

CHAPTER ONE

INTRODUCTION

Background to the Study

Exponential growth in knowledge creation and rapid technological development has made the world to become knowledge oriented. The shift from “muscles to brain” generates significant changes in the present knowledge driven society. A fundamental assumption of this knowledge based view is that knowledge has market value. Contemporary economies thus seem to place a high premium on knowledge resulting in the term knowledge economy. In knowledge based economy, an organisation’s ability to not only create new knowledge but also manage existing knowledge represents its most valuable resource. Knowledge is increasingly becoming “the” resource, rather than “a” resource for wealth generation and has turned out to be a very important resource for preserving valuable heritage, learning new things, solving problems, creating core competences, and initiating new situations for both individuals and organisations now and in the future (Groff & Jones, 2003; Liao, Chang, Cheng &Kuo, 2004). Axioms like “Knowledge is power” was borne out of this view, and with this, knowledge became a much sought after resource both by individuals and organisations.

Organisations thus increasingly recognise the role of knowledge- otherwise, processed information that is organised, interrelated, and more broadly understood and applied- as a key source for competitive advantage(Aina, 2004). Since organisations rely on knowledge to create their strategic advantage, renewed efforts are continually being made to preserve and manage knowledge in form of skills and expertise generated within the organisation, and residing within the employees of the organisation. This gave rise to the concept knowledge management.

Knowledge management has its origin in business, with the aim of getting the most out of knowledge resources. It can be categorised into knowledge creation, knowledge validation, knowledge presentation, knowledge distribution (sharing) and knowledge application activities. It has however, been argued that knowledge sharing is the most important of all the knowledge management processes. The definition of knowledge sharing is as varied as the individual giving the definition and the context in which it is considered. At its most basic level, knowledge sharing involves the processes through which knowledge is channeled between a source and a recipient (Cummings, 2003). The goal of knowledge sharing can either be to create new knowledge by differently combining existing knowledge or to become better at exploiting existing knowledge (Christensen, 2007). It is stating the obvious to argue that knowledge sharing has numerous benefits. Knowledge sharing captures knowledge that may otherwise be lost, preserves existing knowledge, prevents loss of already acquired knowledge, increases efficiency and innovative capability, makes scarce expertise widely available and also leads to better decision making through brainstorming and taking advantage of existing experience and expertise. All these put together has a link in the ultimate performance and competitiveness of the recipients of the knowledge (Bennet&Bennet, 2003; Du, Ai &Ren, 2007; De Clercq, 2015).

Knowledge sharing can be done in a traditional or the technology-enabled platform. Beyond the conventional platforms, knowledge sharing has become possible on a worldwide scale, across borders due to the emergence and advancements in technology. Technology-enabled knowledge sharing also referred to as digital collaboration is the exchange of knowledge between individuals and enterprises through technology-enabling tools that provide for communication and knowledge capturing (Shahid&Alamgir, 2011). Some of these technology-enabling tools include wikis, weblogs, emails, social networking sites, video conferencing

applications, and instant messaging applications, virtual training applications, collaborative workspaces, discussion forums, virtual communities of practice and institutional repositories.

Some studies have posited that technology is a key enabler in facilitating knowledge sharing. Shahid and Alamgir opined that technology can be a helpful tool for effective knowledge sharing and can facilitate knowledge sharing in both time and space dimensions. According to Onifade (2013), use of technology makes knowledge sharing cost effective and very easy. Researchers have recognised different barrier types that technology can help to overcome, such as, social, physical and geographical distance (Shahid&Alamgir, 2011). Through the use of these web-based technologies for knowledge sharing, a group of distributed individuals, dispersed across space, time, and organisational boundaries, organise themselves and share knowledge useful in the creation of a useful product of high quality. Through technologically-mediated communications, people who share a common purpose and experience similar problems can conveniently and quickly exchange, compare, search, and discuss issues, ideas and information. They thus foster a collaborative, interactive environment that supports social interaction and community-building by providing opportunities for participants to write in a collaborative space where ideas are shared, questions are asked, and social cohesion is developed (Huffaker, 2004). The said collaborative space could be formed across and beyond organisational boundaries including Universities.

The university as an organisation is a knowledge-based institution where knowledge production, distribution and application are ingrained in the institutional goals. The faculties and departments in the University including the University Library, are manned by professionals who all work towards ensuring scholarship and giving the university its pride of place amid other

universities both locally and internationally. Professional and paraprofessional Librarians in Nigerian Universities are charged with the acquisition, organisation and dissemination of educational resources for knowledge production via research, knowledge transmission via teaching, and knowledge acquisition and use by students, for the production of highly skilled manpower and entrepreneurs. Greater awareness of the emerging tasking and complex role of the professional and paraprofessional Librarians in the present knowledge-based economy and technology-driven society, and the key role they play in knowledge distribution, may have advanced the idea that increased networking and collaboration, through technology-enabled knowledge sharing, can be highly valuable. Professional and paraprofessional Librarians here refer to those with qualifications in library and information studies, specifically, holders of diploma, and degree or higher degrees respectively.

Professional and paraprofessional Librarians need to take full advantage of the technologies to change the way they engage with each other. The Internet has offered many opportunities for professional and paraprofessional Librarians to connect with each other and their patrons (Hicks, 2014). Consequently, professional and paraprofessional Librarians in Nigerian federal universities need to engage technology-enabled knowledge sharing fully in order to collaborate effectively with other colleagues and utilise one another's knowledge to provide services for their users; and be more proactive in teaching and learning. Indeed, Tella (2016) contended that professional and paraprofessional librarians find it difficult to share their knowledge. It also appears that many professional and paraprofessional librarians that do share, usually engage the conventional channels of communication in their knowledge sharing as against the technology-enabled channels. Backing up this assumption was an argument by Anunobi, Okoye and James (2009) that the old practice of communicating results aimed at

finding solutions to Library and Information Science problems to the members of the profession through journal articles, conference papers, seminar papers and technical reports must give way to the better approach of using modern web technologies. It thus becomes crucial that the predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians be identified to facilitate the use of these modern web technologies.

A predictor gives information supporting a probabilistic estimate or future event. It predicts that something will happen in the future or will be a consequence of something (Chong, 2015; Hornby, 2018). A predictor makes a statement about a future event. It foretells the likelihood of an event happening or occurring. While some likely predictors of technology-enabled knowledge sharing of professionals can be speculated from literature, it is crucial that they are empirically examined as it pertains to professional librarians and paraprofessionals as existing research is insufficient in its ability to identify and validate the predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of south east, Nigeria. Ye, Chen and Jin (2006) identified knowledge self-efficacy, self-image, enjoyment in helping others, trust and system usability as likely factors of knowledge sharing in virtual communities. Lin (2007) suggested two proximal determinants of knowledge sharing as enjoyment in helping others and knowledge self-efficacy. He and Wei (2009) proposed that continued knowledge sharing is done as a response to several attributes (such as enjoyment in helping, reciprocity and image in a contributing context; and perceived usefulness, ease of use and organisational reward in a seeking context). Building upon this framework, this study considered if the constructs: altruism, self-efficacy, trust, reciprocity, availability of technology, perceived ease of use of technology and perceived usefulness of technology could

predict technology-enabled knowledge sharing among professional and paraprofessionallibrarians. A brief overview of these variables suffices.

Enjoyment in helping others is derived from the concept of altruism and it seeks to benefit another person even at an absolute cost to oneself (Cropanzano & Mitchell, 2005). Altruism can involve sharing knowledge with passion and being helpful to others, thus improving their welfare (Hsu & Lin, 2008). Helping is a behaviour that transcends time and space, and as such it is relatively unsurprising that helping could be a widespread activity even in virtual spaces using technology. Beitler and Mitlacher (2007) posited that often people feel pleased by helping others through sharing their knowledge because for them it is a satisfying, fulfilling and meaningful activity. Altruism could thus be a possible predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrarians.

Self-efficacy on the other hand is a person's belief about his or her ability and capacity to accomplish a task (businessdictionary.com, 2019). In the case of knowledge sharing, efficacy perceptions refer to the belief a person has regarding the value of his or her knowledge. Self-efficacy as a predictor of technology-enabled knowledge sharing implies that belief in one's ability to use technology to impart valuable knowledge using relevant technology could spur one towards actually using technology to impart that valuable knowledge. Thus such belief in one's ability to handle issues, accomplish goals and add value to his life and that of others, could predict the willingness to engage in same in the virtual space using technology. In the same vein, trust is being considered as a predictor of technology-enabled knowledge sharing because knowledge sharing requires building a culture of trust, and any practice or action that destroys trust adversely affects the motivation to share information with others (Hinds & Pfeffer, 2003).

Bordering on this allusion, technology-enabled knowledge sharing may not be if there is no culture of trust among professional and paraprofessionallibrarians. The issue of trust in an online environment has however been a topic for contention as the traditional view holds that communication that is technology-mediated is insufficiently rich or social to establish real trust.

Reciprocity is another construct being considered as a predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrarians. It can be defined as a benefit that individuals gain from social exchange (Hung & Chuang, 2009). For knowledge contributors, reciprocal relationship means that they can improve relationships with others via their contributions and they expect future help from others. Additionally, technology adoption and use could be affected by an individual's perception of technology as well as its availability. Individual perception of technology places "technophobians" (those suffering from technophobia) as well as the reluctant adopters of technology on the one hand; and the technophiles on the other hand. Technophiles are more likely to embrace the technology-enabled platforms as they possess enthusiasm for technology use. Preference of technology-enabled platforms for knowledge exchange could thus also be prompted by availability of technology, technology comfort level (perceived ease of use of technology) and the extent to which the technology adopters believe that it will be useful to accomplishing their day to day job roles and work practices (perceived usefulness of technology). There is therefore, the need to identify and validate these predictors as this could help those charged with the enormous and ever evolving task of acquisition, organisation and distribution of knowledge resources in this technology-driven and knowledge-centred work environment, bridge the gap and bring the university to the limelight in this global competition for best practices of the 21st century.

The researcher could not see any study in relation to the predictors of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East geo-political zone of Nigeria. This gap necessitates this study with a view to filling the gap in literature.

Statement of the Problem

Traditionally, the Library and Information Science profession is a knowledge sharing profession, with the professionals having been trained to acquire, organise and disseminate the right information to the right people at the right time. The advent and continuous advancement of ICT created a complex technology driven and tasking work environment, especially for the professional and paraprofessional librarians in institutions of higher learning. The wide adoption and engagement in technology-enabled knowledge sharing for networking and collaboration appears to be a better option if professional and paraprofessional librarians would meet up with their complex work roles.

However, despite the acclaimed indispensable need for technology-enabled knowledge sharing among professional and paraprofessional librarians, it has been observed that while some professional and paraprofessional librarians have embraced its use, others have not (Anasi, Akpan and Adedokun, 2014). This implies that there are some unidentified reasons that predict technology-enabled knowledge sharing use, thus preempting the need to identify the predictors of technology-enabled knowledge sharing among professional and paraprofessional librarians. Additionally, although some of the predictors of technology-enabled knowledge sharing could be speculated from the few reviews on literature available, existing research is insufficient in its ability to fully identify and validate the predictors of technology-enabled knowledge sharing

among professional and paraprofessionallibrarians. Indeed, there is hardly any study specifically on the predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians in Nigerian Universities, particularly in South-East.

Given the importance of technology-enabled knowledge sharing for improved work performance and service delivery of professional librarians and paraprofessionals, this research has sought to identify the predictors of technology enabled knowledge sharing among professional and paraprofessionallibrarians. This research is therefore poised to fill this gap. By determining these predictors, this study will make a significant contribution to the expanding but still highly limited base of theoretical and empirical knowledge concerning technology-enabled knowledge sharing among professional and paraprofessionallibrarians.

Purpose of the Study

The study determined the predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.

Specifically it:

1. Ascertained if self-efficacy predicts technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.
2. Found out whether altruism predicts technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.
3. Ascertained if reciprocity predicts technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.
4. Found out whether trust predicts technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.

5. Determined if availability of technology predicts technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.
6. Found out whether perceived ease of use of technology predicts technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.
7. Ascertained if perceived usefulness of technology predicts technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.

Significance of the Study

The study has practical benefits and usefulness for institutions that serve as employers of professional and paraprofessionallibrarians, professional and paraprofessionallibrarians, Library and Information Science students, and users of the academic Library. It will also be of immense benefit to future researchers on technology enabled knowledge sharing among professional and paraprofessionallibrarians within Nigeria and outside. The society as well as other professional groups will also benefit from the result of the study. The study also has theoretical significance on social exchange theory and technology acceptance model on which the study was anchored.

For employers of professional and paraprofessionallibrarians, when the result of the study is exposed to them through seminars and discussions, the study will provide recruitment indices for staff employment. In addition to looking out for these predictors of technology-enabled knowledge sharing in potential employees, the employers of professional and paraprofessionallibrarians could also use these predictors in identifying and assigning those that

will mentor new recruits among the older employees. The employers can also organise trainings that will enhance these positive variables in the professional and paraprofessionallibrarians. These will in turn provide them with a workforce of professional and paraprofessionallibrarians that makes for more efficient and effective services.

This study will benefit the professional and paraprofessionallibrarians because it will establish an understanding on the predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians. When these predictors are exposed to professional and paraprofessionallibrarians through seminars or workshops, it will enable them to organise, and attend trainings geared towards developing in those areas as part of their professional development. The professional body also will package trainings that will enhance these positive variables in the professional and paraprofessionallibrarians. In addition, knowledge of the predictors of technology-enabled knowledge sharing will motivate the individual professionals to engage in personal enhancement trainings on modern technologies of their own volition and expense. Where such trainings are made available through their employers, the professional and paraprofessionallibrarians will be motivated to take advantage of it.

Library and Information Science students will benefit from this study as the results will enable them to assess and evaluate their own selves on their readiness and preparedness to fit into the current work environment that is technology dependent. The information presented when made available to them through discussions (formal and informal) will enable them to act on their technology skills while still undergoing their studentship, because through this research, they will be able to see that being techno savvy is the in thing for both getting and keeping their job as professional and paraprofessionallibrarians. They will thus take advantage of trainings and courses that deal on modern technology.

Library Users especially the technophiles will benefit from the study as it creates awareness on the predictors of professional and paraprofessionallibrarians' use of technology for knowledge sharing. This knowledge will help them gain an understanding on how to engage the professional and paraprofessionallibrarians through technology for their maximum benefit.

To the future researchers, as the study is published, it will provide baseline information on technology-enabled knowledge sharing among professional and paraprofessionallibrarians. The ideas presented may be used as reference data in conducting new researches or in testing the validity of other related findings. This study will also serve as a cross reference that will give them a background or an overview of the predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians.

To other professional groups, the result of the study will give them an understanding of the predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians. This may motivate them to relate it to their own profession. It may also encourage them to carry out further researches as it affects their profession.

The society will benefit from the results of the study as it will add to the body of existing knowledge especially as it affects technology use in the society. The study will provide empirical evidence on the predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians.

The study has theoretical significance on social exchange theory in that it validates the fact that social exchange theory can be used to explain self-efficacy, altruism, reciprocity, and trust in professional and paraprofessional librarians' engagement in technology-enabled knowledge sharing. It also confirms the fact that technology acceptance model on which

perceived ease of use of technology and perceived usefulness of technology was anchored holds true to professional and paraprofessional librarians' engagement in technology-enabled knowledge sharing.

To ensure that the findings of the study are useful to all the groups listed and the society, it will be published in any of the journals of Library and Information Science and made available online so that many researchers will consult the study.

Scope of the Study

The study focused on determining the predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria. The content scope is delimited to seven (7) possible predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians namely: altruism, self-efficacy, trust, reciprocity, availability of technology, perceived ease of use of technology and perceived usefulness of technology. Technology-enabled knowledge sharing is the dependent variable while altruism, self-efficacy, trust, reciprocity, availability of technology, perceived ease of use of technology and perceived usefulness of technology are the independent variables. The study will cover the professional and paraprofessionallibrarians working in these federal universities. The professional and paraprofessionallibrarians to be studied comprise the professional Librarians working in the University Library (degree and post graduate degree holders in library and information science) and Library Officers (ordinary diploma and higher diploma holders in library and information science).

Research Questions

The research questions that this study addressed include:

1. What is the predictive power of self-efficacy on technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria?
2. What is the predictive power of altruism on technology-enabled knowledge sharing among professional and paraprofessionallibrariansin federal universities of South-East Nigeria?
3. What is the predictive power of reciprocity on technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria?
4. What is the predictive power of trust on technology-enabled knowledge sharing among professional and paraprofessionallibrariansin federal universities of South-East Nigeria?
5. What is the predictive power of availability of technology on technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria?
6. What is the predictive power of perceived ease of use of technology on technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria?
7. What is the predictive power of perceived usefulness of technology on technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria?

Hypotheses

The hypotheses formulated that guided this study at 0.05 level of significance include:

1. LIS professionals' self-efficacy will not be a significant predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.
2. Altruism will not be a significant predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.
3. Reciprocity will not be a significant predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.
4. Trust will not be a significant predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.
5. Availability of technology will not be a significant predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.
6. Perceived ease of use of technology will not be a significant predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.
7. Perceived usefulness of technology will not be a significant predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter reviewed the studies related to the research. The review of the related literature was done under the following subheadings:

Conceptual Framework

Predictor

Knowledge

Knowledge sharing

Technology-enabled knowledge sharing

Professional and paraprofessionallibrarians

Theoretical Framework

Social Exchange Theory (George C. Homans, 1958)

Technology Acceptance Model(Davis, Bagozzi&Warshaw, 1989)

Theoretical Studies

Adoption of Technology-enabled knowledge sharing by professionals

Predictors of technology-enabled knowledge sharing among professionals

- Self-efficacy as a predictor of technology-enabled knowledge sharing among professionals
- Altruism as a predictor of technology-enabled knowledge sharing among professionals
- Reciprocity as a predictor of technology-enabled knowledge sharing among professionals
- Trust as a predictor of technology-enabled knowledge sharing among professionals
- Availability of technology as a predictor of technology-enabled knowledge sharing among professionals

- Perceived ease of use of technology as a predictor of technology-enabled knowledge sharing among professionals
- Perceived usefulness of technology as a predictor of technology-enabled knowledge sharing among professionals

Empirical Studies

Predictors of technology-enabled knowledge sharing among professionals

Summary of Reviewed Literature

Conceptual framework

The conceptual framework captured different definitions of the basic concepts of this study as well as the researcher's conceptual definition of these basic concepts. The concepts covered are predictor, knowledge, knowledge sharing, technology-enabled knowledge sharing and, professional and paraprofessionallibrarians.

