors. For instance, the emergence of the COVID-19 pandemic had led to the adoption of learning management systems by many tertiary institutions. During this period lecturers, librarians, students, and other personnel in tertiary institutions were expected to make use of remote learning technology[16].

In this instance, there is an element of coercive influence as lecturers and students who would normally not use remote learning applications started adopting them because 'those who were important' to them expected them to use the technology [17],[18]. This

suggests that social influence is always available to individuals both in their personal and professional lives. How they react to this influence in term of using library technology would then be a factor of individual personalities. The same is true for how the availability of facilitating condition influence the use of library technology by librarians.

The first hypothesis of the study found a significant influence of facilitating conditions on the use of library technology by academic librarians in Federal Capital Territory, Nigeria. This finding has precedents in literature although there are also other studies that suggests otherwise. Researchers in Saudi Arabia found that facilitating condition has an insignificant direct impact on technology use among the respondents. This means that facilitating condition has an effect on behavioural intention to use technology which in itself is directly related to the use of relevant technologies[19]. This finding was also replicated by studies in other locations.

A group of researchers from Malaysia presented a basic model derived from the literature on information systems (IS) and user behaviour in order to analyse how ease-of-use influences users' propensity to remain loyal to the online educational management platform. The findings demonstrate that facilitating conditions significantly affect the intention of the students to continue using the educational management platform[20]. The researchers interpreted the implication of this finding to mean that developers of information systems must ensure that they attain full comprehension of facilitating conditions and their subsequent impact on the continuation intention to use any technology they are introducing. Equally important for providers of information systems is enhancing users' impressions and, thus, adoption of the technology.

Another research conducted in pointed out that the successful implementation and maximum benefit from educational technology depend on students' comfort with and use of the technology. The findings revealed that there was a statistically significant correlation between facilitating conditions and the intention to behave in a certain way. This result is primarily attributable to the availability of resources required for adopting OLP technology. Infrastructures such as pervasive Internet success, mobile device accessibility, and reasonable file sizes that influence download times all contribute to the accessibility of these publications[21].

This was further confirmed in another study conducted in Taiwan to investigate the influence of factors like performance expectancy, effort expectancy, and facilitating environments on the behavioural intention of using mobile payments among college students. The study found that the likelihood of making a mobile payment is positively related to facilitating conditions[22]. The study concluded that, unless stakeholders put structure in place to ensure easy access to and use of technology, the technology may not gain wide acceptance. Similar findings were reported in African studies, particularly by Nigerian scholars

In a related study conducted in Nigeria's North Central Geo-Political Zone, researchers found that respondents' performance expectations, effort expectations, and facilitating conditions substantially influenced their intention to employ mobile learning. The authors concluded that the facilitating conditions available in the user's environments are crucial to student preparation and acceptance of mobile learning[23]. This was further confirmed in an experimental study that focused on the actual user experience.

The use of technology can be enhanced or hindered by the experience of the use. In some cases, even when all the facilitating conditions are available, some may not be able to use the technology while others will be able to use it even when they have to figure everything out by themselves. This was demonstrated in a study conducted by Nigerian scholars. According to the findings, librarians' ICT skill is an important predictor of their propensity to embrace new technologies. When librarians' ICT skill are lacking, they are more likely to find the use of technology difficult which will drastically restrict their ability to adopt library technology[24].

Another study also investigates what factors influence the willingness of lecturers at Nigeria's public and private universities to incorporate ICTs into their classroom instruction. The regression analysis revealed that only facilitating conditions significantly influenced the implementation of ICT in the classroom. However, at Covenant University, the usage of ICT by faculty is significantly influenced by both effort expectancy. The researchers concluded that the success of technology usage in academic environments is dependent on the availability of relevant institutional policy, technological infrastructure, ease of use, funding, and organizational support[25].

The significance of facilitating conditions, especially institutional support was evident in the study, the respondents from private institutions seem to have more technical support than those in the public-owned universities. This makes the influence of facilitating conditions more pronounced at the University of Ibadan than at Covenant University. The importance of organisational support can be seen in various studies conducted on the use of technology in libraries. This is because librarians were usually trained in the traditional

method which often makes the transition to the digital method difficult for them. This is shown in a study conducted in Botswana.

Researchers in Botswana, motivated by the technology prevalence in modern society which has forced information providers to adopt new methods of delivery to keep up with the growing demand for data evaluated public librarians in Botswana with regard to their openness to implementing technological solutions for library management and information sharing. The study adopted a survey research methodology. Data was collected from 21 people using an online survey through a combination of convenience and selective sampling. In addition, a mixed-methods strategy was utilised to gather both qualitative and quantitative information. This research shows that public libraries are prepared to include ICTs (information and communication technology) in their service offerings. Their heavy reliance on email and social media platforms is proof of this.

Researchers focused on university libraries in North Central Nigeria to evaluate the practice of library resource sharing is being conducted. The study found that (ICT) infrastructures that facilitate resource sharing in the sampled university libraries are irregularly distributed. According to the findings, university librarians should advocate for adequate funding of library computer systems, work to improve libraries' existing Information and Communication Technology (ICT) infrastructures, and implement training and retraining programmes for library staff rather than raise the bar on their ICT competence[26].

The test of the second hypothesis found a significant influence of social influence on the use of library technology by academic librarians in Federal Capital Territory, Nigeria. This finding is support by other related studies. It was also found that social influence is a

significant factor in the use of web blogs among teachers. It was also found that the social influence was derived from sources such as external personal influence, employers' influence, external assessors, and influence of friends/colleagues. The percentage of the various influencers confirms the definition of social influence as the perception that 'those whose opinions matter' want an individual to use the system. It can be seen that the influence of friends, while significant, is still the lowest for teachers[27].

Similarly, researchers examine the performance consistency of UTAUT when applied to a setting different than its original design by examining the application of an adapted UTAUT model to discover librarians' acceptance of the Radio-frequency Identification based Library Management System (RFID-LMS). The study found a significant relationship between social influence and self-efficacy and effort expectancy and social Influence[28]. The finding indicates that social influence can boost the self-efficacy of a potential technology user. This is can be said to perfectly explain how social influence predict the use of technology. It is possible that when significant others express in an individual ability to use a particular system (self-efficacy) and also indicate to him/her that the technology is not difficult to use (effort expectancy), such individual will be encouraged to use the system.

Another study was conducted to examine why college students use library mobile apps by combining the unified theory of acceptance and utilisation of technology (UTAUT) with the Task-Technology fit model. The findings show that users' behavioural intention to utilise library mobile applications is determined by performance expectancy, effort expectancy, social influence, and facilitating factors. The study found that social influence and facilitating conditions have a significant impact on behavioral intention

of using library apps among the study respondents[29]. The implication of this study conducted among undergraduates is that it further validates the strength of social influence and facilitating conditions as predictors of technology adoption among various user categories.

In a related study, researchers examined how widely used e-books have become among university students in Kwara State, Nigeria. The study found a clear preference for electronic textbooks among students at public and state institutions, but a clear preference for paper textbooks among students at private colleges. The study also found that the UTAUT model constructs are significant predictors of e-book use among students. Results showed that there is a significant link between the social influence of others and the intention to use electronic books among Nigerian undergraduates. The study also found that facilitating conditions in terms of the availability of conducive settings, relevant equipment, and support is a significant predictor of e-book use among Nigerian undergraduates[30].

