LECTURERS' ATTITUDE TOWARD MOBILE TECHNOLOGY UTILIZATION FOR INSTRUCTIONAL PURPOSES IN COLLEGES OF EDUCATION IN NORTH CENTRAL, NIGERIA

ANAZA, Abdulmumuni Onuyi (PhD)
08165818332
anazaao74@gmail.com
Department of Curriculum and Instruction
Federal College of Education, Okene

Abstract
Mobile learning has become a new educational paradigm, gaining popularity especially at institutions of higher learning. Using the latest technology in M-learning, lecturers are able to choose when and where they wish to instruct anything. This study assessed lecturers' attitude toward mobile technology utilization for instructional purposes in colleges of education in North Central, Nigeria. The study is descriptive research of the cross-sectional survey. The sample consists of lecturers of the colleges of education in North Central, Nigeria. 650 lecturers were randomly selected and used for the study. A validated questionnaire comprising of 50 items was used to collect data for the study. The reliability of the instrument was tested using Cronbach Alpha and yielded 0.83. The result showed that lecturers had a positive attitude towards mobile technology use for instruction, gender had an influence on lecturers' attitude towards mobile technology usage in instruction while the areas of specialization had no influence. The study, therefore, recommended among others that mobile technology literacy should be spread in colleges of education and encourages the adoption and utilization mobile technology in the teaching and learning process.

Keywords: Attitude, lecturers, mobile technology, instruction, colleges of education

Introduction

As mobile technology has matured sufficiently in recent years to support advanced learning activities, its adaptation for this purpose has spread globally. This is natural since lecturers and students are surrounded by mobile technology in their daily lives. Additionally, the proliferation of advanced wireless technologies has facilitated learning on the go, whereby individuals can access educational content regardless of their location. Mobile technology also offers various opportunities for timely and active knowledge acquisition through the exchange of learning materials (Jones, Scanlon, & Clough, 2013; Woodill, 2011).

Due to its wide range of benefits (for instance cost-effectiveness, ubiquity, location-based services, and potential as a study aid), mobile learning is expected to play a significant role in a multitude of educational settings (Cheon, Lee, Crooks, & Song, 2012). Most importantly, mobile technology possesses great potential in offering rich multimedia experiences and resources of a varied nature while enabling students to learn without being restricted by time or location in both formal and informal educational settings (Lam, Yau, & Cheung, 2010; Milrad, et al, 2013). Consequently, educational institutions specializing have attempted to develop applications such as mobile Learning Management Systems (LMSs) for students enrolled in e-learning courses. Indeed, the swift deployment of such systems by educational institutions should be a priority given continuously increasing student demand.

As technology has become more powerful and pervasive it has provided educators with a valuable tool to support learning. Mobile technology, which has advanced considerably over the last decade, has enabled learning to be more accessible. This accessibility has provided educators with a way to support learning inside and outside the classroom. The mobile technology integrates a wide set of tools and applications that enable learning to be dynamic so that students are no longer tied to their desks to experience and interact with learning objects.

Mobile learning is a new concept of learning via mobile technology. In Mobile learning environment, knowledge, skills and attitude can be transmitted through the mobile phones, laptops, tablet PCs and PDAs and so on. Mobile learning places emphasis on the fact that teaching and learning process can take place without being constrained by time and location (Kukulska-Hulme & Traxler, 2005). In other words, teaching and learning can be carried out at any time and anywhere. There is greater learner mobility. Using mobile technology, lecturers and students can receive and share ideas and materials. They do not need a computer to download any information because the mobile technology devices with internet access can carry out this function anywhere and at anytime. Information also can be relayed by lecturers to their students using either blogs or SMS. Furthermore, there are companies which provide services for sending bulk SMS to registered users. Such services would help lecturers send instructional materials to their students at reasonable rates.