Predictor

A predictor generally, gives information supporting a probabilistic estimate or future event. It predicts that something will happen in the future or will be a consequence of something (Chong, 2015; Hornby, 2018). The variable used to predict is called the predictor variable, and the variable whose value is being predicted is called the criterion variable. The predictor variables are the variables which one thinks could influence participant's behaviour or attitude (Avwokeni, 2007). A predictor variable is a variable that is being used to predict some other variable or outcome, and is used in non-experimental research. It cannot be used to determine cause, and is generally not manipulated by the researcher (Williams, 2018). A predictor variable explains changes in the response. Typically, you want to determine how changes in one or more

predictors are associated with changes in the response (Frost, 2019). According to onlinestatbook.com (n.d.), a predictor variable is a variable used in regression to predict another variable.

The researcher contextually defined predictor as a variable used to predict the likelihood of an occurrence.

Knowledge

Knowledge is a very difficult concept to define and as such the various definitions of knowledge creates what Holden (2002) termed definitional dilemma. Baharim (2008) wrote that knowledge cannot be universally defined as there are many views of knowledge. While some views may omit certain characteristics of knowledge, others pertain to only one particular aspect. Often rooted in varying ontological and epistemological backgrounds, knowledge may be viewed as a state of mind, an object, a process, a condition of having access to information, and/or a capability (Alavi&Leidner, 2001). Armstrong (2006) noted that knowledge is multifaceted and complex, being both situated and abstract, implicit and explicit, distributed and individual, physical and mental, developing and static, verbal and encoded.

Knowledge can be viewed in three perspectives; simplistic view, subjective view and objective view. The simplistic view shows the knowledge hierarchy from the simplest form- data to wisdom. Data would constitute the basic form followed by information, then knowledge and lastly wisdom. The subjective view presents knowledge from two possible perspectives: as a state of mind and as a practice. Those in consonant with this view see knowledge as an accomplishment which affects and is influenced by social practices. As far as they are concerned, knowledge is held by a group and so neither belongs to an individual nor possessed by an agent.

It is instead passed down generations through participation, observation and discussions. The objective view in contrast to this advocate that knowledge can be discovered, improved, stored, transferred and can exist in a variety of locations (Mutula&Mooko, 2008). Knowledge is a combination of experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information (Gammelgaard& Ritter, 2003). Nonaka (as cited in Yeo & Gold, 2014) defined knowledge as know-what and know-how of things surrounding a context that individuals act upon to produce certain results. RastegariandWalsh (2015) reported that an associate professor Tina Grotzer in a roundtable discussion revealed that there are several ways to think about knowledge. This includes conceptual knowledge — “the framing of ideas and mental models, how we construct information in our head; procedural knowledge- “how we do things — algorithms, recipes, know-how”;and structural knowledge — “how concepts are structured in the deepest sense ... what we think about numeracy, how we reason about cause and effect, those very basic assumptions about the nature of how the world works.” Knowledge is a highly valued state in which a person is in cognitive contact with reality (Zagzebski, 2017).

Traditionally, researchers have distinguished between tacit and explicit knowledge. Tacit knowledge is the implicit, semiconscious and unconscious knowledge held in people’s head, while explicit knowledge is knowledge that is expressed. Tacit knowledge resides within individuals and is usually learned through extended periods of experiencing and doing a task, during which the individual develops a feel for, and a capacity to make intuitive judgments about the successful execution of the activity. It is knowledge gained through personal experience in a given context. Being inferred from individual action, as well as being hard to verbalize and codify, tacit knowledge is acquired through imitation, observations, directions, instructions and

practices. In contrast, explicit knowledge can be expressed in codified form and therefore can be diffused throughout an organisation in the form of rules and guidelines. It can also be viewed as codified tacit knowledge (Lin & Lee, 2004; Mutula&Mooko, 2008).

Other scholars have resorted to other formulations. Armstrong (2006) categorized forms of knowledge as:

- embedded in technologies, rules and organisational procedures
- encultured as collective understandings, stories, values and beliefs
- embodied into practical activity-based competencies and skills of key members of the organisation (i.e. practical knowledge or know-how);
- embraced as the conceptual understanding and cognitive skills of key members (i.e. conceptual knowledge or know-how)

Hildreth, Kimble, and Wright (2000) differentiated between “hard” and “soft” knowledge. Hard knowledge is knowledge that can be easily articulated and captured. Soft knowledge on the other hand is not so easily articulated and cannot be so readily captured.

Three broad types of knowledge were described by Hara and Kling (2002) as follows: book knowledge, practical knowledge, and cultural knowledge. Book knowledge refers to mere facts, such as statutes, policies, standards, whereas practical knowledge in contrast refers to using the book knowledge in practice; for example, how to use certain design standards or policies in Web development. Cultural knowledge is about what it is like to be for instance, an advance practice nurse, a web developer, or a literacy teacher and it includes bothone’s philosophy toward a practice, as well as one’s professional responsibilities (including job description) in a practice. For example, cultural knowledge related to fire-fighting practice would entail the philosophy toward the practice (e.g. I want to save people’s lives), and the professional

responsibilities (including job description) associated with fire-fighting (e.g. connect hose lines to hydrants, operate a pump to send water to high pressure hoses, ventilate smoke-filled areas, and provide emergency medical attention to victims as needed).

On the other hand, Christensen (2007) identified four types of knowledge: professional knowledge, coordinating knowledge, object-based knowledge and know-who. Professional knowledge basically describes knowledge that enables the operation supporter to perform his job. Professional knowledge is limited to the practice of being an operation supporter, and has also been referred to as know-how. Professional knowledge originates from a person's formal education in combination with his experience in performing his job. Professional knowledge is a prerequisite for being able as a specialist to contribute to organisational activities, but in itself it does not produce any organisational outcome. Coordinating knowledge is embedded in rules, standards and routines for how jobs are supposed to be performed. Coordinating knowledge guides the application of professional knowledge, in order to secure the efficient transformation of input to organisational output. In other words, coordinating knowledge shapes who is going to perform what and when – not necessarily how (which is rather guided by the professional knowledge). Object-based knowledge is knowledge related to a certain object passing through the production line of the company. In situations of interdependencies the central organisational task is clustering the contribution from various specialists (and their specialized knowledge). Often, the combination of specialized knowledge and coordinating knowledge is applied to a certain object such as a patient, a machine or a customer. Know-who is knowledge about where knowledge exists. Know-who enables the identification of who might be able to help solve specific problems. Knowledge can be stored in databanks and found in presentations, reports, libraries, policy documents, and manuals (Armstrong, 2006). The concept of knowledge from the

literature reviewed thus has many dimensions to it, depending on the context at which it is being discussed.

Having seen this concept from different angles, the researcher's contextual definition of knowledge is that it refers to know-what (important factual information), know-how (skill and procedures), know-why (expertise, understanding cause and effect relationships); and know-where or know-who (source for problem solving) embedded in human beings and which make an individual perform a given task easier and better than others.

Knowledge Sharing

Knowledge sharing stemmed from knowledge management. Jashapara (2004) defined knowledge management in the form of a four-looped process as: effective learning process blended in creation, organizing, sharing (both tacit and explicit) and applying knowledge, which leads to upgrade of organisational intellectual capitals and performance improvement.

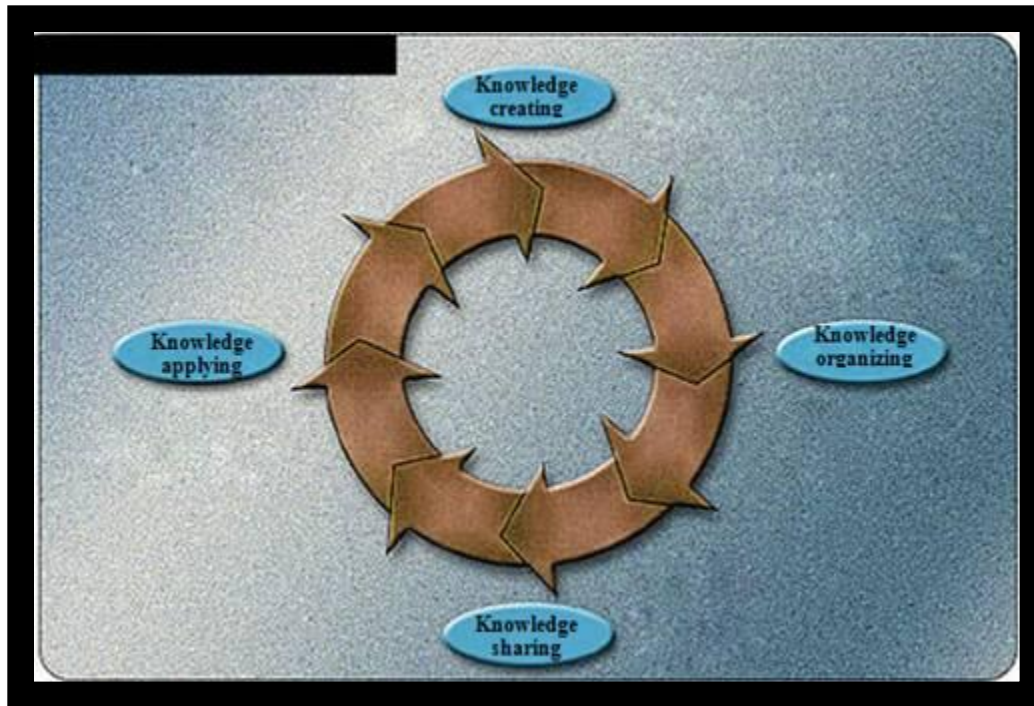


Figure 1: Four-Looped Knowledge Management Cycle (Jashapara, 2004, p.12)

The singular goal of knowledge management is to make the organisation more productive, more effective and more successful by promoting sharing of knowledge among individuals, groups and organisations (Srikantiah, 2000; Vangala, Banerjee & Hiremath, 2017). Knowledge sharing as a concept has been defined in many ways based on the perspective of each writer. At its most basic level, knowledge sharing involves the processes through which knowledge is channeled between a source and a recipient (Cummings, 2003). Willem (2003) defined knowledge sharing as the exchange of knowledge between at least two parties in a reciprocal process allowing reshape and sense making of the knowledge. The implication of the first two definitions is that knowledge sharing is a two way process. There must be a source and a recipient for knowledge sharing to take place. Elaborating further on the concept, a researcher opined that

Knowledge sharing between individuals is the process by which knowledge held by an individual is converted into a form that can be understood, absorbed, and used by other individuals. The use of the term sharing implies that this process of presenting individual knowledge in a form that can be used by others involves some conscious action on the part of the individual who possesses the knowledge. Sharing also implies that the sender does not relinquish ownership of the knowledge; instead, it results in joint ownership of the knowledge between the sender and the recipient (Ipe, 2003, p.341-342).

Knowledge sharing is an activity that requires appropriate mechanisms and media to make it run efficiently and effectively and involves the act of distributing and communicating knowledge both orally and in writing to other parties (Sawan, Suryadi, & Nurhattati, 2021). It is done consciously and with the intention of bringing about an understanding of what is being shared. When thus shared, knowledge does not deplete but instead multiplies, resulting in more knowledge available for use. Knowledge sharing is the process where individuals mutually exchange their (tacit and explicit) knowledge and jointly create new knowledge (van den Hooff & Hendrix, 2004). It refers to the process of capturing knowledge or moving knowledge from a source unit to a recipient unit (Bircham-Connolly, Corner & Bowden, 2005). Zhang, Liu and Xiao (2008) described knowledge sharing as the process organized through various modes of communication which distribute knowledge to members in the best time, place and form. Knowledge sharing is the mutual knowledge flowing and scattering among people and mechanical and non-mechanical knowledge bases (Darvish, Kharaghani & Selseleh, 2010). Knowledge sharing is the process by which an individual imparts his or her expertise, insight, or

understanding to another individual so that the recipient may potentially acquire and use the knowledge to perform his or her task(s) better (Yu, Lu & Liu, 2010).

Knowledge sharing is aimed at ensuring easy knowledge shift from one person to another, to ensure assimilation and adoption of knowledge acquired (Akram&Bokhari, 2011). Knowledge sharing is a process in knowledge management used in creating, harvesting, and sustaining processes (Witherspoon, Jason, Cockrell & Stone, 2013).The concept of knowledge sharing as reviewed in the literature point to the fact that in knowledge sharing there is an exchange of ideas, information and processes, using different communication means; and aimed at empowering one another for better decision making. This exchange could be between individuals of the same profession, working in the same organisations, in the same geographical regions and otherwise.

In view of the various definitions of knowledge sharing, the researcher contextually defined knowledge sharing as that aspect of knowledge management concerned with the act of making knowledge gained through training, experience available to others using technology for the sharing of best practices and creation of new knowledge.

Technology-enabled knowledge sharing

Technology-enabled knowledge sharing is a specific form of work practices through which knowledge workers share knowledge using technologies. The aim is to create a connected virtual environment for knowledge exchange by allowing knowledge seekers to identify and communicate with knowledge sources (Handzic, Lazaro& Van Toorn, 2004).Technology-enabled knowledge sharing is primarily a matter of the use of the rich and existent technology transmission medium/channels to match the task relevance of the knowledge being

conveyed(Sexton, Ingirige, & Betts, 2003). Technology-enabled knowledge sharing support include the use of proper repository for storing and sharing knowledge and the use of a communication medium for communicating and transporting knowledge among individuals (Babu&Gopalakrishnan, 2008). Technology-enabled knowledge sharing also referred to as digital collaboration is the exchange of knowledge between individuals and enterprises through technology-enabling tools that provide for communication and knowledge capturing (Shahid&Alamgir, 2011). Technology-enabled knowledge sharing offer capabilities that help individuals and organisations overcome their knowledge sharing obstacles as through it new possibilities for creation, modification, transmission and storage of knowledge can be generated (Jarrahi, 2013).Information technologies in its various forms has enabled individuals, groups and organizations to collect, store and exchange knowledge as never before, thereby helping them to create new knowledge. Technology-enabling tools enables easy access to others peoples knowledge, and these technologies also enable them to share what they know with others. Some of these tools include: email, video conferencing tools, blogs, wikis, social networking sites, and so on.

For the purposes of this research, technology-enabled knowledge sharing is contextually defined as the engagement of technology-enabling tools for knowledge donating and knowledge collecting in work collaboration and networking for effective service delivery.

Professional and Paraprofessional Librarians

TheDictionary for Library and Information Sciencedefined the term librarian as “a professionally trained person responsible for the care of a library and its contents including the selection, processing, and organisation of materials and delivery of information, instruction, and

loan services to meet the needs of its users” (Reitz, 2004, p.403). Aina (2004) defined a librarian as the professional concerned with the collection, storage, processing and dissemination of recorded knowledge in a library. Aina further noted that “the professional librarians are the most important staff of the library... are expected to provide leadership, and are graduates of library and information science, usually at the postgraduate level” (p.279). With reference to the University Library, Ugwuanyi and Igbokwe (2006) gave three categories of University Library staff as:

- i. Professional Staff (University Librarian, Deputy University Librarian, Principal Librarian, Senior Librarian, Librarian 1, Librarian 11, Assistant Librarian)
- ii. Para Professional Staff (Principal Library Officer, Senior Library Officer, Higher Library Officer, Library Officer)
- iii. Non-Professional Staff (Assistant Library Officer, Senior Library Assistant, Library Assistant, Library Attendant).

The professional librarians are supplemented by paraprofessionals, and other support staff. The paraprofessional staff usually possess qualifications beyond Cambridge Secondary School Certificate or its equivalent, plus qualifications in library and information science such as certificate or diploma. They assist the professional librarians in some intellectually tasks, such as reference service, cataloguing, current awareness services, and performs supervisory roles (Aina, 2004). Lilian’s library life.com (2013) noted that in the field of library and information science; if you have a qualification in library/information studies (e.g. degree or diploma) you’re usually considered to be a professional librarian. A professional librarian in Nigeria is referred to “as a person that has obtained a Bachelors or Master’s degree in Library and Information

Science...these are differentiated from para-professionals who could be diploma holders in the same profession” (Ezeani, Eke &Ugwu, 2015, p.4).

For the purpose of this study the researcher contextually defined aprofessional cum paraprofessional Librarian as one with the necessary preliminary intellectual training incharacter, involving knowledge and to some extent learning (degree or diploma), in the field of Library and Information Science as distinguished from mere skill. The professional librarians are those that had obtained at least a University degree and higher degrees in the field of Library and Information science, while the paraprofessionals are those that had obtained a Diploma, Ordinary Diploma or Higher National Diploma in the field of Library and Information Science.

Theoretical Framework

This work was guided by a theory and a model: Social Exchange theory and Technology Acceptance Model. The theory and the model and how they apply to the study are discussed.

Social Exchange Theory (SET)

Social Exchange theory is one of the most influential conceptual paradigms in organisationalbehaviour (Cropanzano& Mitchell, 2005). It is a commonly used theoretical base for investigating individual’s knowledge sharing behaviour (Liang, Liu & Wu, 2008). The theory was propounded by George C. Homans (1958) in a famous paper “Social Behaviour as Exchange”. The theory interprets behavior in terms of transactions. It proposes that interaction between persons is an exchange of goods, material and non-materials. It is of the view that a person engaged in exchange will seek maximum profit for himself; that is the reward must be more than the cost. The theory postulates that the more valuable the activities that members of a group (classes, firms, communities and societies) get, the more valuable those that they must

give. The cost and the value of what one gives and of what one gets vary with the quantity of what he gives and gets. It surmises that persons that give much to others try to get much from them, and persons that get much from others are under pressure to give much to them. This process of influence tends to work out at equilibrium to a balance in the exchanges. It proposes that if this does not happen, then the behaviour of the person doing the giving may change (Homans, 1958).

The theory had implications for this study because knowledge sharing is a two-way process- giving and collecting. For most people, there must be a balance before they will continue to give their knowledge. Furthermore as Chua (2003) pointed out, sharing of knowledge is usually seen as a costly activity, especially for the knowledge giver. Thus, unless the perceived benefits exceed the costs of sharing, the sharing process is hard to realize. Reluctance in sharing knowledge has a lot to do with reciprocity and trust issues. Reciprocity (giving expecting to be given) and trust (belief that I will not be disappointed and made to lose out in my giving) are likely predictors of knowledge sharing. Reciprocity and trust as predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrariansis being undertaken by this study. This necessitated the application of this theory to find out if the presence of trust and reciprocity among professional and paraprofessionallibrarians are considered as essential in order to maximize benefits and minimize costs of technology-enabled knowledge sharing. The implication of this theory for the study also rested on the assumption that human beings are bound to act in reciprocity. If one is likely to benefit some kind of favour from someone, he/she will offer that person his/her own favour but if not, that favour will be withheld.

