CHAPTER ONE

INTRODUCTION

Background to the Study

University education is undoubtedly a critical factor in the development of any nation. In recognition of this, many nations have invested not just in physical infrastructure but also in human resources that work in the universities. One area of investment in higher education that has received attention in the past decade is the investment on digital library resources. The uses of these digital library resources by lecturers facilitate teaching, learning and research. "Understandably, lecturers as facilitators of teaching and learning in the university have been making use of information resources to improve the quality of their services (Tiemo, 2017)". Several factors have been linked to the effective use of information resources, particularly, digital library resources by lecturers. Critical among these factors is their level of information literacy.

Information literacy is seen as a key to effective access and use of information, especially digital information in the 21st century. The recognition of the importance of information in the 21st century is growing across all disciplines and organizations (Sadioglu, Ipek & Derman, 2009). This has led to the creation of an information society where the demand and use of information is increasing. Thus, information is a key factor which serves as a basis for adequate and effective teaching, learning and research. Popoola (2006) defined information from the holistic point of view as facts, ideas, messages, opinions, truth, symbols, signals, images, databases, sounds and processed data capable of improving the knowledge state of a user on a random phenomenon. Ojedokun (2007) described information

more concretely as statements of facts, figures, ideas and creative works of the human intellects, which are by way of reasoning interrelated and have been communicated, recorded, published or distributed formally or informally in any format. Aina (2013) also defined information as accumulation of knowledge by human beings in all areas of endeavor that is used to solve problems and reduce uncertainty. The importance of information can't be over emphasized. Information helps in planning, decision making, reduces uncertainty amongst others. In this light, libraries as an integral part of the university system that render assistance to users in the exploitation of information, have been investing in modern tools to enhance access and use of information in this digital age.

Furthermore, universities recently have experienced tremendous change and adaptation of current developments in Information and Communication Technology (ICT) for their library services in information generation and dissemination, which has transformed libraries to information centers. Consequently, the application of ICTs in information generation, storage, access and retrieval process has resulted in massive increase of information available in digital format due to information explosion. Information explosion has resulted to the problem of information overload. Adeleke and Emeahara (2016) stated that "to gain access and use these vast resources effectively, information users must learn to overcome information anxiety and as well explore the available information to enable them interpret and utilize information for rational decision making". University libraries globally have adopted digital networking for their information service delivery which has provided a platform for lecturers to maximize the opportunity of downloading and uploading research output in the form of books, journals, dissertation amongst others from digital libraries, thereby making information sources readily available.

Digital libraries (DL) have been defined by several scholars. Ogunsola (2011) defined digital libraries as collection of library resources in electronic/digital format at various

locations, which can be accessed and used with great ease using computer information technology for the purpose of teaching, study, research, learning, leisure and decision making. Digital libraries emerged with an original idea for easy, global, fingertip access to and retrieval of information which today has continuously developed with the advancement in Information and Communication Technology (ICT). There is clearly no doubt that digital libraries have transformed the availability, accessibility and use of information by lecturers due to the fact that they can easily retrieve needed information from digital library resources.

Digital library resources are information sources in digital format accessed electronically such as; CD-ROM, databases, e-books, e-journals and so on. Digital library resources may be "born-digital" or "digitized" (Islam, 2013). Digital library resources are important sources of information that augment the printed resources in libraries and some advantages of digital library resources are: quick information access and retrieval, easy and global access to information, current and reliable information, knowledge sharing, electronic learning, fast and wider information dissemination amongst others . Furthermore, there is a growing use of digital library resources (DLRs), and effective utilization of DLRs as suggested by Simon and Ogom (2015) depend largely on some variables like access and retrieval skills. However, the extent of utilization of digital library resources can be influenced by information literacy especially in accessing search engines and databases.

Information literacy centre on understanding and usage of a set of skill or competence for suitable information use. " Information literacy is the ability to know when information is needed, to be able to find the information, to evaluate the information that has been found; which include technological (ICT) skills that allow you to access and use these information sources" (Bothma, Cosijn, Fourie & Penzhorn, 2014). Notably, Boekhorst (2003) summaries the information literacy description which has been presented over many years into three concepts as:

> The Information and Communication Technology (ICT) concepts: information literacy refers to the competence to use ICT to retrieve and disseminate information; The information resources concept: Information literacy refers to the competence to find and use information independently or with the aid of intermediaries; The information process concept: this concept includes both ICT and information; the information resources concept and persons are considered as information systems that retrieve, evaluate, process and disseminate information to make decisions to survive for self-actualization and development. (p. 3)

Interestingly, Lupton, Glanville, Mcdonald and Selzer (2004); Standing Conference of National and University Libraries, (SCONUL, 2011), Naik and Padmini (2014) presented information literacy to include library research skills, Information Communication Technology literacy Skills, media literacy, academic literacy and information skills. Similarly, Okon, Etuk and Akpan (2014) opined that information literacy is related to ICT skills with broader implications for the individual, the education system and society. On this note, Igwe and Nworu (2018) asserted that, "with the emergence and sophisticated development of ICTs and other digital technologies, concepts such as computer literacy, digital literacy, media literacy and the like continue to surface. Further, the literacies combined together led to holistic one tagged 'meta-literacy', which is what information literacy represents".

Thus, these presents information literacy as a whole element formed by combining several literacies and skills to access, evaluate the information found, use and apply information from digital resources for solving information related problems and to make informed decisions. Sequel to this, a person who possesses these abilities is termed information literate because they have the required information literacy skills for navigating the complex world of information. It is necessary for lecturers to possess information literacy

skills to sieve from large quantity of digital library resources to make use of the most appropriate resources.

Information literacy skills are certain skills required for a person to communicate with information via utilization of information resources. Uzuegbu (2014) rightly defined information literacy skills as "the ability of an individual to access, evaluate, organize and use information from a variety of sources". In understanding the concept of "information literacy skills" many standards have been developed and endorsed such as: Association of College & Research Libraries (ACRL), American Library Association (ALA), International Federation of Library Association (IFLA), American Association of School Librarians (AASL) and Association for Educational Communications Technology (AECT). However for this study, ALA standard was adopted.

According to ALA (2000), "an information literate person is someone who recognizes when information is needed, have the ability to locate, evaluate and use effectively the needed information". The key information literacy skills are therefore: ability to identify the extent of information need, ability to access information, ability to evaluate information, ability to use information effectively and ability to apply legal, ethical and socio- economic issues related to information access and use".

" In determining the extent of information need, an information literate person is able to: identify the information needed, know the various types of information resources, understands the benefits of acquiring information and know the extent of the information he needs" (ALA, 2000). This implies that an information literate person has developed requisite ability to know the type of information he needs and is able to source for it conveniently.

Furthermore, for access to information, an information literate person is said to be someone who has the "ability to select appropriate search strategies, select appropriate information retrieval system and retrieve information in variety of ways such as; online or in

person (ALA 2000)". To be information literate therefore, a person should have capacity to effectively access the information he needs to meet his identified information needs. As Bothma, Cosijn, Fourie and Penzhorn (2014) noted, "to successfully search databases and online journals, one needs to know how to access them."

> In the evaluation of information, "an information literate person is able to: extract the key ideas from information sources; use benchmark to evaluate needed information sources; fuse the key ideas to make up new knowledge; compares new knowledge with previous knowledge for contradictions, contribution or to know the added knowledge; consider the knowledge impact, validate information with individuals or subject experts" (ALA, 2000) P. 14.

The implication of this is that information literate person does not just retrieve and use information; rather he is able to evaluate the retrieved information to identify what is relevant from the mass of information retrieved. For effective use of information, "an information literate person is able to: integrate retrieved information into his work and disseminate the information to others" (ALA, 2000). Therefore, to be information literate means a person can use information effectively as well as share retrieved information with others.

An information literate person is "able to apply the ethical, legal and socio-economic implications in the use of information; as well as apply laws, regulations and policies relating to access and use of information" (ALA, 2000). In effect, an information literate person understands legal and ethical infractions with regard to use and dissemination of information.

Basically, lecturers are academic or teaching staff in institutions of higher learning such as universities, polytechnics and so on. In this light, university lecturers are teaching staff in universities with cadre such as; Graduate Assistance (GA), Assistant Lecturer (AL), Lecturer II, Lecturer I, Senior Lecturer, Reader and Professor. University lecturers are like the engine in a car, in the sense that without their existence as the major stakeholders in the university environment, there would be no effective university education. University lecturers as creators and disseminators of knowledge embark on research to find and report new

knowledge that would enhance their professional skills, share knowledge with students, and make impact in their field of specialization .To this end, Olasore and Adekunmisi (2015) stated that, the quality of research among academics in any university system depends largely on the quality and quantity of digital information resources at the institutions' disposal; most especially, the possession of the requisite skills to utilize them by the lecturers within the institution. More so, lecturers need to revamp with current trend in technology by possessing the needed Information Literacy Skills for exploring resources in digital formats.

Consequently, Adeleke and Emearhara (2016) opined that information literacy skill is needed by Nigerian academics for effective use of information resources for research activities. Thus, Information Literacy Skill (ILS) is essential for lecturers (as information users and disseminators) in the use of digital library resources for research, teaching and learning in line with the high expectation of universities and the world at large.

Alison, Kiyingi and Baziraake (2012) asserted that "use of e-resources depends on individual skills to search for information, if productive searches are to be effected and if the resources are to be optimally utilized". Hence, for lecturers to benefit fully from the DLRs provided by universities through their libraries, it is expected they must have acquired the necessary information literacy skills to enable them effectively utilize desired information for knowledge creation, decision making or problem solving. In support of this assertion, Madu and Dike (2012) stated that increasing ILS will enable academic staff to fully exploit the technological advantages of the new millennium. Tang and Tseng (2013) affirmed that, for modern learners such as lecturers to be successful in the digital learning environment, they must have critical thinking and decision-making skills, as well as the ability to evaluate information – to seek out that which is appropriate and accurate.

Consequently, Catts and Lau (2008) asserted that "the volume of information which is now mostly in digital form makes it mandatory that lecturers (information literate persons)

should possess ICT skills before they can access digital information. In an information society, access to information and utilization of information makes ICT competency a prerequisite". Therefore, ICT competency is an integral part of information literacy in the digital environment. Notably, Adedokun (2017) while establishing the connection between information literacy and ICT skills asserted that "possession of ICT skills enhances information literacy skills in this digital era". Understanding the relationship between information literacy and use of digital information resources becomes critical in view of the fact that universities as critical engines for national development, invest much funds in the acquisition, digitization and subscription of digital library resources as well as databases such as; Health Inter-network Access to Research Initiative (HINARI), JAY- Store (JSTOR), Access to Global Online Research to Agriculture (AGORA), EBSCO-HOST, Online Access to Research in the Environment (OARE), websites among others, and make them accessible through library web portals for utilization by lecturers to keep abreast of the changing trends in education.

Hence, information literacy skill is an essential factor to effective utilization of digital library resources since low / non-use of these resources will result in waste of the funds spent on them. Literatures such as (Daland & Hidle 2016; Kousar & Mahmood, 2015; Okiki & Mabawonku, 2013) have concentrated on information literacy skills of academics and other subjects at the local and global level. A few studies in Nigeria (Adeleke & Emearhara 2006; Ukachi, 2015) have attempted to relate information literacy skills of academics in Nigeria to utilization of digital library resources. However, none of these studies was set in South-South, Nigeria. More so, none of the studies adopted an information literacy skill standard to investigate the relationship between information literacy skills of lecturers and utilization of digital library resources. This study, therefore, aims to investigate the relationship between

lecturers' information literacy skills and their utilization of digital library resources in federal universities in South-South using an information literacy skills standard.

Statement of the problem

Universities globally are changing to meet the opportunities of the new millennium by integrating emerging ICTs for their library services due to the fact that the libraries are vehicles that provide wide range of information electronically to information users for access and use. The integration of ICTs has led to the proliferation of digital library resources in most university libraries. With this, lecturers have diverse sources of information at their disposal due to information explosion occasioned by the availability of information in digital formats. This poses new challenges for them in understanding and evaluating information content due to information overload. A potent means through which lecturers can optimize digital library resources for their research activities is through information literacy skills. This has made information literacy skills an important tool and prerequisite for effective and efficient utilization of digital library resources.

Available literatures like Angello (2010), Okiki (2013), Aina (2014) and Olasore (2015), have shown the low level and lack of Information Literacy Skills among lecturers. Furthermore, evidence abound in literature such as Issa, Sereme, Mutshewa and Bwalya (2014), Amusa and Atinmo (2016), that there are a lot of digital resources with low usage or not being used by lecturers in Nigerian universities.

It has also been observed that, lecturers in Nigerian universities majorly utilized printed sources despite the various digital resources available. In fact, most universities spend a lot of their financial resources for the acquisition and subscription to digital information resources and make them accessible for use by lecturers to keep up with the changing trends in education. While many studies have been carried out to investigate the use of DLRs, there are few of literature connecting use of DLRs to information literacy skills. A few studies in

Nigeria have attempted to relate information literacy skills of academics in Nigeria to utilization of digital library resources in Nigerian universities. None of these studies to the researchers' knowledge, is set in South-South, Nigeria. None of the studies adopted an information literacy standard to investigate the relationship between Information Literacy Skills of lecturers and their utilization of digital library resources. This study, therefore, aims to investigate the relationship between lecturers' information literacy skills and their utilization of digital library resources in Federal universities in South-South using an Information literacy skills standard.

Purpose of the Study

The main purpose of the study was to investigate the information literacy skills (ILS) of lecturers as correlate of utilization of digital library resources (DLRs) in federal universities in South-South, Nigeria. Specifically, the study sought to determine:

1. the relationship between lecturers skills to identify the extent of information need and their utilization of digital library resources in federal university libraries in South-South, Nigeria.
2. the relationship between lecturers skills to access information and their utilization of digital library resources.
3. the relationship between lecturers skills to evaluate information and their utilization of digital library resources.
4. the relationship between lecturers skills to use information effectively and their utilization of digital library resources.
5. the relationship between lecturers skills to apply legal and social aspects of information and their utilization of digital library resources

Significance of the Study

The expected findings of this research work will be of immense benefit to lecturers, library management, librarians, university management, government and researchers.

The study will provide useful information to lecturers and educators on the need to effectively and efficiently use digital library resources acquired and subscribed to by their universities for teaching and research. The findings will reveal the relationship between information literacy skills (ILS) and utilization of digital library resources (DLRs) which in turn will motivate lecturers to improve in the aspects where they are not highly skilled to enable them make good decisions.

The findings will reveal areas of lapses in lecturers' information literacy skills for library management to improve on it, which will in turn, enable them to enhance their policy and programs for lecturers and also motivate them through training and re-training on the utilization of their digital library resources.

This study will also help librarians identify areas lecturers are moderately skilled and organize frequent seminars and programs on information literacy to lecturers so they could apply high skills in effective utilization of digital library resources.

The study will also be beneficial to university management in Nigeria in formulating policies that will enhance effective and efficient use of the digital library resources by lecturers. The study will help them ensure lecturers acquire and demonstrate the basic information literacy skills to use digital library resources for the universities to be outstanding and become reputable institutions which would boost the status and image of their institution. It will also assist them ensure libraries organize periodic programs to improve lecturers ILS.

The government will also gain from this research as it will help create a positive impact on policy formulation as regards Information and communication Technology in Nigeria. It is anticipated that the findings will motivate government to make provision for

more funds in universities for their library services and ensure judicious use of the funds for the intended purposes.

Finally, the research will provide valuable and useful information for researchers who may be interested in this area of research as it will be a source of literature replication of the study in other zones in Nigeria and all over the world. The study will also help the general public to be able to identify the basic skills needed to navigate, sieve and ethically use digital resources for decision making and problem solving.

Scope of the Study

The focus of this study is information literacy skills of lecturers as correlate of their utilization of digital library resources at federal universities, Nigeria. These information literacy skills are grouped into: skills to identify the extent of information need, skills to access information, skills to evaluate information, skills to use information effectively and skills to apply the legal, ethical and social aspect in the use information. These skills form the basis for the study. Geographically, the study was designed to cover federal universities in the six states of the south-south zone of Nigeria. The states are: Akwa-Ibom, Bayelsa, Cross Rivers, Delta, Edo and Rivers states. Also, the respondent of the study covers lecturers in all the federal universities in south-south, Nigeria.

