

Technology competency and perceived ease of use of e-learning system among library and information science lecturers in Nigeria

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Abstract

The study examined the level of technology competency and perceived ease of use of E-learning systems among Library and information science lecturers in Nigeria. Survey research design was used. The population of study consists of the academic librarians in public universities in Nigeria. A self-constructed questionnaire was used for this research. Findings of the study revealed that academic librarians had an overall competent level of technology in using different tools of e-learning system for teaching on an average competence level (average weighted mean =3.0) The result of the study further revealed that the level of perceived-ease-of-use of e-learning among the academic librarians was to a high extent (average weighted mean = 3.1). The study thus recommended that the university management should provide training for the librarians and library and information science lecturers in order to increase their technology competency skills for onward advancement in the e-learning platforms usage.

Keywords: Technology competency, perceived ease of use, e-learning system, academic librarians.

Introduction

Globally, lecturers have been recognized to engage in teaching, learning and research activities which require their being skilled and knowledgeable in various fields of human endeavor. One of the skills required in the academics is a digital skill. Being digitally skilled in the 21st century means possessing the ability to use technology to improve learning. This is popularly referred to as electronic learning or e-learning. The letter “e” in e-learning which stands for the word electronic brings together all educational activities that are carried out by individuals or groups working online. An e-learning system is known as online learning, computer-assisted instruction or internet-

based learning. It is primarily a system of education that makes information or knowledge available to users or learners as it disregards geographic proximity (Franklin & Nahari, 2018). E-learning is a learning system based on dignified teaching but with the help of electronic resources. An e-learning systems are computer-based learning methods and internet networks with limited physical interaction with peers and instructors so that all learning content is delivered digitally. E-learning helps in providing training to all students thereby enabling students to receive study materials and training online. E-learning is cost-effective compared to traditional learning because e-learning saves time, money and

reduces cost of transportation. An e-learning system is defined as learning conducted via electronic media typically on the internet and using digital learning media like the digital camera, personal computers (PCs), digital videos, tablets, projector, operating systems, etcetera which aid in the interaction of students and lecturers (Eze, Chinedu-Eze & Bello, 2018).

Technology competency is the ability to know when there is a need for technology, to be able to identify, locate, evaluate, and effectively use that technology for the issue or problem at hand. The American Library Association (ALA) (2009) defines "technology competency" as a set of abilities requiring individuals to "recognize when technology is needed and have the ability to locate, evaluate, and use effectively the needed technology. Adeleke and Emeahara (2016) further noted that technology competency skills enable individuals to recognize not only when technology is needed, but also when different kinds of technology are needed.

Technologies are changing, therefore Library and information science lecturers educators should be at the forefront in this technology age to embrace technology and as well be more competent in the technical skills in their work than ever before. Attahir (2018) asserts that there five types of technology competency which are: Photo-visual competence, reproduction competence, Branching competency, technology competency and socio-emotional competency. Photo-visual competency is the ability to read and deduce technology from visuals. Reproduction competency is the ability to use technology to create a new piece of work or combine existing pieces of work together to make it your own. Branching competency is the ability to successfully navigate in the non-linear medium of technology space. Technological competence which is the ability to create

and use a particular field of technology effectively is gained through extensive experimentation, learning and development in research (Niiranen, 2021). There are differences in the level of technology competency and the use of technology resources which depend mainly on age and education level, the influence of gender is decreasing and technology competency is high in its operational dimension online content deficit (Guillén-Gámez, Mayorga-Fernández, & Contreras-Rosado, 2021). Consequently, core competence in technology can be considered as an asset of strategic importance for an organization's capacity to handle and take advantage of technology.

Boekhorst (2003) cited in Adeleke and Emeahara (2016) summarized all definitions and descriptions of technology competency presented over the years in three concepts: The ICT concept which refers to the competence with which to use ICT to retrieve and disseminate technology. The technology (re)sources concept, which refers to the competence to find and use technology independently or with the aid of intermediaries, and finally, the technology process concept of technology competency, which refers to the process of recognizing technology need, retrieving, evaluating, using and disseminating of technology to acquire or extend knowledge.