The availability of mobile technology does not actually guarantee that it will be used in an educational setting (Hwang & Chang, 2011). However, the integration of mobile technology into teaching and learning is expected to have great influence on the experience and performance of learners (Mac Callum, & Jeffrey, 2013). It will be the acceptance by lecturers that has the potential to have the greatest influence on the successful introduction of mobile learning (Mac Callum, 2010). Students are able to utilize mobile technology to support informal learning; however, without the support and acceptance of lecturers, it is unlikely to be fully integrated into more formal learning. Substantial research has addressed the factors that influence educators' integration of a range of technologies into the classroom, including; environment, policies, support, beliefs and attitude (Albion, 2001; Hammond, Reynolds, & Ingram, 2011; Sang, Valcke, Braak, & Tondeur, 2010). However, these factors that impact lecturers' use of mobile technology has only been addressed in a few studies (Aubusson, Schuck & Burden, 2009; Lefoe, Olney, Wright, & Herrington, 2009; Seppala & Alamaki, 2003).

Attitudes are a tendency to react negatively or positively to some degree towards persons, ideas, objects, things, and institutions. According to Williams and Iruloh, (2014), if the attitude of a person toward a given object is known, it could be used in conjunction with other situational variables to predict and explain the reactions of these individuals towards that object. Attitudes influence man's response to objects, situations, products, and persons. Attitude in a general sense is seen as intensity and direction of the sum total of a person's inclinations, feelings, prejudices or bias, conceived notions, ideas, fears and other convictions about any specific objects or products (Kpolovie, Joe & Okoto, 2014).

Early literature on teachers' attitude towards technology development, adoption, and implementation define attitudes toward technology as an affective (i.e., experience of feeling or emotion) or evaluative judgment about technology in question (Davis, Bagozzi, & Warshaw, 1989). Thus, it is a degree to which an individual perceives technology with the intention to use it (Barki & Hartwick, 1994). Technology, which is believed to be both important and personally relevant, is more likely to create people's positive attitude towards it (Rogers, 2003; Teo, 2011). For example, Ferdousi (2009) argues that teachers' attitudes have a significant impact on their decisions about the when and how they will use e-learning systems.

However, successful implementation of mobile technology in education relies much on teachers' attitudes towards it (Teo & Ursavas 2012, Avidov-Ungar & Eshet-Alkakay 2011; Salmon 2011; Teo 2011;). Liaw, Huang and Chen, (2007) argued that effective implementation of technology is dependent upon users having a positive attitude towards the technology. Empirical research on attitude lecturers' towards the use of mobile learning has largely been overlooked, as researchers in the past have tended to focus on student adoption (Uzunboylu & Ozdamli, 2011). Lecturers' attitudes have been shown to have a major influence on the acceptance of new technology (Venkatesh, Morris, Davis, & Davis, 2003). The necessity to use mobile technologies in education seems imperative and inevitable. Therefore, preparedness for using this technology in colleges of education should be based on the concept of conviction and acceptance to use it in the teaching-learning process. Positive attitudes towards using this mobile technology in colleges of education should be formed and established. Positive attitudes towards instructional media lead to more achievement than learning directed to gain only knowledge because students are expected to forget knowledge based on remembering (Husain, 2011).

Forming positive attitudes towards mobile technology increases the desire of the lecturers to learn and improves their abilities to apply and use technology in instruction. (Mohammad & Alkaraki, 2008). The inability of lecturers to use technology in instruction could lead to low student achievement in education. This could be attributed to lecturers' negative attitudes towards the instructional media and the associated hatred and frustration, and these conclusions apply also to lecturers (Keegan, 2010). Many studies emphasize that the positive attitudes towards using the new technologies such as the mobile technology in education are associated with better achievement than negative attitudes. A study by Al-Fahad (2009) indicated students' preference for using the mobile phone in their learning regardless of time and place; that mobile phone enabled them to communicate easily with each other and to exchange information and data related to their instructional materials. McConatha, Praul and Lynch, (2008) study revealed that the students who studied by using the mobile phone achieved higher than the other group. Tennant (2008) and Dong and Agogino (2004) studies indicated that technology enriches learning dramatically through the exchange of information and experiences among themselves. Cook (2007) study indicated that motivation increased towards learning the more they used the mobile phone in education, and they preferred the mobile phone in education. Pachler (2007) thinks that using the mobile technologies in education supports the innovative education and develops the students' activities and strengthens the spirit of research. However, these studies were on students which call for the present study on lecturers' attitude towards mobile technology for instruction.