Research Questions

The study has the following research questions:

1. What is the correlation between lecturers' skills to identify the extent of information need and their utilization of digital library resources?
2. What is the correlation between lecturers' skills to access needed information and their utilization of digital library resources?

3. What is the correlation between lecturers' skills to evaluate information and their utilization of digital library resources?
4. What is the correlation between lecturers' skills to use information effectively and their utilization of digital library resources?
5. What is the correlation between lecturers' skills to apply legal and social aspects of information and their utilization of digital library resources?

Research Hypotheses

Null hypotheses were formulated to guide the study. This was tested at 0.05 level of significance.

Ho1**:** Lecturers skills to identify information need do not have significant relationship with their utilization of digital library resources.

Ho 2: Lecturers skills to access information do not have significant relationship with their utilization of digital library resources.

Ho 3: Lecturers skills to evaluate information do not have significant relationship with their utilization of digital library resources.

Ho 4: Lecturers skills to use information effectively do not have significant relationship with their utilization of digital library resources.

Ho 5: Lecturers skills to apply legal and social aspects of information do not have significant relationship with their utilization of Digital library resources

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The review of related literature was discussed under the following sub headings:

Conceptual Framework

Information literacy

Information literacy skills

Digital library

Digital library resources

Theoretical Framework

Theoretical model of information literacy

Theoretical model for utilization of digital library

Theoretical Studies

Skills in identifying the extent of information need

Skills in accessing information

Skills in evaluating information

Skills in effective use of information

Skills in applying legal and ethical use of information

Utilization of digital library resources

Empirical studies

Information literacy skills of lecturers

Utilization of digital library resources

Relationship between information literacy skills and utilization of digital library resources

Summary of Review of Related Literature

Conceptual Framework

Information literacy

The concept, **"**Information literacy" evolved over a long history of library traditions as library orientation, library instruction or bibliographic instruction (Salleh, Yaacob, Halim & Tusoff, 2011). Rafique (2014) asserted that "information literacy is a new concept that has emerged in different fields during the last three decades". The concept 'information literacy' was first used by Zurkowski in 1974, in a proposal to the national communication on libraries and the National Commission on Library and Information Science (NCLIS). He stated that "information literates were people trained to apply information as a resource to their work, especially those who had learned techniques to use information as tools to find solution to problems in their work places". (Zurkowski cited in Mudave 2016).

Mudave (2016) postulated that "the report declared the establishment of a national programme to achieve universal information literacy by 1984, and information literacy grew as a response to the expanding variety of information formats that makes information available. Further, the development of information literacy (IL) is traced to American library association (ALA). Presidential committee on IL formed in 1987 and he stated that ALA's presentation of IL is an important tool both for academic and life beyond the academy".

"As the information environment keeps changing, being affected by technological changes, specific definition of information literacy (IL) also changed as the key elements of IL remains and only modified to reflect the change" (Chartered Institute of Library and Information Professionals, (CILIP) 2011). Spencer (2003) looking at information literacy in the context of problem solving, defined the concept as the ability to identify, locate, evaluate, organize ,effectively create, use and communicate information to address issues or problems at hand. Lupton, Glanville, Mcdonald and Selzer (2004) presented a more detailed explanation of information literacy to include library research skills and Information

Technology literacy. They further explained that the concept goes beyond finding and presenting information, but it is about higher order analysis, synthesis, critical thinking and problem solving.

Armstrong, Boden, Town, Woolley, Webber and Abell (2005) categorically stated that "information literacy is knowing when and why you need information, where to find it, how to evaluate, use and communicate it in an ethical manner. According to Armstrong et.al, it involves the knowledge and use of skills or competencies that make effective and appropriate use of information". Wejetunge and Alahakoon (2005) defined information literacy as the ability to access, evaluate and use information from a variety of sources. Further, Wejetunge and Alahakoon gave a comprehensive definition of the concept as the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address an issue.

Ojedokun and Lumade (2005) looking at information literacy in the context of decision making and research, postulated that it is the ability to locate, evaluate, manage and use information from a range of sources not only for problem solving but also for decision making and research. According to Wejetunge and Alahakon (2005) "an information literate is one who recognizes that accurate and complete information is the basis for decision making, recognizes the need for information, formulates questions, identifies sources, develop search strategies, access sources, evaluates information, organizes information, integrates and use information". Lau (2006) argued that "information literacy focuses on information use, rather than bibliographic skills. That is, one must develop information competencies to become learner. He identified the concept of information literacy as; information fluency, user education, library instruction, bibliographic instruction, information competencies, information skills and development of information literacy skills".

Horland (2008) asserted that information literacy is a scholarly skill associated with knowledge about information sources, source criticism, critical thinking and theory of knowledge. Looking at information literacy in the context of decision making and productivity beneficial to the society, Ranaweera (2008) defined the concept information literacy "as a skill that allows individuals cope with data smog by equipping them with the basic skills to recognize when information is needed, locate it, use it and develop into deep learners which helps in decision making and productivity beneficial to the society". Mishra and Mishra (2010) asserted that, "information literacy is the skill relevant in knowing the need for information including its identification and location. Further, it is a transformational process that lies at the core of learning which empowers an individual to obtain, evaluate, use and generate information to achieve personal, social and educational objectives".

Mishra and Mishra (2010) identified some components which has caused a sudden development in information literacy to include; "Information explosion, advent of ICT, technological changes and users unawareness to new technology, Divergent and vast varieties of information sources, Wide dispersal of information, Birth of new disciplines with new demands and Creation of new knowledge and users empowerment"..

Chartered Institute of Library and Information Professionals (CILLIP) (2011) argued that "an information literate person goes beyond merely acquiring a skill and being able to apply it, but includes understanding and evaluating information before appropriately using it; and to develop lifelong learners that can adapt to changing information landscape by critically evaluating information and using it effectively". Information literacy from the perspective of meeting an information need, Scott (2012) asserted is the ability to find, evaluate and use information efficiently, effectively and ethically to answer an information need. Umeji, Ejedafiru and Oghenetega (2013) emphasized that "information literacy is a way to move efficient access, evaluation and use of information for improving information

end user". Rafique (2014) added that "information literacy is a concept that expands and enhances the competencies of individuals' beyond the formal environment, giving them self-directions in practical life and a critical element for long life learning which provides the fabrication of well-informed individuals".

Okon, Etuk and Akpan (2014) however defined the concept, "as the ability to identify which information is needed, understand how the information is organized, identify the best sources of information for a given need, locate these sources, evaluate the sources critically and share that information". Another definition that tend to expand the concept was given by Naik and Padmini (2014) as "the ability to gather, organize, filter and evaluate information and to form valid opinions based on the results further; the whole concept being to move from text- based learning to resource based learning". Muhia (2015) stressed that the concept of information literacy is based on information explosion which has taken root in the world and the information era that calls for information literate society to know how to use information.

Center for Intellectual Property in the Digital Environment (CIPDE) in Mudave (2016) had a contrary view of the concept. According to them, information literacy is a way of thinking rather than set of skills, emphasizing critical and reflective capacities, as well as disciplined creative thoughts. Kolay, Spiranee and Karvalies (2016) opined that "the descriptions of information literacy can be summarized as the competencies to find and use the information in information resources; the process of recognizing information need, and finding, evaluating and using information to acquire or extend knowledge". However, a recent definition of information literacy by Solmaz (2017) is that, it is a set of skills needed to discover, retrieve, analyze and use information. Sequel to this, Lanning (2017) define the term as, an ability to recognize an information need, find, evaluate, manage, synthesize, use

and communicate information efficiently, effectively and ethically to answer that information need.

In a more concrete term and recent development, Igwe and Nworu (2018) defined information literacy as a set of skills and abilities for identifying information needs, accessing requisite information resources to address the needs, critically evaluating the accessed information resources, synthesizing retrieved information from various sources in line with the identified needs, creating new ideas and knowledge, and communicating the results. American Library Association (2018), defined information literacy as a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information. CILIP (2018) defined information literacy as the ability to think critically and make balanced judgments about any information we find and use.

From the fore going, information literacy is a broad concept that has gained attention from scholars all over the world and information literacy deals with the the ability of a person to identify when and why information is needed, where to find the information, evaluate information, use information effectively and disseminate information in an ethical manner for decision making, problem solving and productivity. It can be concluded that the concept of information literacy evolved from library instruction , user education or bibliographic instruction and some components which overtime has necessitated its rapid development are; information explosion, information overload, time management, technological changes, quest to be information literate, changes in information dissemination and adaption. Information literacy concept can be seen as a never ending prerequisite for life-long learners at all levels of education that enables a person to use information content for research and move towards independent learner.

Information Literacy Skills

Ranaweera (2008) looking at the information literacy skills for an information literate society, stated that it is a skill that empowers individual with the critical skills to become independent lifelong learners for them to carry out their jobs efficiently and successfully. Naik & Padmin (2014) opined that "increasing attention of the concept of information literacy skills in recent years is partly the result of information overload especially related to the growth of digital information which has caused a new alignment called information fatigue syndrome" However, there are a couple of definitions of the term by several researchers. Rafique (2014) defined information literacy skills as the capabilities to identify, locate, organize, evaluate, use and communicate information. Okon, Etuk and Akpan (2014) posited that, it is an intellectual framework for identifying, understanding, evaluating and using information which includes: ability to determine the nature and extent of information, access information, evaluate information critically, incorporate information into knowledge base, and use information to accomplish a purpose, understanding the economic, social and legal issues in information use.

According to Naik and Padmini (2014), the concept is a combination of all the skills required for effective and maximum use of information. Uzuegbu (2014) defined the concept as the ability to access, evaluate, organize and use information from a variety of sources. Rafique (2014) remarked that information literacy skills is a skill that tends to expand and enhance the competencies of information literate person beyond the formal class room environment and gives direction to them in a practical life situation. Muhia (2015) looking at information literacy skills in the context of learning, identified two ways to understand it from learning perspective as ; the need for conceptual understanding of information and knowledge processes; the need for skills to exploit technology to use information effectively.

In addition, Azubuike (2016) remarked that information literacy skill is a set of skills possessed by an individual to interact with information through the use of information resources in making rational decision. Adeleke (2016) expressed that it is a skill that provides users of information resources with techniques to cope with huge quantity of information and explore them for rational decision making. Lousiana State University (2017) opined that information literacy skill is a skill needed to enhance the quality of research, search patterns in access to relevant information, critically evaluate research findings, the ability to identify legal and ethical issues on the use of information and promote the acknowledgement of other people's work.

In understanding the concept of information literacy skill, many standards have been developed to comprehend the basic skills needed by the information literate. American Library Association (2000) identified the skills as; "ability to know the extent of information needed, access needed information effectively and efficiently, evaluate information and its sources critically, effective use of information to achieve specific purpose, ability to know the ethical, legal and socio economic implications in the use of information as well as apply laws, regulations and policies related to accessing and use information". Delaware County Community College (DCCC)(2002) identified the necessary skills needed by an information literate as; "ability to identify available resources in print or digital format, ability to relate the resources to the needed information, ability to develop keywords from a topic, ability to search for information from resources with the keywords, apply advance technique in search, locate and use information from print or electronic resources, navigate within the resources, differentiate between citations, abstracts and full text in digital resources, apply website evaluation skills and capture data retrieved from digital resources".

Armstrong, Boden, Town, Woolley, Webber and Abell (2005) identified eight required skills for an information literate; "understanding a need for information, identify the

information resources, understands how to search and find information, understand the need to evaluate results and exploit results, understand the ethics in information use, communicate information, store and manage acquired information". In this regard, the International Federation of Library Association (IFLA) opined that information literacy skills are grouped into three basic components of information literacy as stated by Lau (2006) which are; Effective and efficient access to information, competent and critical evaluation of information and accurate application or use of information.

Furthermore, the Association of College and Research Libraries (ACRL) 2008 grouped the basic skills into five broad standards. They are; "know what kind of information is needed, access information effectively and ethically, evaluate information and its sources critically; incorporate selected information into knowledge base and value system, use information effectively and ethically to accomplish a specific purpose, understand the economic, legal and social issues to access and use information". Doyle in Mishra and Mishra (2010), looking at the skills needed by an information literate person in the 21st century, highlighted the following; "recognize the need for information, locate information, formulate questions based on information need, identify sources, formulate search strategies, access and evaluate information, organize and integrate information , use information ethically and legally".

In support of the aforementioned, Society for College , National and University Libraries (SCONUL) in the UK (2011) presented seven information literacy skills needed by an information literate as; "ability to recognize a need for information, ability to distinguish ways for information gap, ability to construct strategies for information location, ability to locate and access information, ability to evaluate information from different sources, ability to apply and communicate information to others in an appropriate manner and ability to

synthesize information". Lofti (2015) defined the concept as the ability to discover and use various types of information: an essential skill for navigating the information age.

In a recent development, Sanches (2018) identified the information literacy skills for teachers of higher learning as; "ability to define and articulate the need for information and selects strategies and tools to find it; locate and select information based on its appropriateness to the specific information need and developmental needs; organize and analyze the information needs and developmental appropriateness for the audience; synthesize, process and present the information in a way that is appropriate for the purpose for which information is needed; evaluate discrete pieces of information as well as the entire information seeking process; know how to ethically use and disseminate information". Ekoko (2019) defined ILS as the ability to think critically and make balance judgments about any information we find and use.

Information literacy skill is necessary for an information literate person and is the ability of a person to identify when information is needed to solve a problem; determine the extent of information he needs; locate and access relevant information from diverse sources; appraise the value of the retrieved information in a careful, logical and thoughtful manner using certain criteria's in order to determine the significant and worth of such information; ability to use information effectively considering the ethical and legal aspects; preserve the information, create meaningful information from the retrieved information and disseminate or share the information to the right persons in the right format at the right time for decision making or problem solving.

Digital Libraries

The concept digital libraries can be traced back to the famous papers of fore-seer scientists like Vannevar Bush and J.C.R Licklider identifying and pursuing the goal of innovative technologies and approaches towards knowledge sharing. (Candela, Castelli and

Pagano, 2011). Adamou and Ntoka (2017) stated that the term digital library was first used by computer scientists to refer to the E- version of a library which explains nothing more than the nature of its collection. Globally, researchers have made attempt to define the concept digital library. Slovney (2004) defined digital library as a collection of the representation of numerous types of media such as documents, images and sounds stored in an information repository available through a local computer network or anywhere via the internet.

According to Koohang (2004), "Association of research libraries (ARL) adopted a definition for digital library as: digital library is not a single entity, it requires technology to link the resources of many, the linkages between digital libraries and information services are transparent to the end users, universal access to digital libraries and information services is a goal, digital collections are not limited to document surrogates but extend to artifact not represented in printed form". Rosenberg (2005) opined that, digital library is a term used to refer to a library where some or all of the holdings are available in electronic form and services made available electronically so that users can access them remotely. Shodh (2005) define digital library in a broad sense as a computerized system that allows users to obtain a coherent means of access to an organized electronically stored repository of information and data.

Digital library, according to Seadle and Greifeneder (2007), is the electronic provision of digital documents in connection with online services, building on the tasks of a traditional library, which enables world wide access to its collection via the internet. Trivedi (2010) concluded that digital library is a library that possesses unlimited space at a much lower cost, enhances users with coherent sources to a very large, organized repository of information and knowledge. Matusaik (2012) expressed that; digital library is a library that presents variety of resources created in a digital format as well as those converted from analog materials through digitization efforts. Hemlata and Meena (2013) defined digital library as a library that create

access to large and wide amount of information, fast access to information through advanced search and hyperlinks of navigation.

Pomare (2013) added that digital library is a library that provides easier location of information, frequent availability and accessibility of information and provision of near-endless stream of resources. Gani and Magoi (2014) perceived digital libraries as libraries in which all information resources are available in computer process through acquisition, storage, preservation, retrieval and dissemination of resources carried out using digital technologies. To this very end, International Federation of Library Association (IFLA, 2014) comprehensively stated that the "concept digital library is an online collection of digital objects of assured quality, created or collected, managed according to internationally accepted principles for collection development and made accessible in a coherent and sustainable manner, supported by services necessary to allow user retrieve and exploit the resources".