On the other hand, Perceived ease of use refers to the degree to which a person believes that using a particular system would be free of effort (Davis, 1989). Perceived usefulness refers to the degree to which an individual believes that using a particular system would enhance his or her job performance (Davis, 1993). Thus, Henderson and Divett (2003) assert that the more positive the perceived ease of use and perceived usefulness of the system, the higher the probability of actually using the system. Having considered the universality

of the Unified Theory of Acceptance and Use of Technology by Venkatesh, et al (2003) which encapsulates technological competence as a precursor to the adoption and use of technology. The technology acceptance model (TAM) was first postulated by Davis (1989), based on the theory of reasoned action (TRA) (Fishbein & Ajzen, 1975) in psychology research TAM model suggests that perceived usefulness and perceived ease of use influence users' attitudes towards using a new technology (Paj & Huang, 2011). According to (Davis, 1989) TAM introduces two significant factors which are the perceived usefulness (PU), reflecting the level at which individuals consider the use of a specific scheme to improve their efficiency, and perceived ease of use (PEOU), reflecting the extent to which people believe using a specific scheme would be free of effort. The key element of this model is its highlight on the perceptions of the potential user. Therefore, TAM was the adopted model for the conduct of technological competence in this research. The relevance of the theory to the study is that it explains the behavioural intention of LIS educators and academic librarians in accepting e-learning as they see definite benefits and outcomes in using internet resources.

Statement of the problem

The main goal of lecturers has globally been recognized to support teaching, learning and research which also requires being skilled and knowledgeable in various field of endeavor to demonstrate their competency. Being skilled in the 21st century also means being able to use technology to improve efficiency. Ability of academic librarians to grasp what technology competence means for the development of their institution in the perceived ease of use of E-learning is therefore the gap this research intends to fill.

Objectives of the study

The objectives of the study are to:

1. examine the level of technology competency to use e-learning system by academic librarians in selected public universities in South-West, Nigeria; and
2. determine the level of perceived ease of use of e-learning system by academic librarians in selected public universities in South-West, Nigeria?

Research question

The following questions are answered in the study:

1. What is the level of technology competence to use e-learning by academic librarians in selected public universities in South-West, Nigeria?
2. What is the level of perceived ease of use of e-learning system by academic librarians in selected public universities in South-West, Nigeria?

Significance of the study

Technologies are changing and there is need for Library and information science lecturers to embrace them. Library and information science lecturers' need much more in this technology age to embrace technology competency skills on their work than ever before. Technology competency helps professionals of all works of life to develop skills that can add to their economic status and improve their overall job performance and standard of living. There is need for library and information science lecturers to have technology competency skills, so that they can use them to progress on their jobs and on their careers. With these skills, Library and information science lecturers will be more equipped for

resource sharing, social networking, surfing the net, instant messaging and blogging and host of others technology oriented activities. These skills can also help them on their jobs to assist users get desired technology and education. Since these are skills that can be learnt, technology skills are skills that all technology professionals should thrive to possess. Therefore the findings of the study will be relevant for making decisions by library management for employment processes, the training and development of library and information science lecturers and equipping libraries with technology resources for adequate learning.

Review of literature

Bawden (2016) defined technology competency as the set of attitudes, understanding and skills to handle and communicate technology and knowledge effectively, in a variety of media and formats. Bell and Shank (2016) quoted in their work that technology competency is the ability to use technology, communication tools or networks to locate, evaluate, use and create technology. It is the ability to understand and use technology in multiple formats from a wide range of sources when it is presented via computers. It is also a person's ability to perform tasks effectively in a technology environment. Technology competency includes the ability to read and interpret media, reproduce data and images through technology manipulation, and evaluate and apply new knowledge gained from technology environments.

Omehia, Okwu, and Nsirim (2021) researched on librarians' ICT competencies and utilization of emerging technologies in academic libraries in Rivers State, Nigeria based on survey design research of the correlational type. The findings of the study showed a significant relationship between basic computer competencies, between

information retrieval competencies and web 2.0 competencies of librarians and utilization of emerging technologies in academic libraries in Rivers State, Nigeria. The study discussed the librarians' ICT competencies. It affirmed that the use of technologies by librarians for library and information products and services are minimal. This implies that if the librarians are proficient in the ICT competencies, they will perform their work effectively.

