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Perceived Influence of Digital Competence on Knowledge Sharing Behaviour of College Librarians in the South-East and South-South Geo-Political Zones of Nigeria

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Abstract
Knowledge and the competence to share it in the digital age have become potent tools for the attainment of competitive advantage and sustainable development in organizations and institutions of learning. This awareness has necessitated the need to embark on a study with the main objective of determining how digital competence variables influence the knowledge sharing behaviour of librarians in college libraries in the South–East and South–South of Nigeria. The research was supported by the Theory of Planned Behaviour (TPB) and Technology Acceptance Model (TAM). Survey research method was used to investigate a sample of 264 librarians. A validated and structured questionnaire with a correlation coefficient of 0.92 was used to collect data for the research through the census method. A response rate of 82% (217) was received and analysed. Findings reveal that librarians in college libraries possess the ability to use and manipulate a broad range of digital devices like smart phones, tablets, lap/desk tops; have a working knowledge of the World Wide Web (www); use social media platforms to maintain workplace collaboration; and use popular library application software packages. The study concludes that librarians in the institutions studied have shown significant skills in the use of ICT in their knowledge sharing behaviour and therefore should be sustained. The research recommends amongst others regular ICT training, workshops and conferences to enhance the knowledge sharing behaviour of the librarians and the creation of digital platforms and infrastructure for knowledge creation and sharing for professional and institutional ranking and visibility.
Keywords: Digital Competence, Knowledge Sharing Behaviour, College Librarians, Nigeria
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Introduction

Developments in the society demand that digital skills and competences should be part of the life of individuals in all sectors of the economy. In the present knowledge-driven society, knowledge is regarded as the most valuable asset in an organisation because it is a contributing factor to individual and organisational success (Sergeeva&Andreeva, as cited in Wah, Zawawi, Yusuf, Sambasivan, & Karim, 2018). The 21st century information society is characterised by its affinity with knowledge and digital economy. This idea of a digital economy has gained so much relevance that even a developing country like Nigeria has now acknowledged this reality by creating a"Ministry of Communication and Digital Economy" under the supervision of a digitally-inclined Minister with experience in academia and practice. This shows that knowledge must be properly communicated with contemporary digital technologies to drive sustainable national development across all sectors.

According to Rusli (as cited in Alhalhouli, Hassan & Der, 2015) knowledge is information that is contextual, relevant and applicable or information that can be used. It is a valuable resource that deserves to beand can beconsciously managed. Knowledge about activities, services, customers/users is an increasingly valuable resource that needs to be shared broadly throughout an organization (Islam, & Tsuji, 2016). Historically, the various civilizations of man at different periods have been associated with peculiar and significant tags in the application of human and material resources for societal transformation. While previous historical periods have dwelt on material resources, the present era is increasingly knowledge-based (Ayandokun, &Nworu, 2022).

The 4th Industrial Revolution is characterized by the convergence and complementarity of emerging technology domains, including new materials and advanced digital production (ADP) technologies (Lavopa&Delera, 2021). Propelled by the gains of the industrial revolution, the information technology revolution became the result of a convergence between information and communications technology (ICT) and consequently the global search for acquisition of ICT skills and possession of digital competence. Digital competence refers to the knowledge, skills, responsibility, attitudes, values, quality, efficiency, effectiveness, relevance, excellence, actions to achieve satisfaction in rendering services, inclusion of capacity to respond successfully to specific situations using digital technologies. It is also acting in a competent way, having managerial abilities to solve problems, taking charge of scientific and technological advances to use them properly (Pérez-Uribe, Sierra, &Clavijo-Olmos, 2020). Digital competence also encompasses a set of attitudes, knowledge, skills, awareness,

and values that are of great importance when utilizing disruptive digital technologies and tools in an organization (Dzingirai, 2021).

Knowledge sharing is the dissemination and communication of tacit and explicit knowledge with the sole aim of enlightening the target recipient(s) through meaningful exchanges that would produce needed results (Haco-Obasi&Agim, 2020). The concept of knowledge sharing (KS) refers to the exchange of knowledge between two or more parties such as individuals, organisations or parts of an organization (Maiga, 2017).Knowledge sharing behaviourconnotes characteristics and attitudes associated with communication and receiving knowledge, including supply of new knowledge and demand for new knowledge. The two central behaviours of knowledge sharing as knowledge donating as communicating one's personal intellectual capital to others and knowledge collecting as consulting others to get them share their intellectual capital (Dysvik, Buch&Kuvaas, 2015). People in different organizations like non-university tertiary institutions (college libraries)and librarians exhibit different behavioural traits when requested to share what they know. Some are liberal while others are reluctant to let their friends and colleagues tap from their expertise. In this case, librarians could decide to be outrightly stingy with their knowledge due to past ugly experiences or open to knowledge sharing with colleagues.