Ndakalu (2014) postulated that "digital library is an extensive knowledge network mainly by means of the internet environments and community service organization which can provide information and knowledge services for people and education for all round development". Li and Furht (2014) present "digital library as a library that promote economical and effective delivery of information to all parts of the world, strengthen communication and collaboration, contributes to life- long learning opportunities for all and speed in systematic means to collect, store and organize information in digital format". Also, Ndakalu (2014) defined "digital library as an organization that provide resources including specialized staff to select, structure, offer intellectual access to interpret, distribute, preserve the integrity of and ensure the persistence overtime of collections of digital works that are readily and economically available for use by a defined community".

In addition, Bamgbade, Akintola, Agbenu, Ayeni, Fagbami and Abubakar (2015) described digital library as a library in which collections are stored in digital formats (as opposed to print, microform or other media) and accessible by computers. Further, the content may be stored locally or accessed remotely. Similarly, Urhiewhu, Okeke and Nwafor (2015) asserted that digital library is a library in which the resources are stored and made available in digital forms and the services of the library are also made available electronically. Ram (2015) opined that "digital library is not a single entity; it requires technology to link the resources and universal access to digital libraries". Rohatgi (2016) defined digital library as a library in which collections are stored in the formats as opposed to print form or other media accessible by computers. Antony-Graciou (2016) defined digital library as a library in which collections are stored in digital formats (as opposed to print, microform or other media) and accessible by computers. Wulandari, Sularto, Yusnitasari and Ikasari (2017) opined that digital library is a library that improves searching and manipulation of information, timely access to information, improves use of information, facilities for information sharing, brings information to user and improves collaboration. Harit (2018) defined "digital library as a system providing a community of users with coherent access to a large organized repository of information and knowledge; is not just one entity, but multiple sources seamlessly integrated".

Digital library is a library that selects, acquires through subscription or digitization among others, organizes, preserves and make available intellectual assets as information resources in electronic medium for users to access and use through internet connected computers or mobile phones. Digital library is used to refer to libraries in which the information resources are available in electronic format and accessible electronically by users to increase easy and global access of information, information retrieval, round the clock and availability of information, and to facilitate knowledge sharing.

Digital Library Resources

The sharing of information through digital means to improve education and provide online resources to researchers has become more attractive that it has gained attention globally. Harley (2007) opined that all kinds of digital library resources are proliferating in many different environments and are created by different kinds of developers. Obaseki, Umeji and Krubu (2010) defined "digital library resources as information resources which before now were in print form, but currently found in non-print form (soft copy) and accessible through computer machines and other ICT tools". Islam (2011) opined that "digital library resources are resources that can be accessible from a library's database or from the World Wide Web. Some digital resources are freely accessible anywhere in the world, whilst others are unlimited access due to the library's policy for cost related issues and authentication. Further, digital library resources may be 'born digital' or through 'digitalization".

Alhaji (2011) added that many digital libraries also provide an access to other multi – media content like audio and video. Johnson, Evensen, Gelfand, Lammers, Sipe and Zilper (2012) defined "digital library resources as those materials that require computer access, whether through a personal computer, mainframe or handheld mobile device. Further, they may be accessed remotely through the internet or locally". Digital library resources according to Ugwu and Onyegiri (2013) includes websites, on-line databases, e-books, e-journals, electronic integrating resources and physical carriers in all formats whether free or fee based. Kenchakkanavar (2014) identified specific types as: electronic newspaper, electronic magazine, indexing and abstracting databases, full text database, reference databases, statistical database, image collection, multimedia products, electronic thesis, e- clipping, e-patents and e- standards.

In support of this, Aina (2014) concluded that "digital library resources are information stored electronically and made accessible through electronic systems and computer networks and identified types of digital library resources as: OPAC, CD-ROMs, online- database, internet resources, e –journal, e- books and Electronic resources databases (HINARI, SAGE, AJOL, and so on". Digital library resources form an integral part of the services of a library in recent times because of the application of modern technology in providing access to digital collections in the digital age. IFLA (2014) added that "digital library resources are those resources created, managed and made accessible in such a way that they are readily and economically available for use by a defined community of users".

Olasore and Adekunmis, (2015) defined "digital resources as information sources that a library provides access to in electronic formats accessible electronically. Examples are: CD-ROM, databases, e – mail, OPAC & internet facilities. Further, the internet has made access possible to e- books, e- Journals, databases and search engines". In support of the above, Nwabueze and Urhiewhu (2015) listed the types to include: music, games, articles from magazines, published journals and books, encyclopedias, pamphlets, cartographic materials and other published resources in soft copies. Ekere, Omekwu and Nwoha (2016) listed specific types to include: WWW, WIFI/WAN, search engines, LAN, servers, e- journals, e-books, CD-ROM, portals, OPAC, online databases, VSAT based and internet connectivity.

Digital library resources refer to information resources that a library provides access to electronically through connected computer network or mobile devices. Digital library resources can be 'born digital' or 'digitization'.

Theoretical Framework

Information scientists have propounded different theoretical models to explain the necessary information literacy skills of a literate person & utilization of digital library resources. However, the theoretical models adopted for this study include:

Society of College, National and University Libraries (SCONUL) Seven pillars of information literacy skills for information literacy skills

Technology Acceptance Model (TAM) for utilization of digital library resources

Society of College, National and University Libraries (SCONUL) Seven Pillars of Information Literacy Skill Model

Society of College, National and University Libraries (SCONUL) in United Kingdom, published a study in 1999 on information literacy skills in higher education, introducing the seven pillars of information literacy skills model. This model has been globally adopted by librarians and teachers in teaching information literacy skills in higher education. In 2011, SCONUL working group on information literacy updated and expanded the model to reflect more clearly concepts and terms currently understood as "information literacy". This model defines the core skills including attitudes/ behavior of information literate in higher education of learning. The core skills are called a "pillar". Each pillar is further described by series of items relating to a set of skills and the pillars are envisioned in a circle.

The model demonstrates how information literate person continuously and holistically develop simultaneously and independently within several pillars. This elevates the information literate from a "novice" to information "expert" as he/she moves round the circle of information literacy model. Furthermore, it is expected that as a person becomes more information literate, they exhibit more of the attributes in each pillar and move towards the attributes at the top of the pillar.

The seven pillars of information literacy model according to SCONUL working group on information literacy (2011) are:

Identify: A researcher is able to identify a need for information and locate such information to meet his information need. An information literate is expected to have the skills to identify information in digital library resources and develop a search strategy that could be useful to meet the information need identified.

Scope: A researcher can access current knowledge and identify gaps. In order to fill the gaps, an information literate identify the scope and access the kind of information that can meet the information need.

Plan: A researcher (lecturers) can construct strategies for locating information. Sequel to this, the researcher defines a good search tool and search strategy using appropriate keywords, concept and language to aid search in order to meet the information need.

Gather: A researcher can locate and access the information they need by using diverse retrieval tools and information resources, construct searches for use of digital library resources and demonstrate an ability to translate the search technique based on previous result.

Evaluate: A researcher can review the research process, compare and assess information by distinguishing different digital library resources using appropriate criteria such as accuracy, authors' reputation and bias, credibility of the information and relevance.

Manage: A researcher can organize information professionally and ethically by demonstrating a sound knowledge of issues relating to the intellectual right of owners of knowledge and researchers. This includes copyright, plagiarism, information ethics, data protection and other intellectual property right.

Present: A researcher can apply the knowledge gained by presenting the result of their research, synthesizing new and old information to create new knowledge adding to existing body of knowledge and communicate it in variety of ways.

Below is a diagrammatical representation of SCONUL model explained above.

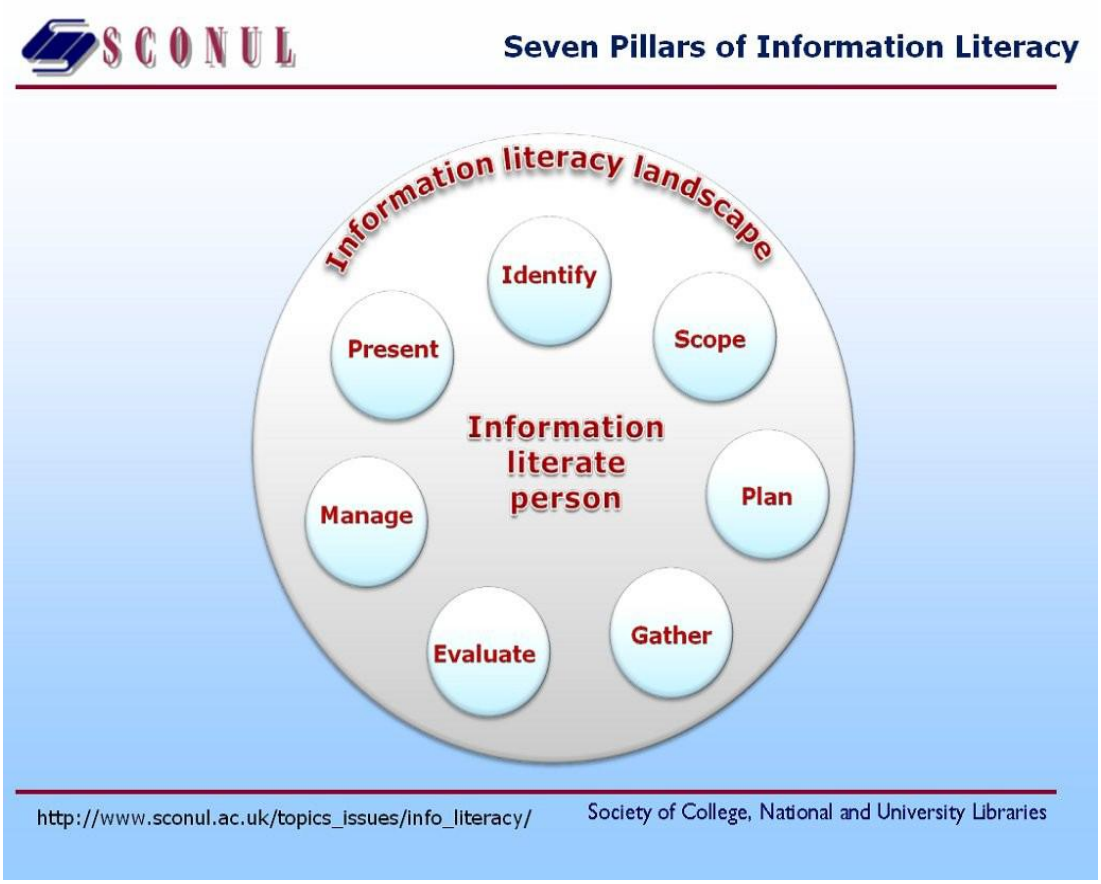

Fig 1: Diagrammatical representation of SCONUL model 2011.

This model of information literacy by SCONUL 2011 was adopted in this study for information literacy skills because it is related to this study as it explains the need for an information literate person to possess information literacy skills with emphasis on the required skills. The model tried to explain the processes an individual undergoes in order to acquire the appropriate skills needed to become an information literate person. This process involves the attributes of an information literate person which lecturers are expected to possess in order to use digital library resources.

Technology Acceptance Model (TAM) for Utilization of Digital Library Resources By Davis Fred 1989

The model adopted for this study is the most widely used application model for users' acceptance and use of a technology. TAM was developed by Davis Fred in 1989. This model is an information system theory that explains how users accept and use a technology. That is, the model tries to predict the acceptability of an information system. The model suggested that, when users are exposed to a technology, a number of factors influence their decision in the use of that technology. The two major factors for the successful acceptability and use of a technology are; perceived usefulness and perceived ease of use. These two factors are also influenced by their attitude towards the usage of the system. If a system is not easy to use, it would probably not be perceived as useful.

The model postulates that the use of an information system is determined by behavior intention; also behavior intention is determined by a person's attitude towards the use and perception of an information system. TAM provides a foundation in which one traces how external variables influences perception, attitude and intention to use an information system. The external variables affect behavioral intension and actual use through intermediate effects on perceived usefulness and perceived ease to use. Below is a diagrammatical representation of Davis model theory explained above.

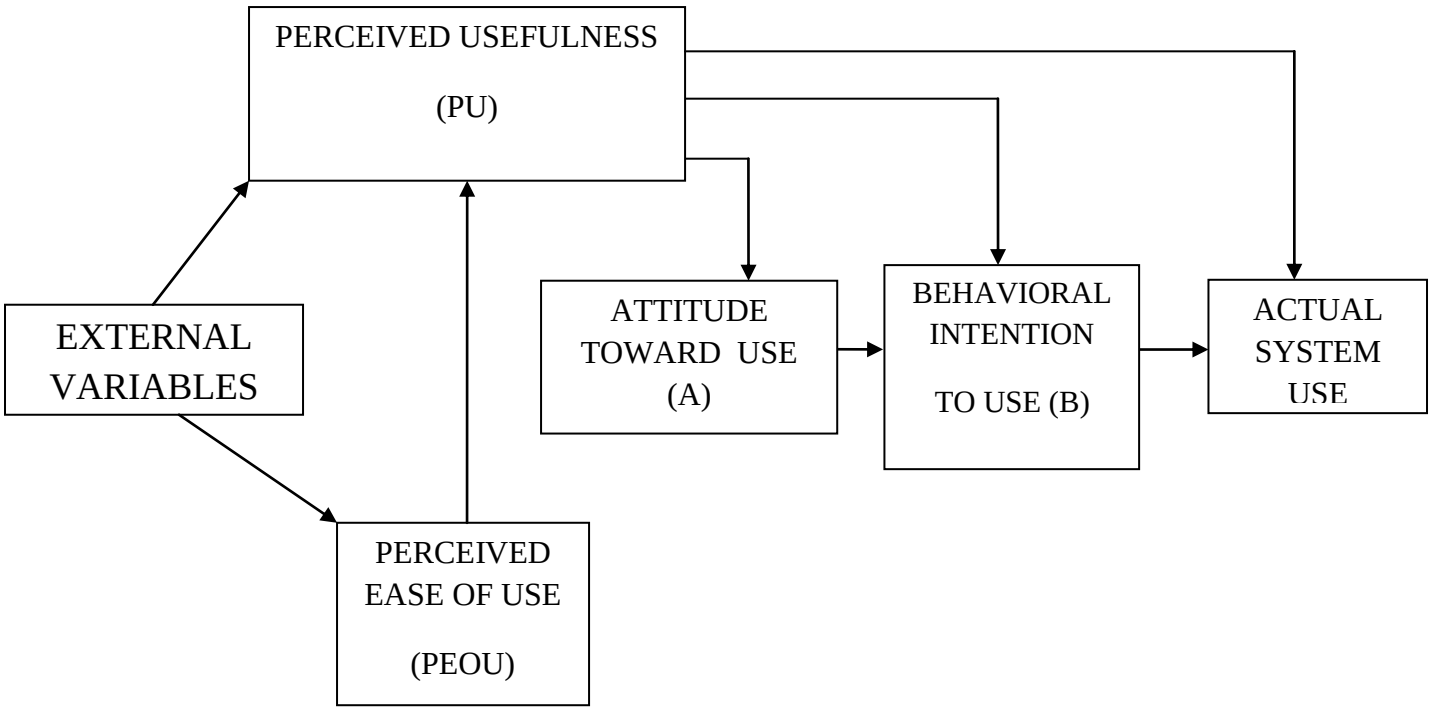

Fig. 2: Diagrammatic representation of Davis 1989 TAM.

(Adopted from Surendran (2012), page 176)

This theoretical model was adopted for utilization of digital library resources in this study as it explains the rationale for a global acceptance and use of digital technology for library information service delivery because of its ease of use, usefulness and users' satisfaction with the technology structure for digital library resources. The model tried to explain that the utilization of digital library resources is influenced by lecturers' perceived ease of use which in turn affects their perception of its usefulness. This is determined by their behavioral intention which affects their attitude towards the use of digital library resources.

Theoretical Studies

Skills in identifying the extent of Information Need

The first skill an information literate (lecturers) should possess as revealed by different standards and researchers is the ability to identify the extent of information needs.