The third hypothesis also revealed a significant combined influence of facilitating conditions on the use of library technology by academic librarians in Federal Capital Territory, Nigeria. This means that the presence of facilitating conditions and social influence will predict the use of library technology among the respondents. This is also reported by another study conducted to examine why college students use library mobile apps by combining the unified theory of acceptance and utilisation of technology (UTAUT) with the Task-Technology fit model. The findings show that users' behavioural intention to utilise library mobile applications is determined by performance expectancy, effort expectancy, social influence, and facilitating factors. The study found that social

influence and facilitating conditions have a significant impact on behavioral intention of using library apps among the study respondents[31]. The implication of this study conducted among undergraduates is that it further validates the strength of social influence and facilitating conditions as predictors of technology adoption among various user categories.

Similarly, researchers from Iran adopted the UTAUT-2 to examine the use of mobile devices for library services among Iranian university students. The study's findings revealed that students' behavioural intentions regarding the use of mobile devices in academic library services were significantly affected by factors including performance expectancy, effort expectancy, facilitating condition, social influence, hedonic motivation, habit, self-efficacy, trust, and voluntary of variance[32]. The implication of this study is that both facilitating conditions and social influence are among the key factors determining the adoption of technologies in libraries. There are other studies that support this stance.

Similarly, researchers from Pakistan conducted a mixed-method research methodology to examine the perception of Pakistani librarians about using Koha, an open-source library management system (OSILS). The study found that the adoption of Koha among the librarians is predicted by perceived usefulness and perceived ease of use both of which were linked to four external stimuli that include social influence, personal inventiveness, and organizational readiness meaning facilitating conditions[32]. The implication of this study is that social influence and organisation readiness (i.e facilitating conditions) may not directly influence the adoption of technology by the influencing the perception of ease of use and usefulness which are both established predictors of intention to use and actual use of technology

A group of researchers in Pakistan also found that factors including performance expectations, effort expectations, and conducive environments all play a role in shaping future behaviour of the librarians regarding the use of technology[33]. This is supported by another study which found that both facilitating conditions and social influence were statistically significant as predictors of technology use among the nurses. Notably, both social influence (SI) and facilitating condition (FC) influenced nurses' use behaviour (UB) via behavioural intention (BI)[34]. This study has effectively shown that the combined influence of facilitating conditionsn and social influence is a significant predictor of technology use. This study is also relevant to this study as the technology under study is an information system the like of which is used in academic libraries. Researchers on the African continent have also been investigating factors determining technology adoption by librarians and other professionals.

A study conducted in Botswana investigated the perception of librarians in that country about their thoughts on Web 2.0 technology. The study also found that the librarians' adoption and use of Web 2.0 technology slowed down due to certain social influences and facilitating conditions[35]. This is similar to the finding of Another study conducted in Ghana to examine the impact of UTAUT constructs on library staff' and patrons' behavioural intentions towards the usage of social media in university libraries in Ghana. The study found that demographics of library personnel and patrons had substantial mediating roles on characteristics impacting the intention to use and actual usage of social media in university libraries. The test of hypotheses revealed that performance expectancy, effort expectancy, and facilitating conditions to behavioral intention and use behavior are all significantly moderated by gender[36].

In a related study, researchers examined the factors predicting the adoption of library technology by public librarians in Nigeria. The result of data analysis showed that shows that social influence, and facilitating conditions, along with other constructs of UTAUT such as performance expectancy, effort expectancy, are significant predictors of technology adoption among public librarians the dependent variable. Performance expectancy, effort expectancy, social influence, enabling conditions, and behavioural intention to use new technology have been found to have a substantial predictive association[37, 38].

Researchers also examined the factors that determine the readiness of academic librarians in Nigeria to adopt emerging technologies such as big data technology. The findings reveal that behavioural intent to adopt big data technology is affected by performance expectancy, social influence, and facilitating conditions. In contrast, behavioural intentions to adopt big data technology are unaffected by individuals' expectations of the amount of effort required to do so. The researcher concluded that the study model may be useful in academic libraries because it explains half the variance in employees' stated intentions to use big data technology[39]. A similar trend was also reported in a study that examined the use of web technology among Nigerian librarians.

Another set of Nigerian librarians conducted a survey of librarians working in public libraries in Akwa Ibom State, Nigeria to learn about their experiences with and thoughts on Web 2.0 tools. The results showed that most librarians believe Web 2.0 technologies are valuable and could improve their job performance; that Web tools are clear and easy to comprehend; and that colleagues, library patrons, host institutions, etc. expect them to use the tools. A relatively low adoption rate of web technologies was found, however,

across the libraries in the study. High costs of technology, limited access to online resources, limited funding, a lack of librarian training, and tight ICT rules are the main obstacles to the widespread implementation of Web 2.0 technologies in Akwa Ibom State's academic libraries. Appropriate resources should be allocated, workers should receive regular training and re-education, library buildings should be modernised to accommodate web 2.0 resources, etc. Suggestions for future research were made as well[40].

Endnotes

1. A.I. Abayomi, & J.I., Ogungbeni, *Automation of Public Libraries In South West, Nigeria: Challenges and Way Forward.* **International Journal Applied Technologies in Library and Information Management**, 6(1). 2020

2. M., Pinto, R., Fernández-Pascual, D.Caballero-Mariscal, & D. Sales, *Information Literacy Trends In Higher Education (2006–2019): Visualizing The Emerging Field Of Mobile Information Literacy*. **Scientometrics**, 124(2), 2020. Pp.1479-1510.

3. K., Shahzad, & A.Iqbal, *Barriers Faced By Library Professionals for Technology Adoption In University Libraries Of Lahore, Pakistan*. **Library And Philosophy and Practice (E-Journal).;** 2020

4. H., Moorefield-Lang, & A. Dubnjakovic, *Factors Influencing Intention to Introduce Accessibility in Makerspace Planning and Implementation*. **School Libraries Worldwide**, 26(2), 2020, 14.

5. Y.S., Amanyi, P.U. Akor, & E.C. Madu, *Use and Effects Of Radio Frequency Identification (RFID) Technology On Theft Detection For Library Resources Management In Two Private Universities In Abuja, Nigeria.* I-**Manager's Journal on Wireless Communication Networks**, 7(2), 2018 P.19

6. I.O. Adeyemi, & K.T., Omopupa, *Moving from OPAC to Discovery Systems: Nigerian Librarians' Perceived Knowledge and Readiness*. **Cataloging & Classification Quarterly**, 58(2), 2020. Pp.149-168.

7. L. F. Kolawole, & T. A. Oladokun *Utilization of Open Source Software In Nigeria Academic Libraries: Matters Arising,* **Cataloging & Classification Quarterly**, 59:4, 2021, 399-407, DOI: 10.1080/01639374.2021.1919268

8. M., Hussain, H.,Idrees, K., Faqir, & M. S. Haider, *Assessment Of ICT Facilities In The Public Libraries Of Khyber Pakhtunkhwa: A Descriptive Study*. **Library Philosophy and Practice**, 2021, 1-22.