Hasim and Salman (2015) noted that technology competency is a concept that has overbearing influence on the extent to which academic staff can access and use electronic resources in their research in universities. The use of library technology resources by library and information science lecturers educators and library users is hindered by non-accessibility of technology resources. This contradicts the easy accessibility of the internet search engines like Google, yahoo for example where single keyword search could result in thousands of hits, no matter the topic. Watts and Ibegbulem (2017) carried out a research on barriers on the use of electronic resources available at the medical library of college of medicine, university of Nigeria, and revealed that lack of adequate ICT infrastructure and affordable online access, absence of in-depth technology skills and technology searching skills among library staff and users are barriers to the use of electronic resources. Similarly, Adomi (2015), Oduwole and Sowole (2017) identified problems in the adoption and usage of digital resources in Nigeria to include a lack of adequate technology skills among staff and users, low basic technology competency levels in the population and prohibitive cost in developing countries to gain access to the internet which was in accordance with the study of Salaam and Adegboro (2015). According to Dadzie (2016), technology resources are invaluable research tools that

complement the print-based resources in a traditional library setting with the advantage that include access to technology that might be restricted to the user due to geographical location or finance and access to more current technology. However, research has demonstrated that the differences in the level of technology competency and the use of technology resources depend mainly on age and education level, while the influence of gender is decreasing (van Dijk & van Deursen, 2016).

Ojiegbe (2015) compared ICT competencies of library staff at the University of Abuja, FCT and University of Jos, Plateau state by conducting a descriptive survey research design. The findings showed that majority of the staff in university libraries performs microsoft word-based tasks like typing and printing of documents, provide online searches using internet but cannot perform effective professional library related duties using ICT.

Based on descriptive survey design, Oyedokun (2018) examined the assessment of ICT competencies of library staff in selected universities in Kwara state, Nigeria. The study revealed that library staff considers acquiring additional qualifications in computer science as a major source of ICT skills acquisition since library schools had failed to adequately train librarians the necessary ICT skills required in today's information society. A high level of ICT competency was demonstrated by library staff on basic and intermediate ICT skills. Tight working schedule, lack of motivation, lack of experience, inadequate training and inappropriate library and information science lecturers' curriculum were the main constraints to ICT skills acquisition.

Perceived Ease-of-Use (PEOU) is the degree to which a person believes that using a particular system would be free from effort (Davis, 1989). Perceived Ease-of-Use (PEOU) refers to the degree to which

academic librarians believe E-learning acceptance usage would be free of effort and it would be easy to handle (Sanni, and Ajiboye, 2021). Zhao and Wang (2020) measured user acceptance with TAM and confirmed perceived usefulness and perceived ease of use of technology could predict user attitude on the use of information technology. A study conducted by Samuel, Onasanya and Olumorin (2018) extended the Technology acceptance model (TAM) and the findings revealed that university lecturers generally have a positive perception of, ease of use and adequacy of use of mobile technologies; however, moderating variable was not included in the conduct of the research. Park, Son, and Kim (2012) asserted that an appropriate construct can be chosen to predict acceptance, adoption or rejection of using a system vis-à-vis a standard model used like TAM.

Based on this assertion, perceived adequacy of use was added construct to the original TAM developed by Davis, Bagozzi and Warshaw (1989). Perceived adequacy has to do tendency to skilfully using digital technologies effectively to accomplish a task with minimum error (Onasanya and Olumorin, 2018). However, attitude to use and behavioural intention to use digital technologies are constructs that were deliberately excluded from the original TAM in order to facilitate the researcher to capture the perceived adequacy of use. Hence, perceived ease of use of E-learning among Nigerian Academic librarians really needs more investigation by researchers. Davis (1989) conducted a study that developed and validated new scales for two specific variables, perceived usefulness and perceived ease of use, which were hypothesized to be fundamental determinants of user acceptance. TAM assumes that there are two specified beliefs that determine computer usage: perceived usefulness and perceived ease of use,

eliminating subjective norms and normative beliefs.

Izuagbe, Hamzat and Joseph (2016) researched on Electronic Information Resources (EIR) adoption in private university libraries in Nigeria: The moderating effect of productivity and relative advantage on perceived usefulness. The findings revealed that productivity and relative advantage are significant moderators of perceived usefulness of EIR adoption in private university libraries in Nigeria. The research recommended productivity and relative advantage attributes that EIR promises these are ability of EIR to enable library personnel to accomplish

E-learning is not the next big thing; it is the now big thing" and up till now, the debate about the benefits of E-learning is still being discussed in education sectors globally. It is on this assertion that Sarwar, Ketavan and Butt (2015) summarized some e-learning values to include accessibility, mobility, resource scalability, effective results and self-paced learning. Accessibility in e-learning eliminates all restrictions, allowing individuals from all over the world to complete training and courses interested in virtually. Mobility in E-learning is the personalized, mobile approach to education, which is exactly what the e-learning option provides. Resource scalability in E-learning enhances the effects of learning and teaching processes, helping teaching capacity to be virtually infinite. Effective results in E-learning is the positivity of E-learning practices which bring better results to organizations in the training of their employees and self-paced learning in E-learning comes with a leaping advantage in terms of schedule freedom.

