The Use of Information and Communication Technology for Knowledge Sharing among HND Students of Library and Information Science in Federal Polytechnic Nasarawa, Nasarawa State

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Abstract
This study examine the level of Information and Communication Technology (ICT) Tools used for knowledge sharing among students of Library and Information Science (LIS) in Federal Polytechnic, Nasarawa State. Descriptive survey design was adopted for the study. The populations of the study comprised of 121 HND students of Library and Information Science. The study is guided by 3 (Three) objectives as follows; to identify the ICT tools and social media used in knowledge sharing (KS) among the students; to ascertain the types of knowledge shared between the HND students and to find out the challenges associated with integrating the ICT tools for knowledge sharing between the students. The study used questionnaire as the instrument for data collection. Findings of the study revealed that knowledge sharing (KS) is practiced in the federal polytechnic Nasarawa State among the students. The challenges associated with integrating/use of ICT tools for knowledge sharing are; Low bandwidth/slow internet connectivity, inadequate power supply and availability of too many social media tools to learn among others are the major factors affecting the use of ICT tools in knowledge. Conclusion and recommendation were provided.

Key words: ICT, ICT tools, Knowledge Sharing, Library, Social Media

Introduction
ICT has established itself as an essential tool in information services delivery (Ayodele, 2001). The essence of ICT is in its power to help individuals and societies achieve greater access to knowledge and ideas for the benefit of humanity. Considering the role of education in nation building and the population explosion in the Polytechnics these days, the use of ICT in the sharing knowledge among HND students has becomes essential. The adoption of ICT by students will enhance effective communication, learning process, research activities and knowledge sharing (Gesci, 2007).

ICT is defined as a "diverse set of technological tools and resources used to communicate, create, disseminate, store, and manage information." (Blurton, 2004). ICT is an umbrella term that includes any communication device or application, encompassing various services and applications associated with them, such as videoconferencing and distance learning. Skilled

professionals to create, operate use ICT technologies, design, maintain, programme and deploy information. In addition ICT connotes technologies (or application of scientific knowledge) in the communication of information. These technologies are both hardware and software. We are in the digital era, the age of information. Information, knowledge and opportunity epitomize the digital era. ICT enables utilization of information in the workplace, in the provision of public services and in the performance of the private sector. The significance of ICT can be visible in all spheres of human life ranging from healthcare, agriculture, banking and finance and commerce and industry to education. Punie & Cabrera (2005) stated that the potential impact of ICT on learning is the vision that it enables learning 'anywhere, anytime, and anyhow'. With ICT, knowledge is not constrained by geographic proximity, and offers more possibilities for sharing, archiving, and retrieving knowledge.

Recent studies have considered the impact of ICT in higher education in terms of the benefits for tertiary learners; for example, (Oliver & Goerke, 2007) investigated the use of mobile learning (m-learning) at Curtin University of Technology in Western Australia. "They suggested that emerging technologies owned and used by students for knowledge sharing, and incorporated wisely into university curricula, can go some way towards enhancing high quality, face to face learning experiences, where articulated knowledge is constructed and student achievement of intellectually challenging outcomes is effected". Another study conducted at the University of Melbourne (Kennedy, Krause, Churchward, Judd, & Gray, 2006) found evidence of a significant positive association between effective use of ICT for knowledge sharing and success in tertiary studies. The researchers reported that many students endorsed the use of a number of technologies and technology-based tools for knowledge sharing in their university studies. For example, mobile phones were identified as one of the widely accessed technologies; therefore, in higher education, an important aspect of the shift in technological processes has been to the adoption of ICT for learning and teaching as well as knowledge sharing.

The concept of Knowledge Sharing (KS) refers to the exchange of knowledge between two or more parties such as individuals, organizations or parts of an organization. In this regard, Bulan and Sensuse (2012) define Knowledge Sharing as a process whereby tacit or explicit knowledge is exchanged and communicated to other individuals. In this exchange, one party communicates knowledge and the other assimilates it and vice versa (Jacobson, 2006).
The growing field of Knowledge Management (KM) in general and evolution of knowledge sharing in particular came as a result of the work of American theorists and practitioners such as Peter Drucker in 1964; he was the first to coin the phrase "knowledge worker" and Peter Senge in 1990 focused on the learning organization. Since then Takeuchi and Nonaka (2002) assert that around the world especially in North and South America companies have increasingly got involved in knowledge exchange. In the context of Africa, and within university environments, Mchombu (2006) points out that, KM is hardly practiced and as a result these institutions are at a disadvantage in the knowledge economy. Similarly, Maponya (2004) notes that though academic libraries in Africa may have a suitable environment for KM practices they have not effectively adopted KM culture. This is exacerbated by the fact that the libraries lack technology, KM policy, leadership and strategies. The study of Masoti and Masheka (2010) in Kenya found that knowledge sharing in organizations was not maximized because culture, leadership and strategy were ignored.

