

CHAPTER ONE

INTRODUCTION

Background to the Study

Library and information services are no longer restricted to hard copies and the print media. The mode of operation has since moved from print to digital which led to the rapid proliferation of information resources in several forms, format, and platforms such as, e-books, e-journals, institutional repositories, online/offline databases and e-reference sources.

The rapid proliferation of information resources was as a result of the utilization of Information and Communication Technologies (ICTs) as the tools that facilitate production, transmission and processing of information resources. ICT is generally accepted in libraries across the world because ICT did not only ease the process of knowledge organization and retrieval but has also bridged the cost of accessing information, the duration of accessing information and the inadequacy in library capacity to serve her users. ICT tools like CD ROM, email service, wireless and cable network, portals, websites, blogs, institutional repositories, open access information resources and databases are used in many areas of library operations including library consortia activities among libraries. The introduction of this new mode of operation occasioned by Information and Communication Technologies (ICT) enable libraries of different kind to collaborate to share service responsibility. (Chanchinmawia and Verma, 2016)

ICT is playing vital roles in the modernization of libraries, one of such roles is Library Consortium (Library Networking, information resources sharing, cooperation, interlibrary loan).Library consortium means a group of Libraries and Information Centers are interconnected for the purpose of sharing what they have in common, in a common pattern or design for information exchange and communication with a view to improve efficiency; it is a synergy among libraries to address their challenges, (Saleem, Shabana-Tabusum, &Sadik (2013).

Library consortium, according to Muthu (2013) is an agreement, formal or informal, among a group of libraries to share collections, data, facilities, personnel, etc., for the benefit of their users and to reduce the expense of collection development. The use of ICT in library has really broken down the walls of the library, web 2.0/Library 2.0 made library consortium so flexible that librarians seem not to be aware when library engaged in library consortium activities because it is no longer a requirement for library to send their representatives to a meeting to discuss and sign the terms of agreement and memorandum of understanding before library consortium can take place. ICT has made it so convenient for librarians to sign and participate in library consortium activities with just ‘a click on a web link’ and the library becomes a member of library consortium. All these happen with the aid of ICT tools in the library.

Therefore, ICT-based library consortium can be described as an informal and or formal process where resources of one library is made available and accessible to users of other libraries with the aid of ICT tools. ICT-based library consortium as an innovation, represent a situation where libraries harnesses all the available ICT tools to provide extensive access to variety of information sources irrespective of the location of the information seekers or users. It is an arrangement where libraries sign or assent to protocol and memorandum of understanding, including electronic and web sign up to allow the use of computers, smart-phones, tablets, emails, websites, portals, blogs, institutional repositories, open access information resources, networked information resources and other technologies of one library to service the users of another library without any form of restriction. Simply put, ICT-based library consortium is the utilization of any ICT tool to facilitate information resources sharing or exchange of information resources among libraries. It includes joint subscription to database either by the libraries themselves or on behalf of the libraries by third party e.g., the National University Commission’s National virtual library project.

However, it is a fact that the application of ICTs tool in library has introduced a paradigm shift in all facet of library and information service that require resetting in most library policies and procedures to accommodate the new paradigm. Hitherto, library collection development policy state how, when, where and what library should acquire into the library as information resource, but the introduction of ICTs into library service has significantly altered 'the how, when, where and what library should acquire'. As a result, most of the libraries have to design a new policy framework called “Library ICT policy”, which is a policy that directs how library should use ICT tools for library services. Many library policies today have been rendered ineffective with the introduction of ICT tools in library. For example, most University library user's education program or policy and library lending policy did not make provision for the application and utilization of ICT at the inception of these policies.

Nevertheless, the current possibilities are quite exciting as librarians need to show capacity in the utilization of ICT tools for running library consortium to address the challenges facing library and information service. Gbaje and Ukachi (2011) concluded that information technology skills are important for effective library and information service delivery in the digital environment. Prior to the introduction of ICT tools in library, nobody thought there was need or there would be need to train librarians as servers and network administrators or web designers but the current reality requires librarians to be skilled in all areas of ICT that relates to library functions. More so, library staff development policy, before now, does not really address the issue of re-skilling and retraining librarians for the mastery of ICT tools. Lack of appropriate ICT skill has been observed as a major contributory factor in the low utilization of ICT based library services, (Kumar & Biradar 2010).

Librarians needed to show commitment toward the paradigms occasioned by technological advancement (ICT) as the new system to handle and manage library collaborative effort. Kumar (2013a) observed that most of the librarians covered in a study responded

positively for having awareness on handling windows operating system. He went further to say that Information and Communication Technology (ICT) has changed the way library professionals interact, communicate, share and acquire knowledge. The paradigm shift is all about the utilization of ICT tools to establish and manage inter library loans, library resource sharing, cooperative acquisition and any other professional activities that strengthen library capacity to serve her users.

Studies have proved that the application of ICT in library and information service creates numerous opportunities for library and librarians to leverage and to address the challenges facing the library (Mole, Dim & Horsfall 2016) and (Adeyinka 2009). Besides creating opportunities, the application of ICT in library also poses a lot of challenges to the library and librarians. Among the challenges confronting libraries and librarians in their attempt to use ICT for library services like library consortium are: librarians' ICT awareness, attitude, competence and the policy situation in library (Akparobore, 2013; Ajaegbu, Ehioghae, & Oreoluwa, 2014; Ramzan & Singh 2010).

Therefore, for University libraries to be projected as centres of excellence in information and knowledge dissemination, they need to go into consortium with other libraries and information service providers through the utilization of ICT tools. The university libraries need to parade a workforce that have adequate ICT awareness, ICT competence and right attitude toward the use of online/offline database, institutional repositories, open access information resources, networked information resources and other related ICT hardware and software to offer ICT-based library consortium services.

In addition, University libraries need to also put in place a policy framework that will encourage and motivate librarians to key into ICT-based library consortium activities. Library as an organization should look inward to phase out all library policy, rule, and guidelines that tend to discourage the librarians from developing interest in the acquisition of ICT skills, replacing

such with library policy, rule, and guidelines that encourage librarians to get skilled in ICT and use the ICT for consortia activities.

Library consortium as a new form of synergy where libraries come together to sign a memorandum of understanding to mutually share their responsibilities, is a programme with capacity to address the problems bedeviling Nigeria University Libraries concerning prompt access to up to date and quality information resources. There were several attempts to establish library consortium in Nigeria but none could stand the test of time, not even the attempt made by the Nigerian University Libraries Consortium under the auspices of Committee of University Librarians of Nigerian Universities (CULNU) and the National Universities Commission. The inability and failure of libraries and librarians to establish enduring library consortium over time, necessitated the quest for an empirical study in this regard. With the available ICT tools in University Libraries in Nigeria (Oyedokun, Oyewumi, Akabi & Laaro, 2018), there is need for the utilization of ICT based library consortium.

Librarians have shown some level of awareness and understanding over time that ICT represent any technology and/or device that is used in producing, organizing and distributing information resources. It is common knowledge in library that one of the channels through which University libraries can enhance library user's access to information is to get involved in the utilization of ICT based library consortium. It will enable a library to provide enhanced access to information resources through a number of initiatives like library resources sharing, collaborative acquisition, cooperative subscription to database(s), consortia licensing and other mechanism that facilitate wider, prompt, and cheaper access to information resource for the teaming library users, researchers, and academics who patronize the university library.

Among other library and information service innovations, library consortium maintains steady progress across the globe; it has a rich historical background that shows the trend of events in the development and spread of library consortium across the global. The origin and

pattern of development of library consortium from its inception to the present stage, at various stages and times has witnessed changes in name and nomenclature, and it is pertinent to look at these changes in names and nomenclature. Library consortium as the current phrase in vogue started from inter-library loan to share union catalogue, from cooperative acquisition to document delivery, from exchange of technical staff and expertise to joint training and re-training of staff.

The origin of library consortium is the origin of library cooperation, interlibrary loan, library resources sharing, and library collaboration which marked the beginning of recipe for libraries to address their inadequacies in terms of information resources and human resources. The purpose of library consortium from the earliest stage to the present stage remains constant despite the changes. The purpose of library consortium is to provide member libraries with more access to information resource, be it in electronic database, journals and any other prominent sources of information resources at reduced costs through collective efforts.

Library consortium overtime bore many names and terminologies with varying nomenclature. Regardless of their names, terminologies and nomenclature, the central aim of library consortium remains same and undaunted. Based on historical realities and various technological developments that occurred in the field of librarianship, the concepts continue changing name, nomenclature, and terminology. The following are the names, terminologies and nomenclature of what is presently called library consortium, a library platform which attempt to promote exchange of ideas, expertise and resources between and among libraries these are: library cooperation, interlibrary loan, library network, library resources sharing, library collaboration and library consortium. Each of these concepts has time and period within which they were conceptualized and prominently used.

Irrespective of the name and nomenclature it bears, the central theme is to enable the congregating libraries acquire more resources through joint purchase, exchange expertise, create

and develop more access to information resources for their clientele and make successful subscription to expensive periodicals than each of them would have acquired on an individual basis.

Two decades ago or more, University libraries in Nigeria have started using the Internet and other digital technologies to develop and disseminate information resources. However, there is a huge amount of information resources available in the information superhighway, but significant portions of these information resources are locked up behind passwords, and they are subscriptions-based information resources controlled by gigantic information resources vendors. Based on this scenario, it is clear that the availability of information resources on the internet space do not translate to free access for majority of library clientele.

Therefore, lack of access to information resources re-ignite the agitation for the utilization of ICT based library consortium, wholly powered and run by ICT tools. Library consortium is not a new thing in librarianship or information service. Rather, it is a reconfiguration and rejuvenation of old pattern of friendship among libraries. For the fact that libraries from time immemorial formed partnership to work together to achieve results make library consortium a familiar phenomenon, but an age long phenomenon wearing a new-look and configuration. The opportunities provided by ICT have become a propelling force that call for libraries to re-configure, re-brand and refocus the platform for where libraries can synergize to improve clientele access to quality information resources.

Every innovation requires new set of skills. Librarians across the world have improved their skills to become ICT proficient, particularly on the new information products, services, and packages powered by ICT. ICT revolution has forced library professionals to share ideas and protocol statement on how to engage in the utilization of ICT-based library consortium to leverage on the potentials of ICT.

ICT-based library consortium creates a new system not known to librarianship four to five decades ago. As a result, it has become imperative to look at the relationship that exists between librarians' ICT awareness, attitude and competency and utilization of ICT based library consortium, including the relationship between library policies and librarians' ICT awareness, attitude and competence. Librarians' level of ICT awareness is a direct reflection of librarians' ICT perception, consciousness and knowledge to use ICT. Librarians' ICT competence is the capacity to engage in the utilization of ICT for basic operations like uploading and downloading of information resources, retrospective conversion and digitalization, maintaining library network, ability to navigate web 2.0 or Lib2.0 and database management. According to Oyedokun, Oyewumi, Akanbi and Laaro (2018) it is very crucial for library and information science professionals to acquire ICT skills in order to be more competitive in the face of competition with other professionals. Without adequate ICT skills, librarians would not be able to cope with information explosion of today's information society.

Libraries and librarians in advanced economy have fully integrated ICT tools to manage their library consortium. But due to the effect of the digital divide, Nigeria and other African countries are lagging behind in taking full advantage of the potentials in ICT to address the challenges that retard them in their attempt to provide better services to their clients. Librarians in Nigeria seem not to be interested in going into ICT based library consortium, may be due to attitudinal or lack of the awareness of the potentials in ICT. There is also the possibility that the policy environment in Nigeria libraries do not encourage librarians to engage in the utilization of ICT based library consortium. It may also not far from the truth that ICT competence of Librarians could be responsible for the poor show of interest in utilizing ICT- based library consortium.

Meanwhile, Ossai (2010) in his attempt to examine the development of consortium building in Africa, concluded that, while there have been notable successes in establishing

consortia in Africa, there remain significant challenges. These challenges include lack of commitment on the part of library sponsors (Government/governmental agencies or university), library administrators and librarians, including all other staff in the library.

However, as rapid development in ICT led to the emergence of networked information services, different types of library consortia have come into existence around the world. It is against this background that, quite recently, libraries in Africa facing similar financial challenges have also moved to cooperate more extensively in sharing their resources for the benefit of their users, although the pace of development has been relatively slow. The time has come for Nigerian library stakeholders to once again push for an enduring ICT-based library consortium whereby libraries can explore each other's common strengths and limitations. Librarians should realize that, together with ICT, things can be done better and greater information resources could be made available to serve the teaming library users.

Investigating the direction and strength of relationship between librarians' ICT awareness, attitude and competence in university libraries become inevitable in an era in which University libraries are stocked with varying degrees of ICT tools, yet underutilized. Three major predictors to unearth the true picture of the situation on the utilization of ICT-based library consortium are librarians' ICT awareness, attitude, and competence; and by extension, the policy framework of the University play a role in shaping and influencing librarians' ICT awareness, attitude and competence toward the utilization of ICT based library consortium.

The study was based on the assumption that there is an underutilization of ICT based library consortia activities by academic librarians (CONUASS 01 to CONUASS 07) in the University libraries in the North Central Nigeria due to lack of appropriate ICT skills, negative attitude of the librarians, lack of awareness of the potential of ICT based library consortium, and weak ICT policy directive in the University libraries.

Statement of the Problem

University Libraries in Nigeria are facing lots of problems and challenges ranging from inadequate funding, inadequate infrastructure, out-dated information resources, to weak purchasing power to import or subscribe to current information resources. For a very long time this situation has made university libraries poorly stocked and lacking in capacity to provide effective information service to their teeming clientele. In this regard, the search for an alternative such as the utilization of ICT-based library consortium will enable the University Libraries to fulfill their mandate and to overcome the problems and challenges that bedeviled them.

There were several attempts to establish library consortium in Nigeria that failed, not even the attempt made by Nigerian Universities Library Consortium under the auspices of Committee of University Librarians of Nigerian Universities (CULNU) and National Universities Commission. The inability and failure of libraries and librarians to effectively utilize ICT-based library consortium overtime, appear to suggest that the needed awareness has not been created among most Nigerian academic librarians on the dividends of utilizing ICT-based library consortium or that the librarians lack the competence and attitude necessary for utilizing ICT-based library consortium or that the policy framework in the University libraries did not support the utilization of ICT based library consortium.

Several studies have been conducted in the developed world as well as in some developing countries to identify the reasons for the poor utilization of ICT based library consortium, but no comprehensive study has been conducted in this regard in Nigeria, to the best knowledge of the researcher. It is believed that without thoroughly investigating the relationship between librarians' ICT awareness, attitudes and competence for the utilization of ICT based library consortium, all efforts to initiate ICT-based library consortium may merely be based on

sound theoretical framework and well-founded recommendations which may not stand the test of time just like some attempts.

Therefore, the study was designed has investigated the status of ICT-based library consortium and determined the relationship that exists between librarians' ICT awareness, attitude, competence, library policy and the utilization of ICT-based library consortium in Nigerian University Libraries in North Central Nigeria.

Purpose of the Study

The purpose of the study was to ascertain the state of library consortium and examine librarians' ICT awareness, attitude and competence as correlates of the utilization of ICT-based library consortium in University Libraries in North Central Nigeria. Specifically, the study conducted investigation to find out:

- 1) The status of Library consortium in university libraries in North Central Nigeria.
- 2) If librarians' ICT awareness correlates with utilization ICT-based library consortium in university libraries in North Central Nigeria.
- 3) If librarians' attitude correlates with utilization of ICT-based library consortium in university libraries in North Central Nigeria.
- 4) If librarians' ICT competence correlates with utilization of ICT-based library consortium in university libraries in North Central Nigeria.
- 5) The relationship that exists between Library Policy and librarians' ICT awareness on ICT-based library consortium in university libraries in North Central Nigeria.
- 6) The relationship that exists between Library policy and librarians' attitude towards ICT-based library consortium in university libraries in North Central Nigeria.
- 7) The relationship that exists between Library Policy and librarians' ICT competence on ICT-based library consortium in university libraries in North Central Nigeria.

Significance of the Study

It is envisaged that the findings of this study would be useful to the following: University Managements, Administrators of University Libraries, Professional and upcoming Librarians, and the entire library system in the following ways:

The findings of the study will enable the university management to have an overview of the kind of relationship that exists between librarians' ICT awareness, attitude, competence and the utilization of ICT based library consortium. The findings would also be of immense benefits to the University Management as it could be used as an input to guide the University Management to fine-tune the University ICT strategies. The findings may assist the University and Library Management in designing a staff development program that would be librarians driven. So that, the University and her libraries can leverage on the potential of ICT-based library consortium to enjoy access to quality and up-to-date scholarly publication.

The findings of the study will serve as empirical evidence that explain the relationship which exists between the independent and dependent variables of the study. The findings of the study will enable University and Library Management to make decision on the application and utilization of ICT-based library consortium in Federal and State University Libraries in North Central Nigeria.

The finding of the study is expected to encourage the University library Management to provide the mechanism that will promote and sustain positive relationship between librarians' ICT awareness, attitude, competent and the use of ICT tools for library consortium. Such positive relationship will enhance University library participation in consortia activities whereby the University libraries will overcome the threat of increasing cost of journal subscription and access to other information resources.

The findings from this study would be of immense benefit to librarianship, librarians and information workers. It is expected that the findings would state and explain the relationship that

exists between librarians' ICT awareness, attitude, competence, library policy and utilization of ICT based library consortium; thereby motivating librarians to engage in the utilization of ICT based library consortium.

Library users are another set of stakeholders to benefit from the study. Knowing the status of library consortium and the relationship that exists between the study's variables, it will spur the University Management and the Library Management to position the University Library to leverage on the potential of ICT-based library consortium to serve the library users, thereby creating more access to information resources for the library users.