Furthermore, the theory has implications for this study with regards to altruism because the reward must be more than the cost. Altruism is a rule whereby we seek to benefit

another person even at an absolute cost to ourselves (Cropanzano & Mitchell, 2005, p.879). The feeling of satisfaction after engaging in technology-enabled knowledge sharing is enough reward for the generally altruistic individual. Self-efficacy as a predictor of technology-enabled knowledge sharing can also rest on this theory. In self-efficacy, a person's belief in his ability to carry out a specific task- in this case, give a valuable knowledge- will strengthen his desire to share the knowledge they have. The value placed on the knowledge one possesses (in other words, the individual's judgment of his capabilities to contribute to the community) may motivate him to give out the knowledge irrespective of whether there is gratification or not. Altruism and Self-efficacy are being undertaken as predictors of technology-enabled knowledge sharing among professional and paraprofessional librarians.

The inability of Social Exchange Theory to cover all the predictors of technology-enabled knowledge sharing being studied in this research, necessitated the introduction of the model known as Technology Acceptance Model (TAM).

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was developed by Davis, Bagozzi and Warshaw in 1989. The theoretical roots can be found in the expectancy-value model and the theory of reasoned action (Bradley, 2009). The Technology Acceptance Model was developed to predict individual adoption and use of new technologies. The model suggests that when users are presented with a new technology, a number of factors influence their decision on if, how and when they will use it. The model uses two variables; perceived ease of use (PEOU) and perceived usefulness (PU) as determinants of user acceptance. These two determinants directly influence the user's attitude toward using the new information technology, which in turn leads to the user's behavioural intention to use. While perceived usefulness (PU) is based on the

observation that people tend to use or not use the application to the extent they believe it will help them perform their job better, perceived ease of use (PEOU) on the other hand refers to how effortless he or she perceives using the technology will be.

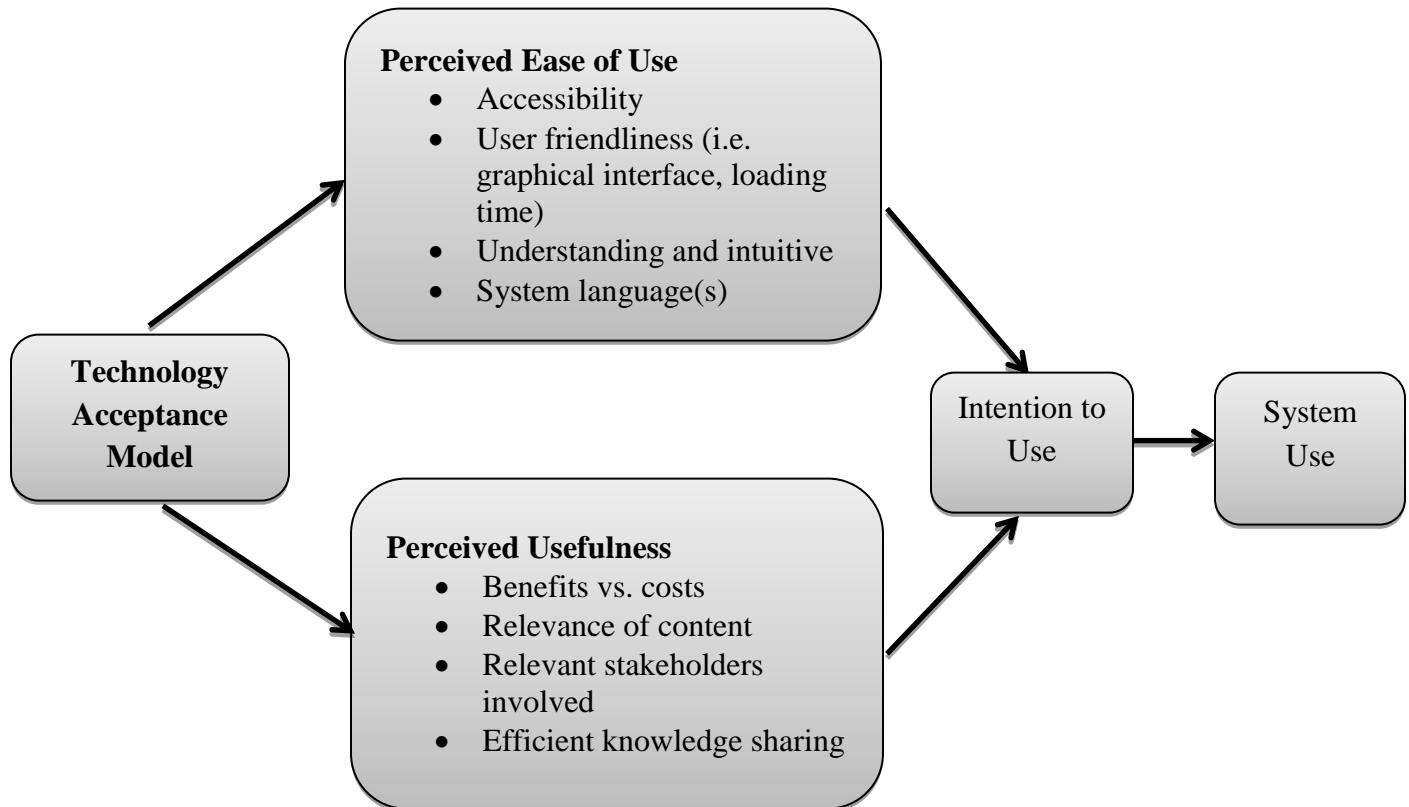


Figure 2: Technology Acceptance Model (Source: www.journals.plos.org, 2018)

The model had implication for this study because it explains the uptake and use of technology by individuals. Although an ICT model, there is need to test the Technology Acceptance Model on professional and paraprofessionallibrarians. Technology Acceptance Model was chosen because the concepts of perceived ease of use and perceived usefulness appeared more appropriate to investigate technology-enabled knowledge sharing among professional and paraprofessionallibrarians. This is because the professional and paraprofessionallibrarians who find technology easy to use and more useful will likely use the technology-enabled knowledge sharing more than those that find technology less easy or less

useful. This includes technology such as: wikis, blogs, microblogs, social networking sites, internet forums, virtual communities of practice or online groups, instant messaging systems, video conferencing tools, email, and online workspaces. Perceived ease of use of technology and perceived usefulness of technology may thus likely predict whether the professional and paraprofessionallibrarianswill engage in technology-enabled knowledge sharing or not.

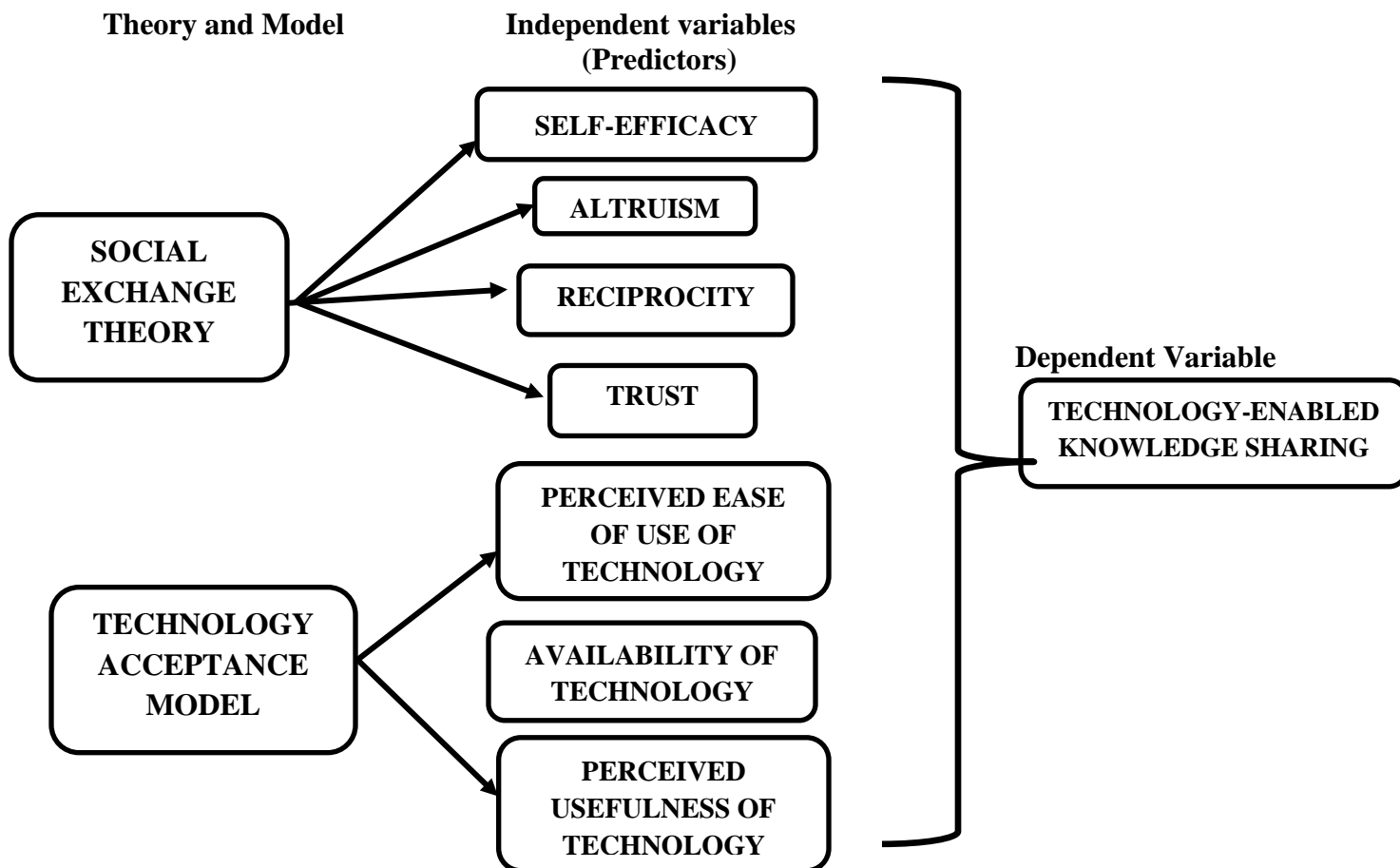


Figure 3: Research Framework

Social Exchange Theory was used to explain the independent variables of self-efficacy, altruism, reciprocity and trust as predictors of the dependent variable of technology-enabled knowledge sharing. Technology Acceptance Model on the other hand was used to explain the

independent variables of perceived ease of use of technology and perceived usefulness of technology as predictors of the dependent variable of technology-enabled knowledge sharing.

Theoretical Studies

Review of theoretical studies was done under two major subheadings: Technology-enabled knowledge sharing and its adoption by professionals and predictors of technology-enabled knowledge sharing. Literature was reviewed on the constructs: Altruism, Self-efficacy, Trust, Reciprocity, Availability of technology, Perceived ease of use of technology and Perceived usefulness of technology as predictors of technology-enabled knowledge sharing among professionals.

Adoption of Technology-enabled knowledge sharing by professionals

Personal and face-to-face interactions have served as the major way of knowledge sharing before the advent of Information and communication technology (ICT). The advent of ICTs has left in its wake several technologies to facilitate technology-enabled knowledge sharing. Jarrahi(2013) identified the following technologies that can be engaged for technology-enabled knowledge sharing: blogs, wikis, instant messaging systems and social media sites such as MySpace, Twitter, Facebook, Flickr, and YouTube. Jarrahi further submitted that workers no longer use social technologies in isolation from other technological communication options. Instead, they leverage multiple social technologies “conjunctively” to share knowledge and communicate with others. The use and mix of a diversity of technologies for communication constitute what Lee, Watson-Manheim and Ramaprasad (2007) called a “communication portfolio”. Carroll (2008) explained that the metaphor of a portfolio implies diversification for meeting different needs of work practices.

Technology-enabled knowledge sharing meets different needs of work practices in so many ways, and includes facilitating interaction among people for the purpose of knowledge sharing (Handzic et al., 2004). Through these technological devices knowledge and ideas are shared, new partnerships are formed and creative sparks are lit (Spira, Friedman & Hadler as cited in Olasina, 2006). Technology has been shown to be an effective vehicle for knowledge sharing because it accelerates the process of both knowledge creation and knowledge transfer (O'Dell & Grayson as cited in Ralph & Ellis, 2009). In addition to this technology-enabled knowledge sharing makes for convenience, speed of access, ease of downloading and sharing of electronic resources across groups (Kaur & Sharda, 2010). Reiterating this view, Hosseini and Hashempour (2012) averred that technology-enabled knowledge sharing makes for speed and easier communication with users and colleagues. Indeed, there is little doubt that technology-enabled knowledge sharing can act as a facilitator to encourage and support knowledge sharing processes by making knowledge sharing easier and more effective (Islam & Khan, 2014). Apart from enhancing and facilitating knowledge sharing, technology-enabled knowledge sharing enables the overcoming of some of the obstacles of knowledge sharing especially as it affects distance and geographical boundaries. This is due to the fact that technology transcends spatial boundaries. The application of electronic mail, Internet, collaboration technologies, bulletin boards and news groups can support the distribution of knowledge across geographical borders. Thus technology-enabled knowledge sharing enhances the sharing of knowledge by reducing the restriction pertaining to distance and time. According to Shah (2013, p.2),

Since ages, knowledge has been passed on from one generation to the other through written text, folklore, word of mouth, religions and customs. The knowledge, however, remained preserved geographically and hierarchically...ICT breaks all the natural,

social, cultural and hierarchical barriers to knowledge sharing. It has the potential to help the people to leapfrog some of the traditional barriers to development by making use of knowledge in various ways such as by improving access to information, expanding their market base, enhancing employment opportunities...etc.

ICT tools ranging from email to virtual conference technologies are used to “extend the boundaries of traditional face-to-face communities by creating virtual communities that enable global asynchronous and realtime collaboration” (Usono, Sharratt, Tsui&Shekhar, 2007, p.200). Previous studies examining geographic boundaries as it affects knowledge sharing reveal that spatial boundaries (e.g. different city or country) decrease the likelihood of knowledge being shared among employees (Tsai, 2002; Hansen & Lovas, 2004). With technology therefore, this problem has been taken care of.

Technologies represent powerful tools to promote transparency, encourage a variety of working styles, and create a more inclusive workforce... technology can help facilitate cross-generational mentoring, knowledge sharing, social networking, and professional development for employees both within and across different locations (Sabattini, Warren, Dinolfo, Falk & Castro, 2010, p.12).

Several platforms for facilitating technology-enabled knowledge sharing among professionals are available. They include, but are not limited to email, virtual communities of practice, Internet discussion forum, listserv, newsgroup, instant messaging system, social networking sites, web log, wiki, videoconferencing and digital/knowledge repository. Mere knowledge about the existence of platforms for technology-enabled knowledge sharing may not really guarantee their adoption and use by both individuals and professionals. According to

Oliveira and Martins (2011), individuals are seen as possessing different degrees of willingness to adopt innovations, and this leads to the segregation of individuals into the following five categories of individual innovativeness (from earliest to latest adopters): innovators, early adopters, early majority, late majority, laggards. Sabattini et al. (2010, p.12) wrote that “in today’s workplace technology is central to many work roles and essential to conducting global business.

This reinforced to some extent the view expressed by McAfee (2006) that it appears that once these new technologies widely available, the only two groups that quickly start using them are techies and newbies. ‘Newbies’ here means new entrants to the workforce (usually recent graduates find it natural to socialize, collaborate, and find what they’re looking for via technology platforms). ‘Techies’ are IT staffers, and also those people (usually very few) who are the natural early adopters and advanced users of whatever technologies are available. Buckley (as cited in Olasina, 2006) suggested that Digital natives—today’s younger generations who speak natively the language of computers, mobiles, video games and the internet—are protagonists for massive technology adoption and a consequent adaptation of human behaviour. This according to Sabattini et al. (2010) was not to suggest that members of other generations were not equally comfortable and interested in using technology to maximise their work. Hence, they cautioned against stereotypical perceptions, asserting that the assumption that all members of a particular age group share the same characteristics and attitudes can be misleading and reinforce negative stereotypes.

Generation gap in technology use could however be very obvious in the amount of time spent using technology. Puybaraud (2012) in a work titled “Digital natives: a tech-savvy

generation enters the workplace” alleged that most Digital Natives use the Internet between two and four hours per day; and that one-fourth of Digital Natives spend between four and six hours of their day online. Puybaraud contended that as a result of this massive investment of time using digital media, they have become masters of navigating and filtering the flood of information they receive, skilled at multitasking, and must be able to access the virtual world at all times. Jarrahi (2013) reported that younger knowledge workers are more likely to employ public social media for reaching out to their strong ties (people that they have formed a close relationship with albeit online). As these platforms are public, older knowledge workers may not see them as relevant. Jarrahi cited Backstrom et al. who posited that an explanation for this difference lies in how people define friendship. Jarrahi submitted further that this perception can lead them to assume that they can reach out to their friends on public social media even though they have never met them. No matter where these social links are geographically located, younger knowledge workers may develop close relationships that they rely upon for work-related or non-work related advice. In addition, younger people are more likely to perceive public social media as a fruitful venue for sharing advice. This perceived usefulness thus makes the possibility of their use of technology for knowledge sharing to be high. Puybaraud(2012) opined however that the technology gap between generations will lessen as older generations learn to embrace and understand new technologies like their Digital Native peers. Puybaraud concluded that if addressed correctly, this new generation can help increase productivity by helping colleagues use technology more efficiently and effectively.

Predictors of Technology-enabled Knowledge sharing among professionals

Professionals arguably do not share their knowledge under all circumstances. Literature although replete with quite an impressive number of factors that may encourage or discourage

the practice of knowledge sharing among colleagues and professionals, studies relating specifically to the Librarianship profession were sparse. It was even more difficult to get literature applying to the predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians.

Knowledge sharing is a voluntary activity (Dixon, 2002). Kim and Mauborgne (as cited in Ghosh, 2004) noted that knowledge is a resource locked in the human mind, and as sharing knowledge is an intangible activity, it can neither be supervised nor forced out of people. Knowledge sharing is therefore dependent on a number of projections which will either mar or encourage the knowledge sharing process be it in a technology-enabled or non technology-enabled environment. The review of literature was on the predictors of technology-enabled knowledge sharing as it pertains to this study.