Librarians are information professionals and knowledge managers that are concerned with the collection, storage, processing and dissemination of knowledgeboth in libraries and other establishments. They may possess bachelor degrees or in some cases, advanced degrees in other subjects plus qualifications in Library and Information Science; and in the case of Nigeria, are approved by the Librarians' Registration Council of Nigeria (LRCN, 2013). Essentially, they use their operational information to create, apply or share knowledge. When this is done, institutional or organisational effectiveness and productivity is enhanced. Haque, Ahlan and Razi (2015) argue that knowledge sharing is now considered as the most important weapon for the success of institutions and its competitive advantage in higher education institutions. Higher education institutions are necessary integrative fields for studying, researching, and learning about the knowledge assets, that is human intellectual capital and technology.

College libraries, though academic libraries by status, are those libraries that are attached to post-secondary or tertiary institutions such as polytechnics, colleges of education, colleges of technology, colleges of agriculture and also research institutes. Adebamowo, Adebisi, Oluwasina, and Adegbite-Badmus (2013) explains that the main mandate of college libraries is to discharge their duties such as acquisition of all relevant information and knowledge resources for sustaining the teaching, learning, research and public service functions of their respective institutions. By properly facilitating knowledge sharing practices among professional colleagues, academic librarians can fill occupational gaps without having to incur extra expenditures (Ayandokun, &Okechukwu, 2021). In the 21st century libraries, librarians and information professionals are expected to thrive in the digital environment where they will be actively involved in the acquisition, application, use and implementation of new technologies in their organizations with their new skills and competencies to fit with their changing roles (Uzohue& Yaya, 2016).

From the foregoing, this work therefore focuses on the perceived influence of digital competence variables on the knowledge sharing behavior of librarians in college libraries in the South – East and South – South geo-political zones of Nigeria.

Statement of the Problem

Despite the acknowledged importance of academic libraries, including college libraries, in providing information resources and services to meet the mandate of supporting the teaching, learning, research and community services of its members, Adebamowo, Adebisi, Olusola, and Adegbite-Badmus (2013) observe that the challenges posed by the new information society for our college libraries in Nigeria through emerging information and digital technologies are enormous. Onuoha, Akidi, and Chukwueke (2019) argue that the bulk of academic business revolves round the process and practices of knowledge sharing.Shakeel and Rubina (2017) explained that librarians with sufficient digital competencies will remain successful and relevant in working with modern information systems.Nevertheless, it seems there is poor digital competence amongst librarians in most college libraries in Nigeria. Consequent upon this, their knowledge sharing behaviour is inadequate for their roles in quality service delivery, professional career development and intellectual productivity in the new digital economy (Asante &Alemna, 2015). This further implies that when the librarians in college libraries do not possess requisite skills to navigate their ways around information systems of the digital era, there is a missing link, an imbalance, and a need to be fulfilled. Furthermore, research works carried out in Nigeria on digital competence are more on librarians in university libraries in specific institutions rather than librarians in college libraries and do not cover South-East or South –South geo-political zone as a whole (Chinaka&Amedu, 2015; Igwebuike&Agbo, 2015; Lawal&Lawal, 2016). Those who may, out of inadequate research on college librarians and their digital competence, believe that librarians in these libraries have no digital competence and exhibit poor knowledge sharing behaviour may be misconceived. It is to fill this gap that this research is embarked upon, focusing on the entire South-East and South-South zones in one study.

Research Questions

The researcher formulated the following research questions to guide the study:

i. What is the perceived influence of computer manipulation skills on knowledge sharing behaviour of librarians in college libraries?
ii. What is the perceived influence of internet navigation skills of librarians in college libraries on their knowledge sharing behaviour?
iii. What is the perceived influence of electronic communication skills of librarians in college libraries on their knowledge sharing behaviour?
iv. What is the perceived influence of computer storage devices skills possessed by librarians in college libraries on their knowledge sharing behaviour?
v. What is the perceived influence of library application use skills on the knowledge sharing behaviour of librarians in college libraries in the zones under study?

Literature Review

Knowledge sharing is a knowledge management process that makes information available to those who actively seek it, as well as directly communicates it to users who could potentially apply it for the benefit of business (Guru Technologies, 2022).Knowledge sharing, an important part of knowledge management, has particularly been regarded as an important way of increasing competitiveness and performance of organisations (Omotayo, &Abdur-Rahman, 2021). It is the sharing of knowledge with the sole aim of enlightening the target recipient (s) through meaningful exchanges that would produce needed results (Haco-Obasi, &Agim, 2020). The underlying purpose of knowledge sharing is to utilize available knowledge to improve performance (Fauzi, 2018).