It is expected that the result or findings of the study will be a win-win situation for all the stakeholders in University library development and beyond. There would be internal economy of scale for subscription and purchase of information resources as University libraries will now pool resources together for subscription and purchase of information resources that were hitherto beyond their reach individually. It would be of great significance to information seekers and research community, as it would lead to an expansion of access to up-to-date information resources. Thus, the University library will be in the position to perform her statutory mandate to the sponsoring University by providing information resources for the research, teaching and learning purposes for which the University is established.

Scope of the Study

The study was focused on librarians' ICT awareness, attitude and competence as correlates of the utilization of ICT-based library consortium in University Libraries in North Central Geo Political Zone of Nigeria. The study is restricted to the relationship that exists between Librarians' ICT awareness, attitude and competence on the utilization of library consortium in their university libraries, including library policies that influence librarians' positive disposition or otherwise towards the utilization of ICT based library consortium. The study was limited to both online and offline database, institutional repositories, fees based and

open access resources used by the University libraries under study. It also included the use of other ICT hardware and software for accessing network information resources, interlibrary loan, exchange and cooperative acquisition of electronic information resources. The study did not cover the sources of funding for library consortium, installation, configuration and deployment of server. Also the level of satisfaction among participating libraries in library consortium was not studied and the rate of utilization of ICT-based library consortium was not measure or ascertain.

Research Questions

- 1) What is the status of library consortium in university libraries in North Central Nigeria?
- 2) What relationship exists between librarians' ICT awareness and utilization of ICT-based library consortium in university libraries in North Central Nigeria?
- 3) What relationship exists between librarians' ICT attitude and utilization of ICT-based library consortium in university libraries in North Central Nigeria?
- 4) What relationship exists between librarians' ICT competence and utilization of ICT-based library consortium in university libraries in North Central Nigeria?
- 5) What relationship exists between Library policy and Librarians' ICT awareness of ICT-based library consortium in university libraries in North Central Nigeria?
- 6) What relationship exists between Library policy and Librarians' ICT attitude towards ICT-based library consortium in university libraries in North Central Nigeria?
- 7) What relationship exists between Library policy and Librarians' ICT competence in ICT-based library consortium in university libraries in North Central Nigeria?

Hypotheses

The following null hypotheses were tested at 0.05 level significance.

- H0₁*** There is no significant relationship between librarians' ICT awareness and utilization of ICT based Library Consortium.
- H0₂*** There is no significant relationship between librarians' ICT attitude and utilization of ICT based Library Consortium.
- H0₃*** There is no significant relationship between librarians' ICT competence and utilization of ICT based Library Consortium.
- H0₄*** There is no significant relationship between library policy and librarians' ICT awareness in ICT based library consortium.
- H0₅*** There is no significant relationship between library policy and librarians' attitude towards ICT based library consortium.
- H0₆*** There is no significant relationship between library policy and librarians' ICT competence on ICT based library consortium.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter presents the review of related literature under the following heading and subheadings:

Conceptual Framework

University Library

Library Consortium

ICT Tools.

ICT Based Library Consortium

Theoretical Framework

Diffusion of Innovation Theory (DOT)

Theoretical Studies

Development of Library Consortium

Librarians' ICT Awareness for the Utilization of ICT Tools in Library

Librarians' Attitude towards the Utilization of ICT Tools in Library

Librarians ICT Competence for the Utilization of ICT Tools in Library

Empirical Studies

Development of Library Consortium

Librarians' ICT Awareness for the Utilization of ICT Tools in Library

Librarians' Attitude towards the Utilization of ICT Tools in Library

Librarians ICT Competence for the Utilization of ICT Tools in Library

Conceptual Framework

The conceptual framework in this work was discussed under the following subheadings: University Library, Library Consortium and ICT Tools.

University Library

The University library is an arm of the academic library family which is found within a university campus. It is usually established by the university to service the university's academic programme like research, teaching and learning. The University Library forms the academic hub of the University. It cannot therefore, be discussed in isolation, it will be more appropriate to discuss the University library alongside with its generic term which is 'academic library'. Hence, Pascual (2016) described a University Library as library comprising the main library and the college or Unit or faculty libraries, whose functions are: learning spaces that are open, accessible, and engaging both physical and virtual, to support individual and collaborative learning, creativity and critical thinking.

Bello (2018) submitted that the University library can be referred to as giant library because all practices of other categories or types of libraries are being carried out or performed in the University library. University libraries are library established with the primary objectives of ensuring effectiveness and efficiency in research, teaching, learning and documentation.

A University library is a type of library created and located within a university founded by public funds, supported by variety of donors with vital and relevant students' books, literature, internet access, photocopy services e.tc. A University library is inspired to deliver and provide for all students and members of the community with appropriate access to the building where the university is hosted. The University library is a form of academic library (Aina, 2004). It is instituted to help actualize the objectives of the university by serving as the gateway to teaching, learning and research, mainly for the University that bankrolls her.

Joel and Ayinla (2015) described an academic library as an institution that is well-established to take care of the information needs of students, lecturers, researchers and other community of scholars. The library is continuously bringing man in contact with the world in the fulfillment of its functions as a repository for knowledge in all forms and shapes.

Bello (2018) as well as Joel and Ayinla (2015) harmoniously agreed that academic library and University library are libraries established to aid teaching, research and learning by providing information resources for the students, faculties or lecturers where such libraries are located.

Singh and Kaur (2009) stressed that academic libraries established with the mandate to support the parent institution with access to information and knowledge, to offer preservation service and to support the parent institution teaching and research mission.

Ekere (2006) postulated that university libraries are meant to service the university that bankroll her in the areas of learning, teaching, research and service, and for the students and researchers of the university, just as Singh and Kaur (2009) and Joel and Ayinla (2015) viewed academic library. Based on the inseparable nature of academic and university library, the researcher upholds the two concepts as same in the course of this study, because going by the issue and view being canvassed by various scholars, it is clear that University library are academic library in transit, because academic libraries have been affected by changes occasioned by information and communication technology.

Library Consortium

International Coalition of Library Consortium (ICOLC, 2013) argued that library consortium is any local, regional, or national cooperative association of libraries that provide for the systematic and effective coordination of the resources of school, public, academic, and special libraries and information centres, for improving services to the clientele of such libraries. While, Brenda, Anne, Beth, and Evan (2014) and Chadwel (2011) observed that librarians are now using best practices to improve services and develop new roles, a new model for library collaboration which is changing the definition of library resource sharing, they observed that the purpose of library consortium is to optimize access to information resources in a way that maximizes savings or minimizes costs and reduces duplication. Among the services commonly

delineated in library consortium are: Resource sharing networks (union catalogue), Reciprocal borrowing, Institutional repositories, Digital collections, Database licensing, Cooperative collection building, and Courier services.

Meanwhile, Chatterjee (2010) and Ossai (2010) observed that libraries can be linked together with the support of information and communication technology, particularly through networking, whereby libraries will come together to acquire traditional and e-resources under the umbrella of library consortium; Chatterjee (2010) and Ossai (2010) agreed that library consortium is the application of ICT infrastructure to run all forms of Library collaboration.

Islam (2012) articulates that Library Consortium is used to fulfill the following major objectives: to facilitate collective acquisition and sharing of traditional and e-resources, to cooperate in processing of information resources, to access and download the required resources remotely by the users of the participating libraries, to help develop a country-wide acquisition policy to avoid unnecessary and wasteful duplication in purchase, to develop a more sophisticated search engine enabling simultaneous search of multiple databases, to establish an electronic journal centre to serve as a permanent archive for electronic journals, to provide extensive facilities to use full text databases and electronic journals, to develop digital resources jointly and to provide access to such materials to the members of the consortium, and to establish reciprocal borrowing agreements among the participating libraries to share resources, etc.

Library consortium represents a working arrangement where two or more libraries agree to pool their resources together and allow users from each library some form of access to the resources of all the other libraries, either through interlibrary loan or borrowing privilege, cooperative acquisition of licence key to electronic or online information resources, be it journals, E-Books, or Database. For the fact that internet technology has created a new form of accessing information resources, therefore, sharing these kinds of information resources gradually becomes another important goal for establishing library consortia. Based on the above,

it can be said that library consortium is an ICT powered library collaboration and synergy for libraries to share their service responsibilities (Moghaddam & Talawar, 2009; Chadwel, 2011; Chatterjee, 2010; Ossai 2010; Rabiou, 2011).

Library consortium means sharing of library responsibilities among two or more libraries. Library consortium could be in form of sharing of information resources and services, or of processes such as joint cataloguing of information resources, or of staff and user training. Library consortium is the aggregate of all form of library collaboration and as well the apex of library synergy predicated on the integration of ICT in library service.

ICT Tools

ICT Tools deal with the use of electronic devices, telecommunication devices, computer hardware and computer software and other computer related accessories which are used to convert, store, protect, process, transmit and retrieve information. De Watteville and Gilbert (2000) observed that the ICT tools include: Computer, Internet, Digital camera, Webcam, Smart Card, Scanner, E-Books, Printers, Electronic Journals, WEB-OPAC, Animation, E-Mail, CD-ROM, DVD, and RFID Technologies. It can be defined as technologies that facilitate, by electronic means, the acquisition, storage, processing, transmission, and disseminating of information in all forms including voice, text, data, graphics and video.

Library as an institution saddled with information management need to radically apply ICT tools on all fronts. Omekwu (2007) agreed that ICT is a system that is radically redefining the age-long system of the library as an institution for the collection, processing, storage and retrieval of paper-based information materials, to a modern library that emerged and is still evolving in that emergence as an institution of advanced media include CD-ROM, computers, the internet, hardware, software, virtual libraries and remote access to a wide range of information resources.

Rouse and Pratt (2017), Abdullahi and Haruna (2008) and Bird and Tedd (2004) viewed ICT as a combination of computers and telecommunication systems to improve the quality of research, teaching, learning, and communication through its gathering, storing, connecting, analysing data, and dissemination of information. In this internet era more and more libraries in the world make use of these new technologies for storage, retrieval and dissemination of information in more effective ways which promotes the library.

Various efforts have been made in defining the phrase or the concept of ICT as the electronic means of computing, processing, storing and disseminating information. That is to say ICTs are electronic devices such as computer, CD-ROM, software, hardware, internet, microfilm, etc., that libraries and information centres can use to convert, store, preserve, transmit, disseminate, retrieve and locate information without unnecessary delay (Iroka & Uzoagba 2010).

The usefulness of ICT in library consortium cannot be over emphasized. In an attempt to situate the importance of ICT in library consortium, Sengupta (2010) opined that library consortia are technology dependent, while Gama (2008) declared that the value of ICT is endless. ICT do not only give libraries the opportunity to have easy access to information from various sources, but also facilitate resource sharing between and among various organizations apart from improving status of the Library and Information Science profession.

Relationship between library and ICT is organic in nature and it is not only applicable in one type of library. To substantiate this, Oye (2008) and Bucholz (2011) argued that the digital revolution driven by Information Communication Technologies (ICT) innovation has also transformed resource sharing among libraries fundamentally. These have impacted on every sphere of library activity, for example, the form of the library collection development strategies,

library buildings and consortia. Computers and networked electronic resources have become an integral part of the library.

ICT based Library Consortium

ICT-based library consortium is a phrase put together by the researcher to strengthen this work. To conceptualize the phrase, the researcher had to first conceptualise library service and ICT based library services. According to Omosor (2014) one can use ICTs to develop new computerized information services and conceptualize it.

Library Services: These are services rendered or provided by a library to her users with intention of serving the users satisfactorily. Topical library services ranges from users' instruction on how to use library information resources and services which include, but not limited to, Circulation Service, Reference Service, Online reservation of books, Recommendation of library material, Current Awareness Service, Inter Library Loan Service, Photocopying / Printing Service, Searching Services, Automation, OPAC, Information resources from other libraries or Information vendor, Database Searching, Selective Dissemination of Information, Audio Visual Service and Multimedia Section, e.t.c.

ICT based library services are library services are offered with the aid of the such ICT tools as CD ROM, email service, wireless and cable network, portals, websites, blogs, institutional repositories, open access information resources and databases used in many areas of library operations including library consortia activities among libraries (Eseohe, Simeon, & Ehikioya, 2014).

Now, what is ICT based library consortium? It is the use of ICT tools: CD ROM, email service, wireless and cable network, portals, websites, blogs, institutional repositories, open access information resources and databases specifically for the purposes of 'resource sharing' 'library cooperation', "library networking", "library linkages", "library collaboration", "library

consortia”, “interlibrary loan”, “document supply”, “document delivery”, and “access services”. These terms are used interchangeably to describe formal and informal cooperation, partnership and resource sharing activities between and among libraries.

Library consortium is a multipurpose vehicle for effective library information dissemination and services, and within the multipurpose nature of library consortium, is the ICT based library consortium. The ICT-based library consortium is therefore an offshoot of library consortium, so also is library consortium an offshoot of library services.

ICT-based library consortium is strategic application of ICT tools to initiate, design and implement library consortia activities among libraries regardless of the location of the participating libraries. The terms or concepts of library consortium entails library information resources sharing, library network or networking and library cooperation, a situation where libraries or a group of libraries agree to pool their resources together and allow the users of each library some form of access to the resources of all the other member libraries of the consortium through the power of ICT. Libraries across the World are forming alliances via International Coalition for Library Consortium for the purpose of identifying and addressing common needs arising from development in information technology, especially the growing importance of ICT tools in managing library consortia activities.

Theoretical Framework

Diffusion of Innovation Theory (DOT) is one of the most popular theories for studying adoption of information technologies (IT) and understanding how IT innovations spread within and between communities. The theory was propounded by Everett Roger in the year 1962. According to the theory, innovation is an idea, process, or a technology that is perceived as new or unfamiliar to individuals within a particular area or social system. Diffusion is the process by which the information about the innovation flows from one person to another over time within the social system. Considering Library or University library as a social system therefore,

Diffusion of Innovation Theory (DOT) was used as the theoretical framework of this study titled: Librarians' ICT Awareness, Attitude, and Competence as Correlates for Library Consortium in University Libraries in North Central Nigeria.

There are four assumptions of Innovation Diffusion Theory, and they are:

i) Innovation, ii) Communication channels, iii) Time, and iv) Social system Innovation. An innovation is an idea, practice or object that is perceived as new by an individual or other unit of adoption. The characteristics of an innovation as perceived by the member of a social system determine its rate of adoption. The characteristics are (i) Relative advantage (ii) Compatibility (iii) Complexity (iv) Trialability and (v) Observability.

Relative advantage: - This is the degree to which an innovation is perceived as better than the idea it supersedes. The greater the perceived relative advantage of an innovation, the more rapid its rate of adoption is likely to be. The utilization of ICT-based library consortium has relative advantage over non ICT based library consortium.

Compatibility: - This is the degree to which an innovation is perceived as being consistent with the existing values, experiences and needs of potential adopters. An idea that is incompatible with the value and norms of a social system will not be adopted rapidly as an innovation that is compatible; i.e., an idea that is not compatible with library and information science philosophy and practice cannot be adopted in library.

Complexity (Simplicity and ease of use):- This is the degree to which an innovation is perceived as difficult to understand and use. New ideas that are simpler to understand are adopted more rapidly than innovations that require the adopter to develop new skills and understanding. The librarians are expected to have the skills considered necessary to operate ICT based library consortium.

Trialability: -This is the degree to which an innovation may be experimented with on a limited basis. An innovation that is trialable represents less uncertainty to the individual who is

considering it for adoption, who can learn by doing. In the case of ICT based library consortium, it implies that through their website, digital libraries, cyber café and Internet users are allowed access to electronic information resources.

Observability: -This is the degree to which the results of an innovation are visible to others. The easier it is for individuals to see the results of an innovation the more likely they are to adopt it. For example, the ability to track download and users' statistics is being built into ICT-based library consortium website like National virtual Library managed by the National Universities Commission.

In view of the above, one may conclude that the ICT-based library consortium is an innovation perceived by people as having greater relative advantage, compatibility, complexity, trialability and observability, as such, it would be adopted more rapidly than other innovations.

Communication channels: Communication is the process by which participants (librarians) create and share information with one another to reach mutual understanding. A communication channel is the means by which message get from one individual to another. Mass media channels are more effective in creating knowledge of innovations, whereas interpersonal channels are more effective in forming and changing attitudes towards the new idea, and thus influencing the decision to adopt or reject a new idea. Most individual evaluate an innovation, not on the basis of scientific research by experts, but through the subjective evaluations of near-peers or co professionals who have adopted the innovation. These near-peers or co professionals thus serve as social models, whose innovation behaviour tends to be limited by others in their system.