Self-efficacy as a predictor of technology-enabled knowledge sharing among professionals

Self-efficacy is considered important in knowledge sharing among professionals in a technology-enabled environment, based on the theory of Social Exchange Theory (SET). The theory proposes that interaction between persons is an exchange of goods, material and non-materials. One usually has the desire to exchange valuable goods, and in applying it to the context of knowledge sharing, one may surmise that the theory may indicate that if individuals are not sure of their capabilities (self-efficacy) and the value of the knowledge they are supposed to share, they may not share it. Andriessen (2006) identified insecurity about the value of the knowledge, not being sure that contributions are important, or relevant to the discussion as a key barrier in knowledge sharing. Wang and Noe (2010) averred that several studies have shown that individuals who are more confident in their ability to share useful knowledge are more likely to

express intentions to share knowledge and report higher levels of engagement in knowledge sharing. They presented that knowledge sharing does appear to be contingent on individuals' confidence of sharing useful knowledge with others. Wang and Noe also claimed that in general, prior research seems to suggest that knowledge sharing is more strongly related to employees' beliefs that their shared knowledge is useful to others than the personal benefits they gain, especially in a professional network. Reiterating this view, Majid and Wey (2011) argued that lack of understanding of what to share, and the fear of providing wrong information could hamper the knowledge sharing activity.

Altruism as a predictor of technology-enabled knowledge sharing among professionals

Altruism as a predictor of technology enabled knowledge sharing stands on Social Exchange Theory (SET). The unique feature of SET is the view that a person engaged in exchange will seek maximum profit for himself; that is the reward must be more than the cost. Altruism thus have linkage to Social Exchange Theory in that certain individuals may give out something freely (cost) without expecting any returns from the receiver, save for the inner feeling of satisfaction derived from the ability to help solve another person's problem (reward). Altruism denotes voluntary helping actions either for the direct benefit of other individuals or indirectly to the community (Fang & Chiu, 2010). The concept of altruism refers to deriving enjoyment in helping others. Altruistic individuals typically derive personal satisfaction from helping others. It is assumed that hardly do individuals help another without expecting any reward. Hall (2001) however made a distinction between hard and soft rewards. Hard rewards are the tangible, economic rewards and soft rewards are for example enhanced reputation and personal satisfaction. Kollock (as cited in Chennamaneni, 2006) noted that individuals share knowledge because they believe helping others with challenging problems is

interesting and because helping others makes them feel good. For some individuals too, helping others strengthens their own skills and old concepts (Wasko&Faraj, 2000).

In a study on why people participate and help others in electronic communities of practice,Wasko and Faraj wrote that individuals in electronic networks are intrinsically motivated to share knowledge with others for various reasons. Some individuals share their knowledge because they derive enjoyment in helping others. For such people, helping others is enjoyable and brings satisfaction. Participants in technology-enabled knowledge sharing are also motivated to share knowledge with others because they consider helping others and sharing knowledge “is the right thing to do”. People feel that they are morally obligated to share knowledge in order to contribute positively to the community advancement. By fulfilling their own altruistic and pro-social motives, people derive intrinsic enjoyment (Chennamaneni, 2006). In order to establish a relationship between trust and altruism in technology-enabled knowledge sharing,Chen, Fan and Tsai (2014) proposed that when individuals perceive an atmosphere of trust in the virtual communities, those with a high level of altruism are more likely to freely share information or discuss personal experiences in the community than those with a low level of altruism.

Reciprocity as a predictor of technology-enabled knowledge sharing among professionals

Reciprocity as a predictor of technology-enabled knowledge sharing among professionals also has a link to Social Exchange Theory (SET). SET proposes that interaction between persons is an exchange of goods, material and non-materials. It is of the view that a person engaged in exchange will seek maximum profit for himself; that is the reward must be more than the cost. The theory postulates that the more valuable the activities that members of a group get, the more

valuable those that they must give. The cost and the value of what one gives and of what one gets vary with the quantity of what he gives and gets. It surmises that persons that give much to others try to get much from them, and persons that get much from others are under pressure to give much to them too. Knowledge sharing practices are thus affected by people's willingness to share knowledge (Islam & Ashif, 2014). This is probably irrespective of the platform it is being carried out. Hew and Hara (2006) affirmed that reciprocity encourages willingness to share knowledge. According to Blau (as cited by Chiu, Hsu & Wang, 2006) reciprocity implies actions that are contingent on rewarding reactions from others and that ceases when these expected reactions are not forthcoming. It refers to knowledge exchanges that are mutual and perceived by the parties as fair, and builds trust, which in turn is centrally important to social exchange relationships. Reciprocity comprises two major activities: viewing (receiving) and posting (giving) knowledge. The significant relationship between reciprocity and individuals' quantity of knowledge sharing implies that participants of a virtual community may seek a fair balance between what they contribute to the community and what they receive from it (Chiu et al., 2006).

At the core of knowledge sharing is one's willingness to release the knowledge one knows and communicate it freely with others in order to learn something from them (Yeo & Gold, 2014). For people who are willing to share their knowledge, the norm of reciprocity is important – they expect others to contribute as well. People expect 'soft benefits' such as elevated reputation and peer recognition in return (van den Hooff & Hendrix, 2004). Putting it in another way, Yeo and Gold explained that when one shares knowledge openly with others one creates a boundary of a reciprocal relationship where the party receiving the knowledge is expected to share something back in return. Majewski and Usoro (2011) recognized that knowledge receivers themselves are often expected to and often feel obligated to reciprocate by

also giving their knowledge, skills, values or something else of value with the consequent development of trust in such relationships. In this instance, reciprocity could be used as a payment for knowledge sharing (Wu & Sukoco, 2010). Hew and Hara (2006) observed that reciprocity can also work the other way. Instead of people sharing knowledge as a way to fulfill an obligation, some people share knowledge in the expectation of getting help in return. Soo (2006) referred to this kind of practice as giving a down-payment for an expected later payback. Kollock (as cited in Wasko & Faraj, 2000) suggested that when people help others due to the possibility of future reciprocation, there must exist the expectation that interaction will be available in the future. Reciprocity in technology enabled knowledge sharing also has a link to trust. Elaborating on this Chen, Fan and Tsai (2014) explained that when reciprocal acts occur in social interaction, individuals may trust each other and are likely to share personal feelings, information, and knowledge.

Trust as a predictor of technology-enabled knowledge sharing among professionals

Knowledge sharing is a two-way process- giving and collecting. Trust as a predictor of technology-enabled knowledge sharing in this study is hinged on the Social Exchange Theory (SET) which interprets behavior in terms of transactions in which a balance in the exchanges must be worked out. For most people, there must be a balance before they will continue to give their knowledge. SET proposes that if this balance does not happen, then the behaviour of the person doing the giving may change. Trust (belief that I will not be disappointed and made to lose out in my giving) has been identified as one of the predictors of knowledge sharing. In fact, Wu and Sukoco (2010) viewed trust as fundamental in knowledge sharing between parties. It is vital for achieving an atmosphere of knowledge sharing in teams and organisations and is also important in online settings (Fang & Chiu, 2010; Majewski & Usoro, 2011). Renzl, Matzler and

Mader (2005) opined that definitions of trust are manifold, however, there are two central issues: firstly, trust is about dealing with risk and uncertainty; and secondly, trust is about accepting vulnerability. Mayer, Davis and Schoorman (as cited in Wu & Sukoco, 2010) defined trust as the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustee, irrespective of the ability to monitor or control that other party.

In the virtual community, trust is developed between individuals and maybe a group of strangers or colleagues that provide positive outcomes for the community as a whole (Wu & Sukoco, 2010). A trusting environment should be more conducive to knowledge sharing. Fostering knowledge sharing is about creating a trusting environment in which people are able to discern whether their colleagues are both knowledgeable and willing to extend their knowledge to the benefit of others. Trust will cause professionals to actively share their knowledge, being sure that the knowledge will not be used against its goals, will be compensated, and will earn considerable benefit in return (Levin, Cross, Abrams & Lesser, 2007; Seyyedeh & Daneshgar, 2010). For trust to exist among colleagues, individuals must believe that their goodwill will be reciprocated, even in the absence of formal controls. Since individuals amass knowledge at considerable expense of time, resources and energy, they would not simply give it away unless they are assured that they are handing this information in good hands and that there is a good chance of reciprocity.

Sharing knowledge in an online community has consequences for the degree of trust among the members of such a community (van den Hooff, Elving, Meeuwssen, & Dumoulin, 2003). This is because trust is required in both sides of the knowledge sharing activity:

knowledge recipients must be able to trust that the knowledge that they receive is qualitative and accurate, and knowledge transmitters must be able to trust that the knowledge they are divulging will be used appropriately. The reputation of both the knowledge seeker and knowledge transmitter is also an integral component in the establishment of trust among colleagues. Loss of face that results from abusing the good will of helpers destroys one's capacity to receive further help or assistance (Connelly, 2000). There is also trust from the point of view of the knowledge seeker. After all, the knowledge seeker doesn't know that the knowledge that he/she is about to get is quality knowledge (Ghosh, 2004). Wu, Yeh and Huang (2007) submitted that once people realise that a transmitted knowledge is valuable or comes from experts, they will be eager to acquire it. Some schools of thought however holds the traditional view that without face-to-face interactions, trust cannot emerge or be maintained (Hardy; Nohria&Eccles as cited in van den Hooff et al., 2003).

Countering this view, Burgoon, Stoner, Bonito and Dunbar (2003) in a study on trust and deception in mediated communication concluded that participants who communicated exclusively through Information Communication Technologies were able to establish trust and mutuality without meeting face-to-face. Buttressing this, Boisot (as cited in van den Hooff et al., 2003) alleged that electronic communication enables co-presence without co-location, which could enable a person to build a more trusting relationship with a transaction partner located in a neighbouring continent than with one in a neighbouring room. van den Hooff et al. citing Jarvenpaa and Leidner further upheld that virtual teams that exclusively interact through technology-enabled platforms can very well develop trust, albeit a task-related, "swift" kind of trust instead of truly interpersonal or socially based trust.

Availability of technology as a predictor of technology-enabled knowledge sharing among professionals

Although not grounded on any known theory, previous studies have included availability of technology as factors of knowledge sharing in an online environment (e.g. Wangpipatwong, 2009; Omar et al., 2011; Usman&Oyefolahan, 2014). This necessitated its inclusion as a likely predictor of technology-enabled knowledge sharing. Technology availability can be referred to as the degree of accessibility of technology for knowledge sharing. It refers to a situation where technology is readily accessible for communication and knowledge exchange (Omar et al., 2011).Cabrera, Collins and Salgado (2006) found out that availability of technology for knowledge sharing, among others significantly predicted self-reports of participation in knowledge exchange. According to Vangala et al. (2017), the availability of ICT is seen to enhance effective dissemination of explicit and tacit knowledge and sharing of best practices.Technology availability is very crucial to facilitate connectivity for long distance collaboration. Availability of technology will most likely make professionals more inclined to seek knowledge from the internet via the different technology-enabled platforms for knowledge sharing, rather than the conventional knowledge sharing platforms which can be more rigorous and time consuming. This is due to the fact that technology-enabled knowledge sharing makes it easier for professionals to communicate and share knowledge irrespective of the geographical distance and at a minimal price (Omar et al., 2011). Technology availability thus empowers professionals to effectively engage in technology-enabled knowledge sharing, and exchange ideas and work processes with other professionals irrespective of the geographical location. Han and Anantatmula (2007) posited that issues related to availability and usability of technology, have been shown to have influences on knowledge sharing. Supporting this, Usman and

Oyefolahan(2014) wrote that technology availability and technology support were the significant variables that influence knowledge sharing using web technologies.

Perceived ease of use of technology as a predictor of technology-enabled knowledge sharing among professionals

Perceived ease of use of technology as a predictor of technology-enabled knowledge sharing among professionals rests upon the Technology Acceptance Model (TAM). The model suggests that when users are presented with a new technology, a number of factors influence their decision on if, how and when they will use it. The model uses two variables one of which is perceived ease of use (PEOU) as determinants of user acceptance. These two determinants directly influence the user's attitude toward using the new information technology, which in turn leads to the user's behavioural intention to use. Perceived ease of use is the extent to which a person believes that using a technology will be free of effort. Perceived ease of use is a construct tied to an individual's assessment of the effort involved in the process of using the system (Venkatesh, 2000). Perceived ease of use is defined as the degree to which a person believes that the act of using a technology would be free from effort (Davis as cited in Bock, Kankanhalli& Sharma, 2006). Thus if a person believes that engaging in technology-enabled knowledge sharing would not be free of effort, the person may not even try to engage in it. Conversely, those who perceive that technology-enabled knowledge sharing will be free of effort will more likely engage in it. This view is supported by Jahangir and Begum (2008) who inferred that the perception that technology-enabled knowledge sharing will involve a minimum of effort and an understanding of how to go about the technology-enabled knowledge sharing will most likely lead to its adoption by professionals.

Perceived usefulness of technology as a predictor of technology-enabled knowledge sharing among professionals

Perceived usefulness of technology as a predictor of technology-enabled knowledge sharing among professionals is established on the Technology Acceptance Model (TAM), which was developed to predict individual adoption and use of new technologies. The model identifies perceived usefulness (PU) as having an influence on user acceptance of a new technology. Perceived usefulness is defined as the extent to which a person believes that using a technology will enhance her/his productivity (Venkatesh, 2000). It is the degree to which a person believes that using a technology would enhance his or her job performance. Perceived usefulness affects a person's attitude which may assist in determining behavioral intentions and hence, would indirectly lead to the actual technology usage (Davis as cited in Bock, Kankanhalli & Sharma, 2006; Omar et al., 2011). Perceived usefulness is also known as performance expectancy (Venkatesh, Morris, Davis & Davis, 2003) which has been defined as the degree to which an individual believes that using the system will help him or her to attain gains in job performance. Jahangir and Begum (2008) noted that usefulness is the subjective probability that using the technology would improve the way a user could complete a given task. A technology is seen to be of high usefulness when a potential adopter believes that there is a direct relationship between use, on the one hand, and productivity, performance, effectiveness or satisfaction, on the other (Lu et al, as cited in Rampersad, Plewa & Troshani, 2012). Although technology might provide at least some degree of usefulness, a potential reason not to adopt exists when adopters fail to see the "need" to adopt. Need recognition is, therefore, likely to drive potential adopters to educate themselves in order to be able to utilize a technology fully before being able to recognize its usefulness. This, in turn, is likely to enhance the rate of adoption. The recognition of usefulness

is important because it has been found to have a strong direct effect on the intention of adopters to use a technology (Rampersad et al., 2012). Therefore, perceived usefulness of technology for knowledge sharing can serve as a motivator for professionals to seek knowledge from, engage in and adopt technology-enabled knowledge sharing. If professionals perceive that the results they obtain from technology-enabled knowledge sharing are useful for their work (i.e., the system can improve their job performance), they are likely to be motivated to participate and engage in technology-enabled knowledge sharing (Wasko&Faraj 2000, Jahangir & Begum, 2008).

Empirical Studies

The review of empirical studies was done under the subheading: predictors of technology-enabled knowledge sharing. Related literature focused on the constructs: altruism, trust, self-efficacy, reciprocity, availability of technology, perceived ease of use of technology and perceived usefulness of technology as predictors of technology-enabled knowledge sharing.

Predictors of Technology-enabled Knowledge sharing among professionals

Renzl, Matzler and Mader (2005) carried out a study on “Impact of Trust in Colleagues and Management on Knowledge Sharing within and across Work Groups”. Data was collected from an Austrian company in the utility sector. The study was set to analyze the impact of trust on knowledge sharing within and across work groups considering two levels of trust, firstly, trust in management and secondly, trust in colleagues. A standardized questionnaire was sent to six hundred and sixty five (665) employees of that company. One hundred and thirty one (131) fully completed and usable questionnaires were returned to the researchers within one week, constituting a return rate of approximately 20 percent. Scale reliability was tested calculating Cronbach alpha and item-to-item correlations. The study found out that trust in management had

significant positive impact on external knowledge sharing; and that trust in colleagues also had significant positive impact on knowledge sharing within the work group. It was however reported that trust in management had no significant impact on internal knowledge sharing and that trust in colleagues had no significant impact on external knowledge sharing. The study by Renzl et al. related to this work in that it considered trust as important in knowledge sharing. It however differed from this work because it did not consider trust as it pertains strictly to predicting technology-enabled knowledge sharing. Furthermore, this work considered trust among other predictors of technology-enabled knowledge sharing among professional and paraprofessional librarians.

Hew and Hara (2006) undertook a study on Identifying factors that encourage and hinder knowledge sharing in a longstanding online community of practice. The study investigated The Nurse Practitioners (a pseudonym), an e-mail based listserv which was one of the oldest and largest of its kind in the United States. Twenty seven nurses (1 male, 26 female) who were members of the NP-I participated in the study. Data collection was done using online observation and interviews. Data collected were coded and analysed using coding scheme that was not predetermined prior to the analysis but which emerged through the interaction with the data. The result of the study revealed that the respondents indicated that they felt obligated, due to a sense of reciprocity, to help others by sharing what they know because they had received help at some point in the past from other members of the community of practice. The study by Hew and Hara related to this study in that it considered reciprocity as a factor of knowledge sharing in a technology-enabled environment, and among professionals. However, while it considered a specific online platform, this study was not limited to only one platform. Secondly, their work considered nurses in United States as its geographical region, while this work

studied professional and paraprofessional librarians in Nigeria, and specifically South-East geopolitical zone.

Tan, Lye, Ng and Lim (2010) carried out a study on the Motivational Factors influencing Knowledge Sharing among Banks in Malaysia. The paper investigates the motivational factors which covers both intrinsic (trust, learning, behaviour) and extrinsic factors (organisation culture, reward system, information technology) that encourages the widespread sharing of knowledge among bank employees in Malaysia banking sector. Questionnaire was used to collect the primary data from eight (8) banks selected through random sampling. The total number of respondents was one hundred and ninety five (195) comprising 114 female and 81 male. Among the variables the researchers tested, Information Technology (IT) had the highest mean, which was 3.86 with standard deviation 0.550, which the researchers attributed to the fact that Information Technology motivates knowledge sharing due to its increasing importance in capturing and storing crucial knowledge. The study also found that Information technology and trust had significant positive influence on knowledge sharing. They conclude however that, behaviour does not have any significant effect on knowledge sharing process. The relationship of this study to this work lay in the fact that trust and technology were seen as having an influence in knowledge sharing. Nonetheless, while their study dealt on technology for knowledge sharing in banks in Malaysia, this work is specifically on predictors of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. In addition to this, this work examined other variables that were not contained in their study.