Knowledge sharing behaviour is defined as a set of individual behaviours involving sharing one's work-related knowledge, skills, and expertise with other members within one's organisation or institution (Yi, as cited in Appel-Meulenbroek, Weggeman, &Torkkeli, 2018). It consists of supply of new knowledge and demand for new knowledge. They described two central behaviours of knowledge sharing as knowledge donating as communicating one's personal intellectual capital to others and knowledge collecting as consulting others to get them share their intellectual capital (Dysvik, Buch, &Kuvaas, 2015). It is a cognitive and behavioural process involving individuals' knowledge sharing practice (Yeo, &Marquadt, 2015).Hislop (as cited in Alam, Abdullah, Ishak, & Zain, 2019) argued that the relationship between attitudes and behaviours of workers to knowledge sharing and the workers who are willing to share their knowledge are a two way reciprocal process between attitudes and behavior of the relationship between the workers' willingness to engage in the knowledge sharing.

Delgado-Vázquez(2021) describes digital competence as the confident and critical use of electronic media for work, leisure, and communication. These competencies are related to logical and critical thinking, high-level information management skills, and well-developed communication skills. Digital competence is a combination of knowledge, skills and attitudes with regards to the use of technology to perform tasks, solve problems, communicate, manage information, collaborate, as well as to create and share content effectively, appropriately, securely, critically, creatively, independently and ethically (Skov, 2016). It encompasses a set of attitudes, knowledge, skills, awareness, and values that are of great importance when utilizing disruptive digital technologies and tools in an organization (Dzingirai, 2021). A study of key competence and sub-competence areas as identified by llomaki, Kantosalo and Lakkala, (2011) and Matthews and Pardue, (2009) reveal five digital competence variables that are relevant and will be used for this study as computer manipulation skills (i.e. ability to log on, log off and shut down a computer system, ability to use key board and mouse pointing devices and others); internet navigation skills (i.e. ability to use the world wide web (www) for information search and retrieval, ability to use search engines and others); Electronic communication skills (i.e. ability to send and use e-mails, ability to attach documents and images to online messages and others); Computer storage devices skills (i.e. ability to use CD-ROM, flash and memory cards for storage and retrieval of information); and Library application software use skills (i.e. ability to use application packages for computerization of library routines, ability to use integrated library management systems, digitization, retrospective conversion and others). These five variables mentioned above are the digital competence indices that this research shall focus on. The variables are better appreciated when put into knowledge sharing.

According to Enakrire and Onyancha (2020), digital tools such as word processors, search engines, database management systems, management information systems and information retrieval tools, web portals, site maps, data warehouses, search engines, semantic webs, artificial intelligence tools, simulation tools and data mining; and strategies such as intensive face-to-face communication among colleagues, reuse of knowledge through codification strategy, creating coherence among colleagues, deepening research and learning process, application of skills to build new knowledge, training and re-training of staff, among others can be used to facilitate proper knowledge management for knowledge sharing purposes among academics. Awodoyin, Osisanwo, Adetoro and Adeyemo (2016) investigated knowledge sharing behaviour pattern analysis of academic librarians in selected

academic libraries in Nigeria. The findings reveal that librarians primarily share knowledge using face-to-face interaction, mobile phones, e-mails and newsletters. Other avenues are memos, web forum, bulletin boards and discussion boards. The study further revealed that knowledge sharing is beneficial because it enhances innovation, efficiency and effectiveness and brings about emotional relief.

Abbas (2017) investigated the patterns and trends ofknowledge sharing and dissemination among academics in Nigerian Universities. The study indicates that for universities and their academics in Nigeria to deliver on their mandate, they must re-evaluate and re-strategized the present scenario, particularly regarding use of modern technologies to increase awareness, communication and networking for improved research and teaching activities, since knowledge sharing is a critical factor in the survival of educational institutions across the globe. Diyaolu and Owunezi (2020) investigated theknowledge sharing for knowledge retention and growth among LIS educators in Akanu Ibiam Federal Polytechnic Ebonyi State. The study revealed that knowledge sharing influence knowledge retention and knowledge growth, but it is affected by disinterest to get engaged in debate sessions about the specialized fields of Library and Information Science, lack of cooperation among the faculty members, and dissimilarity of the level of knowledge and experience between the faculty members.