Knowledge sharing is very important in a knowledge-intensive institution, such as a polytechnic, where knowledge production, distribution and application are ingrained (Cheng et al., 2009). Knowledge sharing is an academic institution's natural activity and the number
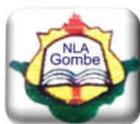
of seminars, conferences and publications by academics, which exceeds by far, that of any other profession, signifies the willingness of academics to share knowledge (Nassuora, 2011; Cheng et al., 2009). However, instead of knowledge sharing, we sometimes have the prevalence of knowledge hoarding. According to Wei, Choi & Chew (2012), students may embrace the mentality of hoarding knowledge as such practice is perceived by the hoarders as providing them with a competitive advantage against other students. If their unwillingness to share knowledge with peers continues, it is very likely that this may become part of their personality and students may exhibit the same mindset as they continue their studies, or in the workplace. In the academic context, the learning and teaching by its very nature involves knowledge sharing activities. The interactions between lecturers and students or among the students themselves denote explicit activities of knowledge sharing and interaction can be face-to-face or through a telecommunication media. Knowledge sharing is important for there to be effective learning and teaching (Masrek, Noordin, Anwar &Idris, 2011). According to Mohd, Goh&Fathi (2012) knowledge sharing allows an institution to narrow the gap between students and even between students and lecturers.

Social media in education are used to foster learning by allowing for social interactions, active participation and engagements of students in classroom discussion, communication (blended/online courses and social media solutions). Social media, such as like Facebook and Twitter, Yahoo Messenger, LinkedIn, etc. grew seriously consolidating with different applications focusing on knowledge information, instruction or training. Instant news report and appropriateness makes the aim that could be used speedily and reliable, but the variation disposition makes it hard for school system to keep abreast and offset. Students are able to make use of social media tools in order to increase range and richness of their networks, gather information and nowadays, increasingly organisations are finding ways of integrating social media into their business processes (Gaál*et al.,* 2015).

Social media tools utilisation has become part of everyday activities within higher learning institutions. These tools are used to turn communication into interactive discussions among like-minded people (Hislop, 2013). Individuals and researchers within higher learning institution can formulate various groups, discuss and share knowledge by using the tools. Hence, through the utilisation of social media tools, higher learning institutions can easily facilitate flow, transfer, communication and sharing of knowledge.

There are several challenges in using ICT for knowledge sharing by sudents. It is misleading to assume that the introduction of ICT in sharing knowledge and trouble-free information management possibilities. There are various problems encountered in the use of ICT in knowledge sharing, such problems include:

- **Lack of funds**: ICT is a capital –intensive venture both in acquisition, installation, maintenance, training and sustainability. As a result, not all students do have funds to venture and sustain ICT on their own (Ani, 2005).
- **Lack of adequate power supply:** ICT equipment depends solely on electricity power supply for functionality and effective performance. In Nigeria, intermittent and frequent power outage, erratic and epileptic with an unending sign of improvement poses a serious threat to ICT for knowledge sharing (Nnadozie, 2007).
- **Lack of appropriate technical skills, education and training**: Presently there is a low level of ICT skills among information user including students in the country; most of them have little or no skills to work with computers, browsing and surfing the internet to access and retrieve information (Oni, 2004).
- **The issue of phobia:** This has been of serious concern, more especially to the traditional users of information who show fear in handling computers and its associated
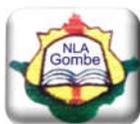
equipment, this assertion was confirmed by Oketunji (2001).