According to ALA (2000), in determining the extent of information need, an information person is able to: identify the information needed, know the various types of information resources understand the benefits of acquiring information and know the extent of the information he needs. This implies that an information literate lecturer has developed the necessary knowledge in the type of information he needs and is able to conveniently source for the information. Armstrong, Boden, Town, Woolley, Webber and Abell (2005) pointed the skills to include: recognizing the need for information, why information is needed, understand what information is required and constraints to information, understand the format information is available, ability to phrase questions and develop focus for research.

IFLA (2006) defined the skills as ability to recognize the need for information, decides to do something to find information, defines the information need and initiates the search process. Ojedokun (2007) listed the skills as: ability to recognize the existence of information need, define the problem and identify the amount of information needed. Fisher and Wilson (2008) identified the skills as; "develop a plan of action to complete a research activity, articulate an appropriate research question, determine the availability of sources, identify and use strategies to organize information and develop new skills needed to complete the research activity". Devadason (2009) affirmed the "identification of information needs is essential to the design of information systems in general and to the provision of effective information services in particular".

To identify information needs, it is important lecturers adopt diverse methods to gather information and a number of factors may influence their information needs. Mwatela (2013) opined that ability to identify and locate information resources depends on their information skills of designing approaches to an information system. Crawford cited in Okon, Etuk and Akpan (2014) noted "some factors as: range of available information sources, use of information, background, motivation and individual characteristics of users and consequences

of information. Further, the steps in identifying information needs according to them include: Preparation for identification of information needs, Study of subjects, Study of specific environment, users study, formal interview and continuous refinement and updating of information needs".

An information literate as stated by Bothma,Cosijn, Fourie and Penzhorn (2014), "decides the kind of information needed , the format of potential sources of information and how much information required for a task. They further, summed the major skills that could help an information literate decide the information needs into three as; analyze the topic: clearly understanding of a topic; decide what sources to use: choose appropriate sources and use a variety of sources: sources should be accessible". Okon, Etuk and Akpan (2014) noted that, "an information literate should be able to identify their information needs, display confidence in their ability to solve problems and know what relevant information is".

In addition, Nwosu, Obiamalu and Udem (2015) identified the skills as; ability to identify a need for information and locate such information that will aid to answer research questions. Adeleke and Emearhera (2016) defined extent of information need as the ability to recognize when information is needed and then phrase questions designed to gather needed information. According to The University of New Orleans (2016), "recognizing the extent of information needed deals with the ability to identify focused, clear and key concepts including extensive sources for access and articulate search strategy to be used". Belay and Bramo (2017) opined that recognizing the extent of information needs involves the ability to understand and articulate scope of information needs.

Lecturers as information users should be able to recognize when information is needed and identify information sources in diverse formats, know the extent and purpose of information needed for decision making or problem solving. The following are some methods to identify the extent of information need by information users (lecturers): What is

the research need? How does the information user find information about the need? Identify key concepts to focus on; consider other words to describe the concepts such as key words or search terms; where do you search for the information? Identify information resources; determine the type of information resources needed whether books, digital resources, website and so on.

Skills in accessing Information

"For access to information, an information literate person should have the ability to select appropriate search strategies, select appropriate information retrieval system and retrieve information in variety of ways such as; online or in person". ALA (2000). This implies that information literate should have capacity to effectively and efficiently access information he needs to be able to meet identified information needs. Similarly, ACRL (2005) identified the ability to include: select appropriate information retrieval systems, constructs search strategies, retrieves information using variety of methods, extracts and manages information. Armstrong, Boden, Town, Woolley, Webber and Abell (2005) suggested that an information literate should be able to identify what resources available for exploitation and access, possess the ability to appropriately search resources to identify relevant information. However, good search strategies require an effective preparation exercise for accessing information. In this light, Horland (2005) highlighted parameters that influence good search of information as: What is wanted? (Definition of a clear and concise search objective); what information is known about what is wanted? What information access tools are available? What is known about the structure of the access tools?

In accessing information, Lau (2006) stated that "the user identifies sources, develop search strategies, access the selected information sources and retrieve the located information". Ojedokun (2007) defined access to information "as the ability of an individual to locate information from variety of resources and access specific information in the

resources such as print, audiovisual and computerized resources using information accessing tools like indexes, abstract, catalogues, bibliographies, and web search tools". On this note, Fisher and Wilson (2008) opined that the "ability to access information involves: identify appropriate type of sources for research activity, use effectively and efficiently methods to collect materials and identify gaps in knowledge". ACRL (2010) suggested that an information user choose appropriate information sources to access information needed such as books, databases and web search engines; constructs effective designed search strategies for searching relevant sources and effectively organizes and respects intellectual property rights.

IFLA (2014) remarked that, "equal access to the cultural and scientific heritage of man helps promote learning and understanding of the richness and diversity of the world. Further, access to information supports education and economic developments. Obviously in access to information, an information user initiates a search process by developing a tactics, in selecting and retrieving information from relevant sources". Bothma, Cosijn, Fourie and Penzhorn (2014) revealed that "an information literate is able to access information needed effectively and efficiently, phrase questions in a way that information found is relevant and detailed for a task. They summed the activity into three as: make decisions on the technique and systems appropriate to access information, Form queries based on information needs and develop search strategies for easy location of the information needed".

Moreso, the traditional means of accessing information was characterized by some challenges that triggered the advent of technologies giving birth to digital library introducing users to access global information. Isah, Mutshewa, Serema and Bwalya (2014) asserted that "the traditional system of accessing information in libraries is gradually giving way to digital system, where users only require a computer connected to the internet to access information".

In 2015, Nwosu, Obiamalu and Udem observed that “access to information entails: ability of a researcher to access available information sources, have understanding of the unknown in order to fill a gap, access information needed both in print and digital formats using different retrieval tools”. Nwosu, Obiamalu and Udem (2015) defined access to information as the ability of a researcher to locate and access information wherever it is stored. Karimi, Ashraffi –Rizi and Hassanzadeh (2015) concluded that “access to information is a right to acquire the specific information to meet a wide range of personal requirement considered as the main needs of an information society”. Adeleke and Emearhara (2016) opined that “skills are significant for accessing information in this generation of technology advancement where most of the information needed for research can be retrieved from electronic sources”. In a more recent research, Odede and Zawedde (2018) found “successful search and retrieval of electronic information as dependent and significant on one’s level of information literacy skills”.

Skills in Evaluating Information

There is abundance of information characterized by information explosion which has become essential for lecturers as information users to assess retrieved information based on authenticity, accuracy, currency, unbiased and relevance to information needs. Armstrong, Boden, Town, Woolley, Webber and Abell (2005) defined "skills in evaluation of information as the ability to assess information for its authenticity, accuracy, currency, value, bias and been able to evaluate the means by which results obtained are properly synthesized for information to be free from bias". In evaluating information, ACRL (2005) made it clear that an information literate summarizes main ideas using criteria's, compares new knowledge to know the value added and validate the information.

Lau (2006) added "that people need to validate and assess information to verify its reliability because of the current information overload". Obviously, evaluation of information is an indispensable aspect of information literacy skills. Lau Lau grouped evaluation of information into two: "Assessment of information: this involves analyzing and extracting information; interpret information, synthesizing information, assessing accuracy and relevance of retrieved information and organization of information which involves categorizing information, organizing retrieved information and determining the most useful information".

Ojedokun (2007) defined "skills in evaluating of information as the ability of a searcher to determine the extent to which conclusions meet the defined information need, assess the understanding of the process, identifies gaps and applies understanding of copyright law in use of information". In this regard, Fisher and Wilson (2008) opined that "skills in evaluating of information entail critical assessment of information for currency and objectivity; analyze information to determine validity and relevance to research questions or information needs". A skill to evaluate information is essential since not all information

found in sources is true, reliable or suitable to meet an information need. “As the availability of information increases, there is a need to assess critically its validity which involves determination of the merit or significance of information sources”. (Dillon et.al cited by Igbo in Madu & Dike, 2012).

“There is need to develop an awareness of effective ways to evaluate information in the light of the complexity and abundance of information through the internet”. (Brabazon, and Coonan in Feekery 2013). In this regard, Bothma, Cosijn, Fourie and Penzhorn (2014) identified “three steps in evaluating information as: use of acceptable criteria to assess the reliability, accuracy, authority, timeliness and bias of the information; determine the usefulness of the information for a given task and ensure information needs are met”.

Also, Nwosu, Obiamalu and Udem (2015) asserted that a researcher chooses a range of materials on a topic using appropriate criteria to access the quality, accuracy, relevance, bias, reputation and credibility of information sources. The University of New Orleans (2016) identified the evaluation of information as examining information from multiple diverse sources using criteria and making judgment about what to keep or discard.

Lanning (2017) asserted that, “evaluation of information is examining your information or information from others and making informational judgment supported by facts, about the quality of information. Further, critical skills are needed to evaluate not only the information found, but also to reflect upon what information you have at each step of the information process. He itemize the factors to consider as; relevance’ purpose, accuracy, scope and depth, style, validity, timeliness and authority”. From the researchers’ view, evaluation of information is a systematic assessment of the merit, worth and significance of information based on information needs using certain criteria like objectivity, authority, currency, accuracy and reliability”.

Skills in the effective Use of Information

"In the effective use of information, an information literate person is able to, integrates retrieved information into his work and disseminates the information to others". (ALA, 2000). In this regard, to be an information literate means a person can use information effectively as well as share the retrieved information with others in an appropriate way abiding by legal and ethical standards. ACRL (2005) defined effective use of information as the ability to apply new information to accomplish a task and effective communicate to others. According to Lau (2006), "the use of information accurately and creatively involves applying retrieved information, internalized information as personal knowledge and Also, Fisher and Wilson (2008) identified that "the use of information to entail: summarizing information and identify concepts to be paraphrased, selects and integrate new information& use appropriate in a manner that supports information need".

To support this, Ojedokun (2007) described "effective use of information as the ability of a searcher to determine the relevant information to scan major ideas and paraphrase important facts when necessary for accuracy and clarity make important conclusion, use the information to solve problem and comply with copyright law". ACRL (2010) summed the effective use of information to include: "integrates the new information and communicates the information effectively to others using appropriate communication medium with an understanding of copyright and fair use". In effective use of information, Salleh, Yaacob, Halim and Yusuff (2011) expressed that "retrieving information from any sources requires knowledge of how information is organized accompanied by skills to retrieve it". Kirinic (2012) added that information literates have learned techniques and skills using wide range of information tools in molding information solutions to their problem.

Furthermore, Madu and Dike (2012) opined that "there is need for complementary cluster of abilities necessary to effectively use information as a mere abundance of

information does not in itself create a more informed citizens. According to Pejova (2012) "without the ability to manipulate and use information effectively, investments in electronic based resources may be a waste". Okiki and Mabawonku (2013) concluded that "information user must learn to overcome information anxiety in order to explore the available information to enable them interpret and use information for rational decision making. Nwosu, Obiamalu and Udem (2015) summed that the "researcher is able to use information found to address the research questions he is working on, summarize document and report verbally and in writing properly"**.** Belay and Bramo (2017) stated that skill to use information effectively is the ability to comprehend and use information effectively.

Skills in applying legal and ethical issues of information use

Application of legal and ethical issues surrounding access and use of information is an integral part of becoming an information literate person. ALA (2000) opined an "information literate person is able to know the ethical, legal and socio- economic implications in the use of information as well as apply laws, regulations and policies related to information access and use". ACRL (2005) opined that "it entails understanding the ethical, legal and socio – economic issues in the use of information, and follow the laws related to access and use of information, and acknowledge information sources used". In effect, an information literate understands legal and ethical infractions with regards to access, use and dissemination of information. Lau (2006) listed the break down on the legal and ethical issues as: "ability to know ethical use of information, respect the legal use of information, communicates information with acknowledgement of intellectual property and using relevant acknowledgement style standards".

Califonian University information literacy fact sheet cited in Ranaweera (2008) defined it "as the ability to understand the economic, legal and social issues surrounding the use of information and then access and use the information ethically and legally". Fisher and

Wilson (2008) in their draft of information literacy standards emphasized that it "involves: understanding what constitutes plagiarism, use resources with proper attribution and accept responsibility for ideas finally presented". American Library Association(ALA, 2010) asserted that, "copyright laws applies to library's online publications with authors and publishers and informing library users of copyright laws that applies to their use of digital information. Furthermore, copyright laws apply to library's online publications with authors and publishers and informing library users of copyright laws that apply to their use of digital information". Martin (2013) stated that, if "an information literate can seek, use, create, store and disseminate information, they should do so in an appropriate and ethical manner. Martin presenting a learning outcome in ANCIL & Society College, National and University Libraries models relating to ethics outlined the following for an information literate summarize basic method utilizing and sharing information without infringing on other people's right; meet standards of conduct for academic integrity; understands their personal responsibility in the storage and sharing of information and develop the right technique within the legal framework".

Bothma, Cosijn, Fourie and Penzhorn (2014) divided legal and ethical use of information by an information literate into three groups. They are: "Information literate needs to understand the use of information correctly according to the law, Information literate needs to understand when to acknowledge information sources and Information literate needs to understand how to acknowledge sources according to standards". Nwosu, Obiamalu and Udem (2015) described it as the ability to demonstrate awareness of issues relating to ethics, data protection, copyright, plagiarism and other intellectual issues. According to Daland and Hidle, (2016),"good organization of references will make ethical use of sources easier, hence decreasing the chance of plagiarism". The University of New Orleans (2016) summed up

legal and ethical issues as: ability to recognize intellectual property concept, ability to defend it, incorporate other work and understand free access to and express information.

Karl-Mundt Library (2017), suggested that to use others work ethically, there is need to understand how to quote, paraphrase and cite the work of others to avoid plagiarism. The three key words mentioned by this author are; cite (giving credit to others ideas), paraphrase (reading and writing in one's own words) and plagiarism (using a person's idea as yours or misrepresentation of the idea of others without credit to them.). The College of St Scholastica (2018) asserted that ethical use of information means ethically using information by correctly citing resources in text and references. Obviously, legal and ethical considerations in information access, use and dissemination are paramount to an information user. The College of St Scholastica listed two ways that deals with legal and ethical concept as: copyright and plagiarism.

Conclusively, it is paramount an information literate (lecturers) have adequate knowledge on why information should be used in a responsible and ethical manner; acknowledge others' ideas by reporting appropriately.

Utilization of Digital Library Resources

The proliferation of readily available digital information in recent times has gained increasing attention and amplified the use of digital library resources globally by lecturers. Thus, Pejova (2002) opined that, without the ability to manipulate and use information effectively, investment in electronic information may be a waste. Ukih (2012) identified some strategies in the use of digital library resources as; "provision of extensive resources, encouraging lecturers to develop life-long habit of reading for independent study and instruction in the use of resources".

A number of factors may influence the use of digital information resources. This may include awareness, regular network connectivity, constant electricity power supply, convenient environment, ability to access, evaluate and effective use information from digital resources, technology acceptance and frequent training of users. Ukih (2012) added some factors as; "availability of information resources, age, location and user education". Okiki and Mabawonku (2013) stated that, "for information users to gain access and effectively use digital resources they must be able to explore available information, interpret and use the information for decision making". Digital library resources are used for academic purposes in higher institution to aid teaching, learning and research.

Ahmad and Panda (2013) opined that "faculty members have a number of options in the electronic era to fulfill their information needs and may not physically use library print resources but can stay in their offices to access digital library resources any time". More so, the quality of teaching and research depends to very large extent on the use of quality digital information resources at the institution's disposal. Okon, Etuk and Akpan (2014) expressed that "information literacy skills would enable an individual use computers, software applications, databases and other technologies for academic work and personal goals. Furthermore, the ability to use information is a prerequisite for lifelong learning and requirement for information society as holistic, interactive and learning process".

Olasore and Ade (2015) observed that "if an institution information services fails to meet the needs of academic staff, they would use other systems since consideration is placed on recency, relevance and authority". Obviously, for effective use of digital library resources, strategies must be adopted and utilized by libraries to improve its use. Olasore and Ade (2015) asserted that non-use of the resources in universities has great effect not only to lecturers but also to the educational system as a whole. Azubuike (2016) added that internet

and World Wide Web provided scholars with fast and easy access to electronic information resources located around the globe.