9. C. U., Uzoigwe, & J. U. Eze, *The Perceived Benefits of Electronic/Digital Reference Services In Nigerian University Libraries: A Survey*. **International Journal of Knowledge Content Development & Technology**, 8(2), 2018. 49-65.

10. S. U., Omeluzor, C. C., Nwosu, & Molkwu, U. E. *Effects of Library Infrastructure on Turnover Intentions of Librarians: A Study of University Libraries in South-South and South-East Of Nigeria*. **Library Philosophy and Practice (E-Journal).** 2018.

11. E. S., Anaelobi, & E. C. Agim, *Tetfund Intervention and Development of University Libraries In South-East, Nigeria.* **Library and Information Perspectives and Research**, 1, 2019, 50-58.
12. E. A., Awojobi, C. C., Okoro, & Y. T. Babalola, *A SWOT Analysis Of Physical Infrastructure In Government-Owned University Libraries In Ogun State, Nigeria*. **South African Journal of Libraries And Information Science,** 86(2), 2020. 38-46.
13. F., Hamad, M.Al-Fadel, & H., Fakhouri, *The Effect Of Librarians' Digital Skills On Technology Acceptance In Academic Libraries In Jordan*. **Journal of Librarianship and Information Science**, 53(4), 2021. Pp.589-600.

14. A., Tella, S. C., Ukwoma, & A. I. Kayode, *A Two Models Modification For Determining Cloud Computing Adoption For Web-Based Services In Academic Libraries In Nigeria*. **The Journal Of Academic Librarianship,** 46(6), 2020. 102255.

15. W.O., Oyediran, A.M., Omoare, M.A., Owoyemi, A.O. Adejobi, & R.B., Fasasi, *Prospects and Limitations of E-Learning Application In Private Tertiary Institutions Amidst COVID-19 Lockdown In Nigeria*. **Heliyon**, *6*(11), 2020.P.E05457.
16. S.A., Raza, W., Qazi, K.A. Khan, & J., Salam, *Social Isolation and Acceptance of the Learning Management System (LMS) in the Time of COVID-19 Pandemic: An Expansion Of The UTAUT Model.* **Journal of Educational Computing Research**, 59(2), 2021. Pp.183-208.
17. B.T., Gamede, O.A. Ajani, & O.S., Afolabi, *Exploring the Adoption and Usage Of Learning Management System As Alternative For Curriculum Delivery In South African Higher Education Institutions During COVID-19 Lockdown.* **International Journal of Higher Education,** 11(1), 2022. Pp.71-84.

18. M. S., Satar, & G. Alarifi, *Factors of E-Business Adoption in Small and Medium Enterprises: Evidence from Saudi Arabia*. **Human Behavior and Emerging Technologies** Volume 2022.

19. Z. Kamarozaman, & F. Z. A. Razak, *The Role of Facilitating Condition in Enhancing User's Continuance Intention.* **Journal of Physics: Conference Series** (Vol. 1793, No. 1, 2021, P. 012022.

20. R., Ambarwati, Y. D., Harja, & S. Thamrin, *The Role Of Facilitating Conditions And User Habits: A Case Of Indonesian Online Learning Platform*. **The Journal Of Asian Finance, Economics And Business**, 7(10), 2020, 481-489

21. M. L., Yeh, & Y. L. Tseng, *The College Students' Behavior Intention Of Using Mobile Payments In Taiwan: An Exploratory Research*. **Proceedings Of IASTEM International Conference, Singapore**, 2nd -3rd, 2017, 1-6

22. J. G., Chaka, & I. Govender, *Implementation of Mobile Learning Using A Social Network Platform: Facebook.* **Problems of Education in the 21st Century**, 78(1), 2020, 24-47. 08086187195

23. R., Izuagbe, N. A., Ibrahim, , L. O., Ogiamien O. R., Olawoyin, N. M., Nwokeoma, P. I., Ilo, & O. Osayande, *Effect Of Perceived Ease Of Use On Librarians'e-Skills: Basis For Library Technology Acceptance Intention.* **Library & Information Science Research**, 41(3), 2019. 100969.

24. A. O., Alabi, & S. Mutula, *Information and Communication Technologies: Use and Factors for Success amongst Academics In Private And Public Universities In Nigeria*. **South African Journal of Information Management**, 22(1), 2020. 1-8.

25. T., Babatunde, J. A., Alhassan, & G. A. Babalola, *Information And Communication Technology Infrastructures And Staff Competence As Correlates Of Effective Resource Sharing In University Libraries In North Central, Nigeria*. **Library Philosophy and Practice,** 2020, 1-15.

26.

27. A. H., Brata, & F. Amalia, *Impact Analysis of Social Influence Factor on Using Free Blogs as Learning Media for Driving Teaching Motivational Factor.* In Proceedings of the 4th International Conference on Frontiers of Educational Technologies**,** 2018.Pp. 29-33.

28. A.M., Zainab, K., Kiran, N.H.A. Karim, & M., Sukmawati, *UTAUT'S Performance Consistency: Empirical Evidence from A Library Management System*. **Malaysian Journal of Library & Information Science,** *23*(1), 2018. Pp.17-32.

29. I.S.H., Wai, S.S.Y., Ng, D.K., Chiu, K.K. Ho, & P., Lo, *Exploring Undergraduate Students' Usage Pattern of Mobile Apps for Education*. **Journal of Librarianship and Information Science,** 50(1), 2018. Pp.34-47.

30. F., Okocha, *Determinants of Electronic Book Adoption in Nigeria.* **DESIDOC Journal of Library & Information Technology**, 39(4), 2019. Pp.175-179.

31. I.S.H., Wai, S.S.Y., Ng, D.K., Chiu, K.K. Ho, & P., Lo, *Exploring Undergraduate Students' Usage Pattern of Mobile Apps for Education*. **Journal of Librarianship and Information Science,** 50(1), 2018. Pp.34-47.

32. F. Parhamnia, *Investigating Mobile Acceptance in Academic Library Services Based on Unified Theory of Acceptance and Use of Technology Model* (UTAUT-2). **The Journal of Academic Librarianship**, 48(5), 2022, 102570.

33. A., Khan, *Investigating the Factors Influencing Librarians' Intention Toward the Adoption of Koha-An Open Source Integrated Library System In Pakistan*. **Library Philosophy and Practice,** 2020. Pp.1A-51.

34. M. N., Masreka, & A. Husseinb, *Intention to Adopt Mobile Applications Services: A Study among Pakistani Academic Librarians*. **International Journal of Innovation, Creativity and Change**, 15(3), 2021.

35. L. L., Zhou, J., Owusu-Marfo, H., Asante Antwi, M. O., Antwi, . D. T., Kachie, A& S. Ampon-Wireko, *Assessment of The Social Influence and Facilitating Conditions That Support Nurses' Adoption of Hospital Electronic Information Management Systems (HEIMS) In Ghana Using the Unified Theory of Acceptance and Use of Technology (UTAUT) Model*. **BMC Medical Informatics and Decision Making**, 19(1), 2019, 1-9.

36. A., Totolo, S. B., Comma, & M. Dimane, *Perceptions of University of Botswana Academic Staff on Web 2.0 Technology Adoption*. **Informatics Studies**, 4(1). 2018.