Quadri and Garaba (2019) assessed the perceived effects of ICT on knowledge sharing among librarians in South West Nigeria using the Unified Theory of Acceptance and Use of Technology (UTAUT) theory. The findings indicate that ICT has enhanced knowledge sharing practices among the librarians. Meanwhile, Joel and Ibrahim (2021) studied the digital competencies needed by librarians and information professionals for knowledge management of the 21st century university libraries in Borno State. The findings indicate that information technology competencies, interpersonal competencies and leadership competencies are highly needed by university librarians and information professionals for knowledge management of 21st century libraries in Borno State.

ICT can facilitate and promote explicit knowledge more efficiently than tacit knowledge as explicit knowledge can be easily stored and codified. Sometimes, however, incompetence in ICT use can act as a potential barrier, as some individuals are not familiar with the system and process (Farooq, 2018).The study by Isa, Jemal and Nordin (2016) investigated factors affecting knowledge sharing behavior in a State Library known as Raja TunUda Library, Selangor, Malaysia. The findings show that there was a strong relationship between individual factors and knowledge sharing behavior among employees in Raja TunUda Library, Selangor. The level of trust amongst the employees also motivated them to share knowledge. Although, this study observed that ICT tools did not influence knowledge sharing behavior in the public library, possibly because they do not have enough ICT tools and might prefer to use offline methods in sharing knowledge, it did not preclude the fact that there is a significant relationship between ICT know-how and knowledge sharing behaviour.

Theoretical Framework

Two theories have been used for this work. They are Technology Acceptance Model (TAM) devised by Fred Davis in 1989 and Theory of Planned Behaviour (TPB) propounded by IcekAjzen in 1985. Fred Davis originated the Technology Acceptance Model (TAM) which aims to predict the acceptance and rejection of modern technology in Information and Knowledge Systems. In other words, TAM evolved to provide an explanation of the determinants of computer acceptance that is general, capable of explaining user behaviour across a broad range of end-user computing technologies and end populations, while at the same time being both parsimonious and theoretically justified (Davis, Bagozzi&Warshaw, 1989). It assumed that an individual's information systems acceptance is determined by two major variables - Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) (Lee, Kozar d Larsen, 2003). TAM was meant to expand additional behaviour constructs to increase the understanding of new technology. In this work, Technology Acceptance Model (TAM) is used to study digital competence variables which establish the fact that increased use of the computer and its level of exploitation by college librarians have become important indicators for measuring perceived information technology use and development.

The Theory of Planned Behaviour (TPB) set out to predict the intention of people to engage in behaviour within a particular place and time and to describe all behaviours over which an individual has the capacity to apply self-control (Ajzen, 2006). The TPB therefore posits that an individual's behavior is determined by behavioural intention and perceived behavioural control. Behavioural intention is determined by attitude towards behaviour (ATT), subjective norm (SN) and perceived behavioural control (PBC). Attitude towards behaviour reflects one's favourable or unfavourable feelings of performing a behaviour. Subjective norm reflects one's perception of others' relevant opinions on whether or not he or she should perform a particular behavior. Perceived behavioural control reflects one's perception of the availability of resources or opportunities necessary for performing a behaviour (Ajzen& Madden, 1986).

Owing to the fact that TAM and TPB recognise skills and abilities as influencing behavioural change, this study therefore posits that the possession of digital skills and abilities by librarians in college libraries would greatly influence and improve their knowledge sharing behavior if necessary resources and opportunities are

provided.

Methodology

In this study, the survey research design was adopted. This design enabled the researcher to gather information from librarians in college libraries on their individual digital competence level and knowledge sharing behaviour. The population of the study was 264 (two hundred and sixty four), which comprised of all librarians in the libraries of polytechnics and colleges of education under study in the South–East and South-South geo-political zones of Nigeria (Field Survey, 2021). No sample size was drawn from the population. The reason is that the population of the study was small and accessible. The census method was used in ensuring that the opinion of all the librarians in the institutions under study was captured.

Questionnaire was the instrument used to collect data for this study. It is titled Perceived Influence of Digital Competence Variables on Knowledge Sharing Behavior of Librarians in College Libraries Questionnaire (PIDCVKSBLCLQ). The questionnaire used a modified 4-point Likert rating scale of Strongly Agree, Agree, Disagree and Strongly Disagree, allowing respondents to choose from pre-determined options. The validation of the instrument was done by first and foremost, comparing the research questions with the items in the questionnaire. Secondly, the instrument was subjected to content and face validity tests by statisticians. Appropriate adjustments and changes were made where necessary.