Amusa and Atinmo (2016) noted that, use of electronic resources is influenced by the available resources and publicity of content. This implies that libraries of higher institution of learning should select and make available current and quality digital information resources for effective use. They must also ensure awareness is sufficient to facilitate its use. In a nutshell, Adeleke and Emearha (2016) stated that information literacy skills are needed for effective use of digital information resources. Odu and Omosigho (2017) asserted that the use of technology is a welcome development and has created a void for those who shy away from or do not have the basic ideas of using modern day information technologies and individuals with the capability of using and understanding information digitally.

FIGURE 3: SCHEMATIC DIAGRAM OF THE RELATIONSHIP BETWEEN INDEPENDENT VARIABLES AND DEPENDENT VARIABLE IN THE STUDY

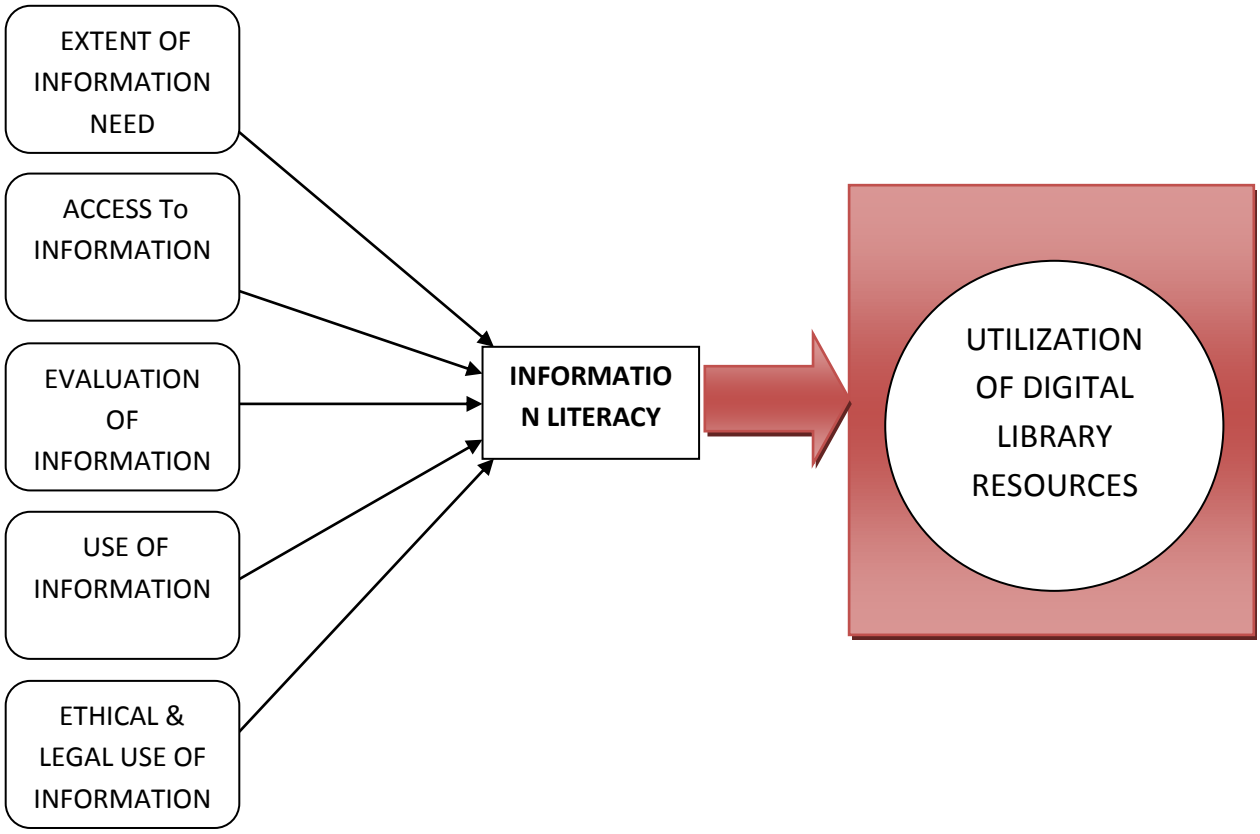

Figure 3 illustrates the relationship that exists between the dependent and independent variables. The independent Variables are skills in identifying the extent of information need, skills in accessing information, skills in evaluating information, skills to effectively use information and skills to apply ethical and legal use of information. These skills are elements that form the components of information literacy skills and are required by an individual to become information literate. While the dependent variable, is utilization of digital library resources. This model proposes that information literacy skills are factors that correlate the utilization of digital library resources in Universities.

Empirical Studies

Some researchers have conducted studies on information literacy skills of lecturers, use of digital library resources, and relationship between information literacy skills and utilization of digital library resources.

Information Literacy Skills of Lecturers

Sadioglu, Ipek and Derman (2009) studied, determining the information literacy skills of teachers for sustainability of quality in education. The study adopted survey method and a population of 180 teachers. Total enumeration sampling was used. "Information literacy survey" which was designed by Aldemir (2004) was used to determine the teachers' level of information literacy skill on a 5 point Likert scale and the reliability coefficient found was .89. ANOVA test was used to see the differences between teachers' information literacy skills in the departments and t- test was employed to find the differences between genders and years. Findings revealed that the teachers did not have comprehensive information literacy skills, as they needed to be offered training on information literacy. The study also revealed the averages in regards to the ability to define access, evaluate and communicate information were 3.52%, 3.66%, 3.74% and 3.78% respectively. This implies that the teachers were not fully exposed to information literacy and in effect, they possess low level in their ability to define access, evaluate and share information. The present study will derive from this research because it covered some aspect of information literacy skills.

Okiki and Mabawonku (2013) carried a survey on information literacy skills of academic staff in Nigerian Federal universities in six geo-political zones. The study adopted descriptive survey research design. A structured questionnaire developed by the authors was used for the study. The population of the study was 10,573 academic staff and 10% representing 1057 staff was used as the sample size. The study adopted a multi-stage sampling procedure. First, the universities were randomly selected from each geo-political

zone resulting to 12 universities. The instrument was distributed equally among four grouped faculties in the selected universities such as Arts/Humanities, Social Science, Education and Science and the selection was based on quota sampling of 10% of sample size. Accidental sampling technique was employed. A seven (7) items scale was used to measure information literacy skills of academic staff in the universities studied and data analyzed using descriptive statistics.

The results shows that academics possessed high information literacy skills, which include ability to recognize a need for information resources, distinguish potential information resources, construct strategies for locating information, compare and evaluate information obtained from different sources, locate and access information resources, organize, apply and communicate information and ability to synthesize and build on existing information and these had greatly influenced their teaching and research productivity. The study also found that female academic staff had more information literacy skills (ILS) than males and senior academics had more ILS than other cadre. The academics acquired information literacy skills through seminars, workshops, trial and error, colleagues and from library staff.

This study is related to the present study in the area of information literacy skills such as ability to recognize access, evaluate and use information. However, the study did not look at ethical and social use of information but the present study covers all components of ILS. This study used only questionnaire as instrument for data collection on ILS which is not appropriate in testing skills, the present study used achievement or cognitive test to generate data for adequate testing of the ILS of academics. While this study focus on information literacy skills of academics, the present study seeks to find the relationship that exist between information literacy skills and the use of digital library resources.

Otunla (2013) carried out a study on "university lecturers' information literacy skills in relation to computer-mediated professional development". The study adopted a descriptive research design, and a population of 142 lecturers randomly selected from 5 universities (3 federal and 2 state universities) in 2 geo –political zones (south- west and north-east) were used. A 20-items pilot- tested university teachers information literacy skills and computer-mediated professional survey instrumented developed by the researcher and the reliability was 0.89 using Cronbach Alpha. The data collected were analyzed using descriptive statistics of frequency count and percentage.

The study found that majority of the university lecturers studied were highly skilled in five out of seven information literacy activities. Also, findings revealed that the university lecturers sampled possess high information literacy skills in tools, resource and publishing. The researcher concluded that lecturers without key information processing skills may find it difficult to cope with the pace of new technologies in their teaching career. The study relates to the present study because it incorporated some components of information literacy skills. But it must be noted that difference exist between the two studies. The study covers in details the various components of information literacy skills in relation to ICT tools and resources. While the present study covers all the components of information literacy skills in relation to the use of digital library resources.

In another research, Kousar and Mahmood (2015) in a study identifies perceptions of faculty about the current level of information literacy skills of post graduate engineering students in higher education in Pakistan. The study used ACRL information literacy competency standards for science and engineering/ technology as basis to assess the perception of teachers of the National University of Science and Technology, teaching engineering students at postgraduate level and a population of 113 faculty members were selected. Structured questionnaire was adopted for the study. T-test was used for data analysis

through SPSS. Findings revealed that the respondents perceived their PhD students higher than M.Sc. students. This study relates to the present in the aspect of adopting an information literacy skill standard. But it must be noted that differences exist between this study and the present one because the present one adopted ALA information literacy skill standard, also in the area of population of the study, data collection techniques. However, the instrument used was not detailed enough and questionnaire was used to test skills, which is not appropriate. The import of this is that the present study provides a more robust opportunity for arriving at a more concrete and detailed findings in Nigeria, specifically South- South.

Nwosu, Obiamalu and Udem (2015) carried out a study titled "relationship between information literacy skills and research output of academic staff in Nnamdi Azikiwe University, Awka (UNIZIK)". Correlation research design was adopted and the population of the study comprised 1,038 academic staff with a sample size of 158 selected through proportionate stratified random sampling technique. The hypotheses were tested at 0.05 % level of significance and two instruments comprising achievement test and research output index were used. The reliability of the instrument was established using Kuder-Richardson 20 formula. Mean and pearson's correlation coefficient were used to answer research questions while hypothesis was tested using Pearson's correlation coefficient.

It was found that academic staff of UNIZIK possessed moderate level of information literacy skills. This implies the academic staff in the institution are moderately skilled in the ability to locate, access, evaluate and use information. Also, there is a significant relationship in the level of information literacy skills possessed by academic staff studied, their rank and research output. This research is related to the present study in the components of information literacy skill and both studies adopt same methodology such as correlation research design and achievement test in data collection. However, while this study focus on the relationship between information literacy skills and research output of academic staff, the present study is

geared towards arriving at a holistic understanding of the relationship between information literacy skills in the utilization of digital library resources using the components of Information Literacy Skill.

Ojeniyi and Adetimirin (2016) carried out a study with the purpose to investigate the influence of information communication technology literacy skills on electronic information resources use among lecturers in two private universities in Oyo state, Nigeria (Ajayi Crowther University; ACU & Lead City University; LCU) . Descriptive survey design was adopted. The population consist 234 lecturers and total enumeration sampling technique was adopted. Questionnaire was the data collection instrument used and the data was analyzed using descriptive and inferential statistics. The findings revealed that lecturers in ACU had high literacy skills, while lecturers in LCU had high literacy skills especially in internet searching and some computer appreciation. Though the study focused on ICT skills in the use of electronic resources, the present study will derive from it, based on the fact that an aspect is on literacy skills.

More recently, Belay and Bramo (2017) investigated electronic information literacy level and challenges among academic staff to teaching and learning in Addis Ababa and Jimma University, Ethiopia. A cross-sectional study design with both qualitative and quantitative data collection method was used. The population was 3,671 academic staff and a sample size of 349 was selected through random sampling. Descriptive statistical analysis was adopted and the findings revealed that academic staff with ability to distinguish information resources skills had the highest percentage, next was ability to synthesize and build on existing information, ability to compare and evaluate information obtained from different sources and ability to construct strategies for information location.

It was found that mean scores of the seven (7) components tested under information literacy skills is lower than the mid-point scores of 2.5 on the scale of 5. The researchers

concluded that the universities studied do not possess adequate electronic information literacy skills based on the overall mean. The study relates to the current study in the sense that it investigated electronic information literacy skill level using similar components of information literacy skills and the study population is on lecturers. The focus of both studies is, however, different because the current study focused on information literacy skills in the use of digital library resources and tends to expatiate more on the components. Also, they differ significantly in the area of geographical scope and methodology. While the study is purely descriptive, the current study is a correlational study.

Utilization of Digital Library Resources by Lecturers

Egberongbe (2011) conducted a survey on "The use and impact of electronic resources at the University of Lagos by lecturers and research scholars". The study adopted a descriptive survey research design. The study population of the lecturers was 813. Questionnaire was the instrument used to collect data and 200 copies was randomly distributed at the media resources, OPAC main library and departmental offices. A total of 20 questions and 120 choices were designed around seven subjects and data were presented in tabular form and analyzed using simple percentage. Findings revealed that the lecturers and research scholars at the University of Lagos use electronic resources to access information for teaching, learning and research and preferred e-resources in comparison to traditional resources. E-journals and search engines were the major electronic resources used by lecturers.

Egberongbe, also found that, the respondents do not receive training in the use of electronic resources rather they resorted to trial and error method of usage and a large number of electronic resources users' were not satisfied with the available infrastructure in the library. This implies that University teachers as scholars need to be adequately trained

through continuous seminars and workshops to enhance their use of digital resources. This would in turn boost their satisfaction with the resources.

However, the study relates to the present study in the area of conceptual focus, that is, the two are looking at use of digital library resources by lecturers. But, they differ in the aspect of methodology. While the study is descriptive, the current study is a correlational study. Also, while the study merely investigated use and impact of electronic resources, this current study is correlating information literacy skills of the use of digital library resources.

Bhukuvhani, Chiparavsha and Zuvatinyeng (2012) carried out a study on "effects of electronic information resources skills training for lecturers on pedagogical practices and research productivity". The survey research design was used. Thirty lecturers from three faculties (science education, commerce and agriculture and environmental science) were purposively sampled for the study from a population of 98 Bindura University of Science Education lecturers who attended EIRST workshops. Questionnaire was the main data collection instrument and was distributed electronically to lecturers by e-mail and personally by hard copy. Descriptive statistical analysis was used for the data.

The researchers found out that lecturers use various electronic resources at BUSE despite notable differences in the frequencies of use and respondents may have gotten the knowledge through university library's information literacy skill workshop and seminars. This implies that seminars and workshops enhance lecturers' skills on information literacy. They also found that the use of electronic resources have positive effect on lecturers' pedagogical practices and their work in general.

However, while this study focus on effect of electronic information resources skills for lecturers, the present study is geared towards arriving at a holistic understanding of use of digital library resources incorporating an essential component such as information literacy skill, rather than a narrow focus. Also, in assessing skill, the study did not adopt a test to

assess the lecturers' skill in the use of electronic resources, rather opted for a questionnaire instrument, which is not appropriate in measuring skill for a person while, the present study adopted an achievement test instrument for a comprehensive assessment of lecturers' skills in the use of digital library resources and questionnaire to assess the aspect of use.

In a related study, Okiki (2012) carried out a study on electronic information resources awareness, attitudes and use by academic staff in university of Lagos. The study adopted a survey method. A population of 1,200 academic staff and a sample size of 120 representing 10% of academic staff were randomly selected. A structured questionnaire was used to collect data and was subject to frequencies count and percentage. A test-retest reliability method of two weeks interval was conducted, response was subjected to Pearson Product Moment Correlation method and a co-efficient of 0.81 was obtained.

Okiki found that a large number of academic staff started using electronic information resources due to the visible impact of electronic information resources and users' access electronic resources more from their offices. This implies that effective use of electronic resources lies on awareness of the resources, which in turn influences their attitude towards usage of the resources. Also, findings shows the lecturers possess high level computer skill and majorly use electronic resources for research, paper writing and teaching. This study is related to the present study in the area of types of digital library resources and their use by lecturers; however, the present study goes beyond merely understanding the level of awareness, attitude and use, to look into the extent of their use.

Ahmad and Panda (2013) carried out a survey on awareness and use of electronic information resources by faculty members of Indian institutes in Dubai international academic city. The study adopted a descriptive survey research design. The population was 30 faculty members of three selected institutes and a structured questionnaire comprised of 24 questions was used, divide into three sections; demographic data, computer literacy and

knowledge and use of electronic resources. The researchers found that, the use of e- resources in the institutes was reasonably high. However, there is insufficient awareness among the respondents in regard to the effective usage of e resources, more particularly CD-ROM databases and OPAC. Also, how faculty attains the skills and knowledge depends on factors like disciplines, status, ranks, access (hardware and location), age and training. In effect, awareness of electronic information resources is a prerequisite to a high and frequent usage of the resources. The study is related to the present study in the area of use of digital library resources but differs in methodology.

