READINESS OF THE POSTGRADUATES ON THE UTILIZATION OF CLOUD COMPUTING FOR LEARNING IN UNIVERSITIES IN KWARA STATE, NIGERIA

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Abstract: Cloud computing is one of the newer trends in technological innovations. It is a subscription-based service in which learners and the general users have access to vast number of services such as storage, space, processing and networking resources. However, despite the numerous benefits of cloud computing for learning, there is need for proper awareness and reorientation of Postgraduates towards the use of cloud computing for learning. This study investigated Postgraduates' readiness to utilize cloud computing for learning in Universities in Kwara State, Nigeria. The objectives of the study were to: (i) investigate the readiness of Postgraduates to utilize cloud computing for learning; (ii) examine the influence of gender on readiness of Postgraduates to utilize cloud computing for learning. The study adopted descriptive research design, using quantitative survey method. Six research questions and four hypotheses were answered and tested respectively. A total of three hundred and ninety-eight (398) respondents were randomly sampled. Frequency counts, percentages and mean were employed to answer research questions while hypotheses were tested using t-test and analysis of variance (ANOVA). The findings of the study revealed that: (i) majority of Postgraduates (59.8%) are ready to utilize cloud computing for learning; (ii) no significant difference between male and female undergraduates on their readiness to utilize cloud computing for learning. The study concluded that Postgraduates are ready to utilize cloud computing resources for learning. Thus, the study recommended that Nigerian universities should encourage postgraduates to explore full benefits of cloud computing in other to improve their learning; among many others.

Keywords: ICT; Cloud computing; readiness; utilization and learning

INTRODUCTION

Information and Communication Technology (ICT) has undergone various stages of innovations and inventions, and a new technology model known as cloud computing is one of them. In the presence of COVID-19, several schools, colleges, and institutions are under lockdown or have been forced to provide online education. Cloud computing offers an idyllic prospect to drop the expenses of higher education (Zahoor, Solomon, & Muhammad, 2021). Cloud computing provides an excellent platform for educators to improve their teaching practices and productivity. Hence, there is a need for the proper integration of these new technological innovations into education to fully achieve its aim of global competitiveness. Information and communication technology (ICT) is a facilitator for change; change in working conditions, handling and exchanging information, teaching methods, learning approaches, scientific research, in accessing and disseminating

information (Fisseha, 2011; Zahoor et al, 2021). Information and Communication Technology tools used for learning amongst others include social media like YouTube, Facebook, E-learning, virtual learning, and cloud computing. Information and Communication Technology (ICT) has gone through different phases of development and is currently witnessing the emergence of a new technology paradigm called cloud computing (Dahunsi & Owoseni, 2015; Duha, Ibtisam, Haider, & Hussain, 2021). All over the world, people are adopting various technological inventions to suit their needs. Newer technologies growing have necessitated changes in education with ranges of flexible ways of teaching and learning. Information and communication tools enable learners to responsively manifest themselves since they have the liberty to publish their content, work, and materials online through wikis and blogs (Ilodigwe, 2015).

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computing resources, artificial intelligence, 3D printing, quantum computing, and machine learning amongst others. Some of these emerging technologies tend to be tied to a particular industry, for instance, 3D printing is of great interest in the medical industry than other industries (Interop Research Reports, 2019). Consequently, Cloud computing is an ICT concept which emanates from terms and concepts from other existing computing paradigms such as utility computing, serviceoriented structure, grid computing among many others (Geelan, 2009; Quasim, Mohammed, & Godwin, 2021). Cloud computing is a means of storing and accessing information over the internet with the use of your technological devices like personal computers (PCs), iPhone, smartphone, and so on. Cloud computing is a subscription-based service where users can get access to vast a number of services which include: storage space, processing, and networking resources. The cloud allows for the opportunity to access clients' data at any time from anywhere, unlike the traditional computer setting which requires the same location for both the user and the data storage (Warwick, Garcia-Perez, & Odeh, 2015). Recently, cloud computing services are progressively being offered by well-established IT service providers such as Google, Amazon, Microsoft, Apple, Yahoo, and Salesforce.com (Writer, 2015). Cloud computing promises to deliver all IT services on-demand whereby enabling learners to only pay for the specific number of resources they really use, or in other words, follow the pay-as-yougo pricing model (Benton & Negm, 2021; Sachdeva, Rana, Kapoor, & Shahid, 2011). Cloud computing is considered as a promising technology to organizations that will improve their performance and overcome the excessive cost related to the information resources.