The test-retest method was used in determining the reliability of the instrument. In doing this, 18 librarians at the library of Federal Polytechnic, Idah, Kogi State, Nigeria(which is outside the scope of the study) were used for the pilot study. Two weeks interval was used for the first and second administrations of the questionnaire on the same respondents based on test-retest approach. The data obtained were tested for reliability through the use of Pearson Product Moment Correlation (PPMC). The result of the reliability test was 0.92 which is 92%. It was high enough to be relied upon for gathering data for this research.

The questionnaire was administered by the researcher and four research assistants who are staff of the Akanu Ibiam Federal Polytechnic Library, Unwana, Ebonyi State. The assistants were thoroughly briefed on what to do. Copies of the questionnaire were administered and those that were properly completed were collected back from the respondents and used for the analysis. Six weeks was used to collect the data.

The Statistical Package for the Social Sciences (SPSS) version 20 was used for data analyses in calculating the mean, percentages and correlation coefficient. Data collected was analysed with the use of descriptive and inferential statistics in line with the research questions. Frequency counts and percentages were used to analyse and present the data and mean values obtained.

Data Analysis and Discussion of Findings

A total of 264 copies of the research instrument (questionnaire) were distributed to librarians in the twenty four institutions involved in the study, out of which 217 representing 82% response rate were properly filled, returned and found valid for analysis. See Table 1 for details.

Table 1: Questionnaire Distribution and Response Rate

S/N	Institution	No. Administered	No. Returned	No. Not Returned	% of Return
1	Akanu Ibiam Federal Polytechnic Unwana Library	18	15	3	83.33
2	Federal Polytechnic Nekede Library	15	13	2	86.66
3	Federal Polytechnic Oko Library	20	18	2	90
4	Institute of Management and Technology Enugu Library	15	12	3	80
5	Abia State Polytechnic Aba Library	12	10	2	83.33
6	Imo State Polytechnic Umuagwo Library	10	7	3	70
7	AlvanIkoku Federal College of Education Owerri Library	18	15	3	83.33
8	Federal College of Education Umunze Library	13	10	3	76.92
9	Federal College of Education Eha-Amufu Library	14	10	4	71.42
10	Abia State College of Education Arochukwu Library	9	9	0	100
11	Ebonyi State College of Education Ikwo Library	9	7	2	77.77
12	NwaforOrizu College of Education Nsugbe Library	15	10	5	66.66

S/N	Institution	No. Administered	No. Returned	No. Not Returned	% of Return
13	Delta State Polytechnic Ogwashi – Uku Library	11	10	1	90.90
14	River State Polytechnic Bori Library	8	6	2	75
15	Federal Polytechnic Auchi Library	12	12	0	100
16	Federal Polytechnic Ekowe Library	5	4	1	80
17	Cross River State Institute of Technology and Management Ugep Library	5	4	1	80
18	AkwaIbom State Polytechnic Ikot- Osurua Library	5	5	0	100
19	Federal College of Education (Technical) Asaba Library	13	10	3	76.92
20	Federal College of Education (Technical) Omoku Library	9	8	1	88.88
21	Isaac Boro College of Education Sagbama Library	4	3	1	75
22	AkwaIbom State College of Education Afaha–Nsit Library	8	6	2	75
23	College of Education Ekiadolor Library	7	4	3	57.14
24	Federal. College of Education Obudu Library	6	6	0	100
	Total	**264**	**217**	**47**	**82%**

Source: Field Survey, 2021

Table 2 revealed the bio-data of respondents, which shows that males numbered 129 (59.45%) while females were 88(40.55%), mostly within the age bracket of 42 years and above (121 or 55.76%), with Bachelor's degree (145 or 66.82%) and Master's degree (52 or 23.96%). In terms of years of experience and length of service, majority of the respondents were just Librarian II & I; thus, those within 6–10 years were 60(27.65%) followed by those between 11–15 years (58 or 26.73%), and they are serving in both the readers' services (53 or 24.42%) and technical services (36 or 16.59%) divisions of the college libraries studied.

Table 2: Bio-Data of Respondents

Bio-data/indices	Responses	Percent
Age group (in years)		
22-25	5	2.3
26-29	12	5.53
3-33	31	14.29
34-37	17	7.83
38-41	31	14.29
42 and above	121	55.76
Total	**217**	**100%**
Gender		
Male	129	59.45
Female	88	40.55
Total	**217**	**100%**
Qualification		
Bachelor's degree	145	66.82
Master's degree	52	23.96
PhD	20	9.22
Total	**217**	**100%**
Years of Working Experience		
Under 5	28	12.90
6-10	60	27.65
11-15	58	26.73
16-20	18	8.29
21-25	32	14.75
26 and above	21	9.68