Aina (2014) conducted a study on awareness, accessibility and use of electronic database among academic staff of Babcock university business school at Ilishan- Remo Ogun State, Nigeria. Survey research design was adopted. The population was 116 randomly selected through simple random technique. The data collected were analyzed by statistical package for social sciences (SPSS). Findings revealed that the use of electronic resources among academics in Babcock was not evenly distributed. It was also found that electronic journals; databases like EBSCO HOST, JSTOR were not fully utilized and academics access the resources for teaching, research and mails.

In effect, the institution must create intelligent means of getting the lecturers to fully utilize the databases because much fund was used in its acquisition to avoid huge waste. The study is related to the present study in the aspect of use of electronic database because database is a type of digital library resources. The difference between both studies is clear, the study focus on a single electronic resource while, the present study is a more in-depth study that looks beyond just a type of digital resources. Also, lack of full utilization of database among academic staff in Babcock University, Nigeria, as found by the study calls for further enquiry on skills of academics in using the digital resources; and this form the basis for this study.

Nwaogu and Ifijeh (2014) investigated “the use of electronic journals by lecturers in university of Ibadan, Nigeria. The study adopted a survey method and questionnaire was used as the data collecting tool. The population comprises of all lecturers of the University of Ibadan and a total of four hundred and sixty seven lecturers were sampled. The collected data was analyzed descriptively using statistical tables and percentage frequencies. The study found that lecturers in university of Ibadan use electronic journals for personal and academic reasons and the e-journals are majorly used by assistant lecturers.

By implication, technology has changed academics fueled by the advancement of digital library resources due to the fact that libraries subscribe to journals in digital format and databases. The study is related to the present study since it focuses on use of electronic journals by lecturers. However, the present study is a more in-depth study that looks beyond just one use of digital resources such as e-journals and the population covers lecturers in six federal Universities in South-South, Nigeria rather than a single University.

Issa, Serema, Mutshewa and Bwalya (2014) carried out a study on adoption and usage of digital library resources by academic staff in university of Ilorin, Nigeria. Case study research design was employed. A population size of 1,005 academic staff across 14 faculties and purposive technique was used to select lecturers at the university with two extreme cases that is, those using digital libraries and those who do not use digital libraries with special focus on the later. In-depth individual interviews (qualitative approach) recoded on tape, direct observation and document analysis was used to collect data. Data was analyzed by transcribing verbatim and organized with the aim of generating themes and patterns through the use of coding technique.

Findings revealed that there is low level of adoption of digital library and academic staff are not making good use of the digital library resources despite the huge investment on digital library resources subscribed to by the university as revealed by records of transaction

log analysis. In this regard, University must wake up from slumber and create avenues to motivate their lecturers on use of the digital resources through consistent workshops, training and seminars. The study relates to the present study in the area of use of digital library resources by lecturers. The difference between both studies is that, the study employed a qualitative, observation and records analysis instrument, the present study employed questionnaire instrument in data collection and used statistical analysis to analyze data. Also, the study employed a case study research design, while the present study adopted a correlational design.

In another study by Olasore and Adekunmisi (2015) on, "use of electronic information resources by academic staff in Olabisi Onabanjo University". A survey approach was used for the study. A population of three hundred and fifty lecturers and simple random sampling technique was used to select respondents from faculties of Arts, Sciences, Law and Social and Management Sciences. Questionnaire was used to collect data from respondents and validated by some senior colleagues of the researcher and two lecturers in educational technology department of the University. The reliability was derived using Pearson product moment correlation and the value obtain was 0.73.Findings revealed that majority of lecturers used the library electronic information resources frequently mainly for research/publication and lecture and just 2% didn't use it at all. Also, they prefer to use electronic resources because it saves time, easy to use, more informative and useful than printed resources. By implication, the advantages of these resources are too numerous and can't be overlooked.

The factors limiting the usage of library electronic information resources by some lecturers as found in the study were; limited computer system, power outage and slow network resulting in slow download of information. The study is related in the aspect of use of electronic resources. But, the present study is more detailed because outlined the various digital library resources and measure the extent of lecturers' usage while the researchers did

not actually identify the various electronic resources but focus on availability and purpose of usage of electronic resources. This method of approach calls for further enquiry and form the basis for this present study.

Amusa and Atinmo (2016) carried out a study on availability, level of use and constraints to use electronic resources by law lecturers' in public universities in Nigeria. The study used a survey research design. The population was nine hundred and thirty one thousand lecturers in 30 accredited public universities and a sample of five hundred and fifty two lecturers were selected. The main instrument used to gather data was questionnaire. Data obtained was coded and analyzed using SPSS statistical software, frequency counts, percentage, mean and standard deviation.

Amusa and Atinmo found that use of electronic resources by law lecturers was low since majority of them reported low use of the resources due to low level of available resources and desired electronic resources within the universities, insufficient training on electronic resources use and low level of local contents. In this regard, the institution needs to ensure availability of local content and desired information to lecturers; also, make provision for their adequate and sufficient training for its use. Although, this study focuses on use of law electronic resources by lecturers, it is still related to the present study. However, they differ in content and scope; and the present study tends to cover a broader scope.

Egberongbe (2016) carried out a study on digital resource utilization by social science researchers in three Nigerian public universities. Survey method of research was adopted. The population of the study comprises social science researchers' Nigerian universities; University of Ibadan, Obafemi Awolowo University and University of Lagos with a sum total of two hundred and eighty two. Data was obtained through a self-developed survey questionnaire and piloted on six social science researchers to ensure its reliability. Fifty

copies of the questionnaire were randomly administered each to respondents at the three faculties. Simple descriptive statistics was used to analyze the data.

It was found that respondents majorly use digital information resources for teaching, research and communication through internet services. The study also revealed inadequacies on the university library' part in providing required resources making lecturers opt for outside services. In the light of this, the University must wake up to the lecturers expectations by providing the essential digital resources to aid teaching and learning since technology has changed positively some library services so they could access information globally. This study relates to the present study in the area of use of digital resources. The difference is that, the study was limited to a single faculty in three federal Universities in South west region of Nigeria. While, the present study embraces a detailed study by investigating various faculties in all federal universities in South -south region of Nigeria and identified digital resources

In a related study, Ojeniyi and Adetimirin (2016) conducted a study on ICT literacy skills and electronic information resources use by lecturers in two private universities in Oyo state, Nigeria. Descriptive survey research was adopted for the study and correlational analysis was done on the relationship between ICT literacy skills and lecturers utilization of electronic resources. The population was two hundred and thirty four lecturers out of which one hundred and forty five were in Ajayi Crowther University, Oyo and eighty nine were in Lead City University, Ibadan, Nigeria. Total enumeration sampling technique was used and questionnaire was the instrument used for data collection and analyzed using frequency count and percentages.

Findings revealed that email, e- journals and website were available and the most often used digital/electronic resources by the lecturers. The study revealed that in both Universities, lecturers had high ICT literacy skills mostly in general computer operation, internet browsing, internet searching and computer appreciation. The study also found that

the major constraint in the use of electronic resources was erratic power supply. The study conceptually relates with the present study in terms of its focus on use of digital resources by lecturers. It however focused on correlating ICT literacy skills and use of electronic resources while this present study is correlating information literacy skill and use of digital library resources.

Yebowaah and Plockey (2017) carried a study on awareness and use of electronic resources in university libraries, a case of University for development in Ghana. Descriptive survey research was employed. The population of 100 and a sample size of 80 lecturers through the use of a simple random sampling procedure were adopted. The instrument use to collect data was questionnaire and analyzed through the use of binary logistics regression model. The study found that many lecturers in the University of Development Studies are aware of the electronic resources in the library but utilization is low. Measures must be taken by the institution to remedy this situation of low use.

It was discovered that inadequate library infrastructure, low internet bandwidth and inadequate trained library staff were the major challenges confronting the use of electronic resources in libraries. The relationship that exists between the study and this present one stems from the fact that both studies investigated use of digital library resources by lecturers. However, while the study is purely descriptive study that focused on awareness and use of electronic resources, this present study looks beyond this by using information literacy skills to correlate use of digital library resources.

Relationship between Information Literacy and Utilization of Digital Library Resources by Lecturers

Alison, Kiyingi and Baziraake (2012) carried out a study on factors affecting utilization of electronic health information resources in Universities in Uganda. Survey research design was used. The population comprises 332 students, 213 teaching staff/

researchers and 13 librarians making a sum of 558 drawn from Makerere University College of Health Sciences, Mbarara University of Science and Technology and Uganda Martyrs University Nkozi and the sample size of 111 was chosen for the study through systematic random sample. Interview, questionnaires and citation analysis were the instruments used for the study. Data was analyzed using kish formular.

The researchers found that utilization of e-resources was influence by human and institutional factors. While usage was low, there was a significant relationship between usage and information literacy skills. Finding also reveals a significant relationship between computer skills and training. However, while this study focus on the factors effecting utilization of electronic health information resources in universities in Uganda, using students , academic staff and librarians and a narrow peep into the relationship between e-resources usage and information literacy skill, the present study is geared towards arriving at a holistic understanding of the relationship between various element of information literacy skills of lecturers 'and use of digital library resources rather than a narrow focus. Also, in assessing information literacy skill, the study did not adopt a test to assess respondents' skill in the use of electronic resources, rather opted for a questionnaire, interview and citation analysis instrument, which is not appropriate in measuring skill in this context while the present study adopted an achievement/ cognitive test instrument for a comprehensive assessment of lecturers' information literacy skills in the use of digital library resources and questionnaire to assess the aspect of use.

Bhukuvhani, Chiparavsha and Zuvatinyeng (2012) carried out a study on "effects of electronic information resources skills training for lecturers on pedagogical practices and research productivity". The survey research design was used. Thirty lecturers from three faculties (science education, commerce and agriculture and environmental science) were purposively sampled for the study from a population of 98 Bindura University of Science

Education lecturers who attended Electronic Information Resources Skills Training workshops. Questionnaire was the main data collection instrument and was pilot tested to ascertain its reliability before it was distributed electronically to lecturers by e-mail and personally by hard copy. Descriptive statistical analysis was used for the data.

The researchers found out that lecturers use various electronic information resources to find information for use for their teaching and/or research despite notable differences in the frequencies of use. Findings revealed that the lecturers may have gotten the knowledge of accessing electronic resources through the university library's information literacy skill workshop and seminars. This implies that seminars and workshops enhance lecturers' skills on information literacy. They also found that the use of electronic resources have positive effect on lecturers' pedagogical practices and their work in general.

However, while this study focus on the relationship between effects of electronic information resources skills for lecturers on the pedagogical practices the present study is geared towards arriving at a holistic understanding of the relationship between various element of information literacy skills and use of digital library resources rather than a narrow focus. Also, in assessing skill, the study did not adopt a test to assess the lecturers' skill in the use of electronic resources, rather opted for a questionnaire instrument, which is not appropriate in measuring skill in this context While, the present study adopted an achievement test instrument for a comprehensive assessment of lecturers' information literacy skills in the use of digital library resources and questionnaire to assess the aspect of use. This shows a positive relationship between information literacy skills and use of digital library resources by lecturers.

Madu and Dike (2012) carried out a study on the relationship between information literacy competencies and academic productivity amongst academic staff in Nigeria universities in north central geographical zone. The design for the study was correlation

survey. The population of the study comprised two thousand eight hundred and ten (2,810) academic staff in 12 universities and 421 academic staff drawn from 6 universities using multi stage sampling technique was sampled. Two instruments were used to collect data, a standard information literacy skill test and academic productivity index. The data were analyzed with the use of Pearson's correction with a coefficient of 0.692 and t-value 17.025.

The findings revealed a fairly strong and positive relationship between information literacy skills possessed by academics and their productivity. By implication, the higher the information literacy skills possessed by lecturers, the higher his productivity. Thus, for lecturers to be respected as research scholars, they may have accessed and used wider range of information resources both in print and digital formats and engaged in current information dissemination especially in their profession. This study is closely related to the present study because it investigated the information literacy skills of lecturers. This study also, like the present study looked at some of the components of information literacy skills, assessing it through a standard information literacy skills test, however, the present study adopted a more detailed test of lecturers skills on the various concept and differ significantly in the area of geographical scope. Also, the present study seeks to find out the relationship of the various components of information literacy skills of lecturers and their utilization of digital library resources.

Okiki and Mabawonku (2013) examined the influence of information literacy skills on academics research productivity in federal Universities in Nigeria. The study adopted descriptive survey research design. Multistage sampling technique was used to select 1,057 academic staff from federal Universities in six geo-political zones of Nigeria. The instruments used for data collection were: information literacy skills acquisition scale (α=0.83), information literacy skills scale (α=0.92) and research productivity of academic

scale (α= 0.91). Seven components were used to test information literacy skills and mean was used for data analysis.

The findings showed that academic staff acquires information literacy skills mostly through workshops, seminars, independent learning, colleagues and library staff. The study also found that the academics possessed high level information literacy skills because the mean scores of each of the components tested were at the mid-point scores of 2.5 on a scale of 5. Okiki and Mabawonku also reported a study by Majid and Abazova on the relationship between computer literacy of academic staff and use of digital information resources which revealed a significant relationship between literacy and use of digital information resources. This implies that lecturers with basic information literacy may use digital information resources more frequently and spend less time retrieving information from digital library resources than their counterpart.

This is related to the present study in the sense that both studies try to establish the relationship between literacy skills of academics and utilization of digital library resources. However, they differ significantly in the area of conceptual and geographical scope. While the study looked at International Islamic University Malaysia, the present study focuses on South-South, Nigeria. However, the study is looking beyond a narrow aspect of computers skills to investigate the use of digital library resources because computer skill is a minor focus imbedded in some components of information literacy skills item the researcher developed in the instrument.

Mwatela (2013) in a study on "factors influencing utilization of library services and resources in university of Nairobi Mombasa campus library" adopted action research design which is used in the social sciences and medicine aimed at solving an immediate problem situation while carefully informing theory. The population was 2579 and systematic sampling procedure was employed to generate random sample size of 106. Questionnaire, interview

and observations were adopted for the study. Data was cross tabulated and analyzed by descriptive statistics of relative frequency in percentages, median and standard deviation.

Mwatela found that lack of information skills was basis for empowering information literacy competencies of identifying, locating and using information resources. Also, they found information literacy skills as a source of underutilization of integrated information resources. Also, he reported awareness, retrieval tools and information literacy as the main factors influencing use of library resources. This implies that, insufficient skill acquisition by lecturers in identifying, accessing and use of information results to under use of digital information resources.

The study relates to the current study in the sense that their findings revealed that information literacy skills was a major factor that influences the use of library resources. The focus of both studies is, however, different because the study focused on postgraduates and undergraduates while the current study focus on lecturers; it is based on experiences in Nairobi not Nigeria; and finally because it focused mainly on both print and electronic resources.

In a related study, Nwosu, Obiamalu and Udem (2015) tried to identify the relationship between information literacy skills and research output of academic staff in Nnamdi Azikiwe University, Awka (UNIZIK). Correlational research design was adopted for the study. The population comprised 1,038 academic staff in Nnamdi Azikiwe University, Akwa and a sample size of 158 selected through proportionate stratified random sampling technique. Five research questions and three hypotheses guided the study. Two instruments comprising achievement test and research output index were used. Mean was used to analyze the data obtained from research question 1-2, Pearson's correlation coefficient was used to answer research question 3-5 and test the hypotheses at 0.05% level of significance.

The study revealed that the lecturers possessed moderate level of information literacy skills and the research output of academic staff of Nnamdi Azikiwe University, Awka was high. Findings revealed a significant relationship between information literacy skills of academics and their research output as the correlation coefficient was positive. By implication, there is a high magnitude of relationship of lecturers' information literacy skills and their research output. However, lecturers' information literacy skills in research output require versatility in the use of digital information resources.