37. M., Mensah, & O. B. Onyancha, *Demographic Factors Influencing the Adoption and Use of Social Media In University Libraries In Ghana: A Unified Theory Of Acceptance and Use of Technology (UTAUT) Approach*. **Journal of Electronic Resources Librarianship**, 33(3), 2021, 170-194.

38. A.E.A., Dowdy, *Public Librarians' Adoption of Technology in Two Southeastern States* **Doctoral Dissertation, Walden University**. 2020.

39. K. A., Owolabi, O. A., Adeleke A. Tella & Y. A. Mudasiru, *A Structural Equation Modeling Approach to Evaluating Library Personnel Intention to Adopt Big Data Technology in Nigerian Academic Libraries*. **Internet Reference Services Quarterly**, 25(4), 2021, 145-167.

40. N.E., Akwang, *A Study of Librarians' Perceptions and Adoption of Web 2.0 Technologies in Academic Libraries in Akwa Ibom State, Nigeria*. **The Journal of Academic Librarianship,** 47(2), 2021. P.102299

Chapter Five

Conclusion

5.1 Summary of Findings

The findings of this study can be summarized as follows;

1. The study found a moderate level of technology usage among academic librarians in the Federal Capital Territory, Nigeria.
2. It was also found that there is a high level of social influence collectively exerted by normative, mimetic, and coercive pressures on the respondents. However, normative influence is the lowest
3. The study also found that the level of perceived facilitating condition among the respondents is high indicating they have the support for the use of library. Technology. However, there are reports of lack of adequate computers and other devices.
4. In addition, it was found that facilitating conditions has a significant influence on the use of library technology by academic librarians in Federal Capital Territory, Nigeria.
5. Similarly, a significant influence of social influence on the use of library technology by academic librarians in Federal Capital Territory, Nigeria was also reported in the study.
6. Overall, the test of the third hypothesis shows a significant combined influence of facilitating conditions on the use of library technology by academic librarians in Federal Capital Territory, Nigeria.

5.2 Conclusion

The use of technology has become non-negotiable in any profession. For the information services providers such as academic librarians, technology use is a necessary act which is closely linked to how effective and efficient they are in the provision of library services. The pervasive nature of technology in the information age means that academic libraries would only be able to provide a limited range of services without the use of technology. It is therefore surprising to see only a moderate use of technology in Nigerian libraries. This study has shown that there are still some underlying factors that must be addressed before these libraries can reach the level of technology use that will enable them provide world class library services to students and lecturers, two users groups who have shown interest in accessing fast, accurate, and relevant information resources with the least effort possible.

5.3 Recommendations

Based on the findings and conclusions reached in this study, the following recommendations are considered appropriate;

1. Universities in the FCT has work hand in hand with the management of their academic libraries to invest in relevant technologies needed in the provision of modern information services.
2. There is a need for better employee motivation so that library personnel would be self-driven and take the initiative to make use of relevant technologies in their various tasks.

3. While the study indicates a high level of facilitating condition to enable the use of library technology, there are also reports of lack of adequate computers and other devices. It is therefore recommended that the libraries develop innovative means of attracting financial and material support to acquire necessary technology equipment even beyond the regular allocation from the university.
4. There is a need to develop maintenance culture to ensure the proper available facilities. This will ensure that they last long enough to entrench a culture of technology use in the library.
5. It is also important for academic libraries in the FCT to institute mentoring and peer review programmes that encourage librarians to make use of technology and discuss any issue they face in the use of library technologies.
6. There should be an overall policy on the use of library technology which makes it mandatory that librarians make use of available technology in the library and.

5.4 Contribution to Knowledge

This study has added to the existing knowledge conceptually, theoretically and empirically. The study has added to the existing literature the combined role of facilitating condition and social influence on the use of library technology. Most importantly, the study focus on universities in the Federal Capital Territory, Abuja which has not been a subject of many studies on the use of library technology.

From the theoretical point of view, the study has integrated the institutional Theory, with the UTAUT creating a unique model to measure social influence and facilitating condition in the use of library technology by librarians. The validation of this theory in

the field of library and information science has opened the door for other researchers to apply it in their studies.

Conceptually. The study has properly conceptualized social influence to include normative influence, mimetic influence and coercive influence which makes it easier to properly investigate social influence.

The study has also provided current empirical data regarding the use of library technology by librarians in the Federal Capital Territory, Abuja. The empirical data provided current insight into the use library technologies in Nigerian libraries which is an update of the existing data available on the subject

5.5 Suggested Areas for Further Research

The study examined the influence of facilitating condition and social influence on the library technology by university library personnel in Abuja, Nigeria. The study has its limitation as it did not cover the entire construct in the UTAUT model. The following areas should therefore be explored by subsequent researchers;

- Influence of effort and performance expectancy on the use of library technology by library personnel in northern Nigeria.
- Comparative analysis on the use of library technologies among library personnel in Nigerian public and private universities.

Bibliography

Book

Clayton, M. & Batt, C., *Managing Library Automation.* Routledge. 2018.

Peters, B.G., *Institutional Theory in Political Science: The New Institutionalism*. Edward Elgar Publishing. 2019

Conference Proceeding

Bozan, K., Parker, K. And Davey, B., *A Closer Look at the Social Influence Construct in the UTAUT Model: An Institutional Theory Based Approach to Investigate Health IT Adoption Patterns of the Elderly.* In *2016 49th Hawaii International Conference on System Sciences (HICSS)* IEEE. 2016, Pp. 3105-3114

Brata, A. H., & Amalia, F. *Impact Analysis of Social Influence Factor on Using Free Blogs as Learning Media for Driving Teaching Motivational Factor.* In Proceedings of the 4th International Conference on Frontiers of Educational Technologies, 2018.Pp. 29-33.

Jakkaew, P., & Hemrungrote, S. *The Use of UTAUT2 Model for Understanding Student Perceptions Using Google Classroom: A Case Study of Introduction to Information Technology Course.* In Proceedings of the 2017 International Conference on Digital Arts, Media and Technology 2017, Pp. 205–209. Http://Doi.Org/10.1109/Icdamt.2017.7904962

Kim-Soon, N., Ibrahim, M. A., Ahmad, A. R., & Sirisa, N. M. X. *Factors Influencing Intention to Use Mobile Technologies for Learning Among Technical Universities Students.* Proceeding of the 26th International Business Information Management Association Conference, Madrid, Spain, 26, 2015, 2046-2057.