Time: The third main element in the diffusion of new ideas is time. According to Rogers (1995), time dimension is involved in diffusion in three ways: the innovation -decision process, innovativeness, and innovation's rate of adoption. The innovation decision process is the mental

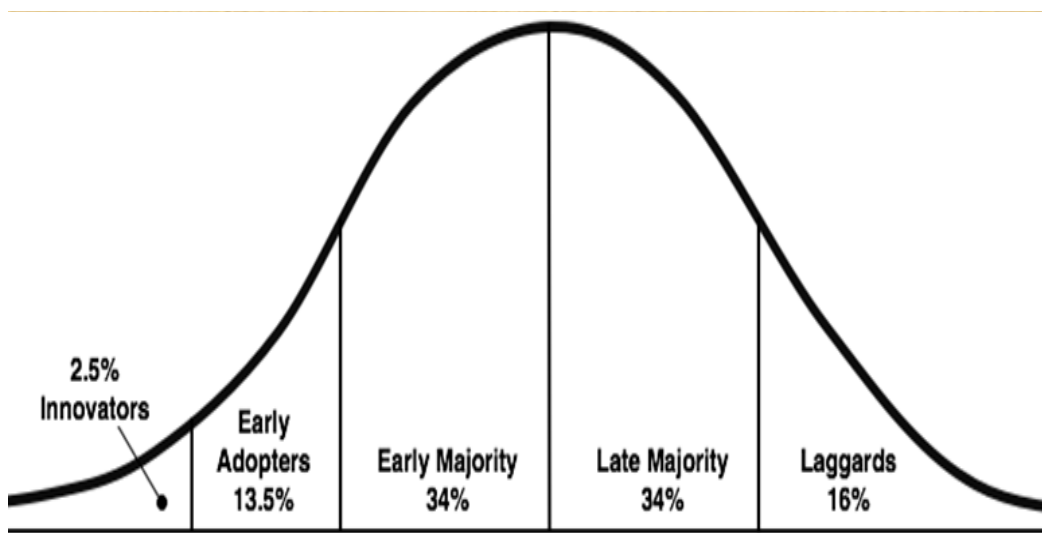
process through which an individual passes from first knowledge of an innovation to a decision to adopt or reject, onto implementation of the new idea and then to confirmation of this decision. Innovativeness of an individual according to Rogers (1995) is “the degree to which an individual is relatively earlier in adopting new ideas than other members of his social system.” Innovation diffusion research has attempted to explain the variables that influence how and why users (librarian) adopt new information medium, such as ICT based library consortium. Opinion leaders exert influence on behaviour via their contact, but additional intermediaries called change agents and gatekeepers are also involved in the process of diffusion. There are five adopters' categories in the diffusion process accorded to innovativeness: (1) innovators (2) early adopters (3) early majority (4) late majority and (5) laggards.

These categories follow a standard normal curve (Figure 1), very few innovators adopt the innovation in the beginning (2.5%), early adopters make up for (13.5%) a short time later, the early majority (34%), the late majority (34%) and after some time, finally the laggards make up for (16%). The rate of adoptions is the third way in which time is involved in diffusion. The rate of adoption is the relative speed with which members of a social system adopt an innovation. It is measured as the number of members of the social system that adopt the innovation in a given period. Innovation's rate of adoption is influence by the five perceived attributes of an innovation (Rogers and Scott, 1997).

The social system: A social system is defined as a set of interrelated units that are engaged in joint problem-solving to accomplish a common goal. The members or units of a social system may be individuals, informal groups, organizations and/or subsystems. The social system constitutes a boundary within which an innovation diffuses. In this study, Federal and State Universities represent the social system while library staff constitute the members of the social system.

Diffusion of innovation theory has been adopted in several studies in Library and Information Science. In Nigeria, Ogbomo (2012) used diffusion of innovation theory when she studied the awareness and attitude of lecturers in South-South Federal Universities in Nigeria towards the establishment of institutional repositories.

Figure 1: Librarians' rate of adoption of ICT innovations



Source: <http://blog.leanmonitor.com/early-adopters-allies-launching-product/>

Diffusion of innovation theory is useful for conceptualization of technology adoption in the context of applying and deploying ICT tools to running library services. Therefore, this theory will be used in the study as the theoretical framework to examine the relationship that exists between Librarians' ICT awareness, attitude, competence, and utilization of ICT based library consortium.

Theoretical Studies

The Theoretical Studies in this work were discussed under the following subheading: Development of Library Consortium; Awareness for the Utilization of ICT Tools for Library Services, Librarians' Attitude towards the Utilization of ICT Tools, and Librarians' ICT Skills and Competence.

The Development of Library Consortium

Fresnido and Yap (2014) argued that the concept of academic library consortium emerged in the Philippines in the 1970s evidenced by the successive establishment of three consortia namely; the Academic Libraries Book Acquisition Services Association (ALBASA) in 1973, the Inter-Institutional Consortium (IIC) (now South Manila Inter-Institutional Consortium) in 1974, and the Mendiola Consortium (MC) in 1975. The study identified that as far back as 1973 some countries had already established library consortium among their libraries. The study therefore identified some of the existing consortium, their membership and their areas of operation and influence thus:

Academic Libraries Book Acquisitions Systems Association, Inc. (ALBASA).

American Corners (also known as American Studies Resource Center (ASRC) in some areas).

Aurora Boulevard Consortium Libraries, Inc. (ABC).

Davao Colleges University Network (DACUN).

Inter University Consortium (IUC).

Intramuros Library Consortium (ILC).

Mendiola Consortium (MC).

Ortigas Center Library Consortium (OCLC), and

South Manila Inter institutional Consortium (SMI-IC)

The study discusses the objectives of the consortia, the activities they undertake and how such relate to the set objectives, the benefits they have enjoyed or continue to enjoy, the issues they have encountered as well as success/failure factors experienced by libraries in joining the different consortia.

Thanuskodi (2013) analysed how in India, the Ministry of Human Resource Development (MHRD) set-up the UGC-Infonet Digital Library Consortium which was formally launched in December 2003 by Honourable Dr. A. P. J. Abdul Kalam, the President of India, soon after providing the Internet connectivity to the Universities in the year 2003 under the UGC-Infonet programme.

Hafsah, Rosnah and Umar (2014) reported that several initiatives were made towards the formation of National consortium among academic libraries in Malaysia. According to the study, consortium focused on subscription of online databases. CDC on behalf of PERPUN members made several initiatives towards formation of national consortium of Malaysian academic libraries. Proposal papers on the formation of the consortium have been submitted to the Ministry of Higher Education. Through “loose consortia” formed, CDC, and later known as Malaysian Online E-Resources Consortium (MOLEC), succeeded in negotiating for subscription of online databases and was able to get financial aid from the Ministry of Education to subscribe several databases since 2002. A commercial databases' committee (CDC) was formed in year 2000 as a platform for academic libraries to evaluate, select, negotiate and manage the online databases. Complications involved in online databases subscriptions such as a cost increase, licence agreement, various formats of usage statistics, merger, and takeover of publishers has made PERPUN (Malaysian Standing Conference of National and University Libraries) realize the need for a formal consortium to be formed.

Hussain, Khan and Zaidi (2013) articulated in one of their studies that academic libraries in the Indian setup have been preparing themselves on a corporate basis; a platform for ICT based information services. The Internet has transformed the ways and means of information service. Breaking the distance barrier, the internet has emerged as a boon to the information seekers as well as libraries. It has become popular, easy to use and inexpensive teaching and research tool.

Still, on the effects made by libraries and librarians on library consortium building, Nwalo (2008) reported that Africa as a continent has many libraries distributed among the nations but the levels of understanding and practice of library consortium, resource sharing and networking vary from region to region because of the different levels of Information Communication Technology (ICT) infrastructure. Although the idea of co-operation has been in existence for many years, library consortium is still at its infancy in many countries of the developing world like Africa.

Rosenberg (2005) reported that Consortia in South Africa has certainly taken on roles wider than cooperative purchase of e-resource licences; they have organized purchase of common library management software, established union catalogues, provided training and designed a common information literacy course for students. However, consortia in other African countries are in their infancy. They would require a lot of support and the funding of paid rather than voluntary staff, if they were to expand their role. But consortia are trusted and librarians gave them as an alternative to giving external support directly to individual libraries.

Looking at library consortium development in the Nigerian context, Sanni and Igbafe (2004) highlighted individuals' and groups' efforts in the past aimed at fostering cooperation among some university libraries in Nigeria. An example of a group of university libraries comprising Ahmadu Bello University, Obafemi Awolowo University, University of Ibadan, University of Benin, University of Ilorin and the University of Nigeria, Nsukka was given. These were attempts at enhancing library co-operation among Universities, promoting co-operative acquisition, the production of an index to Nigerian theses and dissertations, the production of an index to Nigerian periodicals, the establishment of reference libraries in selected university libraries, the setting up of reference libraries, the formation of a consortium of e-library, etc.

Library consortia development is still at infancy stage in this part of the World called Nigeria, Ibeun and Obasuyi (2007) gave an account of the effort being put in place for the

development of resource sharing by various library and information science stakeholders, and amongst such efforts are:

- ✓ John Harris ignited the flame of library co-operation in 1955 by submitting a memorandum to the Nigerian government advocating for the establishment of a Library Advisory and Consultative Committee for Resource Sharing.
- ✓ In 1974 the National Library of Nigeria initiated a resource sharing and networking scheme which involved the machinery for the establishment of National Union List of Serials (NUSLOS) which eventually took off in 1977.
- ✓ In 1980, in Kaduna, NLN commenced "the Cooperative Acquisition in Nigeria." In 1980, the Committee of University Librarians of Nigeria Universities agitated for a forum for University Libraries and the National Universities Commission responded setting up a National Universities Database; Nigerian University Network (NUNET).
- ✓ Nigerian Universities Libraries Consortium by Committee of University Librarians of Nigerian Universities (CULNU).
- ✓ NUC National Virtual Library.

Librarians' ICT Awareness for the Utilization of ICT based Library service/ consortium

Many organizations in Nigeria stimulate librarians' ICT awareness; Bozimo (2006) noted the significant contributions made by the National Universities Commission (NUC) towards the application of ICT in University Libraries. Bozimo observed that the introduction of the Nigeria University Network (NUNET) email linkage for Universities, the TINLIB library Automation Software and the Nigerian Virtual library Project (NVL) are a breakthrough towards the full implementation and application of ICT in University Libraries in Nigeria.

Similarly, Oni (2004) asserted that as early as 1988 some libraries in government parastatals and research institutes were introduced to Computerized Documentations System/Integrated Set of Information Systems (micro CDS/ISIS) software.

Ajaegbu, Ehioghae, and Oreoluwa (2014) held that the factors considered for the level of awareness of ICT based library services are: Internet Services, OPAC, electronic data, E-journal, fax machine, document delivery, scanner, printing facilities, CD ROM, desktop and laptops availability and use. It was found that the level of internet service awareness as ICT based library service is the highest, followed by the use of desktop and laptops, and then printing facilities; while the level of unawareness of fax machine services is highest followed by document delivery and OPAC. They found that there is a need for tertiary institutions to adopt the use of ICT in their library services and also to employ some awareness programs for their Post Graduate students at every point of enrolment. The awareness program will not only be useful to the students but also to the library staff towards effective deployment and use of the technology.

Similarly, the National Virtual Library (NVL) was a proactive response employed by the National Universities Commission (NUC) to boost librarians' level of ICT awareness. It was also designed to enable scholars to have free access to online resources; subscription based online resources and locally digitized resources. The prototype is already deployed and can be accessed through the web at www.nigerianvirtuallibrary.com. The libraries therefore have to deploy computer system and other computer related telecommunication devices and accessories such as a network server and personal computers (PCs) connected through a Local Area Network (LAN) and linked to the World Wide Web to access and control bibliographic databases, control acquisitions, cataloguing and serials service and host of other electronic services.

Mishra and Mishra, (2014) argued that information and communications technology (ICT) have brought unprecedented change and transformation to university library and information services. It has created an environment where rapid continuous change has become

the norm. Gone are the days when the library's collection was its pride and determined its value. The authors went further to submit that Libraries can collaborate (library consortium) with each other more than before and can exchange information much more easily and faster.

The availability and use of ICT tools in library enable libraries to enjoy access to information resources electronically from wherever it is located in the information superhighway, including other offline electronic information resources. It was based on this that Madu, Vandi and Chagwa (2018) based on the findings of a study, concluded that ICT facilities that can be used for information retrieval in Ramat Library University of Maiduguri are available. Meanwhile the level of utilization of these ICT facilities (computer, CD-ROM, Internet and e-mail) is still a subject of concern because of the low level of utilization. This could be attributed to the low level of ICT compliance among developing countries of which Nigeria is one. Moreover, high dependency on hand phones like iPad and tablet could impede students' utilization of ICT facilities in the library. Also, attitude of staff and students towards ICT, and low level of support could prove a hindrance to utilization. Poor network connectivity coupled with poor power supply pose serious problems for effective use of such facilities. The study underscores the fact that there is availability and some form of use of ICT tools in the library, as well as awareness on the potential of ICT, but low level of use occasioned by the digital divide.

Meanwhile, Rajawat (2016) argued that ICT has affected almost all areas of libraries. The ICT application tools and techniques are essential for providing efficient and effective library and information services to the users. The purpose of the study was to examine the Information Communication Technology (ICT) Based Library & Information services in Pharmacy College of Rajasthan, an appraisal in terms of library functions and services. Data gathering tools used include questionnaires, observations and interviews for collecting the data from the selected 31 Pharmacy colleges libraries of Rajasthan. The results from the study reveal that a majority of the

surveyed library professionals found they agree that computerization has made a positive effect which has improved the image of the Pharmacy libraries. ICT not only affect the technical services of libraries, but also shapes the library services that are offered to the library users.

The present study view library consortium as a dynamic tool that is capable of taking the library out of the woods. Libraries all over the world are harnessing the potential of Information and Communication Technologies to engage in network activities to access remote databases and other online services via collaborative arrangement.

However, scholars argue that with the development of new technologies, the possibilities of innovative interlibrary cooperation projects emerged; libraries combining their efforts through various consortia are trying to get access to electronic information sources more economically. Librarians quickly developed ICT awareness because it is very clear that library computerization will, among other benefits, lead to increase productivity, improved quality of tasks/services and resource sharing in libraries. (Nkanu & Okon, 2010; Rajawat, 2016; Madu, Vandi and Chagwa, 2018).

It is well recognized that librarians' ICT awareness made libraries all over the world to agitate for the application of ICT in library services. Thus, libraries are deploying ICT tools in various sectors of the library to pursue the old mission of Library cooperation with a new tool and style called library consortium (Francis & Kabir, 2008; Khan, 2016; Mahesh & Mittal, 2008).

Librarians' Attitude towards the Utilization of ICT Based Library Service/Consortium.

Attitude can be described as a manner, disposition, feeling, position, etc., with regard to a person or thing; tendency or orientation, especially of the mind: a negative attitude; group attitudes, (online dictionary, 2017). According to Business Dictionary online (2017), attitude is seen as a predisposition or a tendency to respond positively or negatively towards a certain idea,

object, person, or situation. Attitude influences an individual's choice of action, and responses to challenges, incentives, and rewards (together called stimuli).

In conformity with the above two sources, Eguavoen (2011) examined the attitudes of library staff to the use of ICT in Kenneth Dike Library. The sample for the study includes 101 respondents comprising 21 professional librarians, 32 Para-professionals and 48 nonprofessional staff of the library. The study developed and utilized Attitudes of Library Staff to the Use of ICT Scale (ALSUICTS) to elicit information from the respondents. The Friedman test was carried out and Pearson correlation matrix where $df = 39$, $r_{obs} = 5$, at $P < 0.05$ was used in analyzing the data. The findings show that generally, library staff in Kenneth Dike Library has a positive attitude towards the use and implementation of ICT and that knowledge of ICT and training influence positive attitudes towards ICT. Based on the findings, it is recommended that staff of libraries be trained to allay the fears and anxiety about the use and application of ICT in their respective libraries.

Acceptance of new technologies often involves users' resistance to change. Therefore, to understand users' intentions to use new technologies, it is important to understand user's resistance to technological change. Nov and Ye (2008) explained the significant influence of librarians' personality and its influence on their attitudes towards accepting the use of ICT tools in libraries in Universities.

Akpan-Atata (2014) observed that ICT has come to stay in every aspect of our profession. It has made impact on the profession in recent years, therefore, librarians and other information scientists should have developed positive attitude towards the adoption and adaptation of ICT for effective service delivery in our academic libraries. Librarians in Nigeria should help formulate and implement ICT policies for effective management and service delivery in the new library that is technology driven. To leverage on the benefits of ICT, libraries

and librarians need to enjoy the full support of library authorities in our various Institutions, and their Management and Governing Councils should reason along the same line.

Ramzan and Singh (2010) observed the intensity of LIS professionals' fear in IT handling, lack of ability to cope with the ever-changing IT innovations and their level of understanding of IT-based rules and regulations. The authors suggest that LIS professionals can improve on their attitude towards ICT applications, their roles in ICT use, ownership of ICT tools and the application of ICT in libraries. Intaganok, Waterworth, Adsavachulamanee, Grasaesom, and Homkome, (2008) revealed that poor skill levels are significantly associated with higher levels of anxiety in staff regarding ICT use. Negative attitude towards ICT were significantly related to higher levels of anxiety.

Librarian's ICTs Competence and Skill for the Utilization of ICT Based Library Service/Consortium

Librarians' ICT competence plays a major role in information/knowledge organization, retrieval, transfer and dissemination in modern day librarianship. Librarianship is going through an era of constant and increasing innovation in the use of ICT tools which has made it mandatory for librarians to continually seek to improve and update their ICT competence. CARL (2010) defined competencies for a profession as “a list or group of a series of knowledge, skills, abilities, and behaviours that define and contribute to performance.” CARL presents holistic compendium of competencies for library educators and librarians working in an intense research environment. The competencies are encapsulated into seven areas: 1. Foundational knowledge, 2. Interpersonal skills, 3. Leadership and management, 4. Collections development, 5. Information literacy, 6. Research and contributions to the profession and 7. Information and communication technology skills.

Nkamnebe, Okeke, Udem, and Nkamnebe (2015) in adding their voice to the debate on ICT competence and skills for librarians argued that librarians' acquisition of the necessary skills is the driving force, and hence plays a towering role in the application and utilization of Information and Communications Technologies for effective and efficient library and information services delivery. APLEN (2008) opined that ICT competency of LIS professionals is a combination of skills, knowledge, and behaviours related to library technologies which are important to the success of parent institutions, personal performances and capacity building.

