

Effects of ICT Skills in Knowledge Sharing: A Focus on Library and Information Science Educators in Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria.

Juliet Onuoha, PhD¹ Juliana O. Akidi, PhD² Chukwuemeka Chukwueke^{3*}

1, 2. University Library, Michael Okpara University of Agriculture, Umudike, P.M.B 7267, Umuahia, Abia State Nigeria

3. Department of Library and Information Science, Michael Okpara University of Agriculture, Umudike, , P.M.B 7267, Umuahia, Abia State Nigeria

Abstract

This study examined the effects of ICT skills in knowledge sharing by Library and Information Science (LIS) educators in Michael Okpara University of Agriculture, Umudike. Five (5) research objectives guided the study. The study adopted the descriptive survey design. Complete census technique was adopted which involved the use of the entire population consisting of eight (8) core lecturers and ten (10) academic librarians who also lectures in the Department of Library and Information Science, making a total of eighteen (18) respondents. A researcher-made 4-point instrument was used for data collection. Data obtained were analysed using frequency counts and mean scores. Findings of the study showed possession of some ICT skills such as social media utilization skills, web navigation skills, among others. It also revealed the sources through which LIS educators in MOUAU acquire their ICT skills. These sources include personal reading/research and attending seminars/conferences, among other sources. The study found out the adoption of lectures, use of meetings, delivering/presentation of papers at conferences, as the top-most pattern adopted by LIS educators for knowledge sharing. Findings also revealed efficiency in communication, access to wider population, and proper understanding of knowledge shared as among the effects of LIS educator's ICT skills on their knowledge sharing practices. The study revealed that LIS educators are faced with challenges in respect of the acquisition of ICT skills and knowledge sharing, which include, but not limited to inadequate ICT skills on the side of the educators, absence of quality ICT training programmes, high cost of ICT gadgets, etc. Based on the revealed effects of ICT skills and the challenges facing the application of these skills for knowledge sharing, the study recommend that ICT facilities should be provided and its functionality ensured so as to improve LIS educator's access to it within the campuses. It is suggested that LIS educators should have a rethink towards ICT training and skills acquisition and make time to improve their competences irrespective of their workload. Finally, the government and university management should intensify efforts to support and fund ICT training for LIS educators regularly as this will go a long way in ensuring the dividends of the tacit knowledge of this category of employee to the overall success of the institutions and organizations.

Keywords: ICT, Skills, Knowledge-Sharing, Effects, LIS-Educators.

DOI: 10.7176/IKM/9-8-05

Publication date:September 30th 2019

1. Introduction

The bulk of academic business revolves round the process and practices of knowledge sharing. In this process, the educator is in one end sharing the knowledge, whereas the learner is on the other end receiving the knowledge. Knowledge sharing manifest in diverse ways such as the lecturer to the students, the teacher to the pupils, the master to the apprentice, the parents to the children, the presenter to the audience, and the superior to the sub-ordinate. Whichever way it manifests, the main thing is that knowledge is being shared. It is important to understand that knowledge sharing do not only come from up to down, but can as well be from down to up. This is to say that in every human, there is an atom of knowledge which could be shared for the benefit of the receiver.

In the words of Nnadozie (2016), knowledge is a basic component of people's intellectual asset, which is made up of skills, experiences, ideas, intellect, expertise and intuition, which become evident when value has been added to information through processing. In a more detailed ancient definition, Leonard & Sensiper (1998) described knowledge as value-added information that is relevant, actionable and based, to a large extent, on experience. Knowledge could also be interpreted to mean a fluid mix of framed experiences, values, contextual

information and expert insight that provide a framework for evaluating and incorporating new experiences and information. Knowledge originates and is applied in the mind of the knower. In the organizational setting, it is often embedded not only in documents or repositories but also in organizational routines, processes, practices and norms (Nnadozie 2016).

From the above definitions, one could believe that action is based on knowledge shared and received. This is to say that the process of passing this knowledge to another goes a long way in determining the action of the person. To this end, knowledge sharing could be defined as the ability of organizations and individuals to share knowledge with each other or among one another. Knowledge sharing occurs when people who share a common purpose and experience similar problems come together to exchange ideas and information (Storey, as cited in MacNeil 2003). The process of knowledge sharing among individuals involve the conversion of the knowledge held by an individual into a form that can be understood, absorbed and used by other individuals (Ipe 2003). It is basically a mechanism by which knowledge is transferred from one individual to another.

Knowledge sharing involves patterns and methods. The pattern and method to be adopted largely depends on the experiences and skills of sharer as well as the environment, the receivers/audience, among other factors. These methods could be through personal conversation, teaching in the classroom, preaching in the religious settings, presenting papers in conferences and seminars, undertaking radio/television programme, parents at home, and lots more. However, the focus of this study is on methods applied in the academic setting. The effectiveness of the method/pattern adopted in knowledge sharing could be anchored on issue of time and energy exerted in the process. Some believe that when one has not spent much energy, he/she is in the best place to share knowledge effectively, some would attest to the fact that the comfort of the environment determines the effectiveness of knowledge sharing practices, which could be enhanced by application of information and communication technologies and skills.