Yeh, M. L., & Tseng, Y. L. *The College Students' Behavior Intention of Using Mobile Payments in Taiwan: An Exploratory Research*. Proceedings Of IASTEM International Conference, Singapore, 2nd -3rd, 2017, 1-6

Hussaini S., Vashistha R., Jimoh A. & Jimah H. *Automation of Library Services for Enhanced Users' Satisfaction of Information Resources in Academic Libraries in Nigeria. In: International Conference on Recent Innovation in Science, Engineering, Humanities and Management.* CSMSS College Of Polytechnic, Kanchanwadi, Aurangabad, India, 16 September 2017, Pp. 150–159

Turki, A. M., & Sathiyanarayanan, M. *Importance of Mobile Learning in Improving the Quality of Educational-Information Systems in the Saudi Arabian High Schools*. In 2018 21st Saudi Computer Society National Computer Conference (NCC) IEEE**.** 2018, Pp. 1-5

Venkatesh, V., Sykes, T.A. &B Zhang, X.*, 'Just What the Doctor Ordered': A Revised UTAUT For EMR System Adoption and Use by Doctors.* In 2011 44th Hawaii International Conference on System Sciences. IEEE. 2011, Pp. 1-10

Journal Article

Abayomi, A.I. & Ogungbeni, J.I., *Automation of Public Libraries in South West, Nigeria: Challenges and Way Forward.* **International Journal Applied Technologies in Library and Information Management**, 6(1). 2020

Adeyemi, I.O. & Omopupa, K.T., *Moving from OPAC to Discovery Systems: Nigerian Librarians' Perceived Knowledge and Readiness*. **Cataloging & Classification Quarterly**, 58(2), 2020. Pp.149-168.

Ahmad, T. S. A. S., Ramlan, Z. S., & Krishnan, S. K. *Acceptance of Google Classroom for Learning English Exit Test.* **International Journal of Modern Languages and Applied Linguistics**, 4(1), 2020, 67–76. Https://Doi.Org/10.24191/Ijmal.V4i1.9504

Ajegbomogun, F. O., & Diyaolu, O. B. *Availability of Library Facilities, Knowledge Sharing as Determinants of Job Performance of Library Staff in Southwest Nigeria*. **Library Philosophy and Practice**, 1. 2018.

Akwang, N.E., *A Study of Librarians' Perceptions and Adoption of Web 2.0 Technologies in Academic Libraries in Akwa Ibom State, Nigeria*. **The Journal of Academic Librarianship,** 47(2), 2021. P.102299

Alabi, A. O., & Mutula, S. *Information and Communication Technologies: Use and Factors for Success Amongst Academics in Private and Public Universities in Nigeria*. **South African Journal of Information Management**, 22(1), 2020. 1-8.

Alziady, A. A. D. J., & Enayah, S. H. *Studying the Effect of Institutional Pressures on the Intentions to Continue Green Information Technology Usage*. **Asian Journal of Sustainability and Social Responsibility**, 4(1), 2019, 1-20.

Amanyi, Y.S., Akor, P.U. & Madu, E.C., *Use and Effects of Radio Frequency Identification (RFID) Technology on Theft Detection for Library Resources Management in Two Private Universities in Abuja, Nigeria.* I-**Manager's Journal on Wireless Communication Networks**, 7(2), 2018 P.19

Ambarwati, R., Harja, Y. D., & Thamrin, S. *The Role of Facilitating Conditions and User Habits: A Case of Indonesian Online Learning Platform*. **The Journal of Asian Finance, Economics and Business,** 7(10), 2020. 481-489.

Anaelobi, E. S., & Agim, E. C. *Tetfund Intervention and Development of University Libraries in South-East, Nigeria.* **Library And Information Perspectives and Research**, 1, 2019, 50-58.

Anyira I.E. *Need For Adoption of Koha Integrated Library Management Software in Nigerian Academic Libraries,* **Library Philosophy and Practice (E-Journal).** 4140. 2020. Available At: Https://Digitalcommons.Unl.Edu/Libphilprac/4140.

Arshad, M., Farooq, M., Afzal, S., & Farooq, O *Adoption of Information Systems in Organizations: Understanding the Role of Institutional Pressures in A Collectivist Culture*. **Journal of Enterprise Information Management.** 2019.

Awojobi, E. A., Okoro, C. C., & Babalola, Y. T. *A SWOT Analysis of Physical Infrastructure in Government-Owned University Libraries in Ogun State, Nigeria*. **South African Journal of Libraries and Information Science,** 86(2), 2020. 38-46.

Babatunde, T., Alhassan, J. A., & Babalola, G. A. *Information and Communication Technology Infrastructures and Staff Competence as Correlates of Effective Resource Sharing In University Libraries In North Central, Nigeria*. **Library Philosophy and Practice,** 2020, 1-15.

Blut, M., Chong, A., Tsiga, Z., & Venkatesh, V. *Meta-Analysis of the Unified Theory of Acceptance and Use of Technology (UTAUT): Challenging Its Validity and Charting a Research Agenda in The Red Ocean*. **Journal of the Association for Information Systems**, 2021.

Buckland, M.K., *Library Technology in The Next 20 Years*. **Library Hi Tech**. Vol. 35 No. 1, 2017 Pp. 5-10

Chaka, J. G., & Govender, I. *Implementation of Mobile Learning Using a Social Network Platform: Facebook.* **Problems of Education in the 21st Century**, 78(1), 2020, 24-47. 08086187195

Choi, C., Kim, C., & Kim, C. *Towards Sustainable Environmental Policy and Management in The Fourth Industrial Revolution: Evidence from Big Data Analytics.* **Journal Of Asian Finance, Economics and Business**, 6(3), 2019, 185-192. Https:// Doi.Org/10.13106/Jafeb.2019.Vol6.No3.185

David, R.J., Tolbert, P.S. And Boghossian, J., *Institutional Theory in Organization Studies*. *In* ***Oxford Research Encyclopedia of Business and Management***. 2019.

Efiloğlu Kurt, Ö., & Tingöy, Ö. *The Acceptance and Use of a Virtual Learning Environment in Higher Education: An Empirical Study in Turkey, And The UK*. **International Journal of Educational Technology in Higher Education**, 14(26), 2017,1–15. Https://Doi.Org/10.1186/S41239-017-0064-Z

Fauzi, A.A. And Sheng, M.L., *The Digitalization of Micro, Small, And Medium-Sized Enterprises (MSMES): An Institutional Theory Perspective*. **Journal Of Small Business Management**, 2020. Pp.1-26.

Gamede, B.T., Ajani, O.A. & Afolabi, O.S., *Exploring the Adoption and Usage of Learning Management System as Alternative for Curriculum Delivery in South African Higher Education Institutions During COVID-19 Lockdown.* **International Journal of Higher Education,** 11(1), 2022. Pp.71-84.

H. J. Kim, J.M. Lee & J.Y. Rha, *Understanding the Role of User Resistance on Mobile Learning Usage Among University Students.* **Computer. Education**. 113, 2017. 108–118. Doi: 10.1016/J.Compedu.2017.05.015

Halili, S. H., & Sulaiman, H. *Factors Influencing the Rural Students' Acceptance of Using ICT For Educational Purposes*. **Kasetsart Journal of Social Sciences**, 2018, 2019, 1-6. Https://Doi. Org/10.1016/J.Kjss.2017.12.022

Hamad, F., Al-Fadel, M. And Fakhouri, H., *The Effect of Librarians' Digital Skills on Technology Acceptance In Academic Libraries In Jordan*. **Journal Of Librarianship and Information Science**, 53(4), 2021. Pp.589-600.

Hamzat, S. A. & Mabawonku, I. *Influence Of Performance Expectancy And Facilitating Conditions On Use Of Digital Library By Engineering Lecturers In Universities In South-West, Nigeria*. **Library Philosophy and Practice**, 2018, 1-16.