Arokyamary (2013) examined how information communication technology (ICT) facilitates access to electronic information that has become invaluable and complementing traditional library services. The author's discussion mapping the existing ICT skills and competencies of the LIS professionals working in the Engineering colleges of Karnataka, comes out with suggestions in bridging the gap by stating the required knowledge, skills and competencies that has not only brought a change in the working style of LIS professionals but also essential for them to survive and flourish in this digital era.

Kumar (2013 b) surveyed knowledge on ICT Skills among LIS practitioners and emphasized that everyone has to adapt to these changes. Changes in society and demands for information utilization have forced the information professionals to look for more effective and efficient methods for processing, storing, and retrieving information to cope with the application of modern information technology. The paper highlights knowledge of information communication technology (ICT) in engineering institutional library and information science (LIS) professionals working at engineering institutions of Rayalaseema region of Andhra Pradesh.

In an attempt to justify the importance of ICT competence, Akparobore (2013) opined that the unavailability of high levels skill labour force is a big problem that needs to be confronted by all stakeholders in university education, particularly the Government, the private

sector, University Governing Councils and international donor organizations, if academic libraries are to move with time. Librarians' ICT skill is too critical to be left unattended to.

Akparobore (2013) and Levine (2007) listed some ICT skills to include but not limited to; word processing skills, spread sheet skills, database skills, electronic presentation skills, web navigation skills, website design skills, e-mail, management skills, Windows Explorer skills, etc, which will enable the library staff to manage the resources. While Islam and Islam (2006) also observed that librarians must develop the competencies to carry out effective searches on CD ROMs, OPAC, on the web and other electronic databases. Pairy (2007) in a study outlined the ICT skills of librarians as database management, web development, management of multiple media, metadata skills, knowledge of standards such as Z39.50 and Dublin Core.

Nyamboga (2007) enumerated the ICT skills among librarians as operating systems, packages and programming languages, knowledge of library automation software, web awareness, knowledge of online facilities/services, technical services, and managerial skills. In collaborating Nyamboga (2007), Abdullahi (2008) opined that, adoption of ICT in libraries require the librarian to be versatile in three areas of skills: technical skills, managerial skills and ICT skills. Therefore, given the current situation where ICT are being continuously updated or introduced and traditional formats are being replaced or supplemented by digital formats, there is the need for continuous and regular training of librarians.

Shivaputrappa and Ramesh (2013) conducted a survey entitled 'Evaluation of librarianship and ICT Skills of Library and Information Professionals Working in the Engineering College professionals working in the engineering colleges in Karnataka state have chosen this profession by accident. The significant difference is observed between different designations towards competence on operation of computers, creation of files and folders, radio frequency identification, library automation software modules, various operating systems, internet-related skills, web design/web editors, search engines and digitization of IR. Compared

to all designations, librarians have more skills on web designs. The majority of the professionals are facing financial problems, overload of work and negative attitude of the higher authority in acquiring ICT skills. And the authors recommended that library professionals should be sent on suitable ICT-based training courses periodically, that is at least once in a year.

Empirical Studies

The empirical studies in this work were discussed under the following subheadings: Development of Library Consortium; Awareness for the Utilization of ICT Tools for Library Services; Librarians' Attitude towards the Utilization of ICT Tools; and Librarians' ICT Skills and Competence.

Development of Library Consortium

Some scholars have studied various aspect of the development of Library Consortium and some of these research studies will be discussed here.

Zachary (2015) in a study titled 'An Assessment of Resource Sharing Activities among Libraries in Zambia' argued that due to the exponential growth and the increasing cost of information resources, it is difficult for a library to acquire all the documents which are required by the users of a library. Libraries in Zambia are no exception to this paradox. The purpose of the study was to assess the state of resource sharing activities among libraries in Zambia, to ascertain the challenges faced by libraries in resource sharing and to establish whether a policy framework on resource sharing existed in Zambia. Survey method was used to collect data from selected libraries in Zambia through self-administered questionnaire and interviews. The questionnaire and the structured interview schedules were validated and their reliability was also ascertained through pre-tested method before the instruments were administered.

A purposive sampling procedure was used to select the sample of 41 libraries that constituted past and present members of Zambia Library Consortium (ZALICO). Data collected from the questionnaires were comprehensively analysed and interpreted using the Statistical

Package for Social Sciences (SPSS). Qualitative data were analysed thematically as themes and sub themes emerged from the data. The findings of the study revealed that though some libraries engaged in some form of resource sharing activities, the state of resource sharing between libraries was unsatisfactory due to the following factors: inadequate funding, lack of a unified national union and institutional framework to promote resource sharing among libraries, lack of awareness and sensitization on the importance of resource sharing among libraries and limited education and training among librarians as other forms of obstacles to effective resource sharing. The study concluded that the state of resource sharing in Zambia is not very satisfactory and some recommendations were made. Zachary's study like the present study makes an assessment of the status of library consortium, the only difference is that Zachary went further to probe the challenges facing library consortium in Zambia, while the present study went further to determine the direction and strength of relationship between variables in the study.

Taole (2009) in a study titled 'Evaluation of the INNOPAC Library System in Selected Consortia and Libraries in the Southern African Region Implications for the Lesotho Library Consortium' argued that resource sharing is considered to be one of the most important pillars of library service because no single library can meet all the needs of its users. Libraries have always cooperated to meet the increasing demands of users by sharing their resources. Taole (2009) carried out the study with the purpose of analysing the successes and limitations of the INNOPAC library system operating in consortia and libraries in the Southern African region, to assess its suitability for Lesotho Library Consortium (LELICO).

The study focused on two South African consortia: The Gauteng and Environs Library Consortium — GAELIC, and The Free State Library and Information Consortium — FRELICO, using two university libraries (Namibia and Zimbabwe) and one Agricultural College Library (Botswana) in the Southern African region that use the system.

The target groups of the study were the library managers, system managers, and library professionals of selected GAELIC and FRELICO libraries, and the system managers of the three selected libraries in the region. The research data were collected through questionnaires, interviews, site visits, and analysis of policy and institutional documents. A set of five questionnaires were prepared and administered on the research respondents after it was validated by experts. For interview, the researcher used a semi-structured interview to capture data on a tape recorder and with written notes. Also, reliability of the instruments was established.

The study undertook a thorough analysis of all the documents for the study. Analyses of quantitative data were mainly generated from questionnaires administered to different respondents. The researcher used computer software called the Statistical Package for Social Scientists (SPSS) to capture and analyse the quantitative data. The study found that the INNOPAC library system is performing satisfactorily in the chosen consortia and libraries, and that it has a positive impact on them. The study revealed that the INNOPAC library system contributed towards increased productivity, improved customer services, and better decision-making in the two consortia. Given the successful performance of INNOPAC consortia, the study recommends further research into the advantages and challenges of INNOPAC for wider regional library cooperation.

Taole (2009) and the present study share something in common, the two studies used library professionals as respondents for their studies, Taole analysed the policy of the library while the present study determined the direction and strength of relationship between library policy and librarian's awareness, attitude and competence for library consortium.

Librarians' Awareness for the Utilization of ICT Based Library Service/Consortium

Some scholars have studied various aspect of awareness for the utilization of ICT tools for library service and some of these research studies will be discussed here.

Krubu and Osawaru (2011) in a study titled 'The Impact of Information and Communication Technology (ICT) in Nigerian University Libraries' asserted that the militating factors hindering the impact of ICT on Nigerian academic Libraries are lack of capital investments to buy hardware, software and standby generators for the library. Lack of search skills, automation at infancy level, epileptic power supply, and technical know-how are also some of the problems encountered by the academic libraries.

Information and Communication Technology (ICT) has brought unprecedented changes and transformation to academic libraries and information services. Taking into cognizance the recent trends in ICT and the Nigerian situation, the work elicits the impact of ICT in Nigerian University Libraries. The primary objectives of the study were to ascertain the level of automation, to determine the usefulness of ICT resources, the effectiveness of ICT resources, the required skills in using ICT resources and the factors militating against the effective use of ICT. John Harris Library, University of Benin and Benson Idahosa University Library, both in Edo State of Nigeria were used as case study. The survey research design was employed and the instrument used for data collection was the questionnaire designed by the researcher and validated by experts and subjected to reliability test. Simple tables and percentages were used to analyze the data collected. The research work revealed that both University Libraries are automated/computerized and that they apply Strategic Library Automation Management (SLAM); only three divisions of the libraries are computerized/automated which are: Readers Services Division, Technical Services Division and Collection Development division. The major reason attached to the use of ICT resources was for information storage and retrieval; the ICT resources mostly used are CD-ROM, online database, World Wide Web and the Internet. The study also revealed that ICT has an enormous impact based on its effectiveness. Inadequate training and retraining of staff by management, inadequate funding, epileptic power supply and lack of search skills are the major factors militating against the effective use of ICT in Nigerian

University libraries. Among others, adequate funding, capacity building and regular power supply were recommended.

Krubu and Osawaru (2011) and the present study are closely related in the area of awareness among the librarians in Nigeria. Krubu and Osawaru proved that librarians appreciably use ICT tools in their respective libraries which is an indication that librarians have awareness on the potentials of ICT to library services, and in comparison, the present study determined the direction and strength of relationship that exist between librarians ICT awareness and utilization of ICT tools for library consortium.

Abubakar, Gupiyem and Banwar (2017) conducted a study titled 'Information and Communication Technology Accessibility as Correlate of E-Resources Usage among Postgraduate Students in Nigerian University Libraries.' The purpose of the study was to examine the correlation between ICT accessibility and use of e-resources in Nigerian university libraries among postgraduate students. The design of the study was survey research design and multi-stage sampling techniques which were used to select 2726 postgraduate students from 16 Nigerian Federal conventional universities. Two instruments (questionnaire on ICT Accessibility and an Interview Schedule for e-resources/ ICT librarians) were used to collect data and data was analysed using percentages and Pearson's Product Moment Correlation.

Findings of the study indicated the extent to which postgraduate students' level of accessibility to ICT facilities for the use of e-resources was low (weighted average = 2.44). The frequency of the usage of e-resources by the postgraduates' was adjudged low (weighted average = 2.45). Major problems postgraduate students encountered in accessing e-resources in their libraries range from internet down time, password issues, inadequate skilled staff, low level awareness of e-resources by the students to epileptic power supply. There is positive, very strong and significant relationship between postgraduate students' ICT accessibility and their use of library e-resources ($r = .776$; $df = 2284$; $p < .05$). Research = Implications: The postgraduate

students who were expected to access and use the library's ICT facilities for retrieving their needed electronic information had low level of accessibility to the ICT facilities. The implication is that it would impede their rate of learning and also affect their general scholarships, particularly now that the entire globe is in the information age where students communicate using ICT facilities. Originality/Value: The study has added to the body of knowledge in university libraries' support in the provision of ICT facilities with flexible policy use which could afford postgraduate students' access to e-resources. The present study share some relationship with this study (Abubakar, Gupiyem and Banwar, 2017), in the sense that they are both correctional studies which try to determine the direction and strength of the relationship that exists between the variables in the studies. Abubakar, Gupiyem and Banwar (2017) was interested in the correlation between ICT accessibility and the use of e-resources in Nigerian university libraries among postgraduate students, while, the present is interested in correlation between librarians' ICT awareness, attitude, competence and utilization of ICT based library consortium.

Librarians' Attitude towards the Utilization of ICT based library service/consortium

Some scholars have studied various aspect of librarians' attitude towards the utilization of ICT tools for library service and some of these research studies will be discussed here.

Ramzan (2015) in a study titled 'Attitudes of librarians towards Application of Information Technology in Academic Libraries in Pakistan' said librarians, being key stakeholders in the development of libraries, play a strategic role in application of IT in libraries. Their attitudes are critical in determining the levels of IT application. Several steps were taken to ensure the validity and reliability of the data collection instrument of this study as the study investigated the attitudes of librarians towards application of IT in academic libraries in Pakistan. Data were collected from 288 head librarians of sampled libraries through a questionnaire

survey, and 219 (76%) valid questionnaires were used for analysis. Findings revealed a good state of development in IT applications as 69.3% respondents had two or more PCs, 91.3% had e-mail and Internet, and 87.6% had some degree of automation. A majority, 75.8% of the respondents had access to online journals and e-books through the National Digital Library.

Respondents overall showed positive attitudes towards IT with a mean of 3.71 measured on a 5-point Likert scale through 42 IT attitude statements. They generally had positive attitudes towards impact of IT (mean= 3.43), IT costs and resource allocation (mean= 3.59), IT training for staff and users (mean= 4.19), and for general statements on IT (mean=3.64).

The study revealed that libraries' level of IT availability ($r=.210, p<.05$) and level of IT use ($r=.281, p<.05$) and staff size ($r=.145, p<.05$) were positively correlated with librarians' IT attitudes. While no significant relationship existed between size of library and librarians IT attitude. No difference existed in librarians IT attitudes based on location of libraries, gender, and librarians' professional qualification. Librarians' age ($r=-.174, p<.05$) experiences as a librarian ($r=-.172, p<.05$) and as a head librarian ($r=-.239, p<.05$) were negatively correlated with their IT attitudes. A significant positive relationship was determined between librarians' IT attitudes and their experience in computer usage ($r=.190, p<.05$), level of technological knowledge ($r=.175, p<.05$), and awareness about new technologies ($r=.275, p<.05$). Findings indicated that confidence in IT application, ownership of IT application, level of IT knowledge, fears of IT, IT training, IT-based rules and regulations, librarians' dynamism and potential as an innovation enabler were key determinants of librarians' attitudes.

Ubogu (2012) in a study titled 'Attitude of Librarians Towards the use of Information and Communication Technology in some selected Nigerian Universities in Edo and Delta States, Nigeria' examined the attitude of librarians towards the use of ICT in libraries in some selected Universities in Edo and Delta States, Nigeria. The population of the study includes 178 respondents comprising 101 professional librarians and 77 para-professional librarians

respectively. Data was collected from 178 respondents of sample libraries through a set of questionnaires validated and established as reliable instrument of data collection for the study. Simple percentage and frequency counts were used to analyse the data. The results indicate that librarians under study have positive attitude towards the implementation and use of ICT. Furthermore, knowledge of ICT and training of librarians influence positive attitude towards ICT. Based on the findings, it is recommended that all librarians who do not have knowledge of ICT should be adequately trained to have positive attitude towards the use of ICTs in their libraries. The present study is directly linked to the study under review (Ubogu 2012), because the two studies focus on the attitude of librarians towards the use of Information and Communication Technology in Nigerian Universities.

Adeyinka (2009) examined the attitudinal correlates of some selected Nigerian librarians towards the use and application of ICT in various libraries. This study adopts a descriptive survey method using the questionnaire. The instrument was validated and the reliability of the instrument was established. The study was interested in measuring the attitude of librarians' as regards anxiety towards the use of ICT. A total of 41 librarians took part in the study. Out of this population, 26 were male and 15 were female. The survey instrument used for the collection of data was a computer anxiety and attitude towards microcomputer utilization (CAATMU) scale and a librarian attitude questionnaire. The main objective of the study was to find relationship between demographic variables of respondent's age, gender, prior knowledge / experience and training, educational qualification, computer anxiety and librarians' attitude towards ICT.

The analysis of results show that all the four out of the five variables of age, gender, educational qualifications and knowledge of ICT significantly correlate with librarian attitude towards ICT; while the variable ICT anxiety correlate negatively with the attitude of librarian towards ICT. The study emphasizes the need for libraries to embark on training their librarian who does not have knowledge of ICT. Based on the findings of this study, it is clear that fear and

anxiety had a negative effect and hinders the development of positive attitude to the use of ICT by the librarian. In the light of this, it is not an overstatement to state that there is need for libraries to embark on training their librarian who does not have knowledge of ICT. The present study is related to the study under review (Adeyinka, 2009), because the two studies focus on the attitude of librarians towards the use of Information and Communication Technology in Nigerian Universities

Aiyebilehin, Ekpoma, Ikenwe and Okpetu (2017) conducted a study entitled “Survey of attitude towards ICTs and use of ICTs for Service Delivery by Librarians in University Libraries in Edo state.” The purpose of the study was to, among other things; examine the attitude of librarians towards ICTs in university libraries in Edo state. Descriptive survey design was used for the study. The population of the study comprised professional and para-professional librarians in Ambrose Alli University Library, Benson Idahosa University Library and John Harris Library, University of Benin. The total enumeration sampling technique was used to select all the 122 professional and para-professional librarians in the three libraries. Questionnaire was used to gather data for the study and the data collected was analyzed with the use of tables and percentages. The findings of the study showed that librarians majorly used computers (100%), Telephone (97%) and Printers (85.7%). The findings also showed that majority (98%) of the respondents use the ICTs to assist researchers while 100% of them use ICTs in answering user queries. It was equally revealed that the librarians have positive attitude towards ICTs use. This is based on the fact that the respondents generally refused the negative attitude scale while they completely accepted the positive attitude scale. The major factors influencing the formation of the attitude towards ICTs by the librarians were found to be peer opinion (100%) and knowledge of available ICTs (97.6). Implication: The conclusions of this study imply that utilization of ICTs depend greatly on the attitude of librarians towards ICTs. Where there is positive attitude utilization will increase, but where there is negative attitude,

available ICTs will be underutilized. Hence, to improve utilization of available ICTs for service delivery, the attitude of librarians must be worked on through exposure and training in the use of emerging technologies. Originality/Value: the originality of this study lies in the finding that ICT utilization depends on attitude of librarians and not just availability and accessibility. Aiyebilehin, Ekpoma, Ikenwe and Okpetu (2017) study is directly related to the present study as both have attitude as variable, while the former was interested in the attitude to the use of ICT, the later bordered on the relationship between attitude and utilization of ICT tools.