Consequently, librarianship is one of the professions that have tested different technologies in the course of its metamorphosis, not only in the practicing profession but also in the teaching profession. This is so because, Nnadozie (2016) holds that LIS education was founded, and still thrives, on inculcating into man, the ability to make and manage records. Hence, the technology for the creation, organization, preservation, management and dissemination of this record has been of interest in the LIS education as well as practice of librarianship. Each generation of LIS educators has had to respond to the need to fashion basic technological tools to ply their trade. The response to this could be seen in the acquisition of technological skills (ICT-related) as well as its application in the knowledge sharing practices.

Although ICTs emerged in the 20th Century, the popularity of this phenomenon in LIS education amply underscores its importance both in the educators, library workers, and the library students. ICTs have effects beyond librarianship and other disciplines concerned with information management, and have become central to the management of knowledge assets in other organizations. Besides, people engaged in different economic, administrative, political, entrepreneurial, and academic enterprises adopt information technologies to achieve their respective purposes, LIS educators, inclusive. This leaves no doubt that ICTs and possession of ICT skills are not only vital to knowledge sharing, but also contribute immensely to the advancement of human society. This paper, therefore, explores the effects of ICT skills in knowledge sharing with particular reference to LIS educators in MOUAU.

2. Research Objectives

The following objectives guided the study.

1. To identify the ICT skills possessed by LIS educators in MOUAU.
2. To ascertain the sources of ICT skills of LIS educators in MOUAU.
3. To find out various methods/patterns adopted by LIS educators for knowledge sharing in MOUAU.
4. To determine the effect of LIS educator's ICT skills in their knowledge sharing practices.
5. To uncover the factors influencing knowledge sharing by LIS educators in MOUAU.

3. Literature Review

Knowledge sharing has been defined as the action of individuals in making knowledge available to others within the organization (Ipe 2003). Similarly, Bartol & Srivastava (2002) viewed knowledge sharing as the sharing of

organizationally relevant information, ideas, suggestions, and expertise with one another. In the same vein, Ryu, Ho & Han (2003) defined knowledge sharing as the behavior of disseminating one's acquired knowledge with other members within one's organization. Lee (2001), on the other hand, gave a broader definition of knowledge sharing, indicating it as involving activities of transferring or disseminating knowledge from one person, group or organization to another. In summary, all these definitions agree that knowledge sharing is a mechanism to disseminate information and knowledge from one individual, group, or organization to another.

Even though most studies defined knowledge sharing at the individual level as a single dimension construct, there are also those who proposed a two dimensional perspective. For example, van den Hooff & de Ridder (2004) defined knowledge sharing as the process where individuals mutually exchange their knowledge and jointly create new knowledge. This definition implies that knowledge sharing process consists of 'donating' and 'collecting'. According to the authors (van den Hooff & de Ridder 2004), knowledge 'donating' means communicating to others what one's personal intellectual capital is, while knowledge 'collecting' means consulting colleagues in order to get them to share their intellectual capital. Similarly, Renzl (2008) defined knowledge sharing as a reciprocal process of knowledge exchange, and thus entails contributing, as well as accumulating knowledge from the mass. Srinivas (2016) saw knowledge sharing as one of the most important pillars of knowledge management. To him, knowledge sharing is the life cycle, which starts with the production of knowledge, organisation and culminates in the exchange of knowledge and its use. Knowledge sharing among 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.

To Yi (2009), knowledge sharing exists in four dimensions namely: written contributions, personal interactions, organizational communication, and community interactions. Lichtenthaler & Ernst (2006) believed that knowledge sharing involve daily activities of universities and individuals, who engage in knowledge sharing practices to attain greater insights and understanding about concepts or practical applications and, in so doing, enhance their levels of learning and expertise. To them, knowledge sharing can be considered a valuable means by which academic staff can learn from one another and develop intellectually. Studies have shown that knowledge sharing is carried out through the processes of exposition, analysis, synthesis and reflection among individuals. It leads to enhanced understanding and skills development, promotes the creation of new ideas, and enhances academic performance. A study of knowledge sharing behaviour of academics at a university in Nigeria has shown that knowledge sharing is vital for the success of organizations and institutions including universities (Elogie & Asemota 2013). In their study, Elogie & Asemota (2013) found out that attitude, social networks, perceived behaviour control, knowledge self-efficacy and enjoyment in helping others, positively influenced knowledge sharing behaviour.

Enakrire & Uloma (2012) conducted a study on knowledge sharing amongst academics on the effect of tacit knowledge for teaching and learning processes and found the need for faculties and departments to organize staff/lecturers' training programmes to boost lecturers' tacit knowledge. Fullwood *et al.* (2013) in their study found that academics engage in knowledge sharing when carrying out research, and teaching. The study argued that in general academics had positive attitudes and intentions towards knowledge sharing and they had a high level of expectation of some personal benefits or rewards as an outcome of their knowledge sharing. Among the benefits, as revealed in the study of Fullwood *et al.* (2013) is the benefit of improving and extending their relationships with colleagues, and to offer opportunities for internal promotion and career development in other universities. Furthermore, the study of Cheng *et al.* (2009) found that academics are motivated to share if they perceive the incentives and rewards to benefit them even if there is no immediate reward or pay-off. Mogotsi *et al.* (2011) investigated the relationship between demographic variables (gender, age, organizational tenure and professional tenure) and knowledge sharing behaviour in the context of the public service sector in Botswana. The study concluded that gender, age, and professional tenure were not related to knowledge sharing behaviour, whilst organizational tenure correlated negatively with knowledge sharing behaviour. Their study also concluded that demographic variables such as race, age, gender do not appear to play any significant role in relation to knowledge sharing behaviour.