E-learning is also known as Web-based learning. It is primarily a web-based system of education that makes information or knowledge available to users or learners thereby disregarding geographic proximity.

The application of E-learning technologies for educational purposes has increased principally because the costs of technologies have dramatically decreased. Given this fact, higher institutions are taking advantage of web-based learning and they are utilizing it to complement the face-to-face approach to learning. E-learning is the acceptance of electronic media to facilitate teaching and learning because it utilizes technology to deliver information embedded in educational material to learners situated in diverse geographical areas. It is a substitute method for teaching and learning that change entire direction of the conventional classroom lectures Tavangarian (2014). Alavi and Leidner (2011) buttressed this by admitting that E-learning is a virtual learning environment where different forms of information technologies are used to mediate between the learner and the instructor. Although E-learning is a phenomenal concept, its adoption is not without limitations. The utilization of state-of-the-art technologies does not guarantee that an e-learning system will result in expected benefits (Ettinger, Holton and Blass, 2017). These authors opined that E-learning is a hindrance rather than a facilitative procedure and substantiated their argument by noting that E-learning does not motivate learners when traditional models of learning are replicated simply by uploading traditional classroom learning materials on web-based platforms. The challenges posed by E-learning have motivated the development of varied pedagogical systems (Roy, 2017).

Theory of reasoned action (TRA) for technology competency

Theory of Reasoned Action (TRA) is one of the most influential theories about human behaviour based on social psychology theory. This theory was proposed by Ajzen and Fishbein in 1975. The TRA theory is

grounded on three precepts: behavioural intention (BI), attitude (A) and subjective norm (SN) (Maduku, 2013; Attuquayefio, Achampong and Aryeetey 2014). TRA posits that the conduct of behaviour is the outcome of an individual's intention to perform the behaviour. The TRA hypothesizes that behaviour is predicted by an individual's intention to engage in a

given conduct. This behavioural intention in turn is predicted by two factors, the individual's attitude toward the behaviour and the subjective norm (Ameme, 2015). The theory of reasoned action (TRA) allowed the addition of external variables such as demographics to be included in the model. The model is shown in figure below:

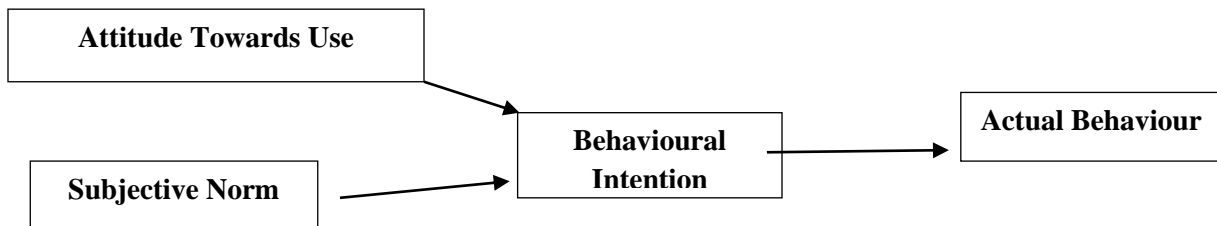


Figure 1: Theory of reasoned action –TRA. Source: (Hovels, 2010)