Librarians' ICT Competence and Skills for the utilization of ICT based library service/consortium

Some scholars have studied various aspects of Librarians' ICT Skills and Competence for library service and some of these research studies will be discussed here.

Oyedokun, Oyewumi, Akanbi, and Laaro (2018) conducted a study titled 'Assessment of ICT Competencies of Library Staff in selected Universities in Kwara state, Nigeria.' The main purpose or broad objective of the study was to investigate the ICT competencies of library staff in selected Universities in Kwara state, Nigeria. The research design adopted for the study was descriptive survey. The population of the study comprises library staff in the selected University libraries in Kwara State. The total population for the study consisted of library staff at the University of Ilorin, Kwara State University, and Al-Hikmah University. According to library staff list collected from each university library management, the total number of library staff of Al-Hikmah University Library was 20 while that of University of Ilorin library was 148 and 23 library staff for Kwara State University. Therefore, the total population for the study was 191. Study adopted judgmental sampling technique which gave the study a total sample of 122 respondents. The instrument used for data collection was five point likert scale questionnaire. The instrument was validated at Cronbach's alpha reliability coefficient of 0.878 to ensure face, contents and construct validity, and the reliability of the instrument was determined to see the

degree of consistency of the test instrument in measuring what it claims to measure by using test-retest reliability

Result from the findings demonstrated a high level of ICT competency on the part of library staff in selected university libraries (University of Ilorin, Kwara State University and Al-Hikmah University), most especially on skills that were considered basic and intermediate ICT skill. Verdict from the study has it that library staff in those universities can effectively deploy ICT tools for operations in the library. They identified library schools, computer training centers, workshops and seminars, personal training, watching demonstrations on YouTube, guidance from friends and relatives as sources from which Library staff can acquire ICT skills. Constraints to ICT skills acquisition identified include: tight working schedule, lack of motivation, lack of experience, inadequate training, and inappropriate library and information science curriculum. Identified challenges militating against effective utilization of ICT tools in the library for dynamic information service delivery include: lack of adequate information infrastructure, absence of provision for staff training and development, limited and tighter budget for the library, lack of technological know-how, fear of technology on the part of library staff as well as epileptic power supply. Sequel to the above identified challenges and constraints, the study recommends that library management should make available adequate information infrastructure and as well make provision for staff development and training. Experienced staff should as well train the upcoming or new staff in the library. Library schools should revise curriculum and design one that will accommodate development in information and communication technology and professional associations and regulatory bodies should organize regular seminars and workshops that will improve ICT skills of librarians.

The verdict of the study holds that library staff in those Universities can effectively deploy ICT tools for operations in the library. They identified library schools, computer training

centres, workshops and seminars, personal training, watching demonstrations on YouTube, guidance from friends and relatives as sources from which Library staff can acquire ICT skills.

The study under review is related to the present research study on many fronts; the study under review was an assessment of ICT competence of library staff in selected Universities in Kwara State, while the present study is to determine the relationship between librarians' ICT competence and utilization of ICT-based library consortium in North Central Nigeria. All the three University libraries covered in the study under review are part of the twelve University libraries which the present research study covers. The two studies are geographically related and their variables are also closely related.

Adewoyin (2017) in a study titled 'ICT Skills, Social Media use and Service Delivery by Librarians in Federal Universities in South-West, Nigeria' set out to investigate the relationship between ICT skills, social media use and library services of librarians in Federal Universities in South-West, Nigeria. The survey research design was adopted for the study. The population was made up of 126 librarians from Federal Universities in South-West, Nigeria. Total enumeration sampling technique was used to cover all the librarians from five out of the six Federal Universities. Data was collected through a structured questionnaire. The Cronbach's alpha reliability coefficient for ICT skills was 0.93, Social media was 0.83 and library service delivery was 0.73. A response rate of 95.4% was obtained. Data was analyzed using descriptive statistics and inferential statistics.

Findings showed that librarians were skilled in ICT. It was also shown that the extent of use of social media tools for library services was generally low. Findings also revealed that the most popular social media tool used was Facebook, followed by WhatsApp, You-tube and Instant Message (IM). It was also revealed that librarians made a very low use of Pintrest, Flickr and Podcast. Erratic power supply, poor internet access, and inadequate ICT facilities were some of the

constraints in the use of social media. Significant relationships between ICT skills and library services ($r = 0.677$, $p < .05$) and Social media and Library services ($r = 0.415$, $p < .05$) were found. The two variables jointly influenced librarians' library services which accounted for 98% variance in the dependent variable ($R^2 = .98$, $F_{(1,56)} = 56$, $p < .05$). It was found that ICT Skills positively influenced Library services ($\beta = .256$) as well as Social Media Use ($\beta = .163$)

The study concluded that majority of the librarians were skilled in nearly all the ICT skills. However, the use of Social Media by librarians in library services proved to be very low. The study recommended that awareness in the use of social media should be created for effective library services. Also, the library management in conjunction with the management of these universities should create an enabling environment for the training of librarians on web technology (Web. 2.0), provide adequate internet access points and tackle erratic power supply. These could motivate the librarians in using social media tools which, in turn, would lead to the enhancement of library services. The study under review is related to the present study as they shared common variable and only differ in the region or area where the studies took place.

Summary of Related Literature Review

The review of related literature done in this section revolved around the topic: concept of academic library, library cooperation, library consortium, resources sharing and ICT tools. The conceptual framework revealed that there is common understanding and agreement on the concepts under review. The concept of Library cooperation, library/information resource sharing and library consortium mean same thing, and are used as such, while the concept of academic library is used to represent university library in this study. ICT-based library consortium was conceptualized to present the situation where ICT tools are engaged in the running or offering library consortium activities. The review of related literature did not reveal any major controversies and discrepancy on what these concepts represent.

The review demonstrates that Rogers' innovation theory is useful for conceptualization of technology adoption in the context of applying and deploying ICT tools for running library services. Therefore, the theory was adopted as the theoretical framework to examine the relationship that exist between Librarians' ICT awareness, attitude and competence as correlates for the utilization of ICT based library consortium.

The rationale for the application of Information Communication Technologies in library services was justified in the review of related literature. The review of related literature from theoretical studies to empirical studies revealed various levels, frequencies, and degrees of ICT awareness and competence among librarians. The review revealed various attitudinal tendencies of librarians towards the utilization of ICT tool for library services including library consortium. Also, ICT competence of librarians was revealed through the literature review and the correlation between librarians' ICT awareness, attitude and competence were revealed.

However, the review did not reveal or identify any study(ies) and literature on the correlation or relationship between librarians' ICT awareness, attitude, competence and the utilization of ICT-based library consortium in Nigeria. Moreover, no studies in the reviewed literature also revealed any relationship in any library policy that influences librarians' ICT awareness, attitude, and competence towards the utilization of ICT based library consortium. This gap therefore necessitated the response of this study to fill the identified lacuna.

CHAPTER THREE

METHOD

This chapter presents the procedures that were adopted in this study under research design, area of the study, population of the study, instrument for data collection, validation of the instrument, reliability of the instrument, method of data collection and method of data analysis.

Research Design

The study adopted correlational survey research design. According to Nworgu (2015) correlation design seeks to establish the relationship between two or more variables as well as indicating the direction and magnitude of the relationship between them. In correlation research, data are collected in order to determine whether and to what degree a relationship exists between two or more variables.

Area of the Study

The area of this study is the North Central Nigeria and the zone is made up of six states namely; Benue, Kogi, Kwara, Nassarawa, Niger and Plateau States. North Central Nigeria is also known as the Middle Belt, a term used in human geography to designate a belt region stretching across Central Nigeria longitudinally and forming a transition zone between Northern and

Southern Nigeria. North Central is the only geo political zone in Nigeria that shares borders with five other geopolitical zones. It is characterized by its lack of a clear majority ethnic group, and is the location of Nigeria's Federal Capital Territory. The region is a convergence of these cultural domains and maintains a tremendous degree of ethno-linguistic diversity. It's Nigeria home of solid mineral resources and a hydro power rich region. North Central Nigeria shares boundaries with South-South (Edo State), South East (Enugu and Anambra States), South West (Ondo and Ekiti States), North West (Kebbi and Kaduna States) and North East (Bauchi and Taraba States). There are six Federal and States Universities libraries in the zone; each of the States has a Federal university and a State university. The researcher chose this zone for the study because of the concentration of Federal and State University libraries with state of the arts ICT infrastructure needed for this study.

Population of the Study

The population of the study was 210 academic librarians in all the Federal and States university libraries in the area of study. The population distribution by Universities is presented as appendix A on page 99.

Sample and Sampling Technique

The entire population was studied without sampling because the size was not too large to warrant sampling.

Instrument for Data Collection

The research instrument used to collect data for the study was the questionnaire. The questionnaire is titled "Librarians' ICT Awareness, Attitude, and Competence as Correlates of Library Consortium Utilization in University Libraries in North Central Nigeria" (LIAACULQ). The instrument was developed by the researcher after intensive literature review.

The questionnaire comprised seven clusters; each cluster for each research question of the study and each cluster contain ten statements or items. Cluster A: What is the status of library

consortium in Universities library in North Central Nigeria; Cluster B: what relationship exists between librarians' ICT awareness and utilization of ICT-based library consortium in University Libraries in North Central Nigeria? Cluster C: what relationship exists between librarians' attitude and utilization of ICT-based library consortium in University Libraries in North Central Nigeria? Cluster D: what relationship exists between librarians' ICT competence and utilization of ICT-based library consortium in University Libraries in North Central Nigeria? Cluster E: What relationship exists between Library policy and Librarians' ICT awareness on ICT-based library consortium in University Libraries in North Central Nigeria? Cluster F: What relationship exists between Library policy and Librarians' attitude towards ICT-based library consortium in University Libraries in North Central Nigeria? Cluster G: What relationship exists between Library policy and Librarians' ICT competence on ICT-based library consortium in University Libraries in North Central Nigeria?

Clusters A to G were measured using many positively and negatively worded statements on a five-point rating scale (5-1) respectively. i.e., SA: Strongly Agree, A: Agree, U: Undecided, D: Disagree and SD: Strongly Disagree.

Validation of the Instrument

Librarians' ICT Awareness, Attitude and Competence as Correlates of Library Consortium Utilization Questionnaire was constructed by the researcher, and to ensure its face and content validity, the instrument was given to three experts across three departments: Department of Educational Foundations, Department of Library and Information Science, Faculty of Education Nnamdi Azikiwe University, Awka, and Department of Library and Information Science, Faculty of Education, University of Nigeria, Nsukka. The copies of the research questionnaires, title of the dissertation, purpose of the study, research questions and the hypotheses were given to the experts to guide them in the validation. The instrument was

adjudged valid by the experts, after cogent comments and corrections were effected in the production of the final copy of the instrument.

Reliability of the Instrument

The reliability of the instrument was established through internal consistency method of reliability carried out on Ten (10) librarians at Nnadmi Azikiwe University, Awka. The research instrument (questionnaire) of this study was administered to them. The responses from the respondents were subjected to Cronbach Alpha test statistically using SPSS (version 20) to establish “Co-efficient of internal consistency” that yielded the following correlation co-efficient of Cluster A to G: Cluster A: $r = 0.68$; Cluster B: $r = 0.64$; Cluster C: $r = 0.86$; Cluster D: $r = 0.55$; Cluster E: $r = 0.81$; Cluster F: $r=0.84$ and Cluster G: $r=68$. While, the Overall is 0.96 which is an indication that the instrument is reliable in line with the view of Gliem and Gliem (2003) that the closer Cronbach’s Alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale.

Method of Data Collection

The research instrument, which is questionnaires, was administered to the respondents by the researcher in company of research assistants appointed in each of the university in the study area. The research assistants who were mostly postgraduate students and serving National Youth Service Corps members were informed of the purpose and intentions of the research. The research assistants were used to retrieve and forward to the researcher the completed questionnaire.

Method of Data Analysis

The data collected were analyzed using statistical mean and Pearson Product Moment Correlation, computed through Statistical Package for Social Sciences (SSPS, V20). Statistical mean was used to answer research question 1. The Pearson Product Moment Correlation was used to answer research questions 2 to 7 and also used to test the hypotheses. Hypotheses were

tested at 0.05 level of significance. Calculated probability value (P) was compared with stipulated level of significance (alpha level α) so that where the P value was less than the stipulated level of significance (0.05), the null hypothesis was rejected but where the P value was greater than or equal to the stipulated level of significance, the null hypothesis was accepted.

In answering research question 1, statistical mean acceptance score was set at 3.00 and above, any score below 3.00 was considered not acceptable. In answering research question 2 to 7, SPSS general rules and Cohen's conventions were adopted to interpret the correlational strength and to determine the direction of relationship and association of the variables.

0.10 - 0.19	Very weak relationship
0.20 - 0.29	Weak relationship
0.30 - 0.39	Moderate relationship
0.40 - 0.49	Strong relationship
0.50 - above	Very strong relationship

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

This chapter presents details of data collection and analytical procedures employed for the study. And the eventual result obtained. It is divided into four parts. The first part reported the administration and the response rate to the questionnaire. The second part reported on the answers to research questions. The third part reported on testing of hypotheses while the fourth part concerned the discussion of findings.

Response Rate

A total of 210 copies of the questionnaire were distributed and 149 i.e., 71% were returned. The response rate of 71% is considered adequate for the study because the standard and acceptable response rate for most studies is 52.7%, according to Baruch and Holtom (2008).

Answer to Research Questions

Answers to the research questions formulated to guide the study are reported in this section.

Research Question 1

What is the status of library consortia activities in University libraries in North Central Nigeria?

Data necessary to provide answer to research question one was presented in Table 1

Table 1: Mean Response on the Status of Library Consortia Activities in University Libraries in North Central Nigeria

Data displayed in Table 1 reveal an overall mean rating of $\bar{X} = 4.27$ which show that librarians in the study area are actively into the utilization of ICT-based library consortium in their respective university libraries. The item-by-item mean rating also show that the librarians agreed that their library subscribe to Nigeria Universities commission library consortium ($\bar{X} = 4.38$). The librarians agreed their libraries are into collaborative program with other libraries ($\bar{X} = 4.40$). The

	Item Statement	\bar{X}	Decision
1	My library subscribe to Nigeria Universities commission library consortium	4.38	Agree
2	My library is involved in library collaborative program among other libraries	4.40	Agree
3	My library is involved in the utilization of online databases not being paid for by my library	4.40	Agree
4	My library is benefiting from using the resources of other libraries	4.36	Agree
5	My library is in the process of joining International Coalition for Library Consortium	4.36	Agree
6	My library has the needed ICT tools required to participate in library consortium	3.25	Agree
7	My library participates in library consortium because there are enough information resources to share in a library consortium	4.02	Agree
8	My library participates in more than one library consortium program	4.46	Agree
9	My library cannot cease to be a member of library consortium	4.58	Agree
10	My library is a financial member of Nigerian Universities library consortium	4.50	Agree
	Overall mean score or rating: Status of library consortium	4.27	Agree

librarians affirmed they involve in the utilization of online databases not being paid for by their library ($\bar{X} = 4.40$). The libraries use the resources of other libraries ($\bar{X} = 4.36$). The librarians agreed that their library is in the process of joining International Coalition for Library Consortium ($\bar{X} = 4.36$). The libraries have the needed ICT tools for library consortium ($\bar{X} = 3.25$). The librarians agreed they have enough resource to exchange or share ($\bar{X} = 4.02$). The libraries are into several library consortium ($\bar{X} = 4.46$). The libraries do not intend to cease their membership of library consortium ($\bar{X} = 4.58$). And the libraries are financial members of Nigerian Library Consortium ($\bar{X} = 4.50$).

Table 2: Pearson Correlation between Librarian's ICT Awareness and Utilization of ICT Based Consortium in University Libraries in North Central Nigeria.

Research Question 2

What relationship exists between librarians' ICT awareness and utilization of library consortium in University libraries in North Central Nigeria?

The answer to research question two is presented in Table 2.

		Library Consortium Utilization	Librarians' ICT Awareness	Remarks
Library Consortium Utilization	Pearson Correlation	1	0.61**	Very strong positive and statistically significant relation
	N	149	149	

****.** Correlation is significant at the 0.05 level (1-tailed).

The data computed in Table 2 show that the direction of the relationship between librarians' ICT awareness and the utilization of library consortium is positive ($r=0.61$). The variables are positively correlated, the variables tend to increase together (i.e., the greater awareness is associated with greater utilization). The magnitude or strength of the association is very strong and the variables have a statistically significant relation.

Research Question 3

What relationship exists between librarians' attitude and utilization of library consortium in University libraries in North Central Nigeria?

Data necessary to provide answer to research question three were analysed and presented in Table 3

Table 3: Pearson Correlation between Librarian's Attitude and Utilization of ICT Based Consortium in University Libraries in North Central Nigeria.

		Library Consortium Utilization	Librarians' Attitude	Remarks
Library Consortium Utilization	Pearson Correlation	1	0.48**	Strong positive and statistically significant relation
	N	149	149	

****.** Correlation is significant at the 0.05 level (1-tailed).

The data presented in Table 3 show that the direction of the relationship between librarians' attitude and the utilization of library consortium is positive ($r=0.48$). The variables are positively correlated, the variables tend to increase together (i.e., positive attitude is associated with positive utilization). The magnitude or strength of the association is strong and the variables have a statistically significant relation.

Research Question 4

What relationship exists between librarians' competence and utilization of library consortium in University library in North Central Nigeria?