Bio-data/indices	Responses	Percent
Total	**217**	**100%**
Rank/ Status		
College/Polytechnic Librarian	12	5.53
Chief Librarian	16	7.37
Assistant Chief librarian	25	11.52
Principal Librarian	12	5.53
Senior Librarian	29	13.36
Librarian I	55	25.35
Librarian II	68	31.34
Total	**217**	**100%**
Section of Deployment		
Technical Services	36	16.59
Readers Services	53	24.42
Serials Services	32	14.75
Circulation Services	26	11.98
E – Library Services	25	11.52
Reference Services	16	7.37
Administration	20	9.22
Loans/Reserved Book Unit	9	4.15
Total	**217**	**100%**

Research Question 1: What is the perceived influence of computer manipulation skills on knowledge sharing behaviour of college librarians?

Table 3: Perceived Influence of Computer Manipulation Skills on Knowledge Sharing Behaviour of College Librarians

SN	Perceived Influence of Computer Manipulation Skills on Knowledge Sharing Behaviour	SA (4)	A (3)	D (2)	SD (1)	Total	Mean	Decision
1	The use of mouse pointing device and keyboard of computer systems to quickly upload documents influence my knowledge sharing behaviour	113	104	0	0	217	3.52	Significant
2	The use of Microsoft office packages to efficiently manage documents and files for the benefit of colleagues influences my ability to share knowledge.	88	125	4	0	217	3.39	Significant
3	My knowledge sharing behaviour is influenced when I appropriately minimize, maximize and move computer windows to share ideas and brainstorm with colleagues	65	113	39	0	217	3.12	Not Significant
4	The use of icons, folders, files and short-cuts to share technical access and procedures with other staff adequately influence my knowledge sharing behaviour.	69	139	9	0	217	3.28	Not Significant
5	My knowledge sharing behaviour is influenced when I correctly handle troubleshooting routine problems and share the knowledge with colleagues.	107	81	29	0	217	3.36	Significant
Significant mean value				**3.33**				

Results from Table 3 showed that the majority of the computer manipulation skills have influence on the knowledge sharing behaviour of librarians in college libraries in the South-East and South-South geo-political zones of Nigeria. However, items bearing movement of computer windows and use of icons and folder were not perceived as influential factors for knowledge sharing.

Research Question 2: What is the perceived influence of internet navigation skills of librarians in college libraries on their knowledge sharing behaviour?

Table 4: Perceived Influence of Internet Navigation Skills on Knowledge Sharing Behaviour of College Librarians

SN	Perceived Influence of Internet Navigation Skills on Knowledge Sharing Behaviour	SA (4)	A (3)	D (2)	SD (1)	Total	Mean	Decision
1	My knowledge sharing behaviour is influenced when I correctly open internet websites through the URL in the browser's location bar to share knowledge	101	106	10	0	217	3.42	Significant
2	My knowledge sharing behaviour is duly influenced when I navigate forward and backward between pages using browser buttons to send messages in the internet.	57	121	39	0	217	3.08	Not Significant
3	My knowledge sharing behaviour is influenced when I correctly save files on hard disk and open various common file formats like PDF and HTML to share knowledge,	78	121	18	0	217	3.28	Significant
4	Bookmarking websites and changing browser's preferences for internet conferences and workshops always influence my knowledge sharing behaviour.	68	125	24	0	217	3.20	Not Significant
5	Operating internet – based search engines by entering keywords in proper fields for quick information access effectively influences my knowledge sharing behaviour with others.	83	123	11	0	217	3.29	Significant
Significant Mean Value		**3.26**						

Table 4 presented data from responses by the librarians in college libraries in the South-East and South-South geo-political zones of Nigeria on the perceived influence of internet navigation skills on their knowledge sharing behaviour. Majority of the items shows that internet navigation skills have influence on the knowledge sharing behavior of the librarians.

Research Question 3: What is the perceived influence of electronic communication skills of librarians in college libraries on their knowledge sharing behaviour?

Table 5: Perceived Influence of Electronic Communication Skills on Knowledge Sharing Behaviour of College Librarians

SN	Perceived Influence of Electronic Communication Skill on Knowledge Sharing Behaviour of College Librarians	SA (4)	A (3)	D (2)	SD (1)	Total	Mean	Decision
1	My knowledge sharing behaviour is influenced when I send and receive e-mails from colleagues regularly without hindrance.	149	63	5	0	217	3.66	Significant
2	My knowledge sharing behaviour is influenced when I attach documents and images to online messages for sharing.	124	83	7	3	217	3.51	Significant
3	When I use social media platforms like facebook, twitter and YouTube to transfer messages my knowledge sharing behaviour is duly influenced..	100	97	20	0	217	3.50	Significant
4	My knowledge sharing behaviour is influenced when I use WhatsAPP and blogs to follow and share conversations, update or post comments.	126	83	8	0	217	3.54	Significant
5	My knowledge sharing behaviour is influenced when I use video chats like Windows live chat, Gmail chat and IMOApp to chat and transmit knowledge.	89	84	29	15	217	3.14	Not Significant
Significant mean value		**3.47**						

In Table 5 the majority of the responses by the librarians in college libraries as seen in the mean scores showed that electronic communication skills have influence on their knowledge sharing behaviour.