Lin (2007) in a study titled “Knowledge sharing and firm innovation capability: an empirical study” examined the influence of individual factors (enjoyment in helping others and knowledge self-efficacy), organisational factors (top management support and organisational rewards) and technology factors (information and communication technology use) on knowledge sharing processes and whether they lead to superior firm innovation capability. It surveyed 172 employees from 50 large organisations randomly selected from the top 1,000 firms list published by Common Wealth magazine in 2004, which listed the 1,000 largest firms in Taiwan. The survey was done using questionnaire, while the data analysis was performed using structural equation modeling (SEM). The result showed that two individual factors (enjoyment in helping others and knowledge self-efficacy) and one of the organisational factor (top management support) significantly influence knowledge-sharing processes. The result equally showed a positive significant relationship between ICT use and knowledge collecting. The study by Lin is related to this work as it examined enjoyment in helping others (altruism) and self-efficacy albeit as factors in knowledge sharing. It however considered only one technological factor- ICT use. This work filled this gap by studying three other technological predictors pertaining to ICT adoption and use which are: availability of technology, perceived ease of use of technology and perceived usefulness of technology.

Hsu and Lin (2008) carried out a study on Acceptance of blog usage: the roles of technology acceptance, social influence and knowledge sharing motivation. Target population was blog participants in Taiwan. It was an online field survey using questionnaire. The study was conducted in a space of two months. The study examined the factors that motivate people to participate in blog activities, and surveyed a total of two hundred and twelve (212) blog participants. The results indicated that ease of use and enjoyment in helping others, and

knowledge sharing (altruism and reputation) was positively related to attitude toward blogging, and accounted for 78 percent of the variance. On the other hand, social factors and attitude toward blogging significantly influenced a blog participant's intention to continue to use blogs. Together they explained 83 percent of the variance of intention to blog. The study however found that social norm had no direct influence on user intention to use. At the same time perceived usefulness, expected reciprocal benefit, trust and expected relationships had no direct influence on attitude. The relationship to this study lie in the fact that it included five constructs being considered in this work as likely predictors of technology-enabled knowledge sharing, which include: perceived ease of use, perceived usefulness, expected reciprocal benefit, trust and enjoyment in helping others. It was however a study of blog participants in Taiwan. This work on the other hand is not limited to participants in a single technology-enabled platform but included predictors of professional and paraprofessionallibrarians' use of all known technology-enabled knowledge sharing platforms.

Karimi and Chiang Choon Poo (2009) investigated the Personal and external determinants of medical bloggers' knowledge sharing behavior. Data was collected from 75 bloggers writing on medical issues. The study examined enjoyment in helping others (i.e. Altruism) among other factors. It was a Web-based survey which was carried out using "www.surveymonkey.com" which is an online web survey provider. Enjoyment in helping others was found to be the most important factor among all the other factors investigated in the study. The study related to this work by its study of altruism as an internal determinant of bloggers knowledge sharing behaviour, and by its study of professionals (medical bloggers). This work improved on the study by Karimi and Chiang Choon Poo in at least three ways- by including other constructs not undertaken by the study as predictors of technology-enabled

knowledge sharing; by studying professional and paraprofessionallibrarians and by extending the study of technology-enabled knowledge sharing to include all known technology-enabled platforms and not just web logs.

Paroutis and Saleh (2009) investigated the determinants of knowledge sharing using modern technologies. The case study was a large multinational firm, TechCo (pseudonym) in UK. This research was based on a qualitative case study design in which eleven (11) in-depth interviews were conducted. A combination of convenient and snowball sampling was used in selecting the samples used for the face-to-face interviews. In addition, secondary data from the responses to the Blogging Q&A conducted internally by TechCo were integrated into the findings of the study. Data was analysed using a grounded approach. The study found out that lack of knowledge about the tools, their benefits and how to go about using them, unawareness or cynicism about the value they could provide, and perceptions of certain risks and downsides associated with using the technologies were among the top mentioned barriers. They observed that those employees who perceived and gained positive outcomes from using the modern technologies were the one's actively participating; while those who were unaware of the benefits, skeptical about them and/or perceived the costs of using these tools to be higher than the benefits were the ones refraining from using them. Majority of the current users stated that they use the technologies partly because it helps them do their jobs more effectively. Some of the most commonly stated benefits include reducing e-mail overload, avoiding answering the same questions multiple times, managing personal knowledge, generating discussions on areas of interest, obtaining help in solving business problems and communicating more effectively with remote team members. Perceived usefulness of the technology was identified as a determinant of knowledge sharing using technology, and in this area the study partly relates to this work.

However, while Paroutis and Saleh studied the determinants of knowledge sharing using technology in a large multinational firm in UK, and applied no theory, this work is on the predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria.

Wangpipatwong (2009) in a study titled “factors influencing knowledge sharing among university students” grouped the factors into three- individual, classroom and technological aspects. A questionnaire was used for collecting data. There were 207 students (in undergraduate and graduate levels) from a university in Bangkok, Thailand. Several classrooms were selected based on convenience sampling and the questionnaires were distributed to students in the selected classrooms. They considered two technological factors- technology availability and technology support. The Cronbach’s alpha statistic was used to test internal consistency, or reliability of group items. The study found out that while technology support has an influence in knowledge sharing, technology availability have no influence on knowledge sharing. Wangpipatwong’s study relates to this work as regarding the technology availability as important in technology-enabled knowledge sharing. This work extended the study by including self-efficacy, altruism, reciprocity, trust, perceived usefulness of technology and perceived ease of use of technology as predictors of technology-enabled knowledge sharing among not students, but professional and paraprofessionallibrarians in South-East, Nigeria.

“Exploring factors that influence knowledge sharing via weblogs” is the title of a study carried out by Yu, Lu and Liu (2010). The subjects for the research were recruited from the numerous internet users who had knowledge sharing experience via weblogs. They explored the factors that facilitate voluntary knowledge sharing in a virtual community using three categories

associated with a sharing culture – fairness, identification and openness. The study used online and interview surveys. The research model was tested with data from members of three professional virtual communities called Chip123 (Taiwan RD Innovation Forum), TESEC (Taiwan Elementary and Secondary Educator Community) and Blueshop. In total, 442 (318 via offline data collection, 124 via online data collection) usable responses were obtained. The LISREL software package was used to perform all Structural Equations Modeling statistical procedures, and all research hypotheses were tested using LISREL 8.72 and SPSS 10.0 with the measurement items. The constructs and their hypothesized relationships were tested simultaneously. The study found a positive relationship between fairness and community sharing culture; and between openness and community sharing culture. It was also found that enjoyment in helping, sharing culture and usefulness had positive relationship with knowledge sharing behaviour. In addition, fairness and openness had significant positive relationship with knowledge sharing culture. Enjoyment in helping (altruism) and usefulness of technology are part of the variables being examined by this study, and thus the study related to this work in that aspect. Other constructs being considered in this work are absent though, such as self-efficacy, perceived ease of use, trust, reciprocity, and availability of technology. This work in addition improved upon the study by considering professional and paraprofessionallibrarians in South-East Nigeria.

A study on the influence of altruism, self-efficacy and trust on knowledge sharing was carried out by Okyere-Kwakye, Nor and Ziaei (2011). Social Cognitive theory was used by the authors as the theoretical base for the constructs altruism and self-efficacy. One hundred and twenty five (125) copies of the questionnaire were distributed to non-academic employees in a public university in Malaysia. Multiple regressions were used to analyze the data. From the result

of the study, altruism and trust were found to significantly influence knowledge sharing. Self-efficacy on the other hand was not significant in influencing individuals' knowledge sharing behaviour. The study by Okyere-Kwakye et al. is related to this work in a couple of ways. It involved employees of a public university albeit only non-academic employees. It also considered three of the variables that are equally being considered in this work. The differences lay in the fact that this work considered only professional and paraprofessionallibrarians in Nigeria instead of Malaysia. In addition to this, this work considered not just knowledge sharing but predictors of technology-enabled knowledge sharing. As such other technology related predictors of technology-enabled knowledge sharing that were not studied by Okyere-Kwakye et al. were included.

Omar, Taib, Yasin, Hashim and Yatin (2011) carried out a study on the "Factors affecting knowledge sharing among undergraduate students in a public university in Malaysia". The study is a cross sectional study among college students in PuncakPerdana campus in University Technology Mara (UiTM), Shah Alam. It was conducted for a period of three months, between the months of January to March 2011. Simple random sampling was employed to a sample of 313 respondents used for the study. Questionnaire was administered and tested using Pearson's Correlation Test. Among the variables they considered were three constructs being undertaken in this study which includes: self-efficacy, perceived usefulness of technology and availability of technology. The study found out that self-efficacy has a high significant correlation to knowledge sharing behaviour. The result of the study suggested that respondents with high self-efficacy have higher confidence in sharing their knowledge and may probably value their knowledge greater than those who do not. Conversely, respondents who have low self-efficacy, tend to withhold knowledge in fear of being perceived by their peers as lacking in intelligence.

On perceived usefulness of technology, most of the respondents accepted that they utilise available technology for knowledge sharing. The study found out that majority of the respondents see technology as a very useful means for obtaining new knowledge. They also perceived that technology had played a vital role in communication and in exchanging knowledge among close and distant friends. The study also revealed that technology availability is significantly correlated to knowledge sharing having the highest mean score. The majority of the respondents claimed that they can access information whenever needed. Relating the study to this work, self-efficacy, perceived usefulness of technology and availability of technology are among the constructs being considered in this work as predictors of technology-enabled knowledge sharing. It however studied these factors as they affect knowledge sharing among undergraduate students in a public university in Malaysia. This work differed here by studying predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians in South-East Nigeria. It also included four other constructs not considered by the work which are: altruism, reciprocity, trust, and perceived ease of use of technology.

Hosseini and Hashempour (2012) carried out a study on the Status of Librarians' Knowledge Sharing using modern technology- Web 2.0 Tools. They undertook a case of Central Libraries of Tabriz Governmental Universities. The study among others sought to find out the main obstacles to effective use of these new technologies for knowledge sharing. The study was a survey research and data collected using questionnaire. The study found that more than half of the respondents (Librarians) indicated that lack of knowledge in the technology use, lack of familiarity with the technologies and inadequate awareness of the value of the usage are the main obstacles to they encounter in effectively using these new technologies for knowledge sharing.

The study concluded by recommending that Librarians should try to keep themselves up-to-date and do their best to adapt themselves to new technologies. The study by Hosseini and Hashempour is related to this work as it studied on use of modern technology (Web 2.0 tools) for knowledge sharing by Librarians in government owned universities. Perceived ease of use and perceived usefulness of technology that were being considered in this work were also identified by them. This work improved upon the study by specifically considering predictors of technology-enabled knowledge sharing among not only Librarians (those with degree or higher degree in Library and Information Science), but also Library Officers (those with Diploma in Library and Information Science). The area of study also differed as this work considered professional and paraprofessionallibrarians in federal universities of South-East, Nigeria.

Jinyang (2015) carried out a study on knowledge sharing in virtual communities from the perspective of Social Exchange theory. The purpose of the study was to identify the knowledge sharing behaviours on the internet, using structural equation modeling methods, and propose a model based on social exchange theory in which share willingness, trust, reciprocity and altruism tended to have impact on people's knowledge sharing behaviours in virtual communities. The target population was mainly university students and a few lecturers who have had knowledge sharing experience in virtual communities. Two hundred and one (201) valid copies of the questionnaire were used for the analysis. The study found out that members sharing willingness positively influences the knowledge sharing behaviours. It also discovered a significantly positive link between trust and willingness to share knowledge, reciprocity and willingness to share knowledge and; altruism and willingness to share knowledge. It however revealed a non-positive influence on knowledge sharing behaviour by altruism. Jinyang's study is related to this work as it rested on Social Exchange theory. Thus, it considered three constructs which are also

being studied in this work- trust, reciprocity and altruism. However, this work improved upon the study by using an additional model- Technology Acceptance model to study the concepts of trust, reciprocity, self-efficacy, altruism, availability of technology, perceived ease of use of technology and perceived usefulness of technology as predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians in South-East Nigeria.

Summary of Reviewed Literature

The literature review covered the conceptual framework, theoretical framework, theoretical studies and empirical studies. Technology-enabled knowledge sharing was found to have numerous advantages over conventional knowledge sharing.

The theoretical framework was based on one theory and a model which were: Social Exchange Theory (SET) - on which was based the concepts of reciprocity, trust, self-efficacy and altruism; and Technology Acceptance Model (TAM) - on which perceived ease of use of technology and perceived usefulness of technology was based.

The theoretical and empirical studies discussed the adoption of technology-enabled knowledge sharing by professionals; as well as self-efficacy, altruism, reciprocity, trust, availability of technology, perceived ease of use of technology, and perceived usefulness of technology as predicting technology-enabled knowledge sharing among professionals.

Various studies that identified and emphasized these constructs as possible predictors of technology-enabled knowledge sharing were discussed, and their relationship and differences to this study highlighted. Quite a few of the works reviewed considered technology-enabled knowledge sharing among professionals in the context covered by this work.

Existing literature was equally sparse on predictors of technology-enabled knowledge sharing as it pertains to professional and paraprofessionallibrarians. The study covered this key

gap in literature and by determining these predictors, has made a significant contribution to the expanding but still highly limited base of theoretical and empirical research on technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East, Nigeria.

CHAPTER THREE

METHOD

This chapter presents the procedure employed in conducting this research. It is split into the following subheads: research design, area of the study, population of the study, sample and sampling technique, instrument for data collection, validation of the instrument, reliability of the instrument, method of data collection, and method of data analysis.

Research design

The design for the study is correlation survey. Correlation survey seeks to establish what relationship exists between two or more variables. Correlation survey study “is used to indicate the direction and magnitude of the relationship between the variables” (Nworgu, 2015, p.97). This design is appropriate for this study because the study intends to find out the direction of the relationship between the given predictors and technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East, Nigeria.

Area of the Study

The study was carried out in South-East, Nigeria. Southeastern Nigeria was one of the initial Nigerian twelve states that were created during the Nigerian civil war. In the 1990s, South-East became the name of one of the six geo-political zones consisting of Abia, Anambra, Ebonyi, Enugu and Imo States.

The local language in South-East, Nigeria is predominantly Igbo. The peculiarities of the South-East states lie in the fact that they are generally highly innovative, industrious,

enterprising, hospitable and educational highfliers. The latter is evident in the vast number of Universities (private and public); polytechnics (private and public); and monotechnics scattered across the zone. A large number of these institutions in the South-East zone have Departments of Library and Information Science (where prospective professional and paraprofessionallibrarians are being trained),and theyare expected to have the capacity to deploy, explore and use technology.

Each of the states in the South-East geopolitical zone has a federal university located in it. Abia- Michael Okpara University of Agriculture, Umudike; Anambra- NnamdiAzikiwe University, Awka; Ebonyi- Dr Alex Ekwueme Federal University, Ndufu-Alike Ikwo; Enugu- University of Nigeria, Nsukka; and Imo- Federal University of Technology, Owerri. All these institutions in the South-East geopolitical zone were used for the study.

Each of these university libraries are significant parts of their parent institutions with the professional and paraprofessionallibrarians in the centre of library services. These services are no longer exclusively traditional although the extent of ICT deployment and integration varies from one university to the other. The choice of the area was occasioned by the fact that no study of such nature as it applies toprofessional and paraprofessionallibrarians has been carried out in the geopolitical zone, to the best of the researcher's knowledge.

Population of the Study

The population of the study consisted of 238professional and paraprofessionallibrarians. It comprised all professional librarians and library officers working in the federal universities of South-East (Abia, Anambra, Ebonyi, Enugu and Imo States) geopolitical zone. Theyare thus the professionals and paraprofessional librarians. They are the key players in the field of Library and Information Science profession and the engine of Library services, having obtained certification

in the field. Data were collected from the professional and paraprofessionallibrariansworking in the afore-mentioned federal universities as at September 2018 which was when the data was collected. The specific details with regards to the various federal universities in the South-East, Nigeria are as shown in Appendix A (See p.112).

Sample and Sampling Technique

Sampling was not carried out. The researcher used the entire population as the number of professional and paraprofessionallibrarians in the federal universities of South-East, Nigeria is manageable, despite the geographical distance between the institutions of study. Thus, all the professional and paraprofessionallibrarians in the federal universities of South East, Nigeria were used for the study.

Instrument for Data Collection

Data for the studywas collected usingstructured questionnaire termed “Predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians’questionnaire” (PRETEKSQ). The questionnaire was self- developed based on knowledge gained from the literature and some of the items used to measure the variables under study were adopted from previous studies.

The instrument consists of eight sections; A, B, C, D, E, F, G and H.Sections A to G are made up of ten (10) items each while Section H is made up of twenty (20) items, all designed to elicit information on the constructs being considered as predictors of technology-enabled knowledge sharing among professional and paraprofessionallibrarians.Section A is made up of items 1-10 which was used to get information on the self-efficacy among professional and

paraprofessionallibrarians. Instrument for general self-efficacy was adopted from Schwarzer and Jerusalem (1995).

Section B made up of items 11-20 elicits information on altruism of professional and paraprofessionallibrarians. Section C consisting of items 21-30 required information on reciprocity among professional and paraprofessionallibrarians. Section D which is made up of items 31-40 deals with trust among professional and paraprofessionallibrarians. The scale of the items to measure trust was adopted from Fetzer institute (n.d).

Section E made up of items 41-50 examines availability of technology among professional and paraprofessionallibrarians. Section F consisting of items 51-60 considers perceived ease of use of technology among professional and paraprofessionallibrarians. Section G made up of items 61-70 deals with perceived usefulness of technology among professional and paraprofessionallibrarians. Section H consisted of items 71-90, and measures Technology-enabled knowledge sharing among professional and paraprofessionallibrarians. The scale of items used to measure technology enabled-knowledge sharing was adopted with modifications from Adamovic, Potgieter and Mearns (2012).

The response format for the questions in Sections A, B, C, D, E, F, G and H is four-point scale which has the response categories as follows: Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2, Strongly Disagree (SD) = 1. The instrument is in Appendix D (See p.115).