The researchers concluded that the implication of the lecturers' high research output and moderately skilled in information literacy skills implies that, the academic staff in NAU is following the new trend that is required in contributing to existing knowledge. The study relates to the current because it studied information literacy skills (ILS) of lecturers; both adopted an information literacy skill test (cognitive test) method to examine the ILS of academic staff. The current study however differs from the study because it focuses on research output of academics and not on use of digital library resources. Both studies also differ in geographical location.

Ukachi (2015) conducted a study on information literacy of students as correlates of their use of electronic resources in university libraries in Nigeria. Purposive sampling technique was also adopted in selecting 12 university libraries which the preliminary study had revealed they had internet access and also subscribed to electronic resources in the south-west geopolitical zone in Nigeria. The population constituted 36,116 library registered undergraduates in the 12 university libraries, while the sample size consisted 1,806 representing 5% of the population and the 12 head librarians of electronic resources sections.

The study used questionnaire and oral interview as the research instrument. The questionnaire was validated by two experts in library and information science and one in science education departments. The instrument was trial tested using 30 library registered

undergraduates from University of Nigeria, Nsukka. Cronbach Alpha was used to test the reliability of the instrument and the results obtained were 0.80 and 0.96. Data were analyzed using SPSS statistical package, frequency counts, percentages, mean and standard deviations. Person's Product Moment Correlation was used to determine the relationship between information literacy skills and use of electronic resources at 0.05 level of significance.

Ukachi (2015) found that electronic resources were not adequately utilized and the students do not possess adequate information literacy skills necessary for optimal utilization of the libraries' electronic resources. Findings also revealed strong positive correlation between the level of information literacy skills and use of electronic resources provided in libraries. In effect, the higher the information literacy skills possessed by a person, the better their ability to use digital resources. The study relates to the current study because it investigates the relationship between information literacy skills and use of electronic resources.

The focus of both studies are, however different because Ukachi's study focused on students while the current study focus on lecturers. They also differ in method of data collection because the study adopted likert scale to test information literacy skills, which is not an appropriate method of assessing skills, while this study adopted an achievement test (cognitive test) method. Both studies differ in geographical location in the sense that the study focus on south west region of Nigeria, while the current study focus on south-south, Nigeria.

Oyenyi and Adetimirin (2016) studied ICT literacy skills and electronic information resources use by lecturers in two private universities in Oyo state, Nigeria. Descriptive survey research was adopted for the study and the population consist 234 lecturers, out of which145 were in Ajayi Crowther University, Oyo and 89 in Lead City University, Ibadan. Total

enumeration sampling technique was used and questionnaire was the instrument for data collection. Data was analyzed using frequency counts and percentages.

Findings revealed a positive significant relationship between literacy skills and electronic resource use by lecturers. The study recommended lecturers be encouraged and motivated for up-to-date training on related and relevant ICT training and skills acquisition programs to increase their literacy skills. The study relates to the current study in the sense that it investigated literacy skills and use of electronic resources by lecturers. But differs in concept and geographical scope in the sense that the study focus on the relationship between ICT literacy skills and use of electronic resources by lecturers in south-west while this study focus on information literacy skills of lecturers and their utilization of digital library resources in south-south, Nigeria.

Coklar, Yaman and Yurdakul (2017) carried out a study on information literacy and digital nativity as determinants of online information search strategies. Correlational research design was adopted and the participants were 398 undergraduates. The data collection instruments were the online information search strategies inventory (OISSI), information literacy and digital nativity assessment scale. Structural regression analysis was employed in the analysis.

Findings revealed that information search competencies had a high level correlation with information literacy and a low level correlation with digital nativity. Information literacy (IL) and digital nativity (DN) as significant predictors of online information search. The researchers concluded base on the correlation analysis that an increase in either or both of IL and DN level would affect OISS competencies and both would exert their effects on the factors of OISS in different ways. The study relates to the current study because it established the relationship that exists between information literacy, digital nativity and online information search strategies and both studies adopted correlational research design. But, the

study focuses on undergraduates outside Nigeria while the current study focuses on lecturers in South-South, Nigeria.

In a study conducted by Okong and Okong (2018) on impact of information literacy skills on the use of e-library resources among tertiary institutions students in Akwa Ibom adopted ex-post facto design and the population comprise students in UNIOYO, Akwa Ibom State Polytechnic (AKSP) and Akwa Ibom State University (AKSU). Questionnaire was the instrument used and data analyzed using Pearson Product Moment Correlation and multiple regressions.

Findings revealed a significant correlation between the students' information literacy skills on the use of computer information technologies. The study also revealed the students' do not highly utilize the available electronic resources. The study is related to the current study because they both seek to establish the relationship between information literacy skills in the use of digital library resources. The focus of both studies is, however different because the study focused on students while the current study focuses on lecturers. They also differ in method of data collection because the study adopted likert scale to test information literacy skills, which is not an appropriate method of assessing skills, while this study adopted an achievement test (cognitive test) method.

SUMMARY OF LITERATURE REVIEW

This chapter reviewed literature related to information literacy skills of lecturers in their utilization of digital library resources in universities. These skills are: skills to identify the extent of information need, skills to access information, skills to evaluate information, skills to effectively use information and skills to apply legal, ethical and social use of information

From the review, information literacy skills could be understood as the recognition of when information is needed, where to find the information, how to evaluate the information, use information and disseminate information in an ethical manner. Some components overtime necessitate its rapid development such as information explosion, information overload and technology. Digital library is the new information environment in libraries in this technology age and is a library where the information resources are available and accessible in electronic format through internet connected computers. The content of the digital library is digital library resources referred to as information resources electronically accessed. Examples are e–books, e-journals, databases, OPAC, and CD-ROM .These resources could be born digital or digitized.

Two theoretical models were adopted for the study. The first theoretical model reviewed was by Society of College, National and University Libraries (SCONUL) developed for information literacy skills in 1999 and was updated and expanded in 2011. This model presents the basic skills an information literate should possess, demonstrating the skills a lecturer should possess in order to effectively use digital library resources. The second theoretical model was Technology Acceptance Model (TAM) for utilization of digital library resources was developed by David Fred in1989. The model provides the rationale for acceptance and use of digital technology, influenced by lecturers perceived ease of use which affects their perceived usefulness and thus determine their intentional behaviors towards technology affecting their attitudes towards the utilization of digital library resources.

Information literacy is a perquisite for participating effectively in the utilization of digital library resources by lecturers to interpret and make informed decisions and to harness digital library resources at their disposal in universities libraries globally. In Nigeria, many university libraries are involved in the acquisition, digitization and subscription of digital library resources and make accessible for usage of global information.

Some relevant empirical studies were also reviewed. These studies mainly concentrated on information literacy skills of lecturers and other subjects both at the local and global levels. While few studies were on information literacy skills of academics in the use of electronic information resources. This shows that there is scanty research on the relationship between information literacy skills of lecturers and their utilization of digital library resources. While few studies focused on relationship of information literacy skills and other subjects. More worrisome is the fact that none of the literatures adopted information literacy standard to show the relationship of information literacy skills of lecturers and their utilization of digital library resources, this is the major gap the study seeks to fill.

CHAPTER THREE

METHOD

This chapter presents the procedure adopted in this study. This was discussed under the following sub-headings: research design, area of the study, population of the study, sample and sampling techniques, instrument for data collection, validation of the instrument, reliability of the instrument, method of data collection and method of data analysis.

Research Design

Correlational research design was adopted for the study. Nworgu (2006) defined correlational research design as a research design that seeks to establish the relationship that exists between two or more variables. The correlational research design shows the relationship between several independent variables and dependent variable, which is the case of this study. In this research, information literacy skill is the independent variable and utilization of digital library resources is the dependent variable. The present research examined the relationship that exists between information literacy skills of lecturers and their utilization of digital library resources. Correlational research was chosen because it would enable the researcher to test the magnitude of the relationship between all the independent and dependent variables in the study.

Area of the Study

The study was conducted in the South–South geopolitical zone of Nigeria. The South-South region of Nigeria comprises six states namely: Akwa-Ibom State, Bayelsa State, Cross-Rivers State, Delta State, Edo State, and Rivers State. The states in the zone have people of diverse ethnic and religious groups inhabited mainly by Ijaw, Itsekiri, Urhobo, Edo, Anioma, Calabar natives who are friendly, industrious, hospitable, mostly educated and endowed with rich cultural heritage.

The region is rich in oil and gas. The region has multi-national oil companies and provides huge opportunities for tourism, educational institutions, government administrative offices; and some of the people engage in petty trading, agriculture and civil service. As a matter of fact, the region has been the foremost economic resource generator for Nigeria since 1956 when crude oil was first discovered in commercial quantity, at Oloibiri in this present-day, Bayelsa, but remained one of Nigerian's least developed. In recent times, the region has suffered from militant violence and crisis which has led to human and economic losses, despite the efforts of government to restore peace.

The coverage of this research cuts across Federal Universities in South- South, Nigeria. There are six Federal universities in south-south, Nigeria. They are: Federal University of Petroleum Resources (FUPRE) Warri, Delta State founded 2007; University of Benin (UNIBEN) Edo State, founded 1970; University of Port- Harcourt (UNIPORT) Rivers State, founded 1975; University of Calabar (UNICAL) founded 1975; Federal University Otuoke (FUO), Bayelsa State, founded 2011 and University of Uyo, Uyo (UNIUYO), Akwa Ibom, founded 1991. This zone was chosen because of accessibility, proximity, the positive attitude of the people in the area for education in the maintenance of peace and unity and the quest to fill a research gap in one's zone. This is hinged on the fact that the researcher is from this zone and also, no research work on such nature to the knowledge of the researcher has been carried out in the zone.

Population of the Study

The population of this study consists of six thousand, six hundred and fifty three (6653) lecturers from all the Federal universities in South-South zone. Source of the population is from the various university registrars' office. See Appendix A, p.109 for the distribution.

Sample and Sampling Technique

The sample size for this study comprises 665 lecturers. The sample size is deemed representative of the entire population of 6653 lecturers considering that Nwankwo (2013) recommends that if the population of a study is a few thousands, a 10% sample will do. Proportionate stratified random sampling technique was used. According to Salkind (2010), Proportionate stratified random sampling is necessary when the population is composed of different sub-groups that are different in number. Consequently, the population was first stratified into already existing faculties in the various institutions. Secondly, random sampling was used to draw 10% from each faculty. (See Appendix B, p.110 for distribution). This position is in sync with the claim of Hayes (2019) that in proportionate stratified method, the sample size of each stratum is proportionate to the population size of the stratum.

Instrument for Data Collection

Two types of instruments were designed for this study: Information Literacy Skill Test (ILST) and the questionnaire instrument titled, Extent of Utilization of Digital Library Resources (EUDLR). The test titled "Information Literacy Skill Test (ILST) was designed to assess the respondents' overall information literacy skills and then build a profile of the level of relationship of lecturers' utilization of digital library resources. The test was in multiple-choice format. The ILST was divided into five clusters, with each cluster having a set of ten questions, making a total of fifty (50) test items on information literacy skills. The second instrument was questionnaire to collect data from respondents titled "Extent of utilization of Digital Library Resources" (EUDLR). The items were structured using a six point rating scale of not at all, once in a semester (very low extent), twice in a semester (low extent), thrice in a semester (moderate extent), four times and in a semester (high extent) and five times and more in a semester (very high extent). See appendices C and D, pg. 112-120.

Validation of the Instrument

The constructed research instrument was face and content validated by three experts. One expert was in Measurement and Evaluation, while two were from Department of Library and Information Science, Faculty of Education, Nnamdi Azikiwe University, Awka. Copies of the draft instrument were given to them together with the topic of research, purpose of the study, research questions and hypotheses. The experts examined the items' in terms of clarity, accuracy, relevance to the purpose of study, suitability of the instruments in terms of appropriateness of the items, arrangement, language and response format. Their comments, suggestion and recommendations were effected to make the final draft of the instrument which was approved by the project supervisor. Th**e** validated instruments are attached as appendix F, G, H and I, Pg. 124-127.

Reliability of the Instrument

To ensure reliability of the instruments used for the study, the instruments were trial tested using thirty (30) lecturers drawn from Ambrose Alli University, Ekpoma, Edo State. Kuder-Richardson method was used to establish the internal consistency of the items. From the reliability test, Cluster A, that is, skills for identifying the extent of information need yielded a coefficient of 0.77, while Cluster B on skills in accessing information yielded a coefficient of 0.78, Cluster C, which is focused on skills in evaluating information yielded a coefficient of 0.75, Cluster D, on skills in using information effectively yielded a coefficient of 0.64, while Cluster E, on skills in applying legal and socio aspect of information yielded a coefficient of 0.81 while utilization of digital library resources, yielded a coefficient of 0.81. These were high enough to consider the various clusters of the instrument reliable and internally consistent to be used for the study.

Method of Data Collection

Instruments for the study were personally administered by the researcher with the help of research assistants in the various universities studied. The research assistants were briefed on the purpose of the research and how to administer the instruments. ILST was administered first to the respondents. The second instrument, Extent of Utilization of Digital Library Resources (EUDLR) questionnaire was administered with the test instrument, and filled by lecturers immediately after the test. The instruments were administered immediately after academic and faculty meetings. The time frame for all administration was two months. Out of 665 lecturers selected for the study, 487 lecturers completed the exercise which was found useful for the analysis, given a returned rate of 73%

Method of Data Analysis

Pearson's Product Moment Correlation Coefficient was used to answer research questions one to five, while multiple regression analysis was used to answer research question six. Pearson's product moment correlation is ideal for ascertaining the extent of relationship between two or more variables (Nworgu, 2015). For the research question one to five, the coefficient (r) and the size of the relationship were interpreted using the interpretation of a correlation coefficient by Nworgu (2015) as follows;

Coefficient (r)	Relationship
.00 to .20	Very low
.20 to .40	Low
.40 to 60	Moderate
.60 to .80	High
.80 and above	Very high

P-value was used to determine the significance of the correlation for the five null hypotheses. Where the calculated p-value was less than the stipulated level of significance (0.05), the null hypothesis was rejected, and the null hypothesis was not rejected where the

calculated p-value was greater than the stipulated level of significance (0.05). All analyses were done using Statistical Package for Social Sciences (SPSS).

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

In this chapter, the data collected were analyzed and the summaries were presented in tables to highlight the findings. The presentations were sequentially done starting with the research questions and then the null hypotheses.

Research Question 1: What is the correlation between lecturers skills to identify the extent of information need and their utilization of digital library resources?

Table 1: Pearson r on Lecturers Skills to Identify The Extent of Information Need and Their Utilization of Digital Library Resources

Source of Variation	N	Skills to identify the extent of information need r	Utilization of digital library resources r	Remark
Skills to identify the extent of information need	487	1.00	0.26	Low Positive Relationship
Utilization of digital library resources	487	0.26	1.00	

Table 1 shows a low positive relationship of 0.26 existing between lecturers' skills to identify the extent of information need and their utilization of digital library resources.

Research Question 2: What is the correlation between lecturers skills to access needed information and their utilization of digital library resources?

Table 2: Pearson r on Lecturers Skills to Access Needed Information and Their Utilization of Digital Library Resources

Source of Variation	N	Skills in accessing needed information r	Utilization of digital library resources r	Remark
Skills in accessing needed information	487	1.00	0.22	Low Positive Relationship
Utilization of digital library resources	487	0.22	1.00	

Table 2 indicates a low positive correlation of 0.22 existing between lecturers skills to access needed information and their utilization of digital library resources**.**

Research Question 3: What is the correlation between lecturers skill to evaluate information and their utilization of digital library resources?

Table 3: Pearson r on Lecturers Skills to Evaluate Information and Their Utilization of Digital Library Resources

Source of Variation	N	Skills in evaluating information r	Utilization of digital library resources r	Remark
Skills in evaluating information	487	1.00	0.18	Very low Positive Relationship
Utilization of digital library resources	487	0.18	1.00	

Table 3 reveals that, there is a very low positive correlation of 0.18 existing between lecturers skills to evaluate information and their utilization of digital library resources.

Research Question 4: What is the correlation between lecturers skills to use information effectively and their utilization of digital library resources?