Research Question 4: What is the perceived influence ofcomputer storage devices use skills of librarians in college libraries on their knowledge sharing behaviour?

Table 6: Perceived Influence of Computer Storage Devices Use Skills on Knowledge Sharing Behaviour of College Librarians

SN	Perceived Influence of Storage Devices Use Skills on Knowledge Sharing Behaviour of Librarians	SA (4)	A (3)	D (2)	SD (1)	Total	Mean	Decision
1	My knowledge sharing behaviour is influenced when I use CD-ROM to store and retrieve online information from colleagues.	105	93	19	0	217	3.40	Significant
2	My knowledge sharing behaviour is influenced when I use USB flash/pen drives to copy and store online information posted by colleagues.	108	102	7	0	217	3.47	Significant
3	When I use memory sticks/cards to store and save online data my knowledge sharing behaviour is influenced.	73	119	25	0	217	3.22	Not Significant
4	My knowledge sharing behaviour is influenced when I use CDs and DVDs to move files from one computer to another for the benefit of others.	79	112	19	7	217	3.21	Not Significant
5	My knowledge sharing behaviour is influenced when I use flash drives to make copies of computer data for sharing and keep their back-ups.	93	115	9	0	217	3.43	Significant
Significant mean value		**3.35**						

No doubt the fact that computer storage devices represent tools for storing knowledge, especially explicit and even tacit knowledge, among individuals. The responses from the librarians in Table 6 indicated that the computer storage devices skills of the librarians contributed in their knowledge sharing behaviour.

Research Question 5: What is the perceived influence of library applications use skills on the knowledge sharing behaviour of librarians in college libraries in the zones studied?

Table 7: Perceived Influence of Library Applications Use Skills on Knowledge Sharing Behaviour of College Librarians

SN	Perceived Influence of Library applications use skills on Knowledge Sharing Behaviour of College Librarians	SA (4)	A (3)	D (2)	SD (1)	Total	Mean	Decision
1	My knowledge sharing behaviour is influenced when I handle library application packages for automation/ computerisation of library routines like TinLIB, Alice for Window, X –Lib and others to transfer knowledge.	93	100	24	0	217	3.32	Significant
2	When I use integrated library management systems like Koha and Evergreen to share knowledge it influences my knowledge sharing behaviour.	82	106	29	0	217	3.24	Significant
3	My knowledge sharing behaviour is influenced when I operate digitization packages like DSpace, Greenstone and EPrints to exchange knowledge.	60	106	45	6	217	3.01	Not Significant
4	When I handle interlibrary loan/electronic delivery systems like Ariel, Prospero and ILLiad's Odyssey my knowledge sharing behaviour is influenced.	61	119	37	0	217	3.11	Not Significant
5	My knowledge sharing behaviour is influenced when I use reference management software like Mendeley, Bookends and BibTeX to transfer knowledge.	63	95	59	0	217	3.02	Not Significant
Significant Mean Value		**3.14**						

Table 7 showed that majority of the items involving library application use skills does not necessarily influence the librarians' knowledge sharing behaviour.

Discussion of Findings

Based on the results from the various tables as analyzed in preceding sub-headings, discussions on the findings

were made. For the demographic characteristics, there was male dominance of professional librarians in the college libraries and those who completed the questionnaire were predominantly 42 years old and above which suggests sufficient maturity in explaining their missions and behaviour in library environments. A good foundation for professional growth and development was observed in the number of first degree holders that outnumbered the others. Most of the respondents were in their mid-career levels although there was a slight tilt in favour of those in the lower rank than those in the senior cadre. Staff that completed the questionnaire were mainly those from readers' and technical services divisions of the libraries studied. It is probably so because the nature of their duties usually warrant a concentration of personnel.