Cloud computing is a paradigm often portrayed to most current and seen as a new technology but also widely accepted as an evolution of technologies such as client-server architecture, World Wide Web, and networking. It is a technology that has been enabled by the availability of broadband networks and inexpensive end-user devices as well as commodity computing nodes that can be simply interconnected and controlled (Ahmed & Omar, 2015). The word "cloud" is an abstract term that comes with numerous ranges of solutions. Cloud computing is basically employing the use of third-party computing services

Newer technologies include various cloud which brings services to the user via the internet. However, it is termed cloud because data and information are stored remotely and delivered through a web-based connection to various users (Aaron, 2018). Cloud computing is a term which encompasses several services that are remotely controlled by a server, managed by a third party and accessed via the internet. Cloud computing is a technology that provides a new way to unlimited computational resources and software applications by providing access to these resources and services at reasonable costs. Cloud computing is a system for enabling omnipresent, easy, on-demand network access to a shared environment of configurable computing resources (for instance, networks, servers, storage, applications, and services) that can be provided on time and released with minimal management effort or service provider interaction (Jaflah & Zakaria, 2021; NIST, 2011).

> Cloud computing is a type of computing technology where fund is not needed to build and maintain information technology infrastructure. It requires borrowing the Information Technology facility from a third-party organization and access it through the internet. In other words, in a cloud environment where it is not required to buy any hardware and software to access resources thus it enables you to cut your investment on hardware resources and IT maintenance team (Gupta, Kusuma, & Viswanath, 2012).

> Cloud computing is having great effects on how education works generally both in online courses and in traditional classrooms. Some of the effects do not include purchase of expensive textbooks because cloud-based textbooks are available and digital content is significantly less expensive than printed content. Also, no more use of outdated learning material because cloud-based materials are easy to update in real-time; so, students always have access to most current learning resources. No expensive software and hardware required using the softwareas-a-service model of cloud computing. It also opens up a world of new possibilities for students, especially those who are not served well by traditional education systems (Bhatia, 2014). Adoption of cloud computing by higher educational institutions in Nigeria is a way to change the educational dimension and services delivered to students (Matt, 2011). A higher educational institution can reduce the cost of information technology equipment and

infrastructure by making use of cloud services to enhance the educational activities of the institutions. Cloud computing works by changing the site of computing hardware to a remote site and distributing services globally (Walker, 2018).

Cloud computing exhibits the following key characteristics; scalability and elasticity which allows for surfing up and down quickly and easily to meet the demand of the users, agility which allows adding or expanding technological infrastructure resources for user's flexibility, device and site independence which allows for users to use systems using a web browser regardless of their location or the device they use, multitenancy which allows for sharing of resources and costs across a large pool of users, metered services allow the users to pay for only what they use, and on-demand self-service that allow users to sign up and receive services at will from cloud providers. Cloud computing provides both learners and educational practitioners with a great number and variety of online applications that can be employed to support a wide range of learning (Gonzalez-Martinez, scenarios Bote-Lorenzo, Gomez-Sanchez, & Cano-Parra, 2015). These applications are usually web-based, accessible anywhere, anytime over the internet, thus extending the exposure time to learning of students (Wu & Huang, 2011).

There are many cloud applications such as Google Apps, Dropbox amongst others that are already extensively employed in education because are common-place, user-friendly, thev and inexpensive tools that many students use in their daily life. Lecturers may give them diverse usages as well. It allows lecturers to share course contents, presentations, and information with students. Cloud computing can also assist lecturers to collaborate with each other and differentiate materials and instructions, to personalize learning and increase students' achievements. For example, lecturers can use Google Spreadsheets to share points to award students for their classroom behavior (Blood, 2011).

Gender differences in terms of teacher belief, teacher self-efficacy, and attitude towards computers is an important research field (Sang, Valcke, van Braak & Tondeur, 2010). Sieverding and Koch (2009) investigated gender differences in computer self-efficacy and revealed that women have lower computer self-efficacy than men. This finding was in line with the findings of Koch, Muller, and Sieverding (2008) and Ong and Lai (2006). Gefen responsibility. Since learning is an active process,

and Straub (1997), Venkatesh and Morris (2000), Venkatesh et al. (2003), and Wang and Wang (2010) investigated the effect of gender on technology acceptance and determined that gender significantly moderated the effects of perceived usefulness and perceived ease of use towards behavioural intention. Studies found that men were more task-oriented and affected by perceived usefulness, while women were more affected by perceived ease of use which was related to their self-efficacy (Venkatesh, et al., 2003; Wang & Shih, 2009).