Statement of the Problem

The application of ICT in knowledge sharing among students increases efficiency and effectiveness and also ensures the delivery of timely, accurate, precise and relevant information. It also places students in a position to face the 21st century challenges of global information society. It plays a significant role in area of effective and efficient use of information as well sharing it among students. The researcher observed that many HND students have access to the ICT facilities and they are using it for various activities and services. But usually these students seem not to have a clear vision about its importance and usability for knowledge sharing. Despite the prevalence and application of ICT for various services delivery in Polytechnic Nasarawa State, little or no research has been conducted to ascertain the use of information and communication technology (ICT) for knowledge sharing among HND students of library and information science. It is against this backdrop the researchers intended to feel this gap.

Research Objectives

1. To identify the ICT tools and social media used in knowledge sharing (KS) among the students in Federal Polytechnics, Nasarawa State.
2. To ascertain the types of knowledge shared among the HND students in Federal Polytechnics, Nasarawa State.
3. To find out the challenges associated with integrating the ICT tools for knowledge sharing among the students.

Methodology

The study was undertaken in the Federal Polytechnic Nasarawa State. The descriptive survey design was adopted for the study. Purposive sampling technique is a judgmental form of sampling where the researchers select a typical sample that is representative of the population to the best of the researches knowledge. Since the total number of students in the department of Library and Information Science was not large, the census method was adopted to gather the data. The sample size are 121 HND students. The questionnaire was used to collect data based on three research questions formulated in line with the objectives of the study. The generated data was analyzed using simple frequencies counts.

Result

Table 1: Types of ICT tools used for knowledge sharing

	Types of ICT tools used	Frequency	Percentage
A	Desktop computer	11	9.09
B	Laptop	16	13.22
C	Tablets	31	25.61
D	GSM Phones	63	52.07
	Total	**121**	**100**

Table 1. Shows that 63 (52.07%) of the respondents uses GSM phones as their ICT tools, 31 (25.61%) respondents uses tablets 16 (13.22%) uses laptop while 11 (9.09%) uses Desktop computers as the ICT tools for knowledge sharing. The findings therefore revealed that majority of the HND student's uses GSM phones more than any other ICT tools for Knowledge sharing. Etebu (2010) studied availability of ICT in Niger Delta University libraries and identified the following ICT tools; computers, UPS, printers, antenna mast, VSAT, proxy server, electricity (power supply), internet connectivity, e-mail, CD-ROM, projectors, slides audio tapes, video tapes. This result is inline the current research.
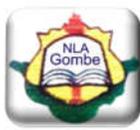
Table 2: Social media used in knowledge sharing

	Social Media	Frequency	Percentage
A	WhatsApp	74	61.16
B	YouTube	13	10.74
C	Blogs	8	6.61
D	Wikis	5	4.13
E	Facebook	5	4.13
F	Twitter	3	2.48
G	Instant messaging	8	6.61
H	LinkedIn	5	4.13
	Total	**121**	**100**

Table 2. Shows that 74 (61.16%) of the participating HND students affirmed that they use whatsApp, 13 (10.74%) indicates that they uses YouTube and 8 (86.61) indicated that they uses blogs for knowledge sharing between them, 5(4.13%) uses Wikis, 5(4.13%) uses facebook, 3(2.48%) uses Twitter, 8(6.61%) uses instant messaging, 5(4.13%) uses linkedIn. The findings, therefore, reveals that most HND students in Federal Polytechnic, Nasarawa State uses social media tools (SMTs) for knowledge sharing.

This result was corroborated with finding of Omotayo and Salami (2018) in their research title used of social media for knowledge sharing among students. The results obtained revealed that various types of social media usedby the students to share knowledge. The results reveals that majority of the students used Facebook (74.5%) and Whatsapp (72.0%) every day. However, the students did not use the other types of social media tools like they used Facebook and Whatsapp. Thus the students mainly used Facebook and Whatsapp whereas the other types of social media tools were minimally used by them. Result indicates that the item "Tumblr" has the highest compared to others (μ=4.85).