Data necessary to provide answer to research question four were analysed and presented in Table 4

Table 4: Pearson Correlation between Librarian's ICT Competency and Utilization of ICT-based library consortium in University Libraries in North Central Nigeria.

		Library Consortium Utilization	Librarians' ICT Competency	Remarks
Library Consortium Utilization	Pearson Correlation	1	0.32**	Moderate positive and statistically significant relation
	N	149	149	

****.** Correlation is significant at the 0.05 level (1-tailed).

The data presented in Table 4 show that the direction of the relationship between librarian's ICT competency and utilization of library consortium is positive ($r=0.32$). The variables are positively correlated, the variables tend to increase together (i.e., increase in competency is associated with increase in utilization). The magnitude or strength of the association is moderate and the variables have a statistically significant relation.

Research Question 5

What relationship exists between library policy and librarians' ICT awareness towards ICT-based library consortium in University libraries in North Central Nigeria?

The answer to research question five is presented in Table 5

Table 5: Pearson Correlation between Library Policy and Librarians' Awareness towards ICT-based library consortium in University Libraries in North Central Nigeria.

		Library Consortium Utilization	Library Policy & Librarians' ICT Awareness	Remarks
Library Consortium Utilization	Pearson Correlation	1	0.68**	Very strong positive and statistically significant relation
	N	149	149	

****.** Correlation is significant at the 0.05 level (1-tailed).

The data presented in Table 5 show that the direction of the relationship between library policy and librarians' ICT awareness towards the utilization of library consortium is positive ($r=0.68$). The variables are positively correlated, the variables tend to increase together (i.e., change in library policy is associated with change in utilization). The magnitude or strength of the association is very strong and the variables have a statistically significant relation.

Research Question 6

What relationship exists between library policy and librarians' ICT attitude towards ICT-based library consortium in University libraries in North Central Nigeria?

The answer to research question six is presented in Table 6.

The data presented in Table 6 show that the direction of the relationship between library policy and librarians' attitude towards the utilization of ICT-based library consortium is positive ($r=0.26$). The variables are positively correlated, the variables tend to increase together (i.e., change in library policy is associated with change in librarians' attitude towards the utilization of

Table 6: Pearson Correlation between Library Policy and Librarians' ICT Attitude towards ICT-based library consortium in University Library in North Central Nigeria

		Library Consortium Utilization	Library Policy & Librarians ICT Attitude	Remarks
Library Consortium Utilization	Pearson Correlation	1	0.26**	Weak but positive And statistically significant relation
	N	149	149	

****.** Correlation is significant at the 0.05 level (1-tailed).

ICT based library consortium). The magnitude or strength of the association is weak but the variables have a statistically significant relation.

Research Question 7

What relationship exists between Library policy and Librarians' ICT competence on ICT-based library consortium in University Libraries in North Central Nigeria?

Data necessary to provide answer to research question seven were analysed and presented in Table 7

Table 7
Pearson Correlation between Library Policy and Librarians' ICT Competence on ICT-based library consortium in University Libraries in North Central Nigeria.

		Library Consortium Utilization	Library Policy & ICT competency	Remarks
Library Consortium Utilization	Pearson Correlation	1	0.15**	Very weak but positive and statistically significant relation
	N	149	149	

****.** Correlation is significant at the 0.05 level (1-tailed).

The data presented in Table 7 show that the direction of the relationship between library policy and librarians' ICT competence for the utilization of ICT-based library consortium is positive ($r=0.15$). The variables are positively correlated, the variables tend to increase together (i.e., change in library policy is associated with change in librarians' ICT competence on ICT based library consortium). The magnitude or strength of the association is very weak but the variables have a statistically significant relation.

Test of Hypothesis

The formulated null hypotheses for the study were tested at 0.05 level of significance.

Hypothesis 1

There is no significant relationship between librarians' ICT awareness and utilization of ICT-based library consortium in University libraries in North Central Nigeria.

Test of hypothesis 1 is presented in Table 8.

Hypothesis 1 was analysed with the data computed in Table 8. It shows that a statistically

Table 8: Significance of relationship between Librarian's awareness and utilization of ICT based consortium in University Libraries in North Central Nigeria.

	Library Consortium	Librarians' ICT Awareness	Remarks	
Library Consortium	Pearson Correlation	1	0.61**	Very strong positive relation
Utilization	P-Value		0.00	Significant H₀ Rejected
	N	149	149	

****.** Correlation is significant at the 0.05 level (1-tailed).

significant relation (*P-Value* = 0.00) exists between librarian's ICT awareness and the utilization of ICT-based library consortium in University libraries in North Central Nigeria. Since $\alpha = 0.05$ and *P-Value* = 0.00, *P-Value* < 0.05, *P-Value* is less than α level, therefore, the null hypothesis was rejected.

Hypothesis 2

There is no significant relationship between librarians' ICT attitude and utilization of ICT-based library consortium in University libraries in North Central Nigeria.

Test of hypothesis 2 is presented in Table 9.

Table 9: Significance of Relationship between Librarian's Attitude and Utilization of ICT Based Consortium in University Libraries in North Central Nigeria.

		Library Consortium	Librarians' ICT Attitude	Remarks
Library Consortium Utilization	Pearson Correlation	1	0.48**	Strong positive relation
	P-value		0.00	Significant H_0 Rejected
	N	149	149	

****.** Correlation is significant at the 0.05 level (1-tailed).

Hypothesis 2 was analysed with the data presented in Table 9 and it shows that a statistically significant relation ($P\text{-Value} = 0.00$) exists between librarian's attitude and the utilization of ICT-based library consortium in University libraries in North Central Nigeria. Since $\alpha = 0.05$ and $P\text{-Value} = 0.00$, $P\text{-Value} < 0.05$, thus the null hypothesis was rejected.

Hypothesis 3

There is no significant relationship between librarians' ICT competence and utilization of ICT-based library consortium in University libraries in North Central Nigeria.

Test of hypothesis 3 is presented in Table 10.

Table 10: Significance of Relationship Between Librarian's ICT Competence and Utilization of ICT Based Consortium in University Libraries in North Central Nigeria.

		Library consortium	Librarians' ICT Competency	Remarks
Library Consortium Utilization	Pearson Correlation	1	0.32**	Moderate positive Relation
	P-value		0.00	Significant H_0 Rejected
	N	149	149	

****.** Correlation is significant at the 0.05 level (1-tailed).

Hypothesis 3 was analysed with the data presented in Table 10 and it shows that a statistically significant relation ($P\text{-value} = 0.01$) exists between librarian's ICT competence and the utilization of ICT-based library consortium in University libraries in North Central Nigeria.

Since $\alpha = 0.05$ and $P\text{-value} = 0.00$, hence $P\text{-value} < 0.05$, the null hypothesis was rejected.

Hypothesis 4

There is no significant relationship between Library Policy and Librarians' ICT Awareness on ICT-based library consortium in University Libraries in North Central Nigeria.

Test of hypothesis 4 is presented in Table 11.

Table 11: Significant Relationship Between Library Policy and Librarians' ICT Awareness on ICT-based library consortium in University Libraries in North Central Nigeria.

		Library consortium	Library Policy & Librarians' ICT C ompetency	Remarks
Library Consortium Utilization	Pearson Correlation	1	0.68**	Very strong positive Relation
	<i>P-value</i>		0.00	Significant H_0 Rejected
	N	149	149	

****.** Correlation is significant at the 0.05 level (1-tailed).

Hypothesis 4 was analysed with the data presented in Table 11 and it shows that a statistically significant relation ($P\text{-value} = 0.00$) exists between library policy and librarians' ICT awareness on the utilization of ICT-based library consortium in University library in North Central Nigeria. Since $\alpha = 0.05$ and $P\text{-value} = 0.00$, $P\text{-value} < 0.05$, the null hypothesis was rejected.

Hypothesis 5

There is no significant relationship between library policy and librarians' ICT attitude towards ICT-based library consortium in University libraries in North Central Nigeria.

Test of hypothesis 5 is presented in Table 12.

Table12: Significant Relationship Between Library Policy and Librarians' ICT Attitude towards ICT-based library consortium in University Libraries in North Central Nigeria.

		Library consortium	Library Policy & Librarians' ICT Attitude	Remarks
Library Consortium Utilization	Pearson Correlation	1	0.26**	Weak positive relation
	<i>P-value</i>		0.01	Significant H_0 Rejected
	N	149	149	

****.** Correlation is significant at the 0.05 level (1-tailed).

Hypothesis 5 was analysed with the data presented in Table 12 and it shows that a statistically significant relation ($P\text{-value} = 0.01$) exists between library policy and librarians' ICT attitude on the utilization of ICT-based library consortium in University library in North Central Nigeria. Since $\alpha = 0.05$ and $P\text{-value} = 0.01$, $P\text{-value} < 0.05$, the null hypothesis was rejected.

Hypothesis 6

There is no significant relationship between library policy and librarians' ICT competency on ICT-based library consortium in University libraries in North Central Nigeria.

Test of hypothesis 6 is presented in Table 13.

Table 13: Significant Relationship Between Library Policy and Librarians' ICT Competency on ICT-based library consortium in University Library in North Central Nigeria.

		Library consortium	Library policy & ICT competency	Remarks
Library Consortium Utilization	Pearson Correlation	1	0.15	Very weak positive Relation
	<i>P-value</i>		0.03	Significant H_0 Rejected
	N	149	149	

****.** Correlation is significant at the 0.05 level (1-tailed).

Hypothesis 6 was analysed with the data presented in Table 13 and it shows that a statistically significant relation ($P\text{-value} = 0.03$) exists between library policy and librarians' ICT competence on ICT-based library consortium in University library in North Central Nigeria. Since $\alpha = 0.05$ and $P\text{-value} = 0.03$, $P\text{-value} < 0.05$, therefore the null hypothesis was rejected.

Summary of Findings

Major findings of the study are summarized as follows:

- 1) The librarians are actively involved in ICT-based library consortium activities, thus, the status or state of library consortium in the study area is positive.
- 2) There is significant relationship between librarians' ICT awareness and utilization of ICT-based library consortium in the university libraries in North Central Nigeria. The H_01 which stated that there is no significant relationship between librarians' ICT awareness and utilization of ICT-based library consortium in University libraries in North Central Nigeria was rejected.
- 3) The Librarians showed positive attitude towards the utilization of ICT-based library consortium in the university libraries in North Central Nigeria. The H_02 which stated that there is no significant relationship between librarians' ICT attitude and utilization of ICT-based library consortium in University libraries in North Central Nigeria was rejected.
- 4) There is a positive relationship between librarians' ICT competence and utilization ICT-based library consortium in the university libraries in North Central Nigeria. The H_03 which stated that there is no significant relationship between librarians' ICT competence and utilization of ICT-based library consortium in University libraries in North Central Nigeria was rejected.
- 5) Positive relationship exists between library policy and librarians' ICT awareness on the utilization of ICT-based library consortium in University libraries in North Central Nigeria. The H_04 which stated that there is no significant relationship between library policy and librarians' ICT awareness on the utilization of ICT-based library consortium in University library in North Central Nigeria was rejected.
- 6) Positive relationship exists between library policy and librarians' attitude towards the utilization of ICT-based library consortium in University libraries in North Central Nigeria. The H_05 which stated that there is no significant relationship between library policy and

librarians' ICT attitude towards the utilization of ICT-based library consortium in University libraries in North Central Nigeria was rejected.

- 7) Positive relationship exists between library policy and librarians' competence on the utilization of ICT-based library consortium in University libraries in North Central Nigeria. The H_0 which stated that there is no significant relationship between library policy and librarians' ICT competency on the utilization of ICT-based library consortium in University libraries in North Central Nigeria was rejected.

CHAPTER FIVE

DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

This chapter discussed the findings of the study, conclusions, implications and recommendations. The chapter also contains limitations and suggestion for further studies.

Discussion of Findings

The discussion of findings was organized in line with major findings of the study.

- 1) **Status of library consortium activities.**
- 2) **Librarians' ICT awareness on the utilization of ICT- based library consortium.**
- 3) **Librarians' ICT attitude towards the utilization of ICT- based library consortium.**
- 4) **Librarians' ICT competence on the utilization of ICT - based library consortium.**
- 5) **Library policy and Librarians' ICT awareness on ICT- based library consortium.**
- 6) **Library policy and Librarians' attitude towards ICT - based library consortium.**
- 7) **Library policy and Librarians ICT competence for ICT - based library consortium.**

Status of Library Consortium Activities

The librarians are actively involved in ICT-based library consortium activities, thus, the status or state of library consortium in the study area is positive. The study was able to prove that librarians in the study area are actively into the utilization of ICT-based library consortium in their respective university libraries with an overall mean rating of 4.27 which is far above the mean cut off point set at 3.00. This finding of the study is in line with the argument put up by Thanuskodi (2013) when he said that digital based library consortium are springing up in India but this is slightly different from the claims of Nwalo (2008) and Rosenberg (2005) who said that library consortium is still at its infancy in many countries of the developing world such as Africa. Certainly, event have overtaken Nwalo (2008) and Rosenberg (2005) findings; Nigerian University libraries are making giant strides in the use of ICT tools to offer library services and library consortium is one of such services.

Librarians' ICT Awareness on the Utilization of ICT- Based Library Consortium

There is significant relationship between librarian's ICT awareness and utilization of ICT-based library consortium in the university libraries in North Central Nigeria. The H_0 which stated that there is no significant relationship between librarians' ICT awareness and utilization of ICT-based library consortium in University library in North Central Nigeria was rejected.

The utilization of ICT tools facilitated the emergence of new forms of electronic environment in libraries. The awareness and acceptance of the paradigm is so overwhelming among library and information science professionals to the extent that librarians and their respective libraries are effectively utilizing ICT tools to share library routine functions like acquisition and subscription with other libraries. Meanwhile, Kumar (2013 a), in line this with finding of the study, attested to the fact that Libraries through their librarian are utilizing ICT tools as an aid to jointly and cooperatively access or make acquisition of license key to electronic or online information resources (E-Books or Database).

Similarly, the study findings agreed with Khan (2016) when he affirmed that computing technology, communication technology, and mass storage technology are some areas of continuous development that reshape the way libraries access, retrieve, store, manipulate, and disseminate information to users. ICT has impacted on every sphere of academic library activity especially in the form of the library collection development strategies, library building and consortia.

Information and Communication Technology (ICT) brought unprecedented changes and transformation to academic library and information services, where conventional library and information services such as OPAC, user services, reference service, bibliographic services,

current awareness services, document delivery, interlibrary loan, audio visual services, and customer relations can be provided more efficiently and effectively using ICT.

The findings of this study are, however, contrary to Zachary (2015) who in a study identified lack of awareness, sensitization, education and training as obstacles to effective library resource sharing (Library Consortium). Conversely, our findings are in affinity with that of Samea (2015) who concluded that shareholders in education in Arab Countries are aware of the key role and impact of academic library consortium on higher education as library staff are well trained and provided with state-of-the-art ICT infrastructure.

Librarians' ICT Attitude towards the Utilization of ICT Based Library Consortium

The Librarians showed positive attitude towards the utilization of ICT-based library consortium in the university libraries in North Central Nigeria. The H_02 which stated that there is no significant relationship between librarians' ICT attitude and utilization of ICT-based library consortium in University library in North Central Nigeria was rejected.

The study was able to establish that Librarians in the study area displayed much excitement towards the utilization of ICT-based library consortium which can be referred to as positive attitude. The findings of the study somehow agreed with previous findings like Adeyinka (2009), Ramzan (2015), Adekunle, Omoba and Adeyinka (2007) where it was proved that librarians have positive attitude towards the utilization of ICT.

The finding of study indicated that librarians in the study area do utilize ICT-based library consortium because ICT has the potential to enhance librarian's productivity and the use of ICT will put an end to the stress usually associated with manual inter-library loan service.

Meanwhile, the study showed that librarians give heed to the advice of Akpan-Atata (2014) that ICT has come to stay in every aspect of our profession, therefore librarians and other information scientists should develop positive attitude towards adoption and adaptation of ICT

for effective service delivery in our academic libraries. The study showed that librarians displayed much excitement towards the utilization of ICT-based library consortium as it will enable library users to access electronic information resources from remote computer not within the four walls of the library. The study thus, agree with Adeyinka (2009), Ramzan (2010), Ubogu (2012), Ejedafiru and Oghenetega (2013) and Angeline and Swaroop (2015), as they all indicated in their various studies that librarians have positive attitude towards the use of ICT.

Librarians' ICT Competence on the Utilization of ICT - Based Library Consortium

There is a positive relationship between librarians' ICT competence and utilization of ICT-based library consortium in the university libraries in North Central Nigeria. The H_03 which stated that there is no significant relationship between librarians' ICT competence and utilization of ICT-based library consortium in University library in North Central Nigeria was rejected.

Librarians are still working towards developing the necessary ICT competence that will enable them to start up a network server for the utilization of ICT tools for library consortium. The study revealed that librarians in the study area have the competence to manage databases, to scan and retrospectively convert non-electronic information resources, to upload and download information resources, to subscribe to electronic information resources, to generate report and statistics. All these enhances librarians' utilization of ICT based Library consortium, but there are a lot of grounds to be covered in terms of ICT competence among the librarians.

This finding of the study is thus in agreement with the findings of Nwabueze & Ibeh (2016), Ojedokun & Victoria (2015), and Nkamnebe, et al (2015) but opposed Adeyoyin (2005) who argued that vast majority of librarians are not skilful in the use of ICT tools in library.

Though, whichever way, it is clear, that in no distant time librarians will not depend on external experts to troubleshoot LAN/WAN and serve as system administrators. Librarians

displayed high level competency in the area of managing both online and offline electronic databases, managing and troubleshooting LAN/WAN, scanning and retrospective conversion of non-electronic information and deploying internet and intranet connectivity.