Table 4: Pearson r on Lecturers' Skills to Use Information and Their Utilization of Digital Library Resources

Source of Variation N	Skills in using information r	Utilization of digital library resources r	Remark
Skills in using information 487	1.00	0.20	Very low Positive Relationship
Utilization of digital library resources 487	0.20	1.00	

Table 4 indicates a very low positive correlation of 0.20 existing between lecturers' skills to use information and their utilization of digital library resources.

Research Question 5: What is the correlation between lecturers' skills to apply legal and social aspects of information and their utilization of digital library resources?

Table 5: Pearson r on Lecturers' Skills to Apply Legal and Social Aspects of Information and Their Utilization of Digital Library Resources

Source of Variation N	skills in applying legal and social aspects of information r	Utilization of digital library resources r	Remark
Skills in applying legal and social aspects of information 487	1.00	0.21	Low Positive Relationship
Utilization of digital library resources 487	0.21	1.00	

Table 5 indicates that, there is a low positive correlation of 0.21 existing between lecturers' skills to apply legal and social aspects of information and their utilization of digital library resources.

Testing the Null Hypotheses

Null Hypothesis 1: The correlation between lecturers' skills to identify the extent of information need and their utilization of digital library resources is not significant.

Table 6: Test of Significance of Correlation Between Lecturers' Skills to Identify The Extent of Information Need and Their Utilization of Digital Library Resources

Source of Variation N	Skills to identify the extent of information need r	Utilization of digital library resources r	Df	p-value	Remark
Skills to identify the extent of information need 487	1.00	0.26	485	0.00	Sig
Utilization of digital library resources 487	0.26	1.00			

Sig = Significant

Table 6 indicates that the calculated r (0.26) has p.value of 0.00 which is less than the alpha level (0.05). Therefore the first null hypothesis is rejected. The correlation between lecturers' skills to identify the extent of information need and their utilization of digital library resources is significant.

Null Hypothesis 2: The correlation between lecturers' skills to access information and their utilization of digital library resources is not significant.

Table 7: Test of Significance of Correlation Between Lecturers' Skills to Access Information and Their Utilization of Digital Library Resources

Source of Variation N	skills in accessing needed information r	Utilization of digital library resources r	df	p-value	Remark
Skills in accessing needed information 487	1.00	0.22	485	0.00	Sig
Utilization of digital library resources 487	0.22	1.00			

Sig = Significant

Table 7 indicates that at 0.05 level of significance and 485df, the calculated r (0.22) has p.value 0.00 which is less than the alpha level (0.05). Therefore the second null hypothesis is rejected. The correlation between lecturers' skills to access needed information and their utilization of digital library resources is significant.

Null Hypothesis 3: The correlation between lecturers' skills to evaluate information and their utilization of digital library resources is not significant.

Table 8: Test of Significance of Correlation Between Lecturers' Skills to Evaluate Information and Their Utilization of Digital Library Resources

Source of Variation	N	skills in evaluating information r	Utilization of digital library resources r	df	p-value	Remark
Skills in evaluating information	487	1.00	0.18	485	0.00	Sig
Utilization of digital library resources	487	0.18	1.00			

Sig = Significant

Table 8 indicates that at 0.05 level of significance and 485df, the calculated r (0.18) has p.value 0.00 which is less than the alpha level (0.05). Therefore the third null hypothesis is rejected. The correlation between lecturers' skills to evaluate information and their utilization of digital library resources is significant.

Null Hypothesis 4: The correlation between lecturers' skills to use information effectively and their utilization of digital library resources is not significant.

Table 9: Test of Significance of Correlation Between Lecturers' Skills to Use Information and Their Utilization of Digital Library Resources

Source of Variation	N	Skills in using information r	Utilization of digital library resources r	Df	p-value	Remark
Skills in using information	487	1.00	0.20	485	0.00	Sig
Utilization of digital library resources	487	0.20	1.00			

Sig = Significant

Table 9 indicates that at 0.05 level of significance and 485df, the calculated r (0.20) has p.value 0.00 which is less than the alpha level (0.05). Therefore the forth null hypothesis is rejected. The correlation between lecturers' skills to use information and their utilization of digital library resources is significant.

Null Hypothesis 5: The correlation between lecturers' skills to apply legal and social aspects of information and their utilization of digital library resources is not significant.

Table 11: Test of Significance of Correlation Between Lecturers' Skills to Apply Legal and Social Aspects of Information and Their Utilization of Digital Library Resources

Source of Variation	N	skills in applying legal and social aspects of information r	Utilization of digital library resources r	df	p-value	Remark
Skills in applying legal and social aspects of information	487	1.00	0.21	485	0.00	Sig
Utilization of digital library resources	487	0.21	1.00			

Sig = Significant

Table 10 indicates that at 0.05 level of significance and 485df, the calculated r (0.21) has p.value 0.00 which is less than the alpha level (0.05). Therefore the fifth null hypothesis is

rejected. The correlation between lecturers' skills to apply legal and social aspects of information and their utilization of digital library resources is significant.

Summary of Major Findings

From the analysis, the following findings were made:

1. There is a low positive relationship of 0.26 existing between lecturers' skills to identify the extent of information need and their utilization of digital library resources.
2. There is a low positive correlation of 0.22 existing between lecturers' skills to access needed information and their utilization of digital library resources.
3. There is a very low positive correlation of 0.18 existing between lecturers' skills to evaluate information and their utilization of digital library resources.
4. There is a very low positive correlation of 0.20 existing between lecturers' skills to use information effectively and their utilization of digital library resources.
5. There is a low positive correlation of 0.21 existing between lecturers' skills to apply legal and social aspects of information and their utilization of digital library resources.
6. The correlation between lecturers' skills to identify the extent of information need and their utilization of digital library resources is significant.
7. The correlation between lecturers' skills to access needed information and their utilization of digital library resources is significant.
8. The correlation between lecturers' skills to evaluate information and their utilization of digital library resources is significant.
9. The correlation between lecturers' skills to use information and their utilization of digital library resources is significant.

10. The correlation between lecturers' skills to apply legal and social aspects of information and their utilization of digital library resources is significant.

CHAPTER FIVE

DISCUSSION OF RESULTS, CONCLUSION AND RECOMMENDATIONS

This chapter presents the discussion of the results from the data collected and analyzed according to the five research questions and five hypotheses stated in the study. Presented in this chapter also are conclusions, recommendations, implications of the study, limitations of the study and suggestions for further research.

Relationship between lecturers' skills to identify the extent of information need and their utilization of digital library resources

The result shows that there is a low positive relationship of 0.26 existing between lecturers' skills to identify the extent of information need and their utilization of digital library resources in federal universities in south-south Nigeria. This finding is in agreement with Issa, Amusan and Daura (2009) findings that shows positive relationship of respondents' skills in formulating questions based on information needs and identifying potential sources of electronic information on electronic resources use. The finding corroborate that of Devadason (2009) who affirmed that, the identification of information needs is essential to the design of information systems in general and to the provision of effective information services in particular.

The finding also collaborate that of Malaki, Majidi, Haddadian, Rezai and Alipour (2012) who found a positive relationship between skill in determining and recognizing information need and using Information Communication Technology. This implies that a lecturer or individual has developed the necessary skill if he is able to know when he needs information, identifies the type of information needed and is able to phrase appropriate question to meet the identified information need. The finding further corroborate that of Mwatela (2013) who studied factors influencing utilization of library resources, found that

users' ability to identify and locate information resources depends on their information skills of designing approaches to an information system.

However, test of significance of correlation between lecturers' skills to identify the extent of information need and their utilization of digital library resources indicates that the calculated r 0.26 is less than the critical value. Therefore, the null hypothesis is rejected. The inference is that the correlation between lecturers' skills to identify the extent of information needs and their utilization of digital library resources is significant.

Relationship between Lecturers' Skills to access information and their Utilization of Digital Library Resources

The result reveals that there is a low positive correlation of 0.22 existing between lecturers' skills to access information and their utilization of digital library resources. The finding supports that of Adeleke and Emearhara (2016), who found that skills are significant for accessing information in this generation of technology advancement where most of the information needed for research can be retrieved from electronic resources. In a research conducted by Odede and Zawedde (2018), they found successful search and retrieval of electronic information as dependent and significant on one's level of information literacy skills thus, they concluded that there is a positive correlation between both variables. This implies that skills to select appropriate search strategies and information retrieval system enhances the use of digital library resources. Hence, lecturers' should have the required capacity to effectively and efficiently access digital library resources needed to meet identified information need.

However, the finding negates Okiki and Mabawonku (2013) study on information literacy skills of academics in Nigerian universities, who found that lecturers' understanding of improved access to digital information resources in general is limited. The finding also

contradicts Hamutunwa (2013) who reported that learners lacked searching skills in the use of electronic resources.

Test of Significance of correlation between lecturers' skills to access information and their utilization of digital library resources reveals a significant relationship exist between lecturers' skill to access information and their utilization of digital library resources. This implies that the null hypothesis is rejected, while the alternative hypothesis is accepted. This finding is in agreement with Oyeniyi (2013) whose finding revealed a significant positive correlation between information professionals' retrieval skills and their utilization of electronic resources. In agreement also, Okun, Etuk and Akpan (2014) found a significant relationship between skills in search strategies and information use.

Relationship between Lecturers' Skills to Evaluate Information and Their Utilization of Digital Library Resources.

The research reveals a very low positive correlation existing between lecturers' skills to evaluate information and their utilization of digital library resources. The finding corroborates that of Okun, Etuk and Akpan (2014) when they found a significant relationship between skill to evaluate information sources and information use. The study further corroborates a study on information literacy and digital nativity as determinants of online information search strategies carried out by Coklar, Yaman and Yurdakul (2017), in which they reported that the correlation coefficients between evaluation of online information had positive relationship with the variables. The findings show that evaluation of information is a critical skill which is essential in utilization of digital library resources due to the fact that abundance of information caused by information explosion as a result of technological advancement. Thus, it has become pivotal for lecturers' to assess information based on certain criteria's in order to meet their information needs.

However, the finding slightly differs from Issa, Amusan and Daura (2009) finding, which reported high skills of academic staff in evaluating information to select main ideas, to determine reliability, accuracy and bias of information in electronic resources. The result of this present study is not misleading because Issa, Amusan and Daura study focused on students in university of Kwara State.

Test of Significance of Correlation between Lecturers' Skills to evaluate information and their utilization of digital library resources shows a significant relationship thus, the null hypothesis is rejected and the alternative hypothesis accepted.

Relationship between Lecturers' Skills to Use Information and Their Utilization of Digital Library Resources

The research reveals a very low positive correlation of 0.20 between lecturers skills to use information effectively and their utilization of digital library resources. This finding agrees with Mar-Rounds (2011) who found that the academic staff surveyed understood information literacy in the aspect of information use, as not only extending beyond the context of learning and teaching at the academic level, but necessary for academic success in electronic environment and real life situations. Adedokun (2017) reported that skill in using the right devices and the best search strategies to get the needed information have a great influence on the volume of electronic information resources. This finding is in sync with Nwosu, Obiamalu and Udem (2015) when they opined that, to use information resources effectively, lecturers' must learn explore and exploit information to enable them interpret and utilize information for rational decision making. This implies that the expectation of lecturers' is to possess skills to use effectively information retrieved from digital library resources, apply it to accomplish a task as well as share the information with others. This corroborates the view of Pejova (2012) that without the ability to manipulate and use information effectively, investments in electronic based resources may be a waste.

However, test of significance of correlation between lecturers' skills to use information and their utilization of digital library resources reveals a significant relationship. Therefore the null hypothesis is rejected.

Relationship between Lecturers' Skills to Apply Legal and Social Aspect of Information and Their Utilization of Digital Library Resources

The result of the research reveals a low positive correlation of 0.21 between lecturers' skill to apply legal and social aspects of information and their utilization of digital library resources. This finding corroborates American Library Association (ALA, 2010) assertion which reveals that, "copyright laws applies to library's online publication and library users should be informed to imbibe copyright laws that applies to their use of digital information". The finding also corroborates that of Mar-Round (2011) who affirmed that many academic staff sees the importance of learning about bibliographic instruction, cite correctly and develop lists of references within copyright regulations necessary at the academic level as plagiarism is a serious offence in academia. However the findings contradicts Adedokun (2017) findings that the respondents do not understand copyright and plagiarism issues in information use and many cannot use appropriate style to cite bibliographic references in research reports. This is not misleading and discouraging to the present study because Adedokun respondents were students while this study focuses on lecturers'.

Test of significance of correlation between lecturers' skills to use information and their utilization of digital library resources reveals a significant relationship thus, the null hypothesis is rejected.

Conclusion

The high expectation of universities and the world in connection to technological innovation has necessitated the adoption of digital library resources in the various

universities, and lecturers to be functional in teaching, learning, research and other academic activities in this new era should develop the requisite skills to maximize its benefits. Therefore, from the analysis in the findings, it can be concluded that information literacy skill is crucial in the use of digital library resources due to the drastic expansion of information in the digital format. The shift into digital environment requires that lecturers' possess the various dimensional constructs of information literacy skills for effective and efficient utilization of digital library resources. Based on the findings in this study, it was concluded that a positive relationship exist between lecturers' skills to identify information need, access information, evaluate information, use information, apply legal and social aspects of information and their utilization of digital library resources.

Implications of the Findings

There is a serious implication of lecturers' information literacy skills in their utilization of digital library resources in Nigerian federal universities as the line between information literacy skill and utilization of digital library resources is still very obvious. This calls for as a matter of urgency, organization of regular training and re-training of lecturers' which would further enhance their information literacy skills in their utilization of digital library resources. Specifically, the implications of the findings are discussed below.

Findings in this study show low positive relationship between lecturers' skills to identify the extent of information need and their utilization of digital library resources. The implication of this is that, for majority of lecturers in the Federal Universities under the study, their ability to identify the extent of information need plays an important role in their use of digital library resources.

Findings show a low positive relationship between lecturers' skills to access information and their utilization of digital library resources. The implication of this is that, majority of the lecturers may not fully access needed information contained in digital library resources.

The study also reveals a very low positive relationship exists between lecturers' skills to evaluate information and their utilization of digital library resources. This implies that lecturers' ability to evaluate information plays moderate role in their use of digital library resources.

The study also reveals a very low positive relationship between skills to use information effectively and their utilization of digital library resources. This implies that skill to use information effectively possessed by lecturers in federal university libraries has little role in their utilization of digital library resources.

The finding in the study also shows a low positive relationship between lecturers' skills to apply legal and social aspect in access and use of information, and their utilization of digital library resources. This implies that while lecturers utilizes digital library resources, consideration of the legal and social issues in information use play crucial role. That is, lecturers consider the legal and social aspects of the information they use.

Recommendations

Lecturers' need to change with the changing technology trend to fully exploit the technological advantages of the new millennium due to the fact that information literacy skill is essential in the use of digital library resources for teaching, learning and research in line with the high expectation of universities and the world at large. Therefore based on the findings of this study, the researcher recommends the following:

1. Library management should as a matter of interest and concern provide regular training and re-training for lecturers' to increase their information literacy skills in utilizing digital library resources. This would further enhance their skills to identify information need, access information, evaluate information, use information and apply legal and social aspect of information.

2. Lecturers' should also avail themselves the opportunity of the training organized by their libraries and university management in the effective use of digital library resources in order to boast their skills for full exploitation. They should also take advantage of the enabling environment.
3. Librarians must think out of the box effective and productive measures to train lecturers on information literacy within a friendly user environment.
4. University management should also motivate librarians/library management to organize frequent seminars and training for lecturers by providing the finance, ensure its judicious use for the intended purpose and monitoring the effectiveness of the program.
5. Federal government should provide more funds to universities for the provision of the necessary ICT infrastructure and well equipped digital libraries to strengthen information literacy program and training.

Limitations of the Study

The study used two different types of instruments to collect data. These are the information literacy skill test (cognitive test) and questionnaire. The sample size of 665 lecturers was used to generalize results for the entire population of lecturers in all federal universities in south-south Nigeria.

Suggestion for Further Research

Based on the delimitation of this research study, further studies may be undertaken in the following areas.

1. The research may be replicated in federal universities in other geo-political zones of Nigeria.

2. The research may be replicated in state and private universities in south-south geo-political zone.
3. Relationship between information literacy skill acquisition and utilization of digital library resources.
4. Extent of information literacy training and the use of digital library resources

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