Technology acceptance model (TAM) for perceived ease of use

Technology Acceptance Model (TAM) is one of the most influential and robust in explaining ICT adoption and behaviour. The key purpose of TAM is to provide a basis for discovering the impact of external variables on internal beliefs, attitudes, and intentions needs (Abdullahi, Ward & Ahmed, 2016). TAM uses the TRA as a theoretical basis for specifying the causal linkages between two key beliefs: perceived usefulness (PU) and perceived ease of use (EOU), and users' attitudes (A), behavioural intention (BI) and actual computer adoption behaviour (Davis, Bogozzi and Warshaw, 1989; Maduku, 2013). Application of Technology Acceptance Model in studies related to teaching, learning and research has become new development of accepting,

adopting or invariably rejecting (Al-Emran, Mezhyuev, & Kamaludin, 2018) the process of knowledge accessing dissemination and application of original TAM in the field of education (Farahat, 2012), extended TAM with other relevant constructs in determining users' intentions towards using E-learning technology (Abdullah & Ward, 2016; Weerasinghe & Hindagolla, 2017) and necessity for deploying digital technologies into educational settings (Scherer, Siddiq, & Tondeur, 2019). Zhao and Wang (2020) extended Technology Acceptance Model (TAM) by incorporating constructs like intrusiveness, social interaction, informativeness on perceived usefulness and perceived ease of use of short-video social media for health advertisement of use and adequacy of use of digital technologies for research based on university ownership

Perceived usefulness: Defined by David (1989) as the degree to which a person believes that using a particular system would enhance his or her job performance.

Perceived ease of use: According to David (1989), it refers to the degree to which a person believes that using a particular system would be free of effort.

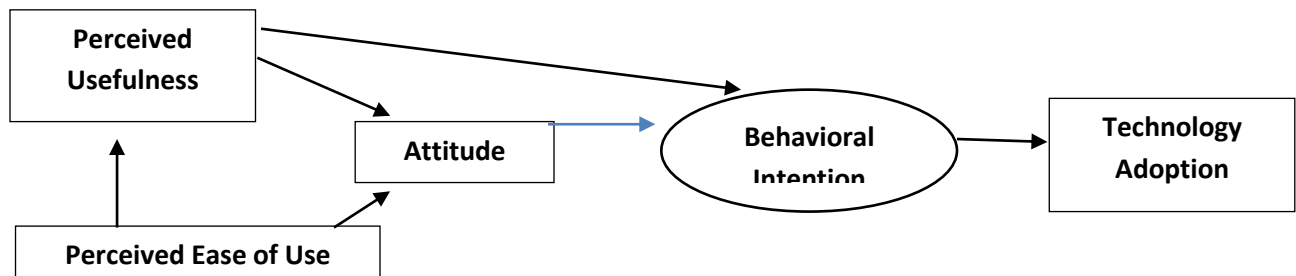


Figure 2: Technology Acceptance Model - TAM (Davis, 1989)

Research methods

Survey research design of correlational type was used for this study. Correlational research design involves the measurement of two or more variables and an assessment of the relationship among the variables. A correlational research design investigates relationships between variables without the researcher controlling or manipulating any of them. The survey research is critical in determining the quality of a research by providing a proficient way of gathering data to help address the research questions. The population for this study consists of the academic librarians in public universities in South West Nigeria. South West Nigeria is one of the geopolitical zones of Nigeria, consisting of six states. The South West States are Osun, Oyo, Ondo, Ekiti Lagos and Ogun State For validity test, 30 questionnaires were administered to the academic librarians at University of Ilorin, Kwara State, Nigeria. The study does not include other geo political zones in Nigeria because of the time frame for the study. The total number of respondents was 214. The study used total enumeration sampling technique. This is because of the small

number of population of the academic librarians in public universities in South West Nigeria. All academic librarians in public universities in South West Nigeria were used for the study. Hence there was no sampling. A self-constructed questionnaire was used for this research for the purpose of objectivity (which assumes that a truth or independent reality exists outside of any investigation or observation) and validity extracting data from the respondents. The questionnaire is divided into six (6) sections. The questionnaire is titled “Organizational Culture, Technology Competency and Perceived Ease of Use and Acceptance of E-learning among Academic librarians Questionnaire”. The content validity of the instrument was also carried out to ensure that constructs of the questionnaire are able to measure accurately what it supposed to measure. (Bolarinwa, 2015). Further expansion of the content validity, factor analysis which is a major component of Content validity was used to check the content validity. Kaiser-Meyer Olkin (KMO) and Barlett’s Test of Sphericity measures acceptable value for a factor to be significant from range 0to 1 with good index

of above 0.5. Average Variance Extracted (AVE) > 0.5 is also used to test the convergent validity of the variables.

Results

Table 1 shows the demographic information of the respondents. Majority of the respondents were male (58.5%) while 81 (41.5%) were female. The table also showed that 52 (26.7%) were in the age group of 20-30 years, 53 (27.2%) were in the age group of 31-40 years, 36 (18.5%) were in the age group of 41-50 years, 33 (16.9%) were in the age group of 51-60 years and 21 (10.8%) were in the age group of 61 years and above.