Studies and most literature show that the way knowledge is shared has a deep impact on its meaning and that knowledge is transmitted explicitly or internalized through a learning process, whether people trust each other, are motivated, or share the same mental models; all these factors determine the mechanisms, and hence the effectiveness, of knowledge sharing. To this end, it is right to assert that knowledge sharing is important because it provides a link between the individual and the organization by moving knowledge that resides with individuals

to the organizational level, where it is converted into economic and competitive value for the organization. Osunade *et al.* (2007) studied knowledge sharing amongst academics and found out that technology and human resources are central to knowledge sharing. This is where the ICT and its skills come in. ICT, a part of the technology, is simply an acronym for Information and Communications Technology. It captures the various electro-mechanical devices used in information handling (Nnadozie 2016). ICTs refer to the aggregate of computers and their accessories, telecommunications equipment, multimedia, and all other associated technologies applied in information organization, management and dissemination. However, Goswami (2015) noted the expansive nature of ICT and described it as an overarching and generic term for the various digital technologies used for manipulating information.

Consequently, the field of education has been affected by ICTs, which have undoubtedly affected teaching, learning, and research (Yusuf 2005) as well as the overall processes of knowledge transfer and receipt. ICTs have the potential to innovate, accelerate, enrich, and deepen skills, to motivate and engage educators and their students or any other category of persons that engage in knowledge sharing (Yusuf 2005). Jhurree (2005) stated that much has been said and reported about the impact of technology, especially computer-enabled devices in communication practices. These computers and applications of technology became more pervasive in society which led to a concern about the need for computing and ICT skills in everyday life.

Amua-Sekyi & Asare (2016) conducted a survey on the ICT literacy among lectures and found out the possession of Internet accessing skills, word processing skills, email sending skills, presentation skills, database searching skills, among other skills. According to Amua-Sekyi & Asare (2016), surfing the Internet for information will make the educator's job easy and engender the establishment of connections with global education, word processing skills and ability to communicate through emails give the educators the capability to easily create and produce documents relevant to their teaching requirements, as well as offer high versatility and flexibility, and lecturers can use it to support any kind of directed instruction. The study further revealed that ICT skills is of immense effects to the educators/lecturers as it enable them to save time in creating or modifying materials to be used in teaching, create documents that are more appealing to students, among other numerous benefits.

On how educators develop skills to enable them use the ICTs for knowledge sharing, Archibong, Ogbiji & Anijaobi-Idem (2010) study on the ICT competence among academic staff in universities in Cross Rivers State, Nigeria found that 268 (89.3%) of academic staff funded any form of ICT development training they have undertaken, while only 32(10.7%) academic staff have received assistance from the University in ICT-related development training. Furthermore, the study by the authors revealed that majority (53.3%) rated their ICT competence as low which according to the respondents is based on inadequate ICT facilities, excess work load and funding. Recommendations made to include funding of ICT training of academic staff by the university management and making ICT training mandatory for all academic staff. Hepp *et al.* (2004) claimed in their paper that ICTs have been utilized in knowledge sharing ever since their inception, but they have not always been massively present in the process of teaching in most educational institutions in Nigeria. Furthermore, it is important to understand that the bulk of the knowledge sharing activities of LIS educators is teaching. This is to say that educating the students is one major means through which LIS educators share their knowledge. ICT skill is therefore necessary for educators because higher education students are nowadays the digital natives (Prensky 2001). The behaviour of these students is different compared to previous generations concerning the ways of learning (Georgas 2013). Students, as digital natives are characterized by their digital fluency and desire to have everything on their phone or gadgets. They spend a great amount of time online and many are frequently connected in social media.

Lekka & Pange (2015) are of the view that the social media are widely used for communication purposes among the academic community and also for teaching and learning. These media involve certain digital tools, such as Google, Facebook, Messenger, Instagram, YouTube, Edmodo and so on. Most of the lecturers in some universities are unfamiliar with some basic ICT tools, like email, Internet, video conferencing, word processing, etc. It is however important to assert that the Internet and other ICT gadgets have affected the library and information profession in all its dimensions (Nnadozie 2016). Among the areas they have affected include the way information is stored, retrieved and disseminated. ICT has made it possible that information and knowledge can be packaged, repackaged and transferred to suit the way information is consumed by various people. Creating videos is one of the ways in which LIS educators through ICT can package information to meet the different ways in which their students consume information and also the information needs of distant students (Palmer, as cited in Gibbs 2015). Palmer further observes that the availability of Internet connectivity and technological tools like digital camera and smart phone has made Video (streaming) possible. Video streaming

has enabled higher education institutions overseas to implement globalization strategy of reaching out to wider students without regional barriers. The author observes that the use of video streaming for knowledge sharing in higher institutions is more cost effective, time effective and sustainable method of teaching and learning.