Validation of the Instrument

In order to substantiate the suitability of PRETEKSQ for the achievement of the objectives of the study, a copy of the instrument, together with the research topic, purpose of study, research questions and hypotheses were submitted to three experts to examine its face

validity. They include two experts of Library and Information Science and an expert of Measurement and Evaluation from Faculty of Education, Nnamdi Azikiwe University, Awka. These experts were given the dissertation title, purpose of the study, research questions, hypotheses and the questionnaire. The instruments were scrutinised in terms of relevance and item clarity. The experts made corrections such as rephrasing ambiguous items, serial numbering; and gave suggestions on rephrasing research questions as well as reduction of the number of variables. The comments and suggestions made by the experts were integrated into the final edition of the instruments. Copies of the validated instruments and reports of the validators are attached as appendices F, G, & H (See p.123-125).

Reliability of the Instrument

The pilot study of the questionnaire was done with the professional and paraprofessional librarians in the University of Uyo, Uyo, Akwa Ibom State. The University is located in the South-South, Nigeria which is not part of the zone being studied but has the same characteristics with the intended group of study. Twenty (20) copies of the instrument were distributed to the respondents and all were collected and used. Internal consistency of the study was determined using the Cronbach's alpha (α). This is because the procedure applies to instruments that are polytomously scored, and in which every response attracts a score (Nworgu, 2015). The alpha co-efficient established the following values for the instrument: Self- Efficacy Cluster - 0.87; Altruism Cluster - 0.83; Reciprocity Cluster - 0.81; Trust Cluster - 0.83; Availability of Technology Cluster - 0.84; Perceived Ease of Use of Technology Questionnaire - 0.75; Perceived Usefulness of Technology Cluster - 0.84; and Technology Enabled Knowledge Sharing Cluster - 0.90. Computation of Cronbach Alpha (α) for reliability of instruments is attached in Appendix E (See p.119).

Method of Data Collection

Direct delivery approach was adopted in the administration of the instrument. Five (5) research assistants were used to administer the instrument in the five selected federal universities so that the researcher will be able to get to all the professional and paraprofessionallibrarians. The research assistants were put through on rudiments of questionnaire administration as well as how to answer possible questions from the respondents. The collection of data was done within six weeks. Of the study population, one hundred and ninety five (195) subjects completed and returned the questionnaire. The response rate was eighty-two percent (82%).

Method of Data Analysis

Simple and multiple regression analysis were used to answer the research questions. In answering the research questions, Muijs' (cited in Cohen, Manion & Morrison, 2007, p. 523) suggestion for assessing the goodness of fit of regression model using squared regression coefficient (R^2) and Beta weights (β) was adopted for the study.

For R^2 :

0–0.1 weak fit;

0.1–0.3 modest fit;

0.3–0.5 moderate fit;

>0.5 strong fit.

For beta weighting (β):

0 - 0.1 = weak effect

0.1 - 0.3 = modest effect

0.3 - 0.5 = moderate effect

>0.5 = strong effect

For the hypotheses, p -value was used to determine the significance of the prediction. Where the calculated p -value is less than the stipulated level of significance (0.05), the null hypothesis was rejected. The null hypothesis was not rejected however where the calculated p -value is greater than the stipulated level of significance (0.05).

All these were calculated using statistical package for social sciences (SPSS) software. The result obtained from the SPSS is on appendix I (p.126).

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

In this chapter, the data collected from the field for this study were analyzed and the summaries presented in tables. The presentations were sequentially done starting with the answers to the mean results, correlation results, research questions and then the testing of hypotheses.

Results

Research Question 1

What is the predictive power of self-efficacy on technology-enabled knowledge sharing among professional and paraprofessionallibrariansin federal universities of South-East Nigeria?

Table 1: Summary of simple regression analysis withself-efficacy aspredictor oftechnology-enabled knowledge sharing

	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>Remarks</i>
Constant	37.67	4.31		
Self-Efficacy	.70	.13	.35	Moderate positive predictor
R	.35			
R ²	.12			
Adj.R ²	.12			

Note: B= Unstandardized Beta

SE B = Standard error

β= Standardized Beta

The summary of the simple regression analysis as shown in Table 1 indicates that the use of self-efficacy in predicting technology-enabled knowledge sharing among professional and

paraprofessionallibrariansin federal universities of South-East Nigeria has a moderate effect, and a modest fit. This is shown by the beta weight ($\beta = .35$) and the coefficient of determination ($R^2 = .12$) respectively. The coefficient of determination indicates that self-efficacy explained 12% of the variance in the technology-enabled knowledge sharing among professional and paraprofessionallibrarians. The beta weight shows that self-efficacy is a moderate positive predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrariansin federal universities of South-East Nigeria.

Research Question 2

What is the predictive power of altruism on technology-enabled knowledge sharing among professional and paraprofessionallibrariansin federal universities of South-East Nigeria?

Table 2: Summary of simple regression analysis withaltruismas predictor oftechnology-enabled knowledge sharing

	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>Remarks</i>
Constant	35.24	5.25		
Altruism	.83	.17	.32	Moderate positive predictor
R	.32			
R^2	.10			
Adj. R^2	.10			

Note: B= Unstandardized Beta
SE B = Standard error
 β = Standardized Beta

The result in Table 2 shows that the beta weight (β) is .32 while the coefficient of determination (R^2) is .10. The coefficient of determination indicates that the regression model using altruism to predict technology-enabled knowledge sharing among professional and paraprofessionallibrarianshas a weak fit and the beta weight shows that it has a moderate effect.

Altruism explains 10% variance of technology enabled knowledge sharing among professional librarians and paraprofessionals while the beta weight shows that altruism is a moderate positive predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrariansin federal universities of South-East Nigeria.

Research Question 3

What is the predictive power of trust on technology-enabled knowledge sharing among professional and paraprofessionallibrariansin federal universities of South-East Nigeria?

Table 3: Summary of simple regression analysis with trust as predictor of technology-enabled knowledge sharing

	<i>B</i>	<i>SE B</i>	β	<i>Remarks</i>
Constant	45.85	3.93		
Trust	.51	.13	.25	Modest positive predictor
R	.25			
R ²	.06			
Adj.R ²	.06			

Note: *B* = Unstandardized Beta
SE B = Standard error
 β = Standardized Beta

As depicted by the data in Table 3, the beta weight (β) is .25 while the coefficient of determination (R^2) is .06. The coefficient of determination shows that trust as a predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrarians has a weak fit as it explains only 6% of the variance. The beta weight (β) shows that trust is a modest positive predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrariansin federal universities of South-East Nigeria.

Research Question 4:

What is the predictive power of reciprocity on technology-enabled knowledge sharing among professional and paraprofessionallibrariansin federal universities of South-East Nigeria?

Table 4: Summary of simple regression analysis with reciprocity as predictor of technology-enabled knowledge sharing

	<i>B</i>	<i>SE B</i>	β	<i>Remarks</i>
Constant	46.18	2.84		
Reciprocity	.58	.11	.34	Moderate positive predictor
R	.34			
R ²	.11			
Adj.R ²	.11			

Note: B = Unstandardized Beta

SE B = Standard error

β = Standardized Beta

The analysis displayed in Table 4 shows that the beta weight (β) is .34 while the coefficient of determination (R^2) is .11. The coefficient of determination is an indication that reciprocity as a predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrarians has a modest fit. The obtained coefficient of determination (R^2) implies that reciprocity explained 11% of the variance in the technology-enabled knowledge sharing among professional and paraprofessionallibrarians. The beta weight (β) suggests that reciprocity is a moderate positive predictor of technology-enabled knowledge sharing among professional and paraprofessionallibrariansin federal universities of South-East Nigeria.

Research Question 5

What is the predictive power of availability of technology on technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria?

Table 5: Summary of simple regression analysis with availability of technology as predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>Remarks</i>
Constant	30.27	3.77		
Availability of technology	1.04	.13	.49	Moderate positive predictor
R	.49			
R ²	.24			
Adj.R ²	.24			

Note: *B* = Unstandardized Beta
SE B = Standard error
 β = Standardized Beta

The summary of the simple regression analysis as shown in Table 5 indicates that the use of availability of technology in predicting technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria has a positive modest fit, and a moderate effect. This is shown by the coefficient of determination ($R^2 = .24$) and the beta weight ($\beta = .49$) respectively. The coefficient of determination indicates that self-efficacy explained 24% of the variance in the technology-enabled knowledge sharing among professional and paraprofessional librarians. The beta weight shows that self-efficacy is a

moderate positive predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.

Research Question 6

What is the predictive power of perceived ease of use of technology on technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria?

Table 6: Summary of simple regression analysis with perceived ease of use of technology as predictor of technology-enabled knowledge sharing

	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>Remarks</i>
Constant	51.24	4.46		
Perceived ease of use of technology	.35	.17	.14	Modest positive predictor
R	.14			
R ²	.02			
Adj.R ²	.01			

Note: *B* = Unstandardized Beta
SE B = Standard error
 β = Standardized Beta

Table 6 shows the beta weight (β) to be .14 while the coefficient of determination (R^2) is .02. The obtained coefficient of determination (R^2) reveals that perceived ease of use of technology has a weak fit as it explained only 2% of the variance in the technology-enabled knowledge sharing among professional and paraprofessional librarians. The beta weight (β) shows that perceived ease of use of technology is a modest positive predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.

Research Question 7

What is the predictive power of perceived usefulness of technology on technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria?

Table 7: Summary of simple regression analysis with perceived usefulness of technology as predictor of technology-enabled knowledge sharing

	<i>B</i>	<i>SE B</i>	β	<i>Remarks</i>
Constant	26.25	5.34		
Perceived usefulness of technology	1.18	.18	.41	Moderate positive predictor
R	.41			
R ²	.17			
Adj.R ²	.17			

Note: *B*= Unstandardized Beta
SE B = Standard error
 β = Standardized Beta

The summary of the simple regression analysis as shown in Table 7 indicates that perceived usefulness of technology is a moderate positive predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of south east Nigeria. This is shown by the beta weight ($\beta = .41$). The coefficient of determination ($R^2 = .17$) indicates that perceived usefulness of technology explained 17% of the variance in the technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria, thus having a modest fit.

Multiple Regression Analysis- Research Questions

Table 8: Summary of multiple Regression Analysis with self-efficacy, altruism, trust, reciprocity, availability of technology, perceived ease of use of technology and perceived usefulness of technology as predictors of technology-enabled knowledge sharing among professional and paraprofessional librarians.

Predictors Entered	<i>B</i>	β	<i>T</i>
Constant	4.46		.71
Self-Efficacy	.19	.10	1.42
Altruism	.24	.09	1.35
Reciprocity	.21	.12	1.77
Trust	.14	.07	1.08
Availability of Technology	.70	.33	5.23
Perceived ease of use of Technology	-.13	-.05	-.81
Perceived Usefulness of technology	.56	.19	2.83
R	.60		
R ²	.37		
Adj.R ²	.34		
<i>F</i>	15.71		

Note: *B*= Unstandardized Beta
SE B = Standard error
 β = Standardized Beta

As shown by the summary of multiple regression analysis in Table 8, the regression coefficient (*R*) = .60, the coefficient of determination (*R*²) = .37, while *F*-ratio = 15.71. Considering the size of the *R*² which fall between 0.31 - 0.5, it was decided that self-efficacy, altruism, trust, reciprocity, availability of technology, perceived ease of use of technology and perceived usefulness of technology has moderate fit as predictors of technology-enabled

knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. Perceived ease of use of technology was however in the negative implying that for technology enabled knowledge sharing to increase among professional and paraprofessional librarians, there would be a decrease in perceived ease of use of technology.

Testing the Null Hypotheses

Hypothesis 1

LIS professionals' self-efficacy is not a significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.

Table 9: Test of Significance of Simple Regression Analysis with self-efficacy as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1495.704	1	1495.704	27.776	.000 ^b
	Residual	10392.983	193	53.850		
	Total	11888.687	194			

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessiona
l_Librarians

b. Predictors: (Constant), Self_Efficacy

As shown in Table 9, the F-ratio associated with self-efficacy is 27.77 and the *P*-value = .00. Since the *P*-value is less than the stipulated 0.05 level of significance, it was decided that professional and paraprofessional librarians' self-efficacy is a significant predictor of

technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. The null hypothesis was therefore rejected.

Hypothesis 2

Altruism is not a significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.

Table 10: Test of Significance of Simple Regression Analysis with altruism as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1259.693	1	1259.693	22.873	.000 ^b
	Residual	10628.994	193	55.073		
	Total	11888.687	194			

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_AmongProfessional_Librarians-
And_Paraprofessionals

b. Predictors: (Constant), Altruism

Table 10 shows that the F-ratio associated with altruism and technology enabled knowledge sharing is 22.87 and the P -value = .00. Since the P -value is less than the stipulated 0.05 level of significance, it was decided that altruism is a significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. Therefore the null hypothesis was rejected.

Hypothesis 3

Trust is not a significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.

Table 11: Test of Significance of Simple Regression Analysis with trust as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	786.525	1	786.525	13.673	.000 ^b
	Residual	11102.162	193	57.524		
	Total	11888.687	194			

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_AmongProfessional_Librarians-
And_Paraprofessionals

b. Predictors: (Constant), Trust

As displayed in table 11, the F-ratio associated with trust and technology-enabled knowledge sharing is 13.67 and the *P*-value = .00. Since the *P*-value is less than the stipulated 0.05 level of significance, it was decided that trust is a significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. The null hypothesis was therefore rejected.

Hypothesis 4

Reciprocity is not a significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.

Table 12: Test of Significance of Simple Regression Analysis with reciprocity as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

ANOVA ^a						
Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	1374.581	1	1374.581	25.232	.000 ^b
	Residual	10514.106	193	54.477		
	Total	11888.687	194			

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_AmongProfessional_Librarians-And_Paraprofessionals

b. Predictors: (Constant), Reciprocity

In Table 12, the F-ratio associated with reciprocity and technology-enabled knowledge sharing is 25.23 and the P -value = .00. Since the P -value is less than the stipulated 0.05 level of significance, it was decided that reciprocity is a significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. Therefore the null hypothesis was rejected.

Hypothesis 5

Availability of technology is not a significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.

Table 13: Test of Significance of Simple Regression Analysis with availability of technology as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2964.850	1	2964.850	64.122	.000 ^b
	Residual	8923.837	193	46.237		
	Total	11888.687	194			

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_AmongProfessional_Librarians-And_Paraprofessionals

b. Predictors: (Constant), Availability_of_Technology

Table 13 shows that the F-ratio associated with availability of technology and technology-enabled knowledge sharing is 64.12 and the *P*-value = .00. Since the *P*-value is less than the stipulated 0.05 level of significance, it was decided that availability of technology is a significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. The null hypothesis was therefore rejected.

Hypothesis 6

Perceived ease of use of technology is not a significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.

Table 14: Test of Significance of Simple Regression Analysis with perceived ease of use of technology as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	249.491	1	249.491	4.137	.043 ^b
	Residual	11639.196	193	60.307		
	Total	11888.687	194			

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_AmongProfessional_Librarians-And_Paraprofessionals

b. Predictors: (Constant), Percieved_ease_of_use_of_Technology

As displayed in Table 14, the F-ratio associated with perceived ease of use of technology and technology-enabled knowledge is 4.13 and the *P*-value = .04. Since the *P*-value is less than the stipulated 0.05 level of significance, it was decided that perceived ease of use of technology is a significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. The null hypothesis was therefore rejected.

Hypothesis 7

Perceived usefulness of technology is not a significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.

Table 15: Test of Significance of Simple Regression Analysis with perceived usefulness of technology as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2074.274	1	2074.274	40.791	.000 ^b
	Residual	9814.413	193	50.852		
	Total	11888.687	194			

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_AmongProfessional_Librarians-And_Paraprofessionals

b. Predictors: (Constant), Perceived_Usefulness_of_technology

As displayed in Table 15, the F-ratio associated with perceived usefulness of technology and technology-enabled knowledge is 40.79 and the *P*-value = .00. Since the *P*-value is less than the stipulated 0.05 level of significance, it was decided that perceived usefulness of technology is a significant predictor of technology-enabled knowledge sharing among professional and

paraprofessional librarians in federal universities of South-East Nigeria. The null hypothesis was therefore rejected.

Multiple Regression Analysis- Hypotheses

Table 16: Test of significance of multiple regression analysis with self-efficacy, altruism, trust, reciprocity, availability of technology, ease of use of technology and perceived usefulness of technology as predictors of technology-enabled knowledge sharing among professional and paraprofessional librarians

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4403.018	7	629.003	15.713	.000 ^b
	Residual	7485.669	187	40.030		
	Total	11888.687	194			

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_AmongProfessional_Librarians-
And_Paraprofessionals

b. Predictors: (Constant), Perceived _Usefulness_of_technology, Trust,
Availability_of_Technology, Perceived _ease_of_use_of_Technology, Self_Efficacy,
Reciprocity, Altruism

Table 16 shows that the F-ratio associated with self-efficacy, altruism, trust, reciprocity, availability of technology, ease of use of technology and perceived usefulness of technology is 15.71 and the *P*-value = .00. Since *P*-value is less than the stipulated 0.05 level of significance, it

was decided that the self-efficacy, altruism, trust, reciprocity, availability of technology, ease of use of technology and perceived usefulness of technology are significant predictors of technology-enabled knowledge sharing among professional and paraprofessional librarians.

Summary of the Findings

From the analysis, the following findings were made:

1. Self-efficacy is a moderate positive significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.
2. Altruism is a moderate positive significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East.
3. Reciprocity is a moderate positive significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.
4. Trust is a modest positive significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.

5. Availability of technology is a moderate positive significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.
6. Perceived ease of use of technology is a modest positive significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.
7. Perceived usefulness of technology is a moderate positive significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

In this chapter, the discussion of results, implications of the study, recommendations, limitations and suggestions for further research were presented.

Discussion of Findings

Findings of the study were discussed in this section under the following sub-heads:

1. Self-Efficacy as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians
2. Altruism as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians
3. Reciprocity as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

4. Trust as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians
5. Availability of technology as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians
6. Perceived ease of use of technology as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians
7. Perceived usefulness of technology as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

Self-Efficacy as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

The findings of the study showed that professional and paraprofessional librarians' self-efficacy is a moderate positive significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. If the relationship between an independent variable and the dependent variable was statistically significant and positive, then the probability for the latter's adoption increased (Saviak, 2007). This finding suggests that increasing the self-efficacy of professional and paraprofessional librarians would likely increase their engagement in technology-enabled knowledge sharing. This result is consistent with the previous studies carried out by Kankanhalli, Tan and Wei (2005) who, in an empirical investigation on contributing knowledge to electronic knowledge repositories in Singapore, found that self-efficacy significantly and positively predicts electronic knowledge repositories usage. The role of self-efficacy in employees' engagement in technology-enabled activities could be due to its ability to drive action. Indeed, some scholars

(Heslin&Klehe, 2006; Aharony, 2011) observed that self-efficacy plays an important role in influencing individuals' motivation and behavior and is, therefore, one of the most important determinants of individual performance. Thus, a sense of the competence and confidence of professional and paraprofessional librarians' is a likely requirement for engaging in technology-enabled knowledge sharing.