The study affirmed APLEN's (2008) position that ICT competency of LIS professionals is a combination of skills, knowledge, and behaviours related to library technologies which are important to the success of parent institutions, personal performances and capacity building.

ICT Competency of library staff is a measure of their capacity to make appropriate use of ICT tools for information selection and acquisition, organization, and storage, retrieval, and dissemination. In reflection on that, Marshall, Taylor and Yu (2003) contend with two type of competencies for librarians: first is professional proficiency which has to do with knowledge of information resources, information technology, leadership and managerial skills and research; and secondly, competencies representing a set of skills, attitude and value that emphasize continuous learning throughout librarians' career as well as ability to cope with change.

In situating the relationship between librarians' ICT competence and the utilization of ICT based library consortium, the findings of the study established relationship between the variables in line with Adewoyin (2017) who said that competency requirement of librarians include knowledge of print and electronic information resources. There is hardly any human endeavour which the advent of ICT has not transformed, one of which is the academic library.

Library Policy and Librarians' ICT Awareness on ICT- Based Library Consortium

Positive relationship exists between library policy and librarians' ICT awareness on the utilization of ICT-based library consortium in University libraries in North Central Nigeria. The H_0 4 which stated that there is no significant relationship between library policy and librarians'

ICT awareness on the utilization of ICT-based library consortium in University library in North Central Nigeria was rejected.

Though findings of the study indicated a relationship between library policy and librarians' ICT awareness on the utilization of ICT based library consortium, the existence of library policy on ICT is however an issue. Whereas, UBD (2018) and UTAMU (2012) affirms that the purpose of ICT policy in the library is to set out procedure that should be followed to ensure a consistent and effective utilization of ICT tools in library. Policy framework is needed in the library to enumerate the rules necessary to ensure the existence of the highest levels of consistency, control and harmonious interaction with ICT technologies. The librarians averred to the fact that sponsorship to attend professional and workshop will stimulate and revolutionize ICT application in the library.

Library Policy and Librarians' Attitude towards ICT Based Library Consortium

Positive relationship exists between library policy and librarians' attitude towards the utilization of ICT-based library consortium in University libraries in North Central Nigeria. The H_05 which stated that there is no significant relationship between library policy and librarians'

ICT attitude towards the utilization of ICT-based library consortium in University library in North Central Nigeria was rejected.

Akpan-Atata (2014) observed that ICT has come to stay in every aspect of our profession. It has made impact on the profession in recent years; therefore, librarians and other information scientists should have developed positive attitude towards adoption and adaptation of ICT for effective service delivery in our academic libraries. Librarians in Nigeria should help formulate and implement ICT policies for effective management and service delivery in the new technology driven library environment. To acquire the benefits of ICT, libraries and librarian

need to enlist the full support of library authorities in our various Institutions, the Management and Governing Councils.

Library consortium, which Moghaddamand Talawar (2009) referred to as cooperation, coordination and collaboration between, and among, libraries for the purpose of sharing information resources, can only thrive when there is a policy framework that state the terms of engagement. Libraries in developing countries have been working on consortia at National, regional and international levels. However, some barriers such as poor technological and communication infrastructure, inadequate finances, culture and context and attitudes towards consortia were perceived to be responsible for the state of library consortium, until this study identified lack of library ICT policy as one of the challenges that limit consortia activities in developing countries.

Library Policy and Librarians ICT Competence for ICT- Based Library Consortium

Positive relationship exists between library policy and librarians' competence on the utilization of ICT-based library consortium in University libraries in North Central Nigeria. The H_06 which stated that there is no significant relationship between library policy and librarians' ICT competency on the utilization of ICT-based library consortium in University library in North Central Nigeria was rejected. Moreover, the Pearson correlation was positively low. Meanwhile, Islam and Islam (2007) observed that librarians must develop the competencies to carry out effective searches on the use of ICT tools. And Akparobore (2013) opined that the unavailability of high levels skill labour force is remaining big problem that need to be confronted by all stakeholders in university education, particularly the government, the private sector, University Governing Councils and international donor organizations if academic libraries are to move with time.

The finding of the study is similar to that of Adeyinka (2009) where the author examined the attitudinal correlates of some selected Nigerian librarians towards the use and application of ICT in various libraries. The analysis of results show that all the four out of the five variables; viz: age, gender, educational qualifications and knowledge of ICT significantly correlate with librarian attitude towards ICT.

The policy framework in University libraries need to be strengthened especially, the aspect of the policy that deal with training of librarians because the frequent changes in ICT tools tend to render previous competences invalid or obsolete the moment there is change or upgrade in such tools.

Implications of Findings

The study has confirmed similar previous studies, similar in the sense that no previous studies have been conducted exactly on ‘Librarians’ ICT awareness, attitude, and competence as correlates for the utilization of library consortium in North Central Nigeria. The study has also confirmed the status and the relationship between the independent and dependent variables of the study. Therefore, the University management and University librarians in the study area and in the entire country should adequately prepare for the following implications:

The university management through the university librarians are directly responsible for the deployment and utilization of ICT tools in university library. They must ensure that ICT friendly environment exist in the libraries to stimulate the correlations because all the variables in the study correlated with each other and the entire null hypothesis tested were rejected.

Librarians’ ICT awareness correlated with the utilization of ICT-based library consortium which means the variables tend to increase together. The implication is that greater ICT awareness among librarians is associated with greater utilization of ICT based library consortium.

Librarians' attitude correlated with the utilization of library consortium which implies that the variables are positively correlated and the variables tend to increase together. The implication is that, positive attitude is associated with positive utilization of ICT based library consortium.

Librarians' ICT competence correlated with the utilization of library consortium, with this implication, the variables tend to increase together i.e., increase in competency is associated with increase in utilization.

The variables are positively correlated, the variables tend to increase together, and change in library policy is associated with change in librarians' ICT awareness on the utilization of ICT based library consortium.

The variables are positively correlated, the variables tend to increase together i.e., change in library policy is associated with change in librarians' attitude towards the utilization of ICT based library consortium.

The variables are positively correlated, the variables tend to increase together, i.e., change in library policy is associated with change in librarians' ICT competence for the utilization of ICT based library consortium.

The implication of the study for the academic librarians is that all the variables correlated with each other, meaning that an increase in one is direct increase in the other; they should brace up increase in their level of professionalism.

Conclusion

Librarians in the study area have awareness on existence of ICT-based library consortium in the university libraries and it was statistically proved that there is significant and very strong positive relationship between librarians' ICT awareness and the utilization of ICT-based library consortium in university libraries in North Central Nigeria.

The librarians have strong positive attitude towards the utilization of ICT based library consortium. The positive attitude was predicated on librarians' enthusiasm towards the utilization of ICT tools for library consortia activities in study area. The relationship between librarians' ICT competence is moderately positive and there is significant relationship between librarians' ICT competence and the utilization of ICT-based library consortium in University libraries in North Central Nigeria. The librarians showed their competence in their responses by affirming that they have the skill required in managing ICT based library consortium.

Finally, the relationship between library policy and librarians' ICT awareness on the utilization of ICT-based library consortium was positive and statistically significant. This is similar to the relationship between library policy and librarians' attitude towards the utilization of ICT-based library consortium but not so with the relationship between library policy and librarians' ICT competence that was only positive and not statistically significant.

Recommendations

The following recommendations arose from the findings of the study:

- 1) The University Library Management should create a department or unit in the University library to handle issues that will promote and sustain librarians' ICT' awareness and utilization of ICT based library consortium.
- 2) The University Library Management should promote activities that can enhance librarians' ICT skill and competence on the utilization of ICT based library consortium.
- 3) The University Library Management should promote activities that would always motivate and encourage librarians to sustain positive attitude toward the utilization of ICT based library consortium.

- 4) The University Library Management should formulate policies which will enhance librarians' ICT awareness, attitude and competence on the utilization of ICT based library consortium.

Suggestions for Further Studies

The following are suggestions for further research:

- 1) The study should be replicated in other Geo Political Zones of the country.
- 2) Study should be carried out under the same topic to cover other categories of library staff.

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Appendix A

List of Federal and State University Libraries and population of Librarians in North Central Nigeria

S/N	Name of University	Location	State	Population of Librarians
1	Federal University of Agriculture	Markudi	Benue	22
2	Benue State University	Markudi	Benue	15
3	Federal University	Lokoja	Kogi	11
4	Kogi State University	Anyigba	Kogi	9
5	University of Ilorin	Ilorin	Kwara	26
6	Kwara State University	Ilorin	Kwara	7
7	Federal University	Lafiya	Nasarawa	16

8	Nasarawa State University	Keffi	Nasarawa	13
9	Federal University of Technology	Minna	Niger	33
10	IBB University	Lapai	Niger	16
11	University of Jos	Jos	Plateau	35
12	Plateau State University	Jos	Plateau	7
	TOTAL			210

Source: fieldwork 2017

Appendix B

Transmittal letter

Department of Library and Information Science,
Faculty of Education
NnamdiAzikiwe University, Awka.

Dear Respondents,

Letter of Introduction

I am a postgraduate student of the above named institution conducting a research titled “Librarians’ ICT Awareness, Attitude and Competence as Correlate of Library Consortium Utilization in University Libraries in North Central Nigeria”.

The questionnaire aims at soliciting information from the respondents on the Librarians' ICT Awareness, Attitude and Competence as Correlate of Library Consortium Utilization in University Libraries in North Central Nigeria.

Please kindly respond as accurately as possible to the items in this questionnaire as I assure you that your responses are going to be used for academic purposes only and will be treated confidentially.

Thank you.

Yours truly,

Aliyu Muhammed Rabiu

Appendix C Questionnaire

Librarians' ICT Awareness, Attitude and Competence as Correlates of Library Consortium Utilization in University Libraries in North Central Nigeria

The questionnaire titled (LIAACULQ) is made up of five clusters A-E, each cluster will solicit answers from the respondents on the research questions.

INSTRUCTION: please read carefully, tick (✓) appropriately all the items in the questionnaire.(SA, A, N, D and SD) Strongly Agree=SA, Agree=A, Undecided =U, Disagree=D, Strongly Disagree=SD)for all the close ended items.

Cluster A: The status of ICT-based library consortium in University libraries in North Central Nigeria.

	The status of ICT-based library consortium in my library	SA	A	U	D	SD
1	My library subscribe to Nigeria Universities commission library consortium program powered library consortium					

2	My library is involve in library collaborative program among other libraries					
3	My library is involve in the utilization of online databases not being paid for by my library					
4	My library is benefiting from using the resources of other libraries					
5	My library is in the process of joining International Coalition for Library Consortium					
6	My library has the needed ICT tools require to participate in library consortium					
7	My library participate in library consortium because there are enough information resource to share in a library consortium					
8	My library participate in more than one library consortium program					
9	My library cannot ceased to be a member of library consortium					
10	My library is financial member of Nigerian Universities library consortium					

CLUSTER B: The relationship between librarians' ICT awareness and utilization of ICT-based library consortium in University Libraries in North Central Nigeria.

	ICT awareness on the utilization of ICT-based library consortium in University Libraries	SA	A	U	D	SD
11	Library ICT tools are utilized to share routine functions like acquisition, subscription and collection development with other libraries					
12	With the aid of ICT tools, Library users from one library can access electronic information resources held by other library					
13	With the aid of ICT tools, libraries can jointly make cooperative acquisition of license key to electronic or online information resources (E-Books or Database)					
14	Libraries can mutually come together to share their service responsibility among themselves with the aid of ICT tools					
15	Through the Fully multimedia computer systems and structured network, libraries can sign Memorandum of understanding to access each other's information resources					

16	ICT tools empower Libraries to offer enhance access to ‘up to date’ electronic information resources					
17	ICT tools empower libraries to offer access to electronic information resources not only stock in one library but among libraries across the globe					
18	With the establishment of ICT based library consortium, one library users can access electronic information resources from remote computer not within the four walls of his library					
19	With the establishment of ICT based library consortium, libraries can jointly own and operate one website to offer services to their respective clients irrespective of their numbers and locations					
20	Nigerian Universities Libraries Consortium was established by Committee of University Librarians of Nigerian Universities (CULNU) and my library is member of the consortium					

CLUSTER C: The relationship between librarians’ attitude and utilization of ICT based library consortium in University Libraries in North Central Nigeria.

	The following statements describe my attitude towards the utilization of ICT-based library consortium in University Libraries	SA	A	U	D	SD
21	Librarians are afraid of losing your job due to the Use of ICT tools for the establishment of Library consortium in your library					
22	Librarians are confidence with the utilization of ICT tools for the establishment of Library consortium as it will put off the stress usually associated with manual inter- library loan service					
23	Librarians are sure the utilization of ICT tools for establishment of Library consortium will bring out the potential of the librarian and enhances their productivity					
24	Librarians agree that the use of ICT tools for the establishment of Library consortium in library will help the library to cope with the high cost subscriptions to information databases					

25	Participating in ICT-based library consortium will not impede the independent of the library					
26	ICT tools enable effective ways of sharing information resources among libraries					
27	Nonchalant attitude of librarian to the use of ICT tools is capable taking the library backward					
28	Librarians believe the use of ICT tools for the establishment of library consortium will provide library with up-to-date Information					
29	Librarians who work with ICT tools for the establishment of library consortium are highly professional and productive					
30	The use of ICT tools for the establishment of Library consortium will encourage the library users to patronize the library more due to the satisfaction they stand to derive					

CLUSTER D: The relationship between librarians' ICT competence and utilization of ICT-based library consortium in University Libraries in North Central Nigeria.

	The following ICT competence to utilize ICT-based library consortium in University Libraries	SA	A	U	D	SD
31	Setting up a network server for library network for the establishment of Library consortium					
32	Managing both online and offline electronic databases for the establishment of Library consortium					
33	Uploading and downloading of information resources in library server for the establishment of Library consortium					
34	Subscribing to electronic information resources and generating report and statistic of usage					

35	Managing and troubleshooting LAN/WAN connectivity for library consortium					
36	Setting up a network server and establish communications link among the work stations within the networks for the establishment library consortium					
37	Serve as system administrator for ICT based library consortium					
38	Ability to conduct scanning and retrospective conversion of non-electronic information					
39	Skilful in Managing E-book, E-journal, online information resources and other databases in library consortium					
40	Skilful in Managing internet and intranet connectivity for the establishment of library consortium					

CLUSTER E: The relationship between Library policy and Librarians' ICT awareness on ICT-based library consortium in University Libraries in North Central Nigeria.

	The following is the relationship that exists between library policy and Librarians' ICT awareness on the utilization of ICT-based library consortium in University Libraries	SA	A	U	D	SD
41	Policy directive in library positively influence librarians' ICT awareness					
42	Some policy issues in library do not encourage librarians to utilize ICT based consortium					
43	University Librarian leadership style influence librarians' ICT awareness					

44	Library seminar programme broadens librarians' ICT awareness					
45	Library policy on appointment and promotion encourage Librarians to develop interest in the use of ICT for library consortium					
46	Library welfare programme positively influence librarians' ICT awareness towards the use of ICT for library consortium					
47	Appraisal and evaluation method in the library promote librarians' ICT awareness towards the use of ICT based library consortium					
48	In-house training policy in library broaden librarians' ICT awareness					
49	Bureaucracy system in the library promote librarians' ICT awareness towards the use of ICT for library consortium					
50	Staff development policy in the library enhances librarians' ICT awareness towards the use of ICT based library consortium					

CLUSTER F: The relationship between Library policy and Librarians' attitude towards

ICT-based library consortium in University Libraries in North Central Nigeria.

	The following are the relationship between library policy and Librarians' attitude towards the utilization of ICT-based library consortium in University Libraries	SA	A	U	D	SD
51	Some policy directives in library did not positively influence librarians' attitude towards the utilization of ICT based consortium					
52	Appointment and promotion policy in the library discourage librarians from engaging in the utilization of ICT based library consortium					

53	Librarians are not satisfy with Library policy directing librarians to take responsibility and liability for any damage resulting from the use of ICT tools in the library					
54	Librarians will not engage in the use ICT-based library consortium that threaten their Job security					
55	Staff development programme in the library influence librarians disposition towards the use of ICT					
56	Library collection development policy did not encourage librarians to support the utilization of ICT based Library consortium					
57	Participation in ICT related decision making process encourage Librarian to support the utilization of ICT based Library consortium					
58	Some policy issues in library do not promote the utilization of ICT based consortium					
59	Prohibition of Librarians from using library ICT tools for personal work discourage librarians					
60	Lack of library in-house ICT training programme discourage librarians from utilization of ICT based library consortium					

CLUSTER G: The relationship between Library policy and Librarians' ICT competence on ICT-based library consortium in University Libraries in North Central Nigeria.

	The following are the relationship between library policy and Librarians' competence on the utilization of ICT-based library consortium in University Libraries	SA	A	U	D	SD
61	Policy directive in library positively influence librarians to acquire of ICT skills					
62	Staff development programme enhances librarians' ICT competence					

63	Participation in ICT related decision-making process in the library increases Librarians' ICT competence					
64	Library in-house ICT skills acquisition, training and re-training programme enhances librarians' ICT competence					
65	Prohibition of librarians from using library ICT tools enhances their skills					
66	Making ICT skill an important condition for appointment and promotion pushes librarians to acquire ICT skills					
67	library appraisal system positively influence librarians' quest for ICT skills					
68	Library welfare policy encourage librarians to seek for improvement in their ICT skills					
69	Availability of ICT tools in library encourage Librarian to seek for improvement in their ICT skill and competence					
70	The fear of not being relevant at work place pushes librarians to acquire ICT skills					

Thank you!