Table 3: Types of information shared among the students

	Types of information shared	Frequency	Percentage
A	Sharing course materials with classmates	64	52.89
B	Discussing new ideas with Classmates	32	26.44
C	Sharing personal knowledge acquired with classmates	7	5.79
D	Putting what is known into words and share it with classmates	12	9.91
E	Sharing any knowledge that would increase the performance of classmates	6	4.96
	Total	**121**	**100**

Table 3 shows that, 64 (52.89%) shares course materials with classmates, 32(26.44%) discuss new ideas with classmates, 7(5.79%) sharing personal knowledge acquired with classmates, 12 (9.91%) putting what is known into words and share it with classmate and 6 (4.96%) sharing any knowledge that would increase the performance of classmates. The findings therefore revealed that majority share knowledge concerning course materials. This is similar to Eid and Al-Jabri (2016) who examined the various categories of social media utilization and the result revealed that chatting and online discussion, creating knowledge and information content, file sharing, and enjoyment and entertainment by tertiary students at a University in Saudi Arabia.

Table 4: Frequency of use of ICT tools and social media for knowledge sharing

	Options	Frequency	Percentage
A	Daily	39	32.23
B	Weekly	20	16.53
C	Occasionally	62	51.23
	Total	121	100

Table 4: shows how often ICT facilities are used, 62(51.23%) responded to occasional use of ICT, while 39(32.23%) responded to daily use, 20(16.53%) responded to weekly use of ICT. From the analysis it could be deduce that the cost of using these facilities for knowledge sharing cost more than they can afford.

Table 5: Challenges associated with integrating the ICT tools and social media for knowledge sharing

|	Challenges	Frequency	Percentage
A	Lack of ICT skills	11	9.10
B	Lack of time to use social media	16	13.22
C	Lack of knowledge about social media tools	12	9.92
D	Poor power supply	17	14.05
E	Availability of too many social media to learn	31	25.61
F	Lack of fund to buy Airtime/data for internet access	34	28.10
	Total	**121**	**100**

From table 5, 34 (28.10%) of the respondents indicated that, lack of fund to buy airtime/data is the major challenge faced in knowledge sharing among them. Followed by 31 (25.61%) of the respondents who indicated that, availability of too many social media as a challenge in knowledge sharing. Others are poor power supply 17 (14.05%) respondents, Lack of ICT skills with 11 (9.10%) respondents, Lack of knowledge about social media tools with 12 (9.92%) respondents and Lack of time to use social media with 6(13.22%) respondents. The findings revealed that majority of the respondents faced with lack of fund to buy airtime/data for Internet access and availability of too many social media to learn as their challenges.

Discussion
Individuals share what they have learned and transmit what they understand to those who have a cooperative concern and those who have discovered the knowledge is useful to; and usually the value of knowledge increases when it is shared (Cheng, Ho, and Lau, 2009). There are a variety of technologies used as actual tools to support students' educational learning and knowledge sharing. Among these technologies are ICT tools that allow people to communicate, participate, collaborate and thus share information (Harinarayana and Raju, 2010; Kelly *et al.,* 2009; Kim and Abbas, 2010). ICT tools has indeed allowed people to express themselves through blogs, websites, social networking sites (Facebook, Twitter, Whatsapp, Instagram, Flicker, YouTube, 2go, Badoo, LinkedIn etc.). They are used as educational tools in institutions. ICT enhance learning experience by enabling students and teachers to connect and interact in new ways beyond the classroom. Social media, such as Twitter, Facebook, LinkedIn, Wikis, Google+ promote collaboration, KS and discussion, and students have embraced them as a means to ask questions, share knowledge and exchange ideas.

Conclusion
From the foregoing discussion, it is obvious that the students use ICT tools for knowledge sharing. It could be concluded that GSM Phones are the most ICT tools for sharing knowledge among them and WhatsApp, Facebook and Instant messages are the major social Medias used for knowledge sharing among HND students in the institution. Finally, lack of power supply and funds to buy airtime/data and availability of too many social media are the challenge faced by the students in knowledge sharing.
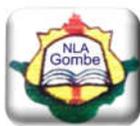
Recommendations

The following recommendations are made:

1. The polytechnic management should form enormous campaigns concerning the need for students to embrace knowledge sharing among them. This can be done through training, extra class activities and workshops etc. on the need for knowledge sharing among them.
2. There is need for adequate Information and communication technology resource in the institution such as wireless infrastructures that will enable because the role of ICT in knowledge sharing cannot be over emphasized.
3. Polytechnic management should encourage collaboration and knowledge sharing among students by providing an enabling environment.
4. Computer/ICT education should be made compulsory for all students; this will encourage knowledge sharing among them.

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