Avinde (2011) investigated the computer selfefficacy among teachers in primary, secondary and tertiary institutions in Niger State, Nigeria. The study was undertaken by the researcher with a view to find out the gender influence and computer self-efficacy among teachers' in Niger State. Three hundred and twenty-one teachers were asked to indicate their experience and level of proficiency in using computer, 96 teachers from primary schools, 123 teachers from secondary schools, and 102 from tertiary institutions. The data for the study were collected through perception of computer selfefficacy scale which has 20-items. The data attained were analyzed using independent t-test and ANOVA. The findings showed that male and female teachers in secondary school have similar competence in the usage of computer. The male primary school teachers were more proficient in utilizing computer than their female counterparts. The female lecturers were more proficient in the utilization of computer than the male lecturers. This is contrary to Chukwuemeka & Aghara (2010) findings which showed that the female teachers having inadequate proficiency skills in using internet for teaching and learning process.

Readiness is the state of being prepared for or willingness to engage in a particular activity. Fisseha (2011) identified factors that affect learning readiness to include attitude, motivation, anxiety, and self-efficacy. There cannot be a successful study if the learner is not ready or willing to learn regardless of the learning resources being put in place. Therefore, students need to be in a state whereby the willingness to use this technology can be acquired. Readiness implies a degree of concentration and eagerness. Getting students ready to learn, creating interest by showing the value of the subject matter, and providing continuous mental or physical challenge, is usually the instructor's

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students must have adequate rest, health, and postgraduates' readiness to utilize cloud computing physical ability. Basic needs of students must be satisfied before they are ready or capable of learning since exhausted or in ill health' students might not learn much. Distraction from outside, responsibilities, interests, or worries, overcrowded schedules, or other unresolved issues, affect students' interest in learning. Readiness also influences the enthusiasm of undergraduate students.

The significance of cloud computing to education has been widely reported in today's competitive market place (Grossman, 2009 & Somya, 2021). The realization of benefits that can be derived from implementing cloud services in education lead to their eagerness to adopt the technology. Higher education institutions are among the sectors that are in need of innovative technologies in order to advance the quality of teaching, learning, and research (Al-Zoube, Abou El-Seoud, & Wyne, 2010; Hazari, North, Moreland, 2019; Laisheng & Zhengxia, 2011). In this respect, educational institutions always look for novel technologies that will ease the teaching and learning process thereby enhancing student performance. Cloud computing is one of the latest trends in computing which is reported to have great impact on the quality of teaching and learning in educational settings (Hashim, Hassan, & Hashim, 2015; Duha et al, 2021). The technology provides the students with flexibility, accessibility, and portability of educational materials anytime and anywhere (Guoli & Wanjun, 2010; Kalagiakos & Karampelas, 2011). Additionally, the technology offers the students an opportunity to use various internet-based applications in an efficient, portable, and secured manner (Kalagiakos & Karampelas, 2011). However, the lack of cloud computing adoption in higher education institutions has been emphasized by researchers (Tashkandi & I. Al-Jabri, 2015).

Despite the fact that the academic institutions in Nigeria appear to be well aware of the need for cloud computing services, students' readiness to adopt and use those cloud computing services remains a challenging task. Hence, this study, Readiness of the Postgraduates on the Utilization of Cloud Computing for Learning in Universities in Kwara State, Nigeria, specifically; (1) explore postgraduates' readiness to utilize cloud computing for learning in universities in Kwara State, Nigeria, (2) determine gender difference on postgraduates' readiness to utilize cloud computing for learning, (3) determine consist result (Carmines & Zeller, 1979). Reliability

for learning based on field of study.

METHOD

The study adopted descriptive research of the survey type. It had been considered appropriate because descriptive research method involves the systematic collection and analysis of knowledge collected from an outsized population that helps to explain the characteristics of population or event as they seem supported the phenomenon into account for this study without external manipulations by the researcher. The population for this study was made from all undergraduate students in Kwara State. The target population contains 9,319 postgraduate students within the three selected universities in Kwara State. Stratified sampling techniques was use to allocate various respondents in each school using Israel Model (2012). Additionally, sampling is utilized in each school to select the 398 postgraduate students from the sampled universities to participate as the respondents during this study.