A survey conducted by Gibbs (2015) on lecturers of research methods in institutions of higher learning in United Kingdom (UK), revealed that video use was common. Among Library and Information Science (LIS) professionals, video offers itself as a way of packaging information to meet the information consumption styles of various library clients. Some schools do not have them provided for their teachers and some teachers may not be economically buoyant to buy one for themselves. At the tertiary-level of education, Okhiria (as cited in Ajegbelen 2016) noted that National Universities Commission (NUC) in Nigeria has prescribed that there should be at least one computer to every four students and one PC to every two lecturers below the grade of lecturer I, one PC per senior lecturer and one notebook per reader/ professor. NUC has gone further to establish e-learning platforms fitted with twenty smart boards in twelve Federal universities for the promotion of the use of ICT in teaching and learning. Majority of the Nigerian universities have not achieved this recommended system ratio for their faculties, though some have made giant or notable strides in campus wide area networking and e-learning course deliveries

A number of challenges have been observed to militate against the application of ICT in knowledge sharing. According to Osakwe (2012), acquisition, deployment and management of information technology resources and services for teaching depend on electricity. Studies have shown that poorly maintained equipment and poor network infrastructure are prominent obstacles to the integration of ICT tools in classroom knowledge sharing practices. A number of educators today have never used computers in their lives and they are terribly shy when they are confronted with this new technology and the terminology associated with using them. Sentlowitz (as cited in Ajegbelen 2016) observed that inadequate technology infrastructure, lack or inadequate power supply and unsteady Internet access, lack of training, funds, skilled and experienced lecturers in multimedia creation and knowledge of video creation tools as well as lack of support from curriculum decision makers can create a big huddle in teaching video creation. Ajegbelen (2016) submits that low digital fluency of faculty and inappropriate technological experience are some of the challenges facing adoption of ICT for knowledge sharing. He explains that many lecturers in higher institutions do not come from technological background, thus there is always a generational gap between the technological capability of the lecturer and that of their students. Secondly, the lecturers' inadequate technological skill on how to create and use the new technology can be complicated and time consuming. But Brynjolfsson & McAfee (2014) maintains that if educators are to provide students with the skills needed to survive in the 'Second Machine Age', then it is imperative they understand the technology at deeper level and its application in knowledge sharing.

Berge & Mullenberg (2001) suggested that technology and pedagogical changes are not the reasons that faculty members are hesitant to engage in online instruction; the major problems are associated with changes in faculty role, organizational function, and administrative structure. In contrast, Shelton & Saltsman (2005) underscored the need for faculty to obtain that technological and pedagogical "know-how." The authors concluded that most faculty participants in their study were unprepared for teaching in a virtual environment. The authors divided faculty's reported barriers to teaching online into seven areas: faculty buy-in, policies addressing faculty concerns, faculty selection, faculty compensation, faculty workload, faculty support, and faculty satisfaction. Out of the seven areas, Shelton and Saltman reported that the issues most pressing for faculty were compensation, faculty workload, and faculty selection. In addition, Howell *et al.* (2004) noted four trends affecting faculty in becoming online instructors, which involve firstly, the traditional faculty role in the classroom is becoming "unbundled" and being redefined as a motivator or facilitator; Secondly, institutions inability to provide more support for faculty engaging in online instruction; thirdly, the traditional process toward tenure is being challenged; and fourthly, the attitudes of faculty toward distance education. Previous quantitative studies conducted by Bower (2001) and McKenzie *et al.* (2000) investigated factors that motivated and hindered faculty's adoption of online instruction.

4. Methodology

The study is a descriptive survey. The population is eighteen (18). This consists of eight (8) core lectures and ten (10) academic librarians who also lecture in the Department of Library and Information Science, Michael Okpara University of Agriculture, Umudike (MOUUAU). Furthermore, there was no need for sampling as the study adopted complete census technique, which involved the use of the entire population as respondents. A 4-point researcher-made instrument titled: "Questionnaire on ICT Skills and Effective Knowledge Sharing"

(QISEKS) was used to generate raw data for the study. The researchers personally distributed copies of the questionnaire to the LIS educators in the University and collected on-the-spot. This strategy accounted for the return of all copies, which gave a response rate of 100%. Data collected were analysed using descriptive statistics of frequency counts and mean score. A four point scale method involving Strongly Agree (SA); Agree (A); Disagree (D); and Strongly Disagree (SD), was used to determine the degree of agreement or otherwise in each of the item statements. The criterion mean of 2.5 was used, which indicated the level of agreement or disagreement. In this, any mean score less than 2.5 was considered disagreed, whereas items with mean scores 2.5 and above were considered agreed. Presentation of results was done through the use of frequency tables.

5. Presentation of Result/Discussion of Findings

Table 1: Mean Responses of LIS Educators on ICT Skills Possessed (N = 18)

S/No	Item Statement	SA	A	D	SD	Mean	Decision
1	Web navigation skills	9	7	2	0	3.39	Agreed
2	Software manipulation and use skills	1	4	7	6	2.00	Disagreed
3	Social media utilization skills	8	10	0	0	3.44	Agreed
4	E-mail management skills	0	18	0	0	3.00	Agreed
5	Videoconferencing skills	1	5	7	5	2.11	Disagreed
6	Electronic presentation skills	6	6	4	2	2.89	Agreed
7	Word processing skills	5	9	3	1	3.00	Agreed
8	WebCT or Blackboard Teaching Skills	1	5	8	4	2.17	Disagreed
9	File Management & Windows Explorer Skills	3	12	2	1	2.94	Agreed
	Grand Mean					2.69	Agreed