Huang, F., Teo, T., & Scherer, R. *Investigating the Antecedents of University Students' Perceived Ease of Using the Internet for Learning*. **Interactive Learning Environments**, 2020, 1–17. Https://Doi.Org/10.1080/10494820.2019.1710540

Hussain, M., Idrees, H., Faqir, K., & Haider, M. S. *Assessment of ICT Facilities In The Public Libraries Of Khyber Pakhtunkhwa: A Descriptive Study*. **Library Philosophy and Practice**, 2021, 1-22.

Iftakhar, S. *Google Classroom: What Works and How*? **Journal Of Education and Social Sciences**, 3, 2016,12–18. Https://Www.Jesoc.Com/Wp-Content/Uploads/2016/03/KC3_35. Pdf,

Izuagbe, R., Ibrahim, N. A., Ogiamien, L. O., Olawoyin, O. R., Nwokeoma, N. M., Ilo, P. I., & Osayande, O. *Effect Of Perceived Ease Of Use On Librarians'e-Skills: Basis For Library Technology Acceptance Intention.* **Library & Information Science Research**, 41(3), 2019. 100969.

James E. Andrew Heather Ward Jungwon Yoon. *UTAUT As a Model for Understanding Intention to Adopt AI And Related Technologies Among Librarians.* **The Journal Of Academic Librarianship** 47, 2021,102437

John, P., & Balasubramanian, P. *Application And Uses Of Information Communication Technology (ICT) In Academic Libraries With Reference To Arts And Science Colleges In Tirunelveli District, Tamil Nadu: A Study*. **Library Philosophy and Practice**, 2019, 1-12.

Kamaghe, J., Luhanga, E., & Kisangiri, M. *The Challenges Of Adopting M-Learning Assistive Technologies For Visually Impaired Learners In Higher Learning Institution In Tanzania*. **International Journal of Emerging Technologies in Learning**, 15(1), 2020, 140-151. Https://Doi.Org/10.3991/Ijet.V15i01.11453

Kamarozaman, Z. & Razak, F. Z. A. *The Role of Facilitating Condition in Enhancing User's Continuance Intention*. **Journal Of Physics: Conference Series** (Vol. 1793, No. 1, 2021, P. 012022.

Khan, A., *Investigating the Factors Influencing Librarians' Intention Toward the Adoption of Koha-An Open Source Integrated Library System In Pakistan*. **Library Philosophy and Practice,** 2020. Pp.1A-51.

Kim, K. J., D.-H. Shin, & E. Park. B. "*Can Coolness Predict Technology Adoption? Effects Of Perceived Coolness on User Acceptance of Smartphones with Curved Screens*." **Cyberpsychology, Behavior, And Social Networking** 18 (9): 2015, 528–533. Doi:10.1089/Cyber. 2014.0675.

Kolawole, L. F. & Oladokun T. A. *Utilization of Open Source Software In Nigeria Academic Libraries: Matters Arising,* **Cataloging & Classification Quarterly**, 59:4, 2021, 399-407, DOI: 10.1080/01639374.2021.1919268

Kumar, J. A., Bervell, B., Annamalai, N., & Osman, S. *Behavioral Intention to Use Mobile Learning: Evaluating the Role Of Self-Efficacy, Subjective Norm, And Whatsapp Use Habit*. **IEEE Access**, 8, 2020–208074. Https://Doi.Org/10.1109/ACCESS.2020.3037925

Latif, B., Mahmood, Z., Tze San, O., Mohd Said, R. And Bakhsh, A., *Coercive, Normative And Mimetic Pressures As Drivers Of Environmental Management Accounting Adoption*. **Sustainability**, *12*(11), 2020.P.4506.

Lee, J., M. Kim, C. D. Ham, & S. Kim. "*Do You Want Me To Watch This Ad On Social Media?: The Effects Of Norms On Online Video Ad Watching*." **Journal Of Marketing Communications** 23 (5): 2017, 456–472. Doi:10.1080/ 13527266.2016.1232303.

Liu, D., Lu, W. And Niu, Y., *Extended Technology-Acceptance Model To Make Smart Construction Systems Successful.* **Journal Of Construction Engineering And Management**, *144*(6), 2018. P.04018035.

Mahardika, H., Thomas, D., Ewing, M. T., & Japutra, A. *Experience And Facilitating Conditions As Impediments To Consumers' New Technology Adoption*. **The International Review Of Retail, Distribution And Consumer Research**, 29(1), 2019, 79-98.

Mallmann, G.L., Maçada, A.C.G. And Eckhardt, A., *We Are Social: A Social Influence Perspective To Investigate Shadow IT Usage*. **In ECIS**, 2018, P. 190.

Maruping, L. M., Bala, H., Venkatesh, V., & Brown, S. A. *Going Beyond Intention: Integrating Behavioral Expectation Into The Unified Theory Of Acceptance And Use Of Technology*. **Journal Of the Association for Information Science and Technology**, 68(3), 2017, 623–637. Https://Doi.Org/10.1002/Asi.23699

Masreka, M. N., & Husseinb, A. *Intention To Adopt Mobile Applications Services: A Study Among Pakistani Academic Librarians*. **International Journal Of Innovation, Creativity And Change**, 15(3), 2021.

Mensah, M., & Onyancha, O. B. *Demographic Factors Influencing The Adoption And Use Of Social Media In University Libraries In Ghana: A Unified Theory Of Acceptance And Use Of Technology (UTAUT) Approach*. **Journal Of Electronic Resources Librarianship**, 33(3), 2021, 170-194.

Mohideen Z. A. *Librarians' Acceptance Of Open Source Library Information System Using The Osis-Utaut Model*. **Phd Thesis, University Of Malaya**, 2017.

Mohideen, Z. A. Kaur, K. Muhamad, S. N. A. W. Jan & A. B. Ahamadhu "*ITIL: Implementation And Service Management Best Practices In Malaysian Academic Libraries*," **International Journal Of Technology And Engineering Studies**, Vol. 3, No. 2, 2017, Pp. 65-73,

Moorefield-Lang, H., & Dubnjakovic, A. *Factors Influencing Intention To Introduce Accessibility In Makerspace Planning And Implementation*. **School Libraries Worldwide**, 26(2), 2020, 14.

Moorthy, K., Tzu Yee, T., Chun T'ing, L., & Vija Kumaran, V. *Habit And Hedonic Motivation Are The Strongest Influences In Mobile Learning Behaviours Among Higher Education Students In Malaysia*. **Australasian Journal Of Educational Technology**, 35(4), 2019174–191. Https://Doi.Org/10.14742/Ajet.4432

Nayana J. *A Study On Library Automation Status Among The Aided College Libraries In Bengaluru*. **Library Philosophy And Practice (E-Journal).** 3048. 2019Available At: Https://Digitalcommons.Unl.Edu/Libphilprac/3048.

Njoku, I.S., *Use Of Open Source Technology For Effective Academic Libraries Services In Nigeria*. **Library Philosophy And Practice.** 2017.

Okocha, F., *Determinants Of Electronic Book Adoption In Nigeria.* **DESIDOC Journal Of Library & Information Technology**, 39(4), 2019. Pp.175-179.

Okuonghae, O. & Idubor, I., *Assessment Of The Use Of Open Source Library Software In University Libraries In South-South Nigeria*. **SAU Science-Tech Journal**, 5(1), 2020. Pp.104-118.