Research instruments

The instrument for data collection is a researcher designed-questionnaire titled "Postgraduates" Readiness for the Utilization of Cloud Computing for Learning in Universities in Kwara State, Nigeria". The instrument is divided into three sections (A, B, and C): Section A addresses the demographic data of the respondents; Section B elicits information on postgraduate students' readiness to utilize cloud computing for learning in universities in Kwara State, Nigeria. The questionnaire responses for section B is rated on a 4-point Likert scale mode: Strongly Agree (SA); Agree (A); Disagree (D); and Strongly Disagree (SD).

Validity and reliability of the instruments

Validity explains how well the collected data covers the actual area of investigation (Ghauri & Gronhaug, 2005). The instrument is validated for face and content validity by the researcher's supervisor and three other lecturers within the Department of Educational Technology, University of Ilorin, Ilorin, Nigeria. Following the lecturers' validation reports. some items of the research instrument are corrected, adjusted, and modified as directed to reinforce the validity. Reliability concerns the extent to which a measurement of a phenomenon provides stable and

is additionally concerned with repeatability. As an or a phenomenon of the study. Moreover, it aims to example, a scale or test is claimed to be reliable if repeat measurement made by it under constant conditions will give the same result (Moser, 1989). Pilot study is administered from a specific university in Oyo State for reliability of the research instrument. The research instrument is found to be reliable at 0.94 for items on readiness at 0.05 level of significance, using Cronbach Alpha SPSS statistical tool.

Procedure for data collection

The researcher obtained a letter of introduction from the Head of department, Educational Technology, University of Ilorin, to sought the permission from the acceptable authority within the sampled schools facilitate easy administration of to the questionnaires. The researcher read and explained the aim of the study to the participants. The respondents got sufficient time to answer the questionnaire. After which, the researcher personally collected the answered questionnaire and reviewed and sufficiently the qualified completed questionnaire. Insufficient information or a doubtful answer like showing observable patterns of answer was removed for those particular items only. The researchers, through the assistance of the statistical analyst, then tabulated the data collected from the participants using Microsoft Excel and eventually process the data collected using SPSS (Statistical Package for Social Sciences).

Ethical consideration

Ethical consideration was maintained through the period of data collection and thereafter. The researcher ensured that respondents were not coerced to fill the questionnaire and respondents were allowed to participate voluntarily. Also, utmost confidentiality and secrecy of the respondents was maintained during the administration, collation, and report of research findings.

Data analysis techniques

The data collected were analyzed employing a FINDINGS AND DISCUSSION descriptive and inferential statistics. Descriptive Descriptive information on the biodata design, consistent with Bhat (2019), may be a respondents based on gender and areas research design that aims to explain the participant specialization are as reflected in Tables 1 and 2.

answer the question which focuses on the demographic information of the study. It was to define respondent characteristic, data trends, and comparison of groups, validate existing condition and to duplicate research. To analyse the target of the study which were determining the characteristic of the participants with reference to socio demographic characteristics, readiness to utilize cloud computing for learning in universities in Kwara State, Nigeria, descriptive statistics is used. Moreover, the various specific statistical tools like frequency, percentage, mean, and variance are utilized so as to measure the quantitative variables to give an overview descriptive of the respondents in analyzing the information for socio-demographic characteristic, gender, and field of study. Hence for the research questions, the researcher-designed-questionnaire was structured on a four-point Likert scale, the selection rule was supported the mid-point of the dimensions 2.50. Therefore, items with mean value of 2.50 and above are considered agreed or positive responses while items with below 2.50 were considered disagreed or negative responses. Furthermore, to check the hypotheses, inferential statistics are employed hypothesis one is tested using independent t-test. Independent t-Test is wont to determine the difference of the mean of two groups which both groups are independent from one another. With this, using the independent t-test yield on answering the target of finding the difference between male and female postgraduates' readiness to use cloud computer for learning. To test, hypothesis two is also tested with Analyses of variance (ANOVA). ANOVA is used to determine whether there are any statistically significant differences between the means of three or more independent (unrelated) groups. Hence using ANOVA, the researcher is able to determine the difference among Humanity and Social Science, Management, Natural Science, Science and Technology postgraduate students' utilization of cloud computing for learning.