Source: *Researchers' Field Survey, 2019*

Criterion Mean = 2.50

Table 1 presents data from responses by the LIS educators in MOUAU on the ICT skills they possessed. There are nine (9) item statements covering responses by LIS educators on ICT skills possessed by LIS educators in MOUAU. Although ICT skills are not limited to the nine (9) contained in the Table, the nine (9) were considered to be relevant for knowledge sharing. The result reveals a total agreement by majority of the respondents on the possession of numerous ICT skills as the grand mean () equals 2.69. This acceptance is as a result of the grand mean score being higher than the criterion mark of 2.5 set for the study. A further breakdown of the result shows that majority of the respondents, agreed on the possession of ICT skills such as: Social media utilization skills (with a of 3.44); web navigation skills (with a of 3.39); e-mail management skills (with a of 3.00); word processing skills (with a of 3.00); file management & windows explorer skills (with a of 2.94); and electronic presentation skills (with a of 2.89). Other respondents with mean scores of 2.00, 2.11, and 2.17 disagreed with the possession of software manipulation and use skills, videoconferencing skills, and WebCT or blackboard teaching skills, respectively.

The report which indicated the possession of six (6) out of nine (9) ICT skills investigated by this study, as well as a grand mean above the criterion mean, indicates that LIS educators in MOUAU possess reasonable number of ICT skills for knowledge sharing. This result is in agreement with the work of Sekyi & Asare (2016) which revealed the possession of number of skills, such as: Internet accessing skills, word processing skills, email sending skills, presentation skills, and database searching skills, among other skills. However, the absence or low possession of ICT skills such as software manipulation and use skills, videoconference skills, and WebCT or blackboard teaching skills could hinder the effective transfer of knowledge through lecturing or software communication.

Table 2: Mean Responses of LIS Educators on Sources of ICT Skills (N = 18)

S/No	Item Statement	SA	A	D	SD	Mean	Decision
10	Through online tutorials	1	2	11	4	2.00	Disagreed
11	From colleagues	3	11	3	1	2.89	Agreed
12	Registering for computer lessons	1	2	10	5	1.94	Disagreed
13	Personal reading/research	8	7	3	0	3.28	Agreed
14	Visiting Internet/cyber cafes	8	6	3	1	3.17	Agreed
15	Acquiring degrees/certificates in ICT-related courses	1	3	8	6	1.94	Disagreed
16	Attending seminars/conferences	8	7	3	0	3.28	Agreed
17	Hiring ICT specialists	4	10	4	0	3.00	Agreed
18	Visiting digital libraries	1	14	1	2	2.78	Agreed
19	Self-learning and/or everyday practice	4	8	4	2	2.78	Agreed
	Grand Mean					2.71	Agreed

Source: *Researchers' Field Survey, 2019*

Criterion Mean = 2.50

Table 2 presents data from responses by the LIS educators in MOUUAU on sources of ICT skills. The Table is made up of ten (10) item statements showing perceived sources of ICT skills and covering responses by LIS educators on their sources of ICT skills. The result indicates a total agreement by majority of the respondents on sources of ICT. This agreement is so, based on the fact that the study scored a grand mean above the criterion mean which is 2.71. A further analysis of data per item statement shows that the majority of the respondents that constitute mean scores and standard deviation of 3.28, 3.28, 3.17, 3.00, 2.89, 2.78, and 2.78 agreed with the acquisition of ICT skills through personal reading/research, attending seminars/conferences, visiting Internet/cyber cafes, hiring ICT specialists, from colleagues, visiting digital libraries, and self-learning and/or everyday practice, respectively. Furthermore, majority of the LIS educators in MOUUAU disagreed with sources such as: registering for computer lessons (with a of 1.94), acquiring degrees/certificates in ICT-related courses (with a of 1.94), and through online tutorials (with a of 2.00).

It could be seen from the result of this present study that LIS educators in MOUUAU put in much personal efforts in the quest to acquire ICT skills. These personal efforts range but not limited to personal reading/research, attending seminars and conferences to hiring ICT specialists, among other numerous personal efforts. This finding agrees with the work of Archibong *et al.* (2010) which found that 268(89.3%) of academic staff funded any form of ICT development training they have undertaken, while only 32(10.7%) academic staff have received assistance from the University in ICT-related development training. This is because majority of the sources of ICT skills acquisition by LIS educators is personally motivated.

Table 3: Mean Responses of LIS Educators on Methods/ Patterns Adopted for Knowledge Sharing (N = 18)

S/No	Item Statement	SA	A	D	SD	Mean	Decision
20	Through lectures	8	10	0	0	3.44	Agreed
21	Delivering/presenting papers at conferences	5	13	0	0	3.28	Agreed
22	Personal interactions	6	12	0	0	3.33	Agreed
23	Sending e-mails and private messages	1	17	0	0	3.06	Agreed
24	Use of Facebook timeline messages and other social media platforms	6	12	0	0	3.33	Agreed
25	Use of radio/television programmes	2	5	9	2	2.39	Disagreed
26	Use of audio/video clips and recordings	3	4	5	6	2.22	Disagreed
27	Video/audio conferencing	2	3	11	2	2.28	Disagreed
28	Use of meetings and other gatherings	7	11	0	0	3.39	Agreed
	Grand Mean					2.97	Agreed