Appendix D

Computation of the reliability test of the study using SPSS (Version 20) Cronbach's Alpha Statistics

Cluster by cluster reliability and overall reliability (cluster a to f)

Scale: All Variables

Reliability

/VARIABLES=VAR00001 VAR00002 VAR00003 VAR00004 VAR00005 VAR00006
VAR00007 VAR00008 VAR00009 VAR00010

/SCALE('cluster A') ALL

/MODEL=ALPHA.

Reliability

Scale: cluster A

Case Processing Summary

		N	%
Cases	Valid	10	100.0
	Excluded ^a	0	.0
	Total	10	100.0

a. Listwise deletion based on all
variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.404	10

Reliability

/VARIABLES=VAR00011 VAR00012 VAR00013 VAR00014 VAR00015 VAR00016
VAR00017 VAR00018 VAR00019 VAR00020

/SCALE('cluster B') ALL

/MODEL=ALPHA.

Reliability

Scale: cluster B

Case Processing Summary

		N	%
	Valid	10	100.0
Cases	Excluded ^a	0	.0
	Total	10	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.643	10

Reliability

/VARIABLES=VAR00021 VAR00022 VAR00023 VAR00024 VAR00025 VAR00026
VAR00027 VAR00028 VAR00029 VAR00030

/SCALE('cluster C') ALL

/MODEL=ALPHA.

Reliability

Scale: cluster C

Case Processing Summary

	N	%
Valid	10	100.0
Cases Excluded ^a	0	.0
Total	10	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.749	10

Reliability

```
/VARIABLES=VAR00031 VAR00032 VAR00033 VAR00034 VAR00035 VAR00036
VAR00037 VAR00038 VAR00039 VAR00040
```

```
/SCALE('cluster D') ALL
```

```
/MODEL=ALPHA.
```

Reliability

Scale: cluster D

Case Processing Summary

	N	%
--	---	---

	Valid	10	100.0
Cases	Excluded ^a	0	.0
	Total	10	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.786	10

Reliability

```
/VARIABLES=VAR00041 VAR00042 VAR00043 VAR00044 VAR00045 VAR00046
VAR00047 VAR00048 VAR00049 VAR00050
```

```
/SCALE('cluster E') ALL
```

```
/MODEL=ALPHA.
```

Reliability

Scale: cluster E

Case Processing Summary

	N	%
Cases		
Valid	10	100.0
Excluded ^a	0	.0

Total	10	100.0
-------	----	-------

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.800	10

Reliability

```
/VARIABLES=VAR00051 VAR00052 VAR00053 VAR00054 VAR00055 VAR00056
VAR00057 VAR00058 VAR00059 VAR00060
```

```
/SCALE('cluster F') ALL
```

```
/MODEL=ALPHA.
```

Reliability

Scale: cluster F

Case Processing Summary

	N	%
Valid	10	100.0
Cases Excluded ^a	0	.0
Total	10	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.841	10

Reliability

```
/VARIABLES=VAR00001 VAR00002 VAR00003 VAR00004 VAR00005 VAR00006
VAR00007 VAR00008 VAR00009 VAR00010 VAR00011 VAR00012 VAR00013 VAR00014
VAR00015 VAR00016 VAR00017 VAR00018 VAR00019 VAR00020 VAR00021 VAR00022
VAR00023 VAR00024 VAR00025 VAR00026 VAR00027VAR00028 VAR00029 VAR00030
VAR00031 VAR00032 VAR00033 VAR00034 VAR00035 VAR00036 VAR00037 VAR00038
VAR00039 VAR00040 VAR00041 VAR00042 VAR00043 VAR00044 VAR00045 VAR00046
VAR00047 VAR00048 VAR00049 VAR00050 VAR00051 VAR00052 VAR00053 VAR00054
VAR00055
```

```
VAR00056 VAR00057 VAR00058 VAR00059 VAR00060
```

```
/SCALE('cluster A- F') ALL
```

```
/MODEL=ALPHA.
```

Reliability

Scale: cluster A- F

Case Processing Summary

	N	%
Cases		
Valid	10	100.0
Excluded ^a	0	.0

Total	10	100.0
-------	----	-------

a. Listwise deletion based
on all variables in the
procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.939	60

Appendix E:

Computation of Pearson correlation and data set (SPSS, VERSION 20)

```
GET FILE='C:\Users\NURSE H\Documents\COPY OF PHD WORK.sav'.DATASET NAME
DataSet1 WINDOW=FRONT.CORRELATIONS /VARIABLES=LIBRARYCONSORTIUM
AWARENESS ATTITUDE COMPETENCE AWARENESSPOLICY ATTITUDEPOLICY
COMPETENCEPOLICY
```

/PRINT=TWOTAIL NOSIG /STATISTICS DESCRIPTIVES /MISSING=PAIRWISE.

Correlations

Notes

Output Created		17-MAR-2019 16:52:50
Comments		
Input	Data	C:\Users\NURSE H\Documents\COPY OF PHD WORK.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
Syntax		<p>CORRELATIONS</p> <p>/VARIABLES=LIBRARYCONSORTIUM AWARENESS ATTITUDE COMPETENCE AWARENESSPOLICY ATTITUDEPOLICY COMPETENCEPOLICY</p> <p>/PRINT=TWOTAIL NOSIG</p> <p>/STATISTICS DESCRIPTIVES</p> <p>/MISSING=PAIRWISE.</p>
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.08

ATTITUDE	Pearson Correlation	.484**	.720**	1	.408**	.310**	.249**	-.006
	Sig. (1-tailed)	.000	.000		.000	.000	.002	.940
	N	149	149	149	149	149	149	149
COMPETENCE	Pearson Correlation	.321**	.356**	.408**	1	.241**	.271**	.023
	Sig. (1-tailed)	.000	.000	.000		.003	.001	.782
	N	149	149	149	149	149	149	149
AWARNESS POLICY	Pearson Correlation	.677**	.434**	.310**	.241**	1	.275**	.268**
	Sig. (1-tailed)	.000	.000	.000	.003		.001	.001
	N	149	149	149	149	149	149	149
ATTITUDE POLICY	Pearson Correlation	.260**	.239**	.249**	.271**	.275**	1	.554**
	Sig. (1-tailed)	.001	.003	.002	.001	.001		.000
	N	149	149	149	149	149	149	149
COMPETENCE POLICY	Pearson Correlation	.152	.042	-.006	.023	.268**	.554**	1
	Sig. (1-tailed)	.064	.613	.940	.782	.001	.000	
	N	149	149	149	149	149	149	149

** . Correlation is significant at the 0.05 level (1-tailed).

	RAW DATA SET FROM SPSS						
RESPONDENTS	RQ1	RQ2	RQ3	RQ4	RQ5	RQ6	RQ7
1	44.00	47.00	46.00	40.00	44.00	47.00	45.00
2	43.00	47.00	45.00	35.00	43.00	38.00	43.00
3	46.00	46.00	47.00	43.00	46.00	49.00	46.00
4	42.00	46.00	46.00	37.00	42.00	44.00	46.00
5	46.00	45.00	49.00	46.00	46.00	46.00	43.00
6	44.00	45.00	45.00	46.00	44.00	38.00	42.00
7	45.00	46.00	48.00	41.00	45.00	43.00	42.00
8	45.00	45.00	42.00	43.00	45.00	43.00	45.00
9	42.00	50.00	48.00	37.00	42.00	40.00	42.00
10	42.00	46.00	50.00	41.00	42.00	39.00	45.00
11	41.00	49.00	47.00	39.00	41.00	35.00	42.00
12	41.00	47.00	48.00	42.00	41.00	43.00	45.00
13	43.00	47.00	46.00	38.00	43.00	47.00	44.00
14	44.00	46.00	46.00	43.00	44.00	41.00	38.00
15	41.00	47.00	48.00	36.00	41.00	44.00	43.00
16	42.00	42.00	40.00	43.00	42.00	47.00	46.00
17	43.00	47.00	49.00	43.00	43.00	45.00	46.00
18	42.00	47.00	44.00	40.00	42.00	37.00	44.00
19	46.00	46.00	48.00	39.00	46.00	44.00	43.00
20	43.00	46.00	48.00	31.00	43.00	33.00	42.00
21	42.00	47.00	45.00	42.00	42.00	37.00	42.00
22	45.00	47.00	44.00	39.00	38.00	42.00	45.00
23	47.00	49.00	45.00	40.00	39.00	43.00	43.00
24	41.00	47.00	49.00	35.00	41.00	42.00	44.00
25	45.00	46.00	48.00	39.00	38.00	39.00	39.00
26	46.00	47.00	45.00	33.00	30.00	33.00	37.00
27	46.00	49.00	48.00	38.00	46.00	47.00	43.00

28	43.00	45.00	42.00	42.00	43.00	43.00	41.00
29	43.00	49.00	46.00	41.00	43.00	47.00	45.00
30	41.00	48.00	49.00	40.00	41.00	46.00	42.00
31	42.00	47.00	44.00	38.00	42.00	46.00	47.00
32	45.00	45.00	48.00	36.00	36.00	41.00	44.00
33	42.00	46.00	44.00	39.00	42.00	47.00	46.00
34	41.00	46.00	43.00	41.00	41.00	46.00	44.00
35	41.00	45.00	48.00	41.00	41.00	48.00	46.00
36	41.00	47.00	44.00	35.00	41.00	48.00	46.00
37	41.00	47.00	44.00	37.00	41.00	43.00	45.00
38	47.00	47.00	49.00	43.00	39.00	50.00	47.00
39	40.00	47.00	45.00	38.00	40.00	44.00	46.00
40	41.00	46.00	45.00	31.00	41.00	44.00	47.00
41	42.00	47.00	46.00	42.00	42.00	41.00	42.00
42	45.00	47.00	46.00	38.00	45.00	49.00	45.00
43	42.00	45.00	38.00	43.00	42.00	50.00	48.00
88	42.00	46.00	47.00	32.00	42.00	49.00	49.00
89	40.00	46.00	45.00	34.00	40.00	50.00	48.00
90	40.00	46.00	45.00	34.00	40.00	49.00	48.00
91	45.00	45.00	46.00	44.00	38.00	41.00	41.00
92	41.00	47.00	44.00	42.00	41.00	49.00	48.00
93	40.00	46.00	43.00	45.00	40.00	48.00	45.00
94	45.00	47.00	46.00	46.00	45.00	49.00	46.00
95	42.00	46.00	47.00	43.00	42.00	49.00	47.00
96	46.00	48.00	49.00	42.00	39.00	31.00	43.00
97	43.00	47.00	45.00	33.00	43.00	48.00	47.00
98	40.00	47.00	44.00	43.00	40.00	44.00	44.00
99	42.00	46.00	47.00	40.00	42.00	50.00	43.00
100	45.00	47.00	43.00	34.00	32.00	47.00	46.00
101	42.00	47.00	45.00	40.00	42.00	49.00	47.00
102	41.00	46.00	41.00	41.00	41.00	43.00	45.00
103	45.00	45.00	44.00	44.00	35.00	49.00	48.00

104	40.00	42.00	46.00	34.00	40.00	45.00	45.00
105	43.00	45.00	47.00	36.00	43.00	39.00	39.00
106	38.00	48.00	46.00	36.00	38.00	49.00	46.00
107	42.00	46.00	46.00	37.00	42.00	48.00	47.00
108	45.00	47.00	45.00	37.00	38.00	43.00	43.00
109	45.00	46.00	46.00	34.00	36.00	44.00	43.00
110	45.00	45.00	44.00	43.00	39.00	45.00	38.00
111	42.00	45.00	45.00	30.00	42.00	45.00	46.00
112	47.00	45.00	46.00	42.00	37.00	46.00	48.00
113	45.00	44.00	43.00	33.00	45.00	43.00	46.00
114	44.00	46.00	42.00	34.00	44.00	46.00	46.00
115	42.00	47.00	42.00	33.00	42.00	46.00	46.00
116	46.00	46.00	46.00	34.00	46.00	43.00	46.00
117	43.00	48.00	44.00	33.00	43.00	49.00	47.00
118	41.00	47.00	44.00	39.00	41.00	45.00	43.00
119	44.00	45.00	46.00	38.00	44.00	45.00	47.00
120	45.00	48.00	46.00	42.00	45.00	47.00	41.00
121	43.00	46.00	43.00	37.00	43.00	46.00	45.00
122	40.00	44.00	47.00	39.00	40.00	46.00	46.00
123	40.00	47.00	46.00	37.00	40.00	47.00	41.00
124	45.00	45.00	48.00	36.00	37.00	45.00	45.00
125	43.00	45.00	45.00	43.00	43.00	45.00	45.00
126	41.00	44.00	44.00	36.00	41.00	44.00	47.00
127	43.00	44.00	47.00	44.00	43.00	45.00	45.00
128	48.00	44.00	44.00	39.00	48.00	42.00	45.00
129	43.00	46.00	46.00	39.00	43.00	49.00	47.00
130	41.00	44.00	45.00	45.00	41.00	44.00	43.00
131	41.00	45.00	44.00	37.00	41.00	42.00	42.00
44	39.00	46.00	45.00	37.00	39.00	41.00	41.00
45	38.00	45.00	43.00	37.00	38.00	41.00	43.00
46	44.00	46.00	44.00	36.00	44.00	44.00	47.00
47	42.00	45.00	42.00	33.00	42.00	47.00	46.00

48	44.00	44.00	45.00	41.00	44.00	45.00	47.00
49	37.00	45.00	41.00	36.00	37.00	29.00	40.00
50	42.00	39.00	44.00	43.00	42.00	50.00	45.00
51	42.00	43.00	40.00	39.00	42.00	44.00	46.00
52	44.00	43.00	46.00	45.00	44.00	46.00	46.00
53	38.00	43.00	47.00	33.00	38.00	46.00	45.00
54	44.00	45.00	43.00	43.00	44.00	41.00	44.00
55	32.00	43.00	45.00	34.00	32.00	27.00	38.00
56	40.00	43.00	42.00	37.00	40.00	45.00	47.00
57	44.00	47.00	45.00	41.00	44.00	39.00	45.00
58	41.00	45.00	44.00	39.00	41.00	40.00	46.00
59	45.00	42.00	44.00	35.00	45.00	45.00	47.00
60	42.00	41.00	45.00	32.00	42.00	41.00	45.00
61	41.00	41.00	43.00	36.00	41.00	43.00	44.00
62	41.00	38.00	43.00	39.00	41.00	40.00	43.00
63	42.00	41.00	43.00	38.00	42.00	43.00	46.00
64	44.00	44.00	40.00	35.00	44.00	42.00	47.00
65	38.00	41.00	43.00	39.00	38.00	39.00	44.00
66	37.00	44.00	45.00	27.00	37.00	42.00	46.00
67	40.00	41.00	48.00	39.00	40.00	40.00	47.00
68	41.00	41.00	41.00	35.00	41.00	37.00	42.00
69	43.00	42.00	43.00	35.00	43.00	45.00	49.00
70	42.00	44.00	39.00	39.00	42.00	38.00	45.00
71	41.00	43.00	45.00	37.00	41.00	39.00	48.00
72	42.00	45.00	40.00	32.00	42.00	37.00	45.00
73	37.00	44.00	38.00	39.00	37.00	36.00	44.00
74	41.00	42.00	42.00	41.00	41.00	38.00	45.00
75	42.00	43.00	42.00	40.00	42.00	38.00	44.00
76	43.00	42.00	33.00	28.00	43.00	43.00	46.00
77	42.00	41.00	39.00	30.00	42.00	42.00	44.00
78	45.00	42.00	40.00	40.00	45.00	42.00	47.00
79	44.00	36.00	38.00	37.00	44.00	37.00	48.00

80	42.00	41.00	39.00	27.00	42.00	38.00	43.00
81	40.00	38.00	42.00	30.00	40.00	35.00	42.00
82	40.00	42.00	44.00	24.00	40.00	38.00	42.00
83	41.00	42.00	38.00	22.00	41.00	33.00	41.00
84	41.00	41.00	35.00	32.00	41.00	37.00	46.00
85	38.00	41.00	34.00	36.00	38.00	39.00	44.00
86	42.00	41.00	35.00	37.00	42.00	40.00	46.00
87	38.00	43.00	37.00	29.00	38.00	40.00	45.00
132	40.00	42.00	40.00	35.00	40.00	39.00	40.00
133	44.00	41.00	33.00	26.00	44.00	42.00	42.00
134	43.00	41.00	40.00	37.00	43.00	44.00	46.00
135	46.00	40.00	42.00	35.00	46.00	45.00	47.00
136	47.00	41.00	42.00	35.00	47.00	46.00	48.00
137	45.00	37.00	37.00	35.00	45.00	45.00	45.00
138	40.00	38.00	37.00	35.00	40.00	43.00	46.00
139	40.00	38.00	41.00	35.00	40.00	42.00	41.00
140	36.00	38.00	36.00	34.00	36.00	40.00	44.00
141	42.00	34.00	39.00	31.00	42.00	40.00	46.00
142	34.00	34.00	29.00	37.00	34.00	35.00	41.00
143	32.00	33.00	40.00	35.00	32.00	40.00	42.00
144	38.00	33.00	37.00	38.00	38.00	40.00	44.00
145	37.00	31.00	36.00	32.00	37.00	45.00	46.00
146	26.00	27.00	30.00	33.00	26.00	44.00	46.00
147	34.00	27.00	34.00	32.00	34.00	38.00	39.00
148	32.00	27.00	30.00	31.00	32.00	44.00	44.00
149	29.00	25.00	38.00	31.00	29.00	39.00	43.00

Appendix F:

Validates Comments