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Table 1 Percentage distribution of respondents by gender

Gender	Frequency	Percentage (%)
Male	217	54.5
Female	181	45.5

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Total	398	100%
Table 2. Pe	ercentage distribution of respondents by	field of study
Area of Specialization	Frequency	Percentage (%)
Natural Science	105	26.38
Management Science	132	33.17
Human and Social Science	161	40.45
Гotal	398	100%

As shown on Table 1, the percentage of male undergraduates that were sampled in the study were readiness level to adopt and utilize cloud computing greater than the female undergraduate (54.5% >45.5%). Also, Table 2 reflected that out of the total respondents, 105 (26.38%) were from Natural Research Question One: What is the postgraduate Science, 132 respondents (33.17%) were from students Readiness to use Cloud Computing for Management Sciences, while 161 respondents learning? (40.45%) were from Human and Social Sciences.

Table 3 presents results on undergraduates' for learning.

S/No	Item	SA	А	D	SD	Mean
		(%)	(%)	(%)	(%)	Score
1	I have installed the necessary applications on my	64	238	62	34	2.83
	computer for cloud computing. for example;	(16.1%)	(59.8%)	(15.6%)	(8.5%)	
	Opera mini, Chrome, Mozilla, and so on.					
2	I have a webcam and microphone for simple	231	67	42	58	3.18
	multimedia participation in the cloud environment.	(58%)	(16.8%)	(10.6%)	(14.6%)	
3	I have a reliable high-speed Internet connection	31	257	75	35	2.71
	(wireless, cable, modem, etc.).	(7.8%)	(64.6%)	(18.8%)	(8.8%)	
4	I have the web skills and mastery to use cloud	69	156	103	70	2.56
	computing resources for my learning.	(17.3%)	(39.2%)	(25.9%)	(17.9%)	
5	I am comfortable and proficient at creating and	91	191	80	36	2.85
	saving different types of files in the cloud	(22.9%)	(48%)	(20.1%)	(9%)	
	environment.					
6	I am comfortable with locating materials, setting	106	168	57	67	2.79
	bookmarks, and downloading files from the cloud	(26.6%)	(42.2%)	(14.3%)	(16.8%)	
	environment.					
7	I can manage my study time efficiently while using	34	88	199	77	2.20
	cloud-based resources for learning or to complete	(8.5%)	(22.1%)	(50.0%)	(19.3%)	
	assignments on time.					
8	I am self-motivated to use cloud-based resources	62	102	166	68	2.40
	for learning.	(15.6%)	(25.6%)	(41.7%)	(17.1%)	
9	I have the knowledge and skills for online	42	78	201	77	2.21
	relationships to relate well in a collaborative cloud	(10.6%)	(19.6%)	(50.5%)	(19.3%)	
	computing learning environment.					
10	If I cannot figure out something related to my	57	216	72	53	2.70
	study, I am comfortable asking an expert, my	(14.3%)	(54.3%)	(18.1%)	(13.3%)	
	instructor, or classmates for help via email,					
	discussion board, or chat.					
	Grand M	ean				2.643

Tuble 5. Onder graduates reduiness to use croud comparing for redining	Table 3. Undergraduates'	readiness to use	cloud computing	for learning
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SA = Strongly Agree, A = Agree, D = Disagree, SD= Strongly Disagree

agreed that they have installed the necessary undergraduates have a webcam and microphone for applications on their computer for cloud computing. simple multimedia participation in the cloud

Table 3 shows that 59.8% of the respondents An item with the highest mean indicated that

undergraduates are comfortable and proficient at relate well in a collaborative cloud computing creating and saving different types of files in the cloud environment with mean score of 2.85. Undergraduates are comfortable with locating materials, setting bookmarks, and downloading files from the cloud environment with mean score of 2.79. Item 3, 10, and 4 respectively indicated that to adopt and utilize cloud computing for learning. undergraduates have a reliable high-speed internet connection (wireless, cable, modem, and so on), if undergraduates cannot figure out something related to their study, they are comfortable asking an expert, their instructor or classmates for help via email, discussion board or chat, undergraduates have the web skills and mastery to use cloud computing resources for their learning. However, items 8, 9, and 7 have mean score lower than the average benchmark 2.5 respectively. "I am self-motivated to use cloudbased resources for learning." (M = 2.40), "I have the readiness to utilize cloud computing for learning."

environment with a mean score of 3.18. Followed by knowledge and skills for online relationships to learning environment." (M = 2.21), "I can manage my study time efficiently while using cloud-based resources for learning or to complete assignments on time" (M = 2.20). Cumulatively the grand mean of 2.643 > 2.50 indicated that undergraduates are ready

Hypotheses testing

Based on research questions 2-3, research hypothesis 1and 2 were developed. The results related to hypotheses one and two formulated for the study in the objective of the study was as shown in subsequent tables. All hypotheses were tested at 0.05 level of significance.