Source: *Researchers' Field Survey, 2019*

Criterion Mean = 2.50

Table 3 presents data from responses by LIS educators in MOUUAU on the methods/patterns adopted by them for knowledge sharing. There are nine (9) item statements covering responses by LIS educators on methods/patterns adopted for knowledge sharing. The result reveals a total agreement by majority of the respondents on the adoption of different and numerous methods/patters for knowledge sharing with a grand mean () of 2.97. This agreement is as a result of the grand mean score being higher than the criterion mean of 2.5 set for the study. A

further breakdown of the result shows that the respondents agreed with the methods/patterns such as: through lectures (with a of 3.44); use of meetings and other gatherings (with a of 3.39); personal interactions (with a of 3.33); use of Facebook timeline messages and other social media platforms (with a of 3.33); delivering/presenting papers at conferences (with a of 3.28); and sending e-mails and private messages (with a of 3.06). However, other respondents disagreed with methods/patterns such as: use of audio/video clips and recordings (with a of 2.22); video/audio conferencing (with a of 2.28); and use of radio/television programmes (with a of 2.39) .

Consequently, the acceptance of six (6) out of nine (9) methods being investigated, is a strong indication that the methods/patterns adopted by LIS educators for knowledge sharing is not only limited to one pattern. The acceptance of methods/patterns such as use of Facebook timeline messages and other social media platforms, use of e-mails and private messages, among other method/patterns shows the adoption of ICT-enabled platforms for knowledge sharing by LIS educator in MOUAU. Similarly, the rejection of methods/patterns involving the use of radio/television programmes, audio/video clips and recordings and video/audio conferencing could be attributed to the absence or low possession of videoconferencing skills as presented in item statement 5 in Table 1. This is a strong indication that knowledge sharing has something to do with method/patterns adopted for knowledge sharing by LIS educators in MOUAU. This is in tandem with the study of Fullwood *et al.* (2013) which revealed that academics engage in knowledge sharing when carrying out research, and teaching. The study argued that in general academics had positive attitudes and intentions towards knowledge sharing and they had a high level of expectation of some personal benefits or rewards as an outcome of their knowledge sharing.

Table 4: Mean Responses of LIS Educators on Effects of LIS Educators' ICT Skills on their Knowledge Sharing Practices (N = 18)

S/No	Item Statement	SA	A	D	SD	Mean	Decision
29	Access to wider population	10	8	0	0	3.56	Agreed
30	Saving of time	5	13	0	0	3.28	Agreed
31	Saving of energy	9	9	0	0	3.50	Agreed
32	Brings about efficiency in communication	14	4	0	0	3.78	Agreed
33	Promotes proper understanding of knowledge shared	9	9	0	0	3.50	Agreed
34	Reduces stress	9	9	0	0	3.50	Agreed
35	Ensures effective utilization of knowledge	9	9	0	0	3.50	Agreed
36	Guides against misunderstanding/misinterpretation	9	9	0	0	3.50	Agreed
37	Makes for easy referral of knowledge passed/shared	4	14	0	0	3.22	Agreed
	Grand Mean					3.48	Agreed

Source: *Researchers' Field Survey, 2019*

Criterion Mean = 2.50

Table 4 above presents data from responses by LIS educators in MOUAU on the effects LIS educators' ICT skills on their knowledge sharing practices. The study reveals the presence of nine (9) item statements bothering on the perceived effects of ICT skills of individuals on their knowledge sharing practices. Result gotten from the study on this reveals a total agreement by majority of the respondents on the effects of ICT skills on knowledge sharing practices with a grand mean () of 3.48. This agreement is as a result of the grand mean score being higher than the criterion mean of 2.50 set for the study. A further breakdown of the result shows that the respondents agreed with the effects such as: brings about efficiency in communication (with a of 3.78); access to wider population (with a of 3.56); saves energy (with a of 3.50); promotes proper understanding of knowledge shared (with a of 3.50); reduces stress (with a of 3.50); ensures effective utilization of knowledge (with a of 3.50); guides against misunderstanding/misinterpretation (with a of 3.50); saves time (with a of 3.28); and makes for easy referral of knowledge passed/shared (with a of 3.22).

Consequently, the agreement of all the item statements in Table 4 as well as the scoring of 3.48 as grand mean is a strong indication that LIS educator's ICT skills play a great significant and positive role in their knowledge sharing practices. These effects which range from efficiency in communication to easy referral of knowledge passed/shared are very vital in ensuring smooth and effective knowledge sharing among LIS educators. The finding agrees with the report of Sekyi & Asare (2016), which revealed that ICT skills are of immense effects to the educators/lecturers as it enable them to save time in creating or modifying materials to be used in teaching, create documents that are more appealing to students, among other numerous benefits.