As for the academic qualifications of respondents, 26 (13.3%) of the respondents had HND as the highest academic qualification, 52 (26.7%) had BSc/BA as the highest academic qualification, 40 (20.5%) had MSc/MA as the highest academic qualification, 42 (21.5%) had MPhil as the highest academic qualification and 35 (17.9%) had PhD as the highest academic qualification. Concerning the work experience of the respondents, the result also showed that 38 (19.5%) of the respondents had 1-5 years of work experience, 55 (28.2%) had 6-10 years of work experience, 35 (17.9%) had 11-15 years of work experience, 32 (16.4%) had 16-20 years of work experience, 24 (12.3%) had 21-25 years of work experience and 11 (5.6%) had 26-30 years of work experience. The respondents also were representatives of different public universities in the South-west Nigeria such as FUNAAB (20, 10.3%), OOU (14, 7.2%), TASUED (12, 6.2%), UNIOSUN (10, 5.1%), OAU (20, 10.3%), FUYOYE (11, 5.6%), OSUSTECH (3, 1.5%), UI (50, 25.6%), LAUTECH (16, 8.2%), UNILAG (16, 8.2%) and LASU (23, 11.8%).

Research question one: What is the level of technology competency to use e-learning system by academic librarians in

selected public universities in South-West, Nigeria?

Table 2 shows the level of technology competence possessed by academic librarians in using different tools of E-learning system for teaching. The librarians were asked to rate the extent of acceptance of E-learning systems using a rating scale of 1-4, with 4 being highly competent; 3 competent; 2 averagely competent and 1 not competent. The table revealed that the academic librarians had an overall competent level of technology in using different tools of E-learning system for teaching was to an average competence level (average weighted mean =3.0) on a scale of 4 and this reported competent level could be possibly due to the fact that respondents showed high competence in the following areas: evaluating E-learning skills (mean =3.7), understanding the teaching standard that are most important or essentially based on E-learning needs of the student while teaching with E-learning system (mean =3.6), using WhatsApp social media as E-learning tools in E-learning system for teaching (mean =3.5), in using Telegram social media as e-learning tools in E-learning system for teaching (mean =3.5), building essential content required for students to comprehend easily while teaching on E-learning platform (mean =3.5), teaching general library automation in E-learning system (mean =3.4) and in integrating technology in teaching to make teaching and learning more meaningful to the students on E-learning platforms (mean =3.4). These results suggest the need for the academic librarians to sustain commitment in the aforementioned areas and should be given priority on policy matters since they had the highest mean score among the dimensions measured.

However, the academic librarians showed average competence in using Edmodo E-learning tools (mean = 2.5) and

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using Zoom E-learning tools (mean = 2.0) in E-learning system for teaching. These areas recorded low measurement scores and

should be identified as critical areas of concern that should be improved on.

Table 1: Demographic Information of respondents

Demographics		Freq	%
Gender	Male	114	58.5
	Female	81	41.5
Age (in years)	20-30	52	26.7
	31-40	53	27.2
	41-50	36	18.5
	51-60	33	16.9
	61 and above	21	10.8
	Highest academic qualification	HND	26
	BSc/BA	52	26.7
	MSc/MA	40	20.5
	MPhil	42	21.5
	PhD	35	17.9
Work experience	1-5	38	19.5
	6-10	55	28.2
	11-15	35	17.9
	16-20	32	16.4
	21-25	24	12.3
	26-30	11	5.6
Institution	FUNAAB	20	10.3
	OOU	14	7.2
	TASUED	12	6.2
	UNIOSUN	10	5.1
	OAU	20	10.3
	FUOYE	11	5.6
	OSUSTECH	3	1.5
	UI	50	25.6
	LAUTECH	16	8.2
	UNILAG	16	8.2
LASU	23	11.8	

Table 2: Level of technology competency to use e-learning system by academic librarians in selected public universities in South-West, Nigeria