Hypothesis one: There is no significant difference between male and female postgraduates in their

Table 4. T-test of male and female postgraduate readiness to utilize cloud computing for learning

Variable	Ν	Ā	SD	df	t	Sig	Remarks	
Male	217	26.53	2.82	396				
					0.709	0.479	Not	
							Rejected	
Female	181	26.32	2.92					

difference between male and female undergraduates in their readiness to utilize cloud computing for learning. This is reflected in the result, t (396) =0.709, p = 0.479. That is, the result of t-value of 0.709 resulting in .479. The significant value was greater than 0.05 alpha value.

Table 4 revealed that there was no significant *Hypothesis two:* There is no significant difference among postgraduate students' readiness to utilize cloud computing for learning based on their field of study.

		for learning b	ased on their field of stu	dy		
	Sum of Squares	df	Mean square	F	Sig.	
Between	.582	3	.194	1.499	.214	
Groups Within	48.395	395	.129			
Groups						
Total	48.977	398				

Table 5. ANOVA of postgraduate students' readiness to utilize cloud computing

Table 5 revealed the ANOVA of difference among Postgraduates student's readiness to utilize cloud computing for learning based on their field of study. The result revealed that "there was no significant difference among natural science, management science, and human and social science undergraduates' readiness to utilize cloud computing for learning" (F $_{(3,377)} = 1.499$, p > 0.05).

The null hypothesis is therefore accepted.

Discussion

This study investigated postgraduate students' readiness for the utilization of Cloud computing for learning in universities in Kwara State, Nigeria. Research question one seeks to examine the postgraduate students' readiness to use Cloud

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computing for learning different items were tested and from the data gathered, it was revealed that majority of postgraduate students are ready for the utilization of cloud computer for learning. Based on the items in the study which is consistent to the previous study of Fisseha (2011) whose study identifies factors that affect learning readiness to include attitude, motivation, anxiety, and selfefficacy. The author stated that there cannot be a successful study if the learner is not ready or willing to learn regardless of the learning resources being put in place.

Research question 2 hypothesis 1 determined gender difference on postgraduates' readiness to utilize cloud computing for learning. From the data analyzed, it was revealed that there was no significant difference between male and female undergraduates in their readiness to utilize cloud computing for learning, the mean value in table 2 also reveals that there is slight different in the male and female readiness to use cloud computing for learning. This is seen in the grand mean score. This conforms with Sang, Valcke, van Braak & Tondeur (2010). Sieverding and Koch (2009) whose study investigated gender differences in computer selfefficacy and revealed that women have lower computer self-efficacy than men. This finding is in line with the findings of Koch, Muller and Sieverding (2008) and Ong and Lai (2006). Gefen and Straub (1997), Venkatesh and Morris (2000), Venkatesh et al. (2003), and Wang and Wang (2010) investigated the effect of gender on technology acceptance and determined that gender significantly moderated the effects of perceived usefulness and perceived ease of use towards behavioural intention. Studies found that men are more task-oriented and affected by perceived usefulness, while women are more affected by perceived ease of use which was related to their selfefficacy (Venkatesh, et al., 2003; Wang & Shih, 2009).

Research question 3 and hypothesis 2 which sought to determine postgraduates' readiness to utilize cloud computing for learning based on field of study. The findings in this study revealed that "there was no significant difference among natural science, management science, and human and social science undergraduates' readiness to utilize cloud computing for learning". This finding does not conform with the findings of Shakeel, Muhammad and Imran (2017) where it was revealed that there is a significant difference in the perception of students towards the utilization of mobile technologies for learning base on area of specialization.

CONCLUSION

This research examined postgraduates' readiness to utilize cloud computing for learning in Universities in Kwara State, Nigeria. The result obtained from data gathered and analyzed in this study indicated that undergraduates are highly ready to adopt cloud computing into their day to day learning. More so, gender has no significant influence on readiness to utilize cloud computing for learning. However, field study has a significant influence on of indergraduates' readiness utilize to cloud computing for learning.

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