Table 5: Mean Responses of LIS Educators on Factors Influencing Acquisition of ICT Skills for Knowledge Sharing (N = 18)

S/No	Item Statement	SA	A	D	SD	Mean	Decision
38	Inadequate ICT skills on the side of the educators	9	9	0	0	3.50	Agreed
39	The issue of technological obsolescence	9	4	5	0	3.22	Agreed
40	High cost of acquiring ICT skills	9	9	0	0	2.50	Agreed
41	Inadequate time to engage in ICT trainings	4	10	4	0	3.00	Agreed
42	Absence of quality ICT training programmes	4	14	0	0	3.22	Agreed
43	Issue of ICT-knowledge at the receiving end being insufficient	9	9	0	0	3.50	Agreed
44	High cost of most ICT gadgets	4	10	4	0	3.00	Agreed
45	Most of the ICTs require much technical-know-how	5	13	0	0	3.28	Agreed
46	Atmospheric and weather conditions hinder effectiveness of some ICTs	9	9	0	0	3.50	Agreed
	Grand Mean					3.19	Agreed

Source: *Researchers' Field Survey, 2019*

Criterion Mean = 2.50

Table 5 presents data from responses by LIS educators in MOUUAU on factors influencing use of CT for knowledge sharing. There are nine (9) item statements covering responses on the factors influencing the use of ICT for knowledge sharing. The result reveals a total agreement response by majority of the respondents on the factors that influences use of ICT in knowledge sharing. This agreement response was as a result of the study having a grand mean score of 3.19, which is above the criterion mean set for the study. Responses to specific item statements indicate agreement with all the item statements by majority of the respondents as each of the item statements obtained mean scores above the criterion mean of 2.50. These factors, and their mean scores and standard deviation include: inadequate ICT skills on the side of the educators (with a of 3.50); issues of ICT-knowledge at the receiving end being insufficient (with a of 3.50); atmospheric and weather conditions hinder effectiveness of some ICTs (with a of 3.50); most of the ICTs require much technical-know-how (with a of 3.28); the issue of technological obsolescence (with a of 3.22); absence of quality ICT training programmes (with a of 3.22); inadequate time to engage in ICT trainings (with a of 3.00); high cost of most ICT gadgets (with a of 3.00); and high cost of acquiring ICT skills (with a of 2.50).

It could be deduced from the responses and findings of the study that availability and functionality of ICT gadgets (see item statements 39, 44, and 45), the atmosphere/environment of ICT application (see item statement 46) as well as the receivers of this knowledge (see item statement 43), greatly influence the acquisition of ICT skills for knowledge sharing by LIS educators. These educators seem to be discouraged in their quest for ICT skills when considering the high cost of acquiring the training, high cost of the ICT gadgets, the state of the environment where these gadgets could be deployed for use, and the knowledge and reception of the users of this knowledge if ICTs were used for the transmission of knowledge. The findings of these factors, among other factors agree with the work of Sentlowitz (2009), which revealed that inadequate technology infrastructure, lack or inadequate power supply and unsteady internet access, lack of training, funds, skilled and experienced lecturers, as factors inhibiting acquisition of ICT skills for knowledge sharing.

6. Summary and Recommendation

From the findings of this study, it was concluded that ICT skills play a critical role in LIS knowledge sharing practices. The study has shown the different sources of ICT skills of LIS educators. Most of these sources are personally motivated and self-funded. However, the highly used method or pattern adopted for knowledge sharing by LIS educators include lectures and presentation of papers at conferences and seminars, among other patterns. If these educators possess low ICT skills, it invariably shows that their knowledge sharing practices will not be effective. This study however concludes that ICT skills of the lecturer are essential for knowledge sharing practices in the 21st century. Although these educators are faced with numerous challenges in an attempt to acquire ICT skills, adequate measures should be taken to overcome these challenges faced by the LIS educators. Based on the findings of this study, the researchers recommend the following:

1. LIS educators should see the need to embrace ICT skills and application of ICT in their knowledge sharing practices. This will go a long way in ensuring their relevance and bringing efficiency and effectiveness in communication.

2. On the other hand, university management should see it as a necessity and intensify efforts to fund the ICT training of LIS educators.
3. Furthermore, provision should be made for continuous retraining of LIS educators on ICT since development in technology is dynamic and the educators need to keep abreast with current trends.
4. University management should make training in ICT mandatory for all LIS educators as this will propel the uninterested or unwilling ones to undertake the training.
5. Finally, ICT facilities should be provided and its functionality ensured so as to improve academic staff access to it within the campuses. It is suggested that LIS educators should have a rethink towards ICT training and skills acquisition and make time to improve their competences irrespective of their workload.