Oladokun, T.A. & Kolawole, L.F., *Sustainability Of Library Automation In Nigerian Libraries: KOHA Open Source Software*. **Library Philosophy And Practice**, 2018. P.1.

Olakoge D.P. & Kolawole J.A. .*Effect Of Library Automation On Performance Of Librarians In Private Universities In South-West Nigeria*. **Information And Knowledge Management**, 9(5), 2019, 1–11

Omeluzor, S. U., Nwosu, C. C., & Molkwu, U. E. (2018). Effects Of Library Infrastructure On Turnover Intentions Of Librarians: A Study Of University Libraries In South-South And South-East Of Nigeria. **Library Philosophy and Practice (E-Journal).**

Omoadoni, O.R., *Impact Of RFID (Radio Frequency Identification) Technology On Libraries*. **Library Philosophy and Practice,** 2019. Pp.1-10.

Owolabi, K. A., Adeleke, O. A., Tella, A., & Mudasiru, Y. A. *A Structural Equation Modeling Approach to Evaluating Library Personnel Intention to Adopt Big Data Technology In Nigerian Academic Libraries*. **Internet Reference Services Quarterly**, 25(4), 2021, 145-167.

Oyediran, W.O., Omoare, A.M., Owoyemi, M.A., Adejobi, A.O. & Fasasi, R.B., *Prospects and Limitations Of E-Learning Application in Private Tertiary Institutions Amidst COVID-19 Lockdown in Nigeria*. **Heliyon**, *6*(11), 2020.P.E05457.

Parhamnia, F. *Investigating Mobile Acceptance In Academic Library Services Based On Unified Theory Of Acceptance And Use Of Technology Model* (UTAUT-2). **The Journal of Academic Librarianship**, 48(5), 2022, 102570.

Pimmer, C., Brühlmann, F., Odetola, T. D., Oluwasola, D. O., Dipeolu, O., & Ajuwon, A. J. *Facilitating Professional Mobile Learning Communities with Instant Messaging*. **Computers And Education**, 128, 102-112. Https://Doi. Org/10.1016/J.Compedu.2018.09.005

Pinto, M., Fernández-Pascual, R., Caballero-Mariscal, D. & D. Sales, *Information Literacy Trends in Higher Education (2006–2019): Visualizing The Emerging Field Of Mobile Information Literacy*. **Scientometrics**, 124(2), 2020. Pp.1479-1510.

Quadri, G., & Garaba, F. *Perceived Effects Of ICT On Knowledge Sharing Among Librarian In South-West Nigeria: A UTAUT Theoretical Approach*. **Journal Of Balkan Libraries Union**, 6(1), 2019, 38-46

Rahmad, R., Adria Wirda, M., Berutu, N., Lumbantoruan, W., & Sintong, M. *Google Classroom Implementation In Indonesian Higher Education*. **Journal Of Physics: Conference Series**, 1175(1), 2019, 1–6.

Raman, A., & Rathakrishnan, M. *Blended Learning Via Google Classroom: English Language Students Experience Based On UTAUT Model And Flow Theory*. **Hamdard Islamicus,** XLIII(1).2020

Ray, B., & Singh, S. K. *Features And Use Of Library Management Software Packages In The Libraries Of Gauhati University (GU) And Indian Institute Of Technology Guwahati* (IITG). **International Journal Of Library And Information Studies** Vol.8(1), 2018

Raza, S.A., Qazi, W., Khan, K.A. & Salam, J., *Social Isolation And Acceptance Of The Learning Management System (LMS) In The Time Of COVID-19 Pandemic: An Expansion Of The UTAUT Model.* **Journal Of Educational Computing Research**, 59(2), 2021. Pp.183-208.

Sabhapandit, T., *Development Of ICT Application In The University Libraries Of Assam: A Study*. **Library Philosophy And Practice**, 2019. Pp.1-11.

Sabhapandit, T., *Development Of ICT Application In The University Libraries Of Assam: A Study.* **Library Philosophy And Practice**, 2019. Pp.1-11.

Satar, M. S., & Alarifi, G. Factors Of E-Business Adoption In Small And Medium Enterprises: Evidence From Saudi Arabia. **Human Behavior And Emerging Technologies** Volume 2022.

Serwaa, N. A., Dadzie, P. S., & Owusu-Ansah, C. M. *Awareness And Use Of Digital Reference Services In Academic Libraries In Ghana*. **International Journal Of Knowledge Content Development & Technology**, 12(Special), 2022. 7-29.

Shahzad, K., & Iqbal, A. (). *Barriers Faced By Library Professionals For Technology Adoption In University Libraries Of Lahore, Pakistan*. **Library And Philosophy And Practice (E-Journal).;** 2020

Shehu, A.B. & Singh, K.P., *A Study On The Application Of Information And Communication Technology In The University Libraries Of North-Central Nigeria*. **Library Philosophy And Practice**, 2022. Pp.1-11.

Shonhe, L., *An Assessment of The Technology Readiness of Public Librarians In Botswana.* **Global Knowledge, Memory and Communication**. 2019. DOI 10.1108/GKMC-10-2018-0086

Sivankalai, S., *Awareness Of Library Automation Among The Professionals In Academic Libraries At State Of Eritrea.* **International Journal Of Academic Library And Information Science**, 8(1), 2020. Pp.17-21

Soares, A. L. V., Mendes-Filho, L., & Gretzel, U. *Technology Adoption In Hotels: Applying Institutional Theory To Tourism*. **Tourism Review**, 76(3), 2020, 669-680.

Stephens, M.K., *Review Of Koha Library Software.* **TCB: Technical Services In Religion & Theology**, 30(2), 2022. Pp.7-9

Tella, A., Ukwoma, S. C., & Kayode, A. I. *A Two Models Modification for Determining Cloud Computing Adoption for Web-Based Services In Academic Libraries In Nigeria*. **The Journal of Academic Librarianship,** 46(6), 2020. 102255.

Totolo, A., Comma, S. B., & Dimane, M. Perceptions Of University Of Botswana Academic Staff On Web 2.0 Technology Adoption. Informatics Studies, 4(1). 2018.

Ugur, N. G., Koc, T., & Koc, M. *An Analysis Of Mobile Learning Acceptance By College Students.* **Journal Of Educational And Instructional Studies**, 6(2), 2016, 39-49

Ursavaş, Ö.F., Yalçın, Y. & Bakır, E., *The Effect Of Subjective Norms On Preservice And In-Service Teachers' Behavioural Intentions To Use Technology: A Multigroup Multimodel Study.* **British Journal Of Educational Technology**, *50*(5), 2019. Pp.2501-2519.

Uzoigwe, C. U., & Eze, J. U. *The Perceived Benefits Of Electronic/Digital Reference Services In Nigerian University Libraries: A Survey*. **International Journal Of Knowledge Content Development & Technology**, 8(2), 2018. 49-65.

Venkatesh, V., *Adoption And Use Of AI Tools: A Research Agenda Grounded In UTAUT*. **Annals Of Operations Research**, *308*(1), 2022. Pp.641-652.