Altruism as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

Altruism was found in this study to be a moderate positive significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. This finding indicates that an increase in altruism will probably result in an increase in technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. This could also imply that altruistic professional and paraprofessional librarians will more often than not engage in technology enabled knowledge sharing than non-altruistic professional and paraprofessional librarians. This result is in accord with other findings (Hsu & Lin, 2008; Yu, Lu & Liu, 2010; Chen et al., 2014) where enjoyment in helping others (altruism) positively and significantly predicted Knowledge Sharing in blog usages and on a Virtual Community of Teacher Professionals. Altruism enables a professional to engage in technology-enabled knowledge sharing with passion and be helpful to others, thus improving their welfare. One would also be likely to participate in technology enabled knowledge sharing because the interacting process yields fun and enjoyment (Hsu & Lin, 2008).

It is however not in agreement with another scholarly study (Jinyang, 2015) which found out that members' altruism cannot predict their knowledge sharing behaviors in a virtual community. The

disparity may be linked to the differences in the categories of the respondents, the study location and the rating scale employed. Jinyang used Likert five-point scale with Chinese students as respondents.

Reciprocity as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

In relation to reciprocity, the study found that it is a moderate positive significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. The findings of this study suggest a likelihood that an increase in professional and paraprofessional librarians' reciprocity will result in an increase in engagement in technology-enabled knowledge sharing. The result of this study is consistent with previous studies (Kankanhalli, Tan, & Wei, 2005) who reported that reciprocity significantly and positively predicted electronic knowledge repositories usage. In the concept of reciprocity, a knowledge owner willingly consumes his time and energy in providing technology-enabled knowledge sharing to the knowledge seeker with the belief that the knowledge seeker will in turn provide knowledge to him when the knowledge seeker becomes the knowledge owner anytime in the future (Jinyang, 2015).

In contrast however, another prior study (Wasko & Faraj, 2005) found that reciprocity is not a significant predictor of knowledge contribution in electronic networks of practice. The discrepancy in results of the studies could be associated with the difference in the nature of respondents- as Wasko and Faraj's study involved technical communities dedicated to developing valuable programming knowledge. Additionally, the space in time between the researches (over a decade gap) could have contributed to the difference in perception.

Trust as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

The findings of the study showed that trust positively, significantly and modestly predicted technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. This signifies that an upturn in trust may likely enhance technology-enabled knowledge sharing among professional and paraprofessional librarians. The finding of this study is in agreement with other scholars (Fang & Chiu, 2010) who found that trust positively and significantly predicted knowledge sharing in a virtual community of practice. Trust has impact on participants' behaviors in technology-enabled knowledge sharing. The positive significant effect of trust on technology-enabled knowledge sharing is no marvel as Majid and Wey (2011) stated that mutual trust is often developed using technology over time through frequent interactions. When this is achieved, participants in a technology-enabled knowledge sharing environment will be less hesitant to post information to other members of a given technology-enabled knowledge sharing platform, thereby creating a necessary atmosphere to sustain social exchange in the platform (Ardichvili, Page & Wentling, 2002; Jinyang, 2015). This way, trust becomes not only a prerequisite for technology-enabled knowledge sharing but also, to a large extent, the outcome of such sharing and collaboration (Paroutis & Saleh, 2009).

It however differs with a previous study (Hsu & Lin, 2008) which found out that trust does not significantly predict technology-enabled knowledge sharing using blog. The disparity between the result from Hsu and Lin's study and the current result could be due to the time lag which is over a decade, and also that the respondents used the blogs in a non-work related environment.

Availability of technology as a predictor of technology-enabled knowledge sharing professional and paraprofessional librarians

The findings of the study showed that availability of technology is a moderate positive significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. This implies that an upsurge in technology availability may likely boost professional and paraprofessional librarians' participation in technology-enabled knowledge sharing. This result concurs with previous research by Omar et al. (2011) who found that technology availability is significantly correlated to knowledge sharing among undergraduates, having the highest mean score. While availability of technology is a positive predictor of technology-enabled knowledge sharing, it may not hold true in all instances. Availability of the more advanced technologies failed to predict willingness to share according to a study by Han and Anantamula (2007), because participants were not trained to use these technologies.

Perceived ease of use of technology as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

The findings of the study showed that perceived ease of use of technology is a modest positive and significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. The positive and significant prediction of perceived ease of use of technology to technology-enabled knowledge sharing among professional and paraprofessional librarians in federal Universities of South-East Nigeria shows that its increase will likely increase the professional and paraprofessional librarians' engagement in technology-enabled knowledge sharing. This result is in accord with previous results (Hsu & Lin, 2008) which found that perceived ease of use significantly predict technology-enabled knowledge sharing using blog usage. The agreement between the findings could be related to the fact that Knowledge sharing generally depends first and foremost on

communication skills both verbal and written, the latter in this case has to do with transcriptions using technology (Riege, 2005). Difficulty in use of technology for communication will most likely impede technology enabled knowledge sharing. However, if the technology is user friendly, professionals may be persuaded and encouraged to use the available technology to share their knowledge (Han & Anantatmula, 2007).

Perceived usefulness of technology as a predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians

The findings of the study showed that perceived usefulness of technology is a moderate positive significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. The findings indicate that a rise in perceived usefulness of technology will probably induce a rise in technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. The result of the study is consistent with previous studies by Yu, Lu and Liu (2010) who found out that perceived usefulness was positively significant in predicting knowledge sharing via weblogs. The agreement between this finding and the current result could be due to the importance of perceived value of technology-enabled knowledge sharing to its utilization by professional and paraprofessional librarians. The more valuable one perceives technology-enabled knowledge sharing to be, the more likelihood to engage in it.

Conclusion

Technology-enabled knowledge sharing among professional and paraprofessional librarians is key enabler in facilitating effective collaboration among professional and paraprofessional librarians' for the utilization of one another's knowledge to provide services for their users; and be more proactive in teaching and learning as well as for professional development. It appears

that certain predictors ought to be in place for technology-enabled knowledge sharing to take place. Increasing self-efficacy, altruism, trust, reciprocity, availability of technology, perceived ease of use of technology and perceived usefulness of technology will thus likely bring an increase in engagement in technology-enabled knowledge sharing by professional and paraprofessional librarians in federal universities of South-East Nigeria.

Implications of the Study

The results of the study present the following implications in relation to technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria.

1. Professional and paraprofessional librarians' self-efficacy is a significant and positive predictor of technology-enabled knowledge sharing in federal universities of South-East Nigeria. This has implications for qualities to strengthen among staff, look out for in staff recruitment, and the need for provision of useful feedbacks by the employers of professional and paraprofessional librarians in federal universities of south-east. Positive feedbacks and recognition of staff contributions in technology-enabled platforms will likely boost their confidence and increase their self-efficacy.
2. Altruism significantly and positively predicts technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. This has implications for assigning mentorship and team membership in the

profession. The profession thrives on knowledge sharing, and professional and paraprofessionallibrarians that are not prone to enjoyment in helping others in technology-enabled knowledge sharing may frustrate the purpose of those exercises.

3. Professional and paraprofessionallibrarians' reciprocity significantly and positively predicts their involvement in technology-enabled knowledge sharing. This shows the likelihood that professional librarians and paraprofessionals with inherent motivation towards reciprocity will engage in technology-enabled knowledge sharing. This has implication for organised and monitored technology-enabled platform which ensures that no knowledge sharer is left unattended to at the point of need. The realization that one will always receive help will spur one on to give help. It also has implication for policy review to ensure that there is fairness in technology-enabled knowledge sharing among professional and paraprofessionallibrarians.
4. Trust positively and significantly predicted technology-enabled knowledge sharing among professional and paraprofessionallibrarians in federal universities of South-East Nigeria. This has implication for monitoring knowledge sharing in the technology-enabled platform for both the knowledge receivers and knowledge sharers to ensure that both sides are sincere in engaging the process. The implication for employers of professional and paraprofessionallibrarians to set up monitoring committees to ensure that the knowledgeable older professionals share knowledge gained via their experiences. The trust on the wider experience of these older professionals will in turn provide them with professional and paraprofessionallibrarians' workforce that makes for more efficient and effective services.

5. Availability of technology is a significant positive predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. Professional and paraprofessional librarians in federal universities of South-East who may otherwise engage in technology-enabled knowledge sharing may be hindered due to inability to afford the relevant technology. This has implication for the provision of modern technologies to enhance hands-on practice by the professional and paraprofessional librarians.
6. Professional and paraprofessional librarians' perception of the ease of use of technology is a significant positive predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. This has implications for ensuring that systems with user friendly interfaces and applications are provided, as complex interfaces will likely discourage use. It also has implications for professional and paraprofessional librarians' engagement in personal enhancement trainings on modern technologies of their own volition and expense, to aid their familiarity with and understanding of modern technologies.
7. Perceived usefulness of technology is a positive and significant predictor of technology-enabled knowledge sharing among professional and paraprofessional librarians in federal universities of South-East Nigeria. Involvement in technology-enabled knowledge sharing among professional and paraprofessional librarians could be affected by the extent to which they perceive technology as being useful and relevant to their career and professional development. This has implications for organising trainings that will expose professional and paraprofessional librarians to the usefulness of technology-enabled knowledge sharing in enhancing efficient and effective services.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Training for professional and paraprofessionallibrarians who are already in the field should be organized by the professional body, the regulatory body and the university library management to enhance the positive index of the predictors of technology-enabled knowledge sharing. This will in turn expedite their career growth and professional development.
2. Highly self-efficacious professional and paraprofessionallibrarians can be established by recruiting and selecting employees who are proactive, and who have high cognitive aptitude and self-esteem and are intrinsically motivated. After recruitment, efforts should be made to sustain the self-efficacy of the professional and paraprofessionallibrarians because for technology enabled knowledge sharing to be enhanced among professional and paraprofessionallibrarians in federal universities of South-East, Nigeria, there will be an increase in their self-efficacy.
3. LIS managers should work towards ensuring technology availability in federal universities of South-East, Nigeria to encourage professional and paraprofessionallibrarians' engagement in technology-enabled knowledge sharing. This is because an increase in availability of technology will enhance technology-enabled knowledge sharing among professional and paraprofessionallibrarians' in federal universities of South-East, Nigeria.
4. Professional and paraprofessional librarians should be motivated to engage in personal enhancement trainings on modern technologies of their own volition and expense. The aim is to increase the perceived ease of use of technology and perceived usefulness of

technology among professional and paraprofessional librarians for corresponding increases in technology-enabled knowledge sharing.

5. Trainings and enhancement programmes should also be organised for the professional and paraprofessional librarians by their employers, and the necessary structures put in place for their engagement in technology-enabled knowledge sharing. In the same vein, trainings should be packaged by the professional association (Nigerian Library Association) and the regulatory body (Librarians Registration Council of Nigeria) to enhance technology use for knowledge sharing as part of the professional development of professional and paraprofessional librarians.
6. Professional and paraprofessional librarians should enhance their self-efficacy, trust, reciprocity and altruism so as to facilitate technology-enabled knowledge sharing.

Limitations of the Study

It is plausible that a number of limitations may have influenced the results obtained

1. The subjects were professional and paraprofessional librarians in federal universities of South-East, Nigeria. The result may differ among the other geopolitical zones within the country.
2. The participants were limited to professional and paraprofessional librarians. The findings may not apply to other professions.
3. The respondents were professional and paraprofessional librarians in federal universities. The result may not be applicable to professional and paraprofessional librarians in state or private universities, monotechnics, polytechnics and colleges of Education.

Suggestions for further research

1. Predictors of technology-enabled knowledge sharing among professional and paraprofessional librarians in other geo-political zones of Nigeria (South-South, South-West, etc.)
2. Predictors of technology-enabled knowledge sharing among professional and paraprofessional librarians in monotechnics, polytechnics or special libraries.
3. Other constructs not captured by this study could also be examined as predictors of technology-enabled knowledge sharing among professional and paraprofessional librarians.
4. Predictors of technology-enabled knowledge sharing among other professions not yet captured in the literature.

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APPENDIX A

DISTRIBUTION OF PROFESSIONAL AND PARAPROFESSIONAL LIBRARIANS IN SOUTH-EAST ACCORDING TO THEIR INSTITUTIONS (AS AT SEPT. 2018)

S/N	Institution	University Library		Total
		Professionals	Para-professionals	
1.	Federal University of Technology, Owerri	35	44	79
2.	Michael Okpara University of Agriculture, Umudike	12	15	27
3.	University of Nigeria, Nsukka	49	50	99
4.	NnamdiAzikiwe University, Awka	13	7	20
5.	Dr Alex Ekwueme Federal University, Ndufu-Alike Ikwo	4	9	13
	Sum Total	129	137	238

APPENDIX B

REQUEST FOR VALIDATION OF INSTRUMENT

Department of Lib. and Info. Science
Faculty of Education
NnamdiAzikiwe University
Awka.

Dear Sir/Madam

REQUEST FOR VALIDATION OF INSTRUMENT

I am Jiagbogu, OkeomaChinelo, a Ph.D student in the Department of Library and Information Science, Faculty of Education, NnamdiAzikiwe University Awka. I am conducting a research on the Predictors of Technology-enabled Knowledge Sharing among professional and paraprofessionallibrariansin Federal Universities of South-East Nigeria.

I humbly request that you use your expertise to validate the instruments for this study and offer corrections and modifications where necessary on the content and face values. I attached the purpose of the study, the research questions and the hypothesis to be tested.

Thanks in anticipation of your favourable consideration.

Yours sincerely,

Jiagbogu, OkeomaChinelo

APPENDIX C**LETTER OF TRANSMITTAL**

Department of Library and Info. Science
Faculty of Education
NnamdiAzikiwe University
Awka

Dear Respondent,

REQUEST TO COMPLETE RESEARCH QUESTIONNAIRES

I am a doctoral student in the Department of Library and Information Science NnamdiAzikiwe University Awka, carrying out a study on the “Predictors of Technology-enabled Knowledge Sharing among professional and paraprofessionallibrarians in Federal Universities of South-East Nigeria”.

The attached questionnaires are designed for data collection for the study.

Kindly assist me in this endeavour by completing the questionnaires on the assurance that your response will be kept confidential and will be used solely for this study.

Thank you for your cooperation.

Yours sincerely,

Jiagbogu, OkeomaChinelo
Research student

APPENDIX D

PREDICTORS OF TECHNOLOGY-ENABLED KNOWLEDGE SHARING QUESTIONNAIRE (PRETEKSQ)

Please indicate your agreement or disagreement with the following statements by ticking on the column (1= Strongly Agree to 4 = Strongly Disagree)

Note: SA= Strongly Agree, A= Agree, D= Disagree, and SD= Strongly Disagree

SECTION A: Self-Efficacy as a predictor of technology-enabled Knowledge Sharing

S/N	Statement	SA	A	D	SD
1	I can always manage to solve difficult problems if I try hard enough.				
2	If someone opposes me, I can find the means and ways to get what I want.				
3	It is easy for me to stick to my aims and accomplish my goals.				
4	I am confident that I could deal efficiently with unexpected events.				
5	Thanks to my resourcefulness, I know how to handle unforeseen situations.				
6	I can solve most problems if I invest the necessary effort.				
7	I can remain calm when facing difficulties because I can rely on my coping abilities.				
8	When I am confronted with a problem, I can usually find several solutions				
9	If I am in trouble, I can usually think of a solution.				
10	I can usually handle whatever comes my way.				

SECTION B: Altruism as a predictor of technology-enabled Knowledge Sharing

S/N	Statement	SA	A	D	SD
11	Helping others makes me feel good				
12	I don't like it when other people bug me with their problems.				
13	I enjoy helping others out as much as I can				
14	I render help to others only at my own convenience.				
15	I take up any opportunity to help others				
16	I don't freely help if it will be beneficial to another person's advancement				
17	I count it as a privilege when I am opportuned to help others				
18	I help others whether there is any gratification attached or not				
19	It disturbs me when others have problems that I cannot help out with.				
20	I voluntarily help others - even if they don't ask me for it.				

SECTION C: Reciprocity as a predictor of technology-enabled Knowledge Sharing

S/N	Statement	SA	A	D	SD
21	I help people who can return the favour.				
22	If my help is not reciprocated, the defaulter will still get what he/she deserves by and by.				
23	I don't mind helping even when I am not helped in return.				
24	I withhold help when others withhold help from me				
25	I cut off anyone that I am not benefiting from.				
26	If I help out people, then they will do the same in return.				
27	If my help will not be reciprocated, I will stop rendering my own help.				
28	I find that always being handy to help can improve reciprocal benefit.				
29	I only meet other peoples need when I know that mine will also be met				
30	Responding to the needs of others makes them obligated to respond to my own need				

SECTION D: Trust as a predictor of technology-enabled Knowledge Sharing

S/N	Statement	SA	A	D	SD
31	I avoid people because they are unpredictable				
32	Most people are trustworthy.				
33	I believe that people mutually help each other.				
34	Most people would try to take advantage of me if they got the chance				
35	Most people are basically honest				
36	People usually help people who they consider as friends				
37	Most times one can't be too careful in dealing with people				
38	I hardly get help from others.				
39	People are mostly just looking out for themselves				
40	Those devoted to unselfish causes are often exploited by others.				

SECTION E: Availability of technology as a predictor of technology-enabled Knowledge Sharing

S/N	Statement	SA	A	D	SD
41	Modern technologies are always at my disposal in my institution.				
42	I have a dedicated desktop/laptop for my office use				
43	Technology resources are easily available at the shortest possible time				
44	Internet facilities are easily available in my institution using wifiorLAN				
45	Technology infrastructure is hardly available when it is needed.				
46	Cost of having available technological resources is too high for me				
47	I have personal laptop or desktop				
48	I have available internet using my personal network.				
49	I have the username and password to the institution's subscribed online databases				
50	I have a smart phone for easy access to the internet				

SECTION F: Perceived Ease of Use of technology as a predictor of technology-enabled Knowledge Sharing

S/N	Statement	SA	A	D	SD
51	I find it easy to use electronic tools				
52	I am intimidated when it comes to technology use.				
53	The process of engaging technology is enjoyable				
54	It is very convenient for me to adopt technology for daily use.				
55	Technology use is too tasking for me				
56	Using technology is time-saving				
57	I avoid using technology as much as I can				
58	I do not know how to use technology				
59	I lack basic troubleshooting skills in case of crash of technology				
60	I have not been able to learn technology use.				