References

- Ajebelen, A.J. (2016), "The Use of ICT to Enhance University Education in Nigeria", *International Journal of Education, Learning and Development* 4(5), 1-11.
- Amua-Sekyi, E.T. & Asare, P.Y. (2016), "A Survey of Information and Communication Technology Literacy among Lecturers", *Information and Knowledge Management* 6(8), 1-7.
- Archibong, I.J., Ogbiji, J.E. & Anijaobi-Idem, F. (2010), "ICT Competence among Academic Staff in Universities in Cross Rivers State, Nigeria", *Computer and Information Science* 3(4), 109-115.
- Bartol, K.M., & Srivastava, A. (2002), "Encouraging Knowledge Sharing: The Role of Organizational Reward Systems", *Journal of Leadership & Organizational Studies* 9, 64-76
- Berge, Z.L. & Muilenburg, L.Y. (2001), "Obstacles Faced at Various Stages of Capability Regarding Distance Education in Institutions of Higher Learning", *Technological Trends* 46(4), 40-45.
- Brynjolfsson, E. & McAfee, A. (2014), *The Second Machine Age* (1st ed.), New York, W.W. Norton & Company.
- Cheng, M. Y., Ho, J. S. Y., & Lau, P. M. (2009), "Knowledge Sharing in Academic Institutions: A Study of Multimedia University, Malaysia", *Electronic Journal of Knowledge Management* 7(3), 313-324.
- Elogie, A. A., & Asemota, A. E. (2013), "Knowledge Sharing Behaviour of Academics in the University of Ibadan, Nigeria", *PNLA Quarterly* 77(4), 1-16.
- Enakrire, R.T & Uloma, N. G. (2012), "The Effect of Tacit Knowledge for Effective Teaching and Learning Processes among Lecturers at the Delta State University, Abraka", *Library Philosophy and Practice* (e-journal).
- Fullwood, R., Rowley, J., & Delbridge, R. (2013), "Knowledge Sharing amongst Academics in UK Universities", *Journal of Knowledge Management* 17(1), 123-136.
- Georgas, H. (2013), "Google vs. the Library: Student Preferences and Perceptions when Doing Research Using Google and a Federated Search Tool", *Portal: Libraries and the Academy* 13(2), 165-185.
- Gibbs, G. (2015), "Innovative Pedagogies Series: Video Creation and Reuse for Learning in Higher Education", UK, Higher Education Academy.
- Goswami, S. (2014), "ICT: Sustainable Development", *SCMS Journal of Indian Management*, (January - March), 125-133.
- Hepp, K. P., Hinojosa, S.E., Laval, M.E., & Rehbein, L. F. (2004), "Technology in Schools: Education, ICT and the Knowledge Society. *OECD Report*. Available at: www.worldbank.org/education/pdf/ICT_report_oct04a.pdf.

- Ipe, M. (2003), "Knowledge Sharing in Organizations: A Conceptual Framework", *Human Resource Development Review* 2, 337-359.
- Jhurree, V. (2005), "Technology Integration in Education in Developing Countries: Guidelines to Policy Makers", *International Education Journal* 6(4), 467-483.
- Lekka, A. & Pange, J. (2015, November), "What ICT Tools do Undergraduate Students Use?", *Proceedings of Interactive Mobile Communication Technologies and Learning (IMCL), 2015 International Conference* (pp. 386-388). IEEE.
- Leonard, D. & Sensipar, S. (1998), "The Role of Tacit Knowledge in Group Innovation", *California Management Review* 40(3), 112-132.
- Lichtenthaler, U., & Ernst, H. (2006), "Attitudes to Externally Organising Knowledge Management Tasks: A Review, Reconsideration, and Extension of the NIH Syndrome", *R&D Management* 36(4), 367-386.
- MacNeil, C. M. (2003), "Line Managers: Facilitators of Knowledge Sharing in Teams", *Employee Relations* 25, 294-307.
- Mogotsi, I. C., Boon, J. A., & Fletcher, L. (2011), "Modelling the Relationships Between Knowledge Sharing, Organisational Citizenship, Job Satisfaction and Organisational Commitment among School Teachers in Botswana", *African Journal of Library, Archives & Information Science* 21(1), 41-58.
- Nnadozie, C.O. (2016), "ICT: Its Application to Knowledge Management and Role in Sustainable Development in Nigeria", Lead Paper Presented at 2nd Annual Conference of the Nigeria Library Association (NLA), Ebonyi State Chapter held 30th November - 3rd December, 2016 at Akanu Ibiam Federal Polytechnic, Unwana-Afikpo.
- Osakwe, R.N. (2012), "Challenges of Information and Communication Technology (ICT) Education in Nigerian Public Secondary Schools", *Education Research Journal* 2(12), 388-391. Retrieved from <http://www.resjournals.com/ERJ>.
- Osunade, O., Philips, O. F. & Ojo, O. (2007), "Limitations of Knowledge Sharing in Academia: A Case from Nigeria", *Knowledge Management for Development Journal* 3(1), 26-34.
- Prensky, M. (2001), "Digital Natives, Digital Immigrants Part 1", *On the Horizon* 9(5), 1-6.
- Renzl, B. (2008), "Trust in Management and Knowledge Sharing: The Mediating Effects of Fear and Knowledge Documentation", *Omega* 36, 206-220.
- Ryu, S., Ho, S. H., & Han, I. (2003), "Knowledge Sharing Behavior of Physicians in Hospitals", *Expert Systems with Applications* 25, 113-122.
- Sentlowitz, S. (2009), "Engaging Students in Video Production and Movie Making in the Classroom", *Tech & Learning*. Retrieved from [http:// www.techlearning.com](http://www.techlearning.com)
- Shelton, K., & Saltsman, G. (2005), "An Administrator's Guide to Online Education. Charlotte, NC, Information Age Publishing.
- Srinivas, S. A. S. (2016), "Driving Knowledge Sharing Initiatives for Enhanced Collaboration in Sultan Qaboos University (SQU) Libraries—A Case Study", *Electronic Journal of Knowledge Management* 14(1), 31-44.
- van den Hooff, B., & de Ridder, J. A. (2004), "Knowledge Sharing in Context: The Influence of Organizational Commitment, Communication Climate and CMC Use on Knowledge Sharing", *Journal of Knowledge Management* 8(6), 117-130.
- Yi, J. (2009), "A Measure of Knowledge Sharing Behaviour: Scale Development and Validation", *Knowledge Management Research & Practice* 7(1), 65-81.

Yusuf, M.A. (2005), “Modern Technology and Library Services in Nigeria”, *Katangora Journal of Science and Technology* **1**(2), 5-18.