Wai, I.S.H., Ng, S.S.Y., Chiu, D.K., Ho, K.K. And Lo, P., *Exploring Undergraduate Students' Usage Pattern of Mobile Apps for Education*. **Journal Of Librarianship and Information Science,** 50(1), 2018. Pp.34-47.

Yemi-Peters, O.E., Sokari, V., Olayemi, K.J., Haliru, Z.A. & Gama, U.G., *The Application of ICT In the Circulation Services of The University Library, Federal University, Lokoja-Kogi State, Nigeria*. **Library Philosophy and Practice**, 2019. Pp.

Yoon, C. "*Extending the TAM For Green IT: A Normative Perspective*." **Computers In Human Behavior** 2018.8 3: 129–139. Doi:10.1016/J.Chb.2018.01.032.

Zainab, A.M., Kiran, K., Karim, N.H.A. & Sukmawati, M., *UTAUT'S Performance Consistency: Empirical Evidence from A Library Management System*. **Malaysian Journal of Library & Information Science,** *23*(1), 2018. Pp.17-32.

Zainol, Z., Yahaya, N., Yahaya, N. M., & Zain, N. N. B. M. *Factors Influencing Mobile Learning Among Higher Education Students In Malaysia.* **International Journal Of Advanced Scientific Research And Management**, 2(8), 2017,86-91.

Zhou, L. L., Owusu-Marfo, J., Asante Antwi, H., Antwi, M. O., Kachie, A. D. T., & Ampon-Wireko, S. *Assessment Of The Social Influence And Facilitating Conditions That Support Nurses' Adoption Of Hospital Electronic Information Management Systems (HEIMS) In Ghana Using The Unified Theory Of Acceptance And Use Of Technology (UTAUT) Model*. **BMC Medical Informatics And Decision Making**, 19(1),2019, 1-9.

Zwain, A. A. A. *Technological Innovativeness and Information Quality as Neoteric Predictors of Users' Acceptance of Learning Management System: An Expansion of UTAUT2*. **Interactive Technology and Smart Education**, 16(3), 2019, 239–254

Thesis and Dissertation

Dowdy, A.E.A., *Public Librarians' Adoption of Technology in Two Southeastern States* Doctoral dissertation, Walden University. 2020.

Appendix

Questionnaire

Department of Library and Information Science
Faculty of Communication and Information Science
Lead City University

Social Influence, Facilitating Conditions and the use of Library Technology among Academic Librarians in Federal Capital Territory, Abuja.
(QFCSILT)

Dear Respondent,
I am a Master's degree student in the above-named Department. I seek your indulgence to help fill out this questionnaire centered on the influence of social influence and facilitating conditions the use of library technology among Academic Librarians in Federal Capital Territory, Abuja to the best of your ability. Your response is strictly confidential and will be used only for research purposes.
Thanks

Section A: Demographic information:

a. Name of institution:…….
b. Department:…… ….
c. Academic Qualification: BSC. { }.Masters{ } MPhil { } PhD{ } Others { }
d. Age 25-29{ }, 30-34{ }, 26-30 { }, 31-35 { }, 36-40 { }, **40-44** { } 45 and above{ }
e. Gender: Male { }, Female { }.

Section B: Level of Library Technology Use

Instruction: Please respond to the following statements as they apply to you

Key: 4=strongly agree, 3=Agree, 2=Disagree, 1=strongly disagree).

I make use of Library Technology:	**Always**	**Often**	**Sometimes**	**Never**
Daily				
Twice a week				
Weekly				
Monthly				
Never				

2. **For what purposes do you make use of Library Technologies?**

Instruction: Please respond to the following statements as they apply to you

Key: 4=Very Great Extent, 3= Great Extent, 2= Low Extent 1= Very Low Extent.

S/N	**Items**	**Very Great Extent**	**Great Extent**	**Low Extent**	**Very Low Extent**
1.	I use library technology to organize library resources				
2.	I use library technology to source for library resources				
3.	I use library technology to render reference services				
4.	I use library technology to preserve information resources				
5.	I use library technology for charging and discharging library materials				
6.	I use library technology to engage in interlibrary loan				
7.	I use library technology to organize information literacy programmes				

3: Instruction: Please respond to the following statements as they apply to you

Key: 4=strongly agree, 3=Agree, 2=Disagree, 1=strongly disagree).

	Social Influence	**SA**	**A**	**D**	**SD**
	Normative pressure				
8.	The professional associations I belong to require that I make use of library technology				

9.	Other libraries that my library interacts with expect me to use library technology				
10.	The use of technology is generally accepted in the librarianship profession				
N	**Mimetic Pressure**	**SA**	**A**	**D**	**SD**
11.	All reputable academic libraries in Nigeria are known for using technology				
12.	The most prestigious academic libraries in Nigeria have set good examples in the use of technology				
13.	The most prestigious academic libraries in Nigeria have boosted library patronage in their institutions through the use of library technology				
14.	Many academic libraries have obtained competitive advantages by implementing library technology				
	Coercive Pressure	**SA**	**A**	**D**	**SD**
15.	I may be sacked from my job if I don't know how to use library technology				
16.	Without the use of library technology, accrediting bodies will not approve courses in my university				
17.	Majority of library users will not use the library if the library cannot provide technology-based services				

Facilitating Condition Questionnaire

Instruction: Please respond to the following statements as they apply to you
Key: 4=strongly agree, 3=Agree, 2=Disagree, 1=strongly disagree).

	Facilitating Conditions				
	Availability of Infrastructure	**SA**	**A**	**D**	**SD**
	I have access to resources such as laptops, mobile phones etc. to support my use of the library technology				
	My library provides a stable internet connection that makes it possible to use library technology				
	Technical Support				

	My library's policy is clear on the use of library technology				
	My library has employed IT experts to solve any problems with hardware and software used for library services				
	Training and Development				
	I have the support to acquire training in the use of library technology				
	I have access to mentors who can help me in the use of library technology				
	My library provides financial support for those who acquire digital skills for the use of library technology				

Bio-data

A. Personal Data

1. Full Name: Victoria Deyeh OGUNMOLA.

Address: National Library of Nigeria,

Plot 274, Sanusi Dantata House, Central Business District, Abuja, Federal Capital Territory.

Email: victostephen@gmail.com

2. Date and Place of Birth: June 13th 1980/ Zaria, Kaduna State.

3. Nationality: Nigerian.

4. Name and Address of Next of Kin: Johnson B. Ogunmola.

Address. House 23, Road 14, EFAB Estate, Lokogoma, Abuja.

B. Educational Background

Educational Institutions attended with dates and Qualifications:

i. **Primary Education: Depot Nursery and** Primary School, Zaria, Kaduna State.1985-1990. Primary School Leaving Certificate - Certificate of Primary Education.

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iii. **Higher Educational Institutions:** Ahmadu Bello University (ABU) Zaria, Kaduna State. 1997- 2002. Bachelor of Library and Information Science (BLS).

C. Working Experience with Dates

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Role: Librarian.

D. Awards and Fellowships:

E. Membership of Academic Professional Bodies:

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The University Compliance Certification

This is to certify that, this thesis is written by Victoria Deyeh OGUNMOLA with Matric No LCU/PG/002305 in the Department of Information Management, Lead City University, Ibadan, is in FULL compliance with the approved university format and style.

Name	**Signature**