Statement	HC (%)	C (%)	AC (%)	NC (%)	Mean	Std. Dev
How competent are you in evaluating E-learning skills	138 (70.8)	57 (29.2)	0 (0.0)	0 (0.0)	3.7	0.5
How competent are you to understand the teaching standard that are most important or essentially based on E-learning needs of the student while teaching with E-learning system	125 (64.1)	66 (33.8)	4 (2.1)	0 (0.0)	3.6	0.5
How competent are you in using WhatsApp social media as e-learning tools in e-learning system for teaching	88 (45.1)	107 (54.9)	0 (0.0)	0 (0.0)	3.5	0.5
How competent are you in using Telegram social media as e-learning tools in e-learning system for teaching	93 (47.7)	98 (50.3)	4 (2.1)	0 (0.0)	3.5	0.5
How competent are you in building essential content required for students to comprehend easily while teaching on E-learning platform	88 (45.1)	107 (54.9)	0 (0.0)	0 (0.0)	3.5	0.5
How competent are you in teaching general library automation in e-learning system	73 (37.4)	122 (62.6)	0 (0.0)	0 (0.0)	3.4	0.5
How competent are you in integrating technology in teaching to make teaching and learning more meaningful to the students on e-learning platforms	73 (37.4)	122 (62.6)	0 (0.0)	0 (0.0)	3.4	0.5
How competent are you in assessing students' performance on e-learning platforms while teaching with e-learning system	84 (43.1)	51 (26.2)	60 (30.8)	0 (0.0)	3.1	0.9
How competent are you in using Google Meet E-learning tools in e-learning system for teaching	73 (37.4)	67 (34.4)	29 (14.9)	26 (13.3)	3.0	1.0
How competent are you in converting the functions of cataloguing from manual to an automated mode for teaching	60 (30.8)	83 (42.6)	52 (26.7)	0 (0.0)	3.0	0.8
How competent are you in converting the functions of acquisition from manual to an automated mode for teaching in E-learning system	60 (30.8)	69 (35.4)	66 (33.8)	0 (0.0)	3.0	0.8
How competent are you in implementing firewalls or antivirus security in automated systems while teaching with E-learning system	35 (17.9)	116 (59.5)	44 (22.6)	0 (0.0)	3.0	0.6
How competent are you in converting the functions of circulation from manual to an automated mode for teaching in E-learning system	32 (16.4)	119 (61.0)	44 (22.6)	0 (0.0)	2.9	0.6
How competent are you in teaching students on how to use automated systems in E-learning system	43 (22.1)	89 (45.6)	63 (32.3)	0 (0.0)	2.9	0.7
How competent are you in providing back-up in automated systems while teaching with E-	49 (25.1)	71 (36.4)	75 (38.5)	0 (0.0)	2.9	0.8

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learning system						
How competent are you in converting the functions of serials from manual to an automated mode for teaching in E-learning system	31 (15.6)	89 (45.6)	75 (38.5)	0 (0.0)	2.8	0.7
How competent are you in using E-learning system for teaching sound knowledge of ready reference sources	25 (12.8)	91 (46.7)	69 (35.4)	10 (5.1)	2.7	0.8
How competent are you in comprehending the impact of E-learning system in teaching library courses	26 (13.3)	78 (40.0)	91 (46.7)	0 (0.0)	2.7	0.7
How competent are you in using Google Classroom E-learning tools in E-learning system for teaching	26 (13.3)	94 (48.2)	42 (21.5)	33 (16.9)	2.6	0.9
How competent are you in using Edmodo E-learning tools in E-learning system for teaching	33 (16.9)	74 (37.9)	48 (24.6)	40 (20.5)	2.5	1.0
How competent are you in using Zoom E-learning tools in E-learning system for teaching	12 (6.2)	30 (15.4)	101 (51.8)	52 (26.7)	2.0	0.8

Level of technology competence (Average Weighted Mean = 3.0; Std. Dev = 0.4)

HC = Highly Competent, C = Competent, AC = Averagely Competent, NC = Not Competent

Decision Rule: 1.0-1.8 = Not Competent; 1.9-2.5 = Averagely Competent; 2.6-3.3 = Competent; 3.4-4.0 = Highly Competent

Table 3: Level of perceived ease of use of e-learning by academic librarians in selected public universities in South-West, Nigeria

Statement	EHE (%)	HE (%)	LE (%)	ELE (%)	Mean	Std. Dev.
I find it easy to get the E-learning system clear and concise	82 (42.1)	82 (42.1)	31 (15.9)	0 (0.0)	3.3	0.7
I find the E-learning system easy to understand	69 (35.4)	76 (39.0)	46 (23.6)	4 (2.1)	3.1	0.8
Interacting with the E-learning system does not require a lot of my mental effort	60 (30.8)	82 (42.1)	41 (21.0)	12 (6.2)	3.0	0.9
I find the E-learning system to be easy to use	71 (36.4)	71 (36.4)	44 (22.6)	9 (4.6)	3.0	0.9