Generally, as revealed in the study, the various digital competences have influence on the knowledge sharing behaviour of librarians in the colleges in South-East and South-South Nigeria, thereby concurring with the earlier findings of Quadri and Garaba (2019). In the angle of computer manipulation skills, findings revealed that the skills are instrumentsthat play substantial influence on the knowledge sharing behaviour of the librarians. This implies that college librarians in the South-East and South – South geo-political zones possess computer manipulation skills in varying degrees that enable them to quickly upload documents, efficiently manage documents and files for the benefit of colleagues, share technical access and procedures with other staff and correctly engage in troubleshooting routine problems. These findings therefore corroborate the submission of the School of Information Science of the University of Tennessee – SISUT (2014) that these basic elements of computer knowledge could to a large extent influence knowledge sharing behaviour. Israel and Edesiri (2016) further confirm that these computer manipulation skills enhance effective use of online resources and by implication knowledge sharing behaviour.

The statements covering internet navigation skills were revealed as influencing knowledge sharing behaviourof librarians in college libraries in the South East and South – South geo – political zones of Nigeria. This implies that the college librarians use and navigate the Internet and websites, correctly save files and open common file formats; and enter key words in proper fields for quick information access in the internet. This case is supported by the work of Ezeani (2011) in which it is revealed that most academic librarians fare well in the use of basic (first generation) internet applications. Thus, a higher order thinking skills according to van Deursen and Van Dijk (2009) is however, still essential to using the internet in a successful manner in the college libraries.

Electronic communication skills of the librarians were found to have influence on their knowledge sharing behaviour. No doubt, the use of social media platforms (like facebook, twitter, YouTube etc) to transfer messages, sending and receiving e-mails from colleagues, attaching documents and images to online message and the use of WhatsApp and blogs to follow and share conversations, update or post comments were rated very high for knowledge sharing by the college librarians. This finding corroborates the work of Momoh and Ibrahim (2015) as well as that Adeniyi, Babalola and Ajayi (2015) that internet and e-mail facilities are very useful in knowledge sharing.

On storage devices and knowledge sharing behaviour, it was revealed that use of storage devices facilitates and influences knowledge sharingbehaviour of the librarians. The use of CD – ROM to store and retrieve information, the use of USB flash/pen drives to copy and store online information and the use of flash drives to make copies of computer data for sharing and backups were rated very high. This finding is in line with the work of Khan (2011), in the sense that most of the college librarians possess the competence to consult their CD – ROM databases not only for updating their knowledge base but also to share such knowledge with colleagues and patrons.

Furthermore, the study revealed that library applications software use skills have influence on knowledge sharing behaviour of the librarians. Thus, the ability to handle library application packages for automation/computerization of library routines and use of integrated library management systems software like Koha and Evergreen influenced the librarians knowledge sharing behaviour more positively. This is in line with the works of Imo and Igbo (2010) as well as Kari and Bari (2014) that application packages are tools that enable knowledge sharing for automation-related practices in libraries.

Findings associated with challenges affecting knowledge sharing behaviour of the college librarians revealed that the major challenges are poor relationship with colleagues, value orientation with respect to the use of technology, poor organizational culture, lack of equipment and necessary technological device for use, and the lack of incentive and motivation to share knowledge with digital devices. This aligns with the findings of Onuoha, Akidi and Chukwueke (2019) who found out that absence of quality ICT training programmes affect the use of ICTs in knowledge sharing among Library and Information Science educators.

Conclusion and Recommendations

The study examined thepercieved influence of digital competence variables on the knowledge sharing behaviour of college librarians in the South – East and South – South geo – political zones of Nigeria. Based on the findings of the study, the inference is that all the digital competences such as computer manipulation skills, internet navigation skills, electronic communication skills, computer storage devices skills and library applications

software use skills have influence on the knowledge sharing behaviour of the librarians

Based on the findings of this study, the following recommendations are made:

i. Attending regular ICT trainings, conferences and workshops will enhance the knowledge sharing behaviour of college librarians.
ii. Provision of uninterrupted power supply in digital environments will stimulate interest in the use of technological devices and consequently their use for knowledge sharing purposes.
iii. The institutional provision of functional ICT centers and digital libraries will promote the search for knowledge and the eagerness to share same amongst colleagues and patrons.
iv. Advocating or instituting knowledge sharing as an organizational culture through seminars, conferences and workshops at unit, section, departmental, or institutional levels will definitely leverage on good knowledge sharing behaviour.
v. The regular monitoring or update of technological changes and growth patterns will help professionals adapt to global best practices.
vi. The regular monitoring and analysis of social network and media developments will enhance identity and integration in matters of global professional concern.
vii. Digital platforms and infrastructure for knowledge creation publishing and sharing should be constructed for professional and institutional ranking and visibility.
viii. Joint or collaborative research or projects should be encouraged at various levels of administration and scholarship for healthy knowledge sharing.

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