SECTION G: Perceived Usefulness of technology as a predictor of technology-enabled Knowledge Sharing

S/N	Statement	SA	A	D	SD
61	Connecting with experts can be done without technology.				
62	Applying technology is very useful for professional networking				
63	There is little or no new knowledge to be gained using technology				
64	Technology enables me to accomplish my work quickly, efficiently and effectively.				
65	I have no need to engage in technology for issues relating to my work practices				
66	Technology is useful in asking for assistance from fellow professionals on work related issues				
67	I don't need technology to perform effectively in my profession				
68	Technology makes it easier to give suggestions to colleagues on work related issues				
69	Technology is useful in connecting to colleagues who are experts in various fields				
70	Technology enhances information sharing considerably				

SECTION H: Technology-enabled knowledge sharing among LIS professionals

S/N	Statement	SA	A	D	SD
71	I make use of diverse technologies for knowledge sharing				
72	I belong to professional Online groups, Social networking sites and internet forums.				
73	I make use of technology when I have a question or problem relating to my work practices				
74	I readily answer questions posted by my fellow professionals on blogs, online groups and Internet forums				
75	I contribute to professional blogs and update wikis on issues relating to the profession				
76	I use blogs, microblogs, instant messaging systems and video conferencing tools for interaction with professional colleagues				
77	I participate in professional discussions in the online professional groups, social networking sites and internet forums.				
78	I post messages regarding my work practices or experiences on the Online groups.				
79	I hardly seek for solutions to work related issues using technology.				
80	I send emails to colleagues when I have issues with my work				
81	I share ideas for my researches using online workspaces				
82	I use email for collaborative authorship				
83	I keep contact with colleagues by following their discussions on microblogs and social networking sites.				
84	I obtain work related information and knowledge using social networking sites, online groups and internet forums				
85	I use social networking sites to maintain and strengthen communication with professional colleagues				
86	I easily contact my professional colleagues using their email address				
87	I look up knowledge relating to my profession on professional blogs and wikis				
88	I upload my academic works in institutional repository and social networking sites for other professionals to benefit from.				
89	I use microblogs for personal knowledge sharing to a wider audience.				
90	I use video conferencing tools for meetings, seminars, conferences and keeping up with best practices in the profession				

APPENDIX E

COMPUTATION OF CRONBACH ALPHA (α) FOR RELIABILITY OF INSTRUMENT

Scale: Predictors of Technology-enabled knowledge sharing Questionnaire

Section A: Self Efficacy

Case Processing Summary

		N	%
	Valid	20	100.0
Cases	Excluded ^a	0	.0
	Total	20	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
0.867	10

Section B: Altruism

Case Processing Summary

		N	%
	Valid	20	100.0
Cases	Excluded ^a	0	.0
	Total	20	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
0.829	10

Section C: Reciprocity**Case Processing Summary**

		N	%
Cases	Valid	20	100.0
	Excluded ^a	0	.0
	Total	20	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
0.808	10

Section D: Trust**Case Processing Summary**

		N	%
Cases	Valid	20	100.0
	Excluded ^a	0	.0
	Total	20	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
0.834	10

Section E: Availability of Technology

Case Processing Summary

		N	%
Cases	Valid	20	100.0
	Excluded ^a	0	.0
	Total	20	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
0.844	10

Section F: Perceived Ease of Use of Technology

Case Processing Summary

		N	%
Cases	Valid	20	100.0
	Excluded ^a	0	.0
	Total	20	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
0.750	10

Section G: Perceived Usefulness of Technology

Case Processing Summary

		N	%
Cases	Valid	20	100.0
	Excluded ^a	0	.0
	Total	20	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
0.841	10

Section H: Technology-Enabled Knowledge Sharing

Case Processing Summary

		N	%
Cases	Valid	20	100.0
	Excluded ^a	0	.0
	Total	20	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
0.897	20

APPENDIX F

SUGGESTION AND CORRECTION OF INSTRUMENTS BY EXPERT 1

APPENDIX F

Validation of instrument on the topic:

Predictors of Technology-enabled Knowledge sharing among Library and Information Science professionals in Federal Universities of South-East, Nigeria.


This is to certify that I.....

Prof. Ngani Agn

Validated the above mentioned instrument and made corrections/recommendations on the following areas:

- The variables are too many. I advise that the researcher cuts the independent variables to few at most.

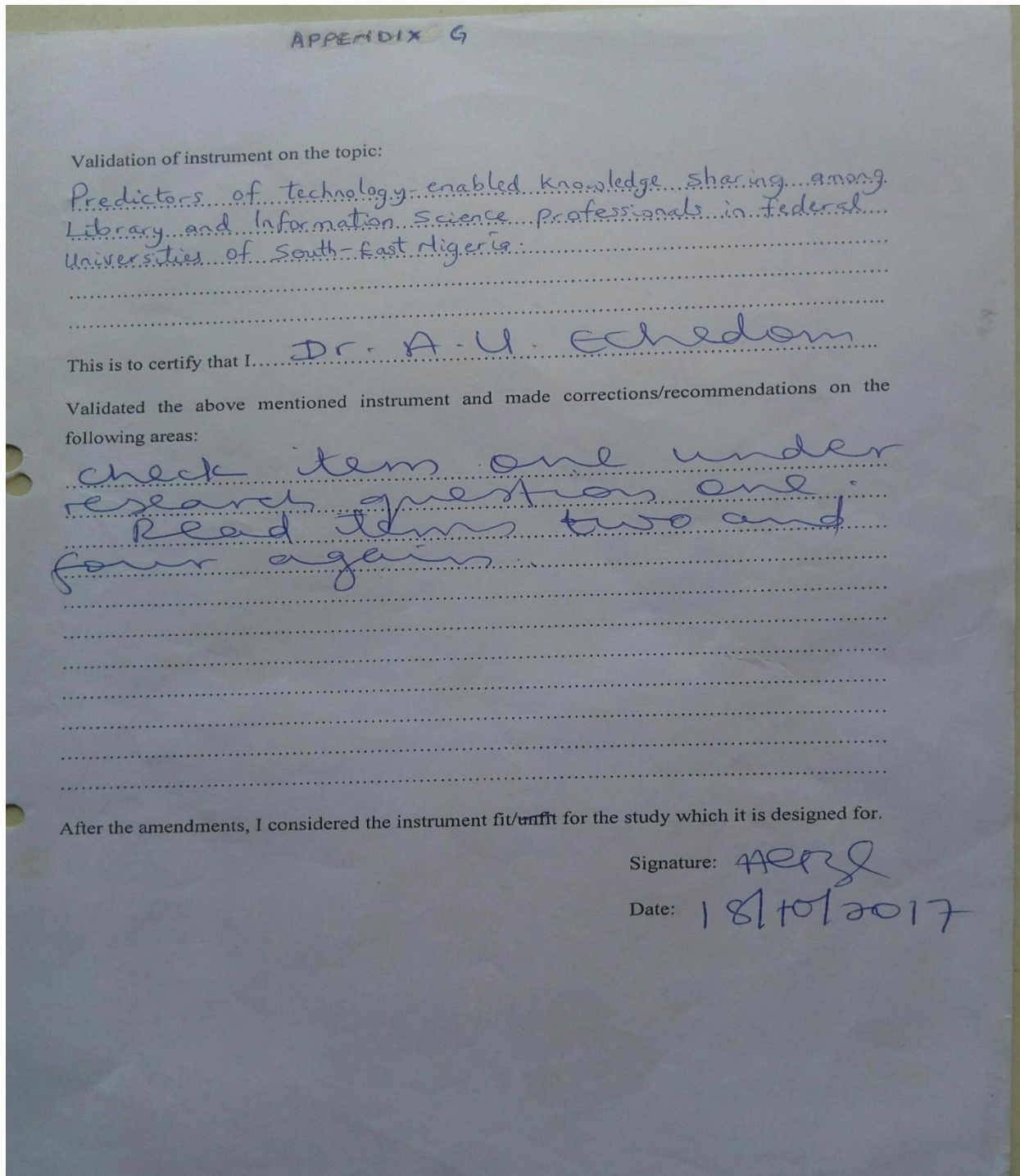
After the amendments, I considered the instrument fit/~~use~~ fit for the study which it is designed for.

Signature: 

Date: 18/11/17

APPENDIX G

SUGGESTION AND CORRECTION OF INSTRUMENTS BY EXPERT 2



APPENDIX G

Validation of instrument on the topic:

Predictors of technology-enabled knowledge sharing among Library and Information Science professionals in Federal Universities of South-East Nigeria.

This is to certify that I, Dr. A. U. Echedom

Validated the above mentioned instrument and made corrections/recommendations on the following areas:

check item one under research question one; Read items two and four again.

After the amendments, I considered the instrument fit/unfit for the study which it is designed for.

Signature: A. U. Echedom

Date: 18/10/2017

APPENDIX H

SUGGESTION AND CORRECTION OF INSTRUMENTS BY EXPERT 3

APPENDIX H

Validation of instrument on the Topic:

Predictors of Technology-enabled
Knowledge Sharing Among Library and
Information Science Professionals in
Federal Universities of South East Nigeria

This is to certify that I ... Dr. E. S. Anaeobi

Validated the above mentioned instrument and made corrections/recommendations
on the following areas:

- ① I suggest "How does" a given predictor enable -- instead of "Does" a given predictor enable.
- ② Number serially to facilitate analysis.

After the amendments, I considered the instruments fit/~~unfit~~ for the study which it is designed for.

Signature:

Date:

Egbunietobi
16/10/17

APPENDIX I

SPSS OUTPUT OF ANALYSIS

Preliminary Analysis

Variable Mean (N=195)

Variable	Mean	Std. Deviation
Self-efficacy	3.20	.39
Altruism	3.00	.31
Reciprocity	2.39	.45
Trust	2.82	.39
Availability of Technology	2.88	.38
Perceived ease of use of technology	2.52	.32
Perceived usefulness of Technology	2.87	.28
Technology-Enabled Knowledge Sharing	3.01	.39

The mean for the variables shows that Self-efficacy had the greatest mean score with 3.20 while Reciprocity had the lowest mean with 2.39.

Correlation for variables (N=195)

Variable	Correlation coefficient with technology-enabled knowledge sharing among professional librarians and paraprofessionals
Self-efficacy	.355**
Altruism	.326**
Reciprocity	.340**
Trust	.257**
Availability of Technology	.499**
Perceived ease of use of technology	.145**
Perceived usefulness of Technology	.418**

A positive relationship exists between the seven variables (Self-efficacy, Altruism, Reciprocity, Trust, Availability of Technology, Perceived ease of use of technology and Perceived usefulness of Technology) and technology-enabled knowledge sharing among professional and paraprofessionallibrariansin federal universities of South-East, Nigeria. Availability of technology had the highest correlation coefficient (.499) while perceived ease of use of technology had the least (.145).

Descriptive Statistics

	N	Mean	Std. Deviation
Self-efficacy	195	3.20	.39
Altruism	195	3.00	.31
Reciprocity	195	2.39	.45
Trust	195	2.82	.39
Availability of Technology	195	2.88	.38
Perceived ease of use of technology	195	2.52	.32
Technology Enabled KS	195	3.01	.39
Perceived usefulness of Technology	195	2.87	.28
Valid N (listwise)	195		

Correlations

		Self-Efficacy	Technology_Enabled_KS2
Self-Efficacy	Pearson Correlation	1	.355**
	Sig. (2-tailed)		.000
	N	195	195
Technology-Enabled KS	Pearson Correlation	.355**	1
	Sig. (2-tailed)	.000	
	N	195	195

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Altruism	Technology_Enabled_KS2
Altruism	Pearson Correlation	1	.326**
	Sig. (2-tailed)		.000
	N	195	195
Technology_Enabled_KS2	Pearson Correlation	.326**	1
	Sig. (2-tailed)	.000	
	N	195	195

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Reciprocity	Technology_Enabled_KS2
Reciprocity	Pearson Correlation	1	.340**
	Sig. (2-tailed)		.000
	N	195	195
Technology_Enabled_KS2	Pearson Correlation	.340**	1
	Sig. (2-tailed)	.000	
	N	195	195

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Trust	Technology_Enabled_KS2
Trust	Pearson Correlation	1	.257**
	Sig. (2-tailed)		.000
	N	195	195
Technology_Enabled_KS2	Pearson Correlation	.257**	1
	Sig. (2-tailed)	.000	
	N	195	195

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Availability of Technology	Technology_Enabled_KS2
Availability of Technology	Pearson Correlation	1	.499**
	Sig. (2-tailed)		.000
	N	195	195
Technology_Enabled_KS2	Pearson Correlation	.499**	1
	Sig. (2-tailed)	.000	
	N	195	195

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Perceived ease of use of Technology	Technology_Enabled_KS2
Perceived ease of use of Technology	Pearson Correlation	1	.145*
	Sig. (2-tailed)		.043
	N	195	195
Technology_Enabled_KS2	Pearson Correlation	.145*	1
	Sig. (2-tailed)	.043	
	N	195	195

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		Perceived Usefulness of technology	Technology_Enabled_KS2
Perceived Usefulness of technology	Pearson Correlation	1	.418**
	Sig. (2-tailed)		.000
	N	195	195
Technology_Enabled_KS2	Pearson Correlation	.418**	1
	Sig. (2-tailed)	.000	
	N	195	195

** . Correlation is significant at the 0.01 level (2-tailed).

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Self-Efficacy ^b	.	Enter

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.355 ^a	.126	.121	7.33823

a. Predictors: (Constant), Self_Efficacy

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1495.704	1	1495.704	27.776	.000 ^b
	Residual	10392.983	193	53.850		
	Total	11888.687	194			

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians

b. Predictors: (Constant), Self_Efficacy

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	37.679	4.315		8.732	.000
	Self-Efficacy	.705	.134	.355	5.270	.000

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Altruism ^b	.	Enter

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.326 ^a	.106	.101	7.42109

a. Predictors: (Constant), Altruism

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1259.693	1	1259.693	22.873	.000 ^b
	Residual	10628.994	193	55.073		
	Total	11888.687	194			

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians

b. Predictors: (Constant), Altruism

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	35.242	5.256		6.705	.000
	Altruism	.835	.175	.326	4.783	.000

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Trust ^b	.	Enter

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofession al_Librarians

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.257 ^a	.066	.061	7.58447

a. Predictors: (Constant), Trust

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	786.525	1	786.525	13.673	.000 ^b
	Residual	11102.162	193	57.524		
	Total	11888.687	194			

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessiona l_Librarians

b. Predictors: (Constant), Trust

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	45.854	3.931		11.664	.000

Trust	.510	.138	.257	3.698	.000
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a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Reciprocity ^b		Enter

a. Dependent Variable: Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.340 ^a	.116	.111	7.38087

a. Predictors: (Constant), Reciprocity

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1374.581	1	1374.581	25.232	.000 ^b
	Residual	10514.106	193	54.477		
	Total	11888.687	194			

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessiona
l_Librarians

b. Predictors: (Constant), Reciprocity

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	46.189	2.849		16.213	.000
Reciprocity	.588	.117	.340	5.023	.000

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Availability of Technology ^b		. Enter

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.499 ^a	.249	.245	6.79982

a. Predictors: (Constant), Availability_of_Technology

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2964.850	1	2964.850	64.122	.000 ^b
	Residual	8923.837	193	46.237		
	Total	11888.687	194			

a. Dependent Variable:

Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians

b. Predictors: (Constant), Availability_of_Technology

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	30.271	3.776	8.018	.000
	Availability of Technology	1.042	.130	.499	8.008

a. Dependent Variable: Technology Enabled Knowledge Sharing Among Professional And Paraprofessional Librarians

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Perceived ease of use of Technology ^b		. Enter

a. Dependent Variable: Technology Enabled Knowledge Sharing Among Professional And Paraprofessional Librarians

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.145 ^a	.021	.016	7.76574

a. Predictors: (Constant),
Perceived_ease_of_use_of_Technology

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	249.491	1	249.491	4.137	.043 ^b
	Residual	11639.196	193	60.307		
	Total	11888.687	194			

- a. Dependent Variable: Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians
 b. Predictors: (Constant), Percieved_ease_of_use_of_Technology

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	51.247	4.462		11.486	.000
1	Perceived ease of use of Technology	.357	.175	.145	2.034	.043

- a. Dependent Variable: Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Perceived Usefulness of technology ^b		Enter

- a. Dependent Variable: Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians
 b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.418 ^a	.174	.170	7.13105

- a. Predictors: (Constant), Perceived_Usefulness_of_technology

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2074.274	1	2074.274	40.791	.000 ^b
1	Residual	9814.413	193	50.852		
	Total	11888.687	194			

- a. Dependent Variable: Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians
 b. Predictors: (Constant), Perceived_Usefulness_of_technology

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26.258	5.347		4.911	.000
	Perceived Usefulness of technology	1.184	.185	.418	6.387	.000

- a. Dependent Variable: Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Perceived Usefulness of technology, Trust, Availability of Technology, Perceived ease of use of Technology, Self-Efficacy, Reciprocity, Altruism ^b		Enter

- a. Dependent Variable: Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians
 b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.609 ^a	.370	.347	6.32695

- a. Predictors: (Constant), Perceived_Usefulness_of_technology, Trust, Availability_of_Technology, Perceived_ease_of_use_of_Technology, Self_Efficacy, Reciprocity, Altruism

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4403.018	7	629.003	15.713	.000 ^b
	Residual	7485.669	187	40.030		
	Total	11888.687	194			

a. Dependent Variable: Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians

b. Predictors: (Constant), Perceived_Usefulness_of_technology, Trust, Availability_of_Technology, Perceived_ease_of_use_of_Technology, Self_Efficacy, Reciprocity, Altruism

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	4.467	6.248		.715	.476
	Self-Efficacy	.198	.139	.100	1.426	.155
	Altruism	.247	.182	.096	1.358	.176
	Trust	.141	.130	.071	1.085	.279
	Reciprocity	.211	.118	.122	1.778	.077
	Availability of Technology	.708	.135	.339	5.231	.000
	Perceived ease of use of Technology	-.136	.166	-.055	-.816	.416
	Perceived Usefulness of technology	.560	.198	.198	2.833	.005

a. Dependent Variable: Technology_Enabled_Knowledge_Sharing_Among_Professional_And_Paraprofessional_Librarians