Level of perceived ease of use of E-learning (Average Weighted Mean = 3.1; Std. Dev = 0.7)

EHE= Extremely High Extent, HE= High Extent, LE= Low Extent, ELE= Extremely Low Extent

Decision Rule: 1.0-1.8 = Extremely Low Extent; 1.9-2.5 = Low Extent; 2.6-3.3 = High Extent; 3.4-4.0 = Extremely High Extent

Research question two: What is the level of perceived ease of use of e-learning system by academic librarians in selected public universities in South-West, Nigeria?

The librarians were asked to rate the extent of the level of perceived ease of use of E-learning using a rating scale of 1-4, with 4 being extremely high extent; 3 high

extent; 2 low extent and 1 extremely low extent. The result of Table 4.6 showed that the level of perceived-ease-of-use of E-learning among the academic librarians was to a high of extent (average weighted mean = 3.1) and this reported high extent could possibly be due to the fact that respondents found that it is easy to get E-learning system

clear and concise (mean = 3.3), E-learning system is easy to understand (mean = 3.1), interacting with the E-learning system does not require a lot of mental effort (mean = 3.0) and E-learning is easy to use (mean = 3.0).

These results suggest the need for the academic librarians to sustain commitment in the aforementioned areas to boost E-learning acceptance. The results also suggest that the ability to get E-learning system with ease of clarity and to be concise should be given priority on policy matters since it had the highest mean score (mean = 3.3) among the variables measured.

Discussion

Research question one was formulated to ascertain the level of technology competency to use e-learning system by academic librarians in selected public universities in South-West, Nigeria. Findings from the study showed that (79.0%) of the respondents had high level of technology competence towards the use of E-learning system acceptance and 41 (21.0%) had moderate level towards E-learning and there was a positive and significant influence of technology competence and the acceptance of e-learning system and this corroborates the reports from the study of 6which revealed a significant influence of technology competence on how academic librarians accept E-learning and emerging technologies in library field of study and that the utilization of E-learning in library depends on how skilled the academic librarians are in ICT related information. The work of Oyedokun (2018) also supported the report of this study where it was shown that library staff have a high level of ICT competence on basic and intermediate ICT skills and unlike this study where most of the respondents have a high level of technology competence. As against

Ojiegbe (2010) reported that academic staff of the university of Jos are only competent in basic e-learning tools but cannot perform effective professional library related issues using ICT. Also, the finding of this study is supported by the Litsalia (2017) and Oguche (2018) studies that showed that librarians have a high ICT competence in basic ICT and some web technologies such as sending e-mails, use of search engines, the use of Microsoft application software such as MS Word and MS Power Point, connecting to the internet and the use of OPAC and that the staff needed to be trained for further improvement. Research question two was formulated to establish the level of perceived ease of use of e-learning system by academic librarians in selected public universities in South-West, Nigeria. Results of the study showed that (72.8%) of the respondents had high level of perceived ease of use of E-learning system 49 (25.1%) had moderate level and 4 (2.1%) had a low level of perceived ease of use of E-learning system and there was a positive and significant influence of the perceived ease of use on the acceptance of E-learning system. This finding was supported by the study of Ibrahim, Leng, Yusoff, Samy, Masrom & Rizman (2017) that showed that the perceived ease of use of e-learning by library staff has a significant effect on the level of acceptance of e-learning.

Conclusion

The importance of e-learning advocacy and adoption among academic librarians cannot be overemphasized. The study has succeeded in investigating the level of technology competency and perceived ease of use of e-learning system among academic librarians. The finding of the study is relevant to library management for employment purposes, the training and development of library and information

science lecturers, equipping them with technology resources for adequate learning.

The following are recommended in the light of the findings:

1. The university management should provide training for the librarians and library and information science lecturers in order to increase their technology competency skills to enable progress in their use of e-learning platforms.
2. The university management should organize seminars for academic librarians to enable them to realize the importance of e-learning and also for them to upgrade their knowledge and practice about it.
3. The University management should develop policies that will ensure total compliance to the practice of E-learning system with frequent retraining.

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