Gender and areas of specialization are among the factors that the researcher considered being important as are been tested in several studies. Even taking into account the two factors are significant; there is still no clear understanding of how and why these factors may affect teachers' attitudes toward mobile technology use for instruction. Also, literature also associates attitudes by personal characteristics (mediated factors) such as gender, and area of specialization. Assessing attitude of lecturers towards mobile technology for instruction is yet another area in which gender may manifest itself. However, it often neglected in technology utilization for instruction studies (Gefen & Straub, 1997). Having that, this study further understands the moderating effect of gender on the relationship between the attitude and use. Over decades, although many studies have investigated the role of gender in computer-related attitudes and its use, very few studies have incorporated gender as moderator in assessing the attitude and use of mobile technology in an educational context. Chu (2010) revealed that gender differences in the use of the technology should be carefully examined, rather than merely demonstrating differences. Understanding gender differences in the strength of the path coefficients could bring further insight into stereotypical beliefs regarding gender issues, especially in developing countries. Furthermore, the magnitude of gender differences may vary across areas of specialization (Gefen & Straub, 1997).

Area of specialization is the discipline individual lecturers in the universities, polytechnics and colleges of education specialized on (Daramola, 2011). In the colleges of education system, this area of specialization can be classified into five, namely Sciences; Art and Social Sciences; Languages; Vocational Education; and Education (NCCE, 2013). Regardless of the school, the lecturers belong to, the use of mobile technology for effective teaching cannot be over-emphasized. It is generally assumed that lecturers with a science background may be positively predisposed to the computer-based system thereby using it more often. Oludipe (2004) reported that subject discipline has no influence on teachers' level of computer literacy. However, Olumorin (2008) revealed that lecturers in Kwara State, irrespective of their area of specialization, have positive attitude and competence in the use of a computer.

Teacher education is the key to educational development in Nigeria. The teachers hold the key to national transformation and development. This implies that whatever the quality of education in Nigeria today, is a manifestation of the quality of its teachers. This is so because according to the Federal Republic of Nigeria (2004) no education system can rise above the quality of its teachers. Nigeria has made several attempts to improve the quality of education to meet international standard. This goal cannot be achieved without adequate preparation of lecturers especially in use of technology for instruction to meet the challenges of our contemporary time.

In Nigeria today, individual may not use ICT service for different reason ranging from lack of interest, illiteracy, lack of awareness, the exorbitant rate of service, poor quality of service and low per

capita income (Kpolovie & Obilor, 2013; 2014; Kpolovie, Obilor & Ololube, 2015). In Nigerian higher institutions (colleges of education in particular), financial dealings are more or less online but the areas of data assessment such as semester's results, GPAs, lectures timetables, and lectures note are still an important issue that has not been attended to with the use of mobile technology even when fees have been charged for the needed ICT facilities. These issues are posing many questions begging for answers. These questions include 'have the lecturers not known the benefits of the use of mobile technology in the various sphere of life? It is against this background that this present study tends to assess lecturers'attitude towards mobile technology for instruction in colleges of education in North Central, Nigeria.

Statement of the Problem

Mobile technologies have spread among large numbers of people, especially colleges of education students. The teacher education institutions are competing to adopt e-learning and communication media in education since the traditional learning no longer meets the needs of the contemporary society. The colleges of education have to take advantage of the potential applications of the mobile technologies in instruction. Thus, the colleges of education have to provide a special environment to make use of the mobile technologies in developing the lecturers' capabilities in instruction and giving them the opportunity and access to the new innovations to reach a high level of excellence and creativity.

Implementing mobile technology requires a high level of commitment from both lecturers and students; otherwise, it would neither be feasible nor effective. Besides that, it is also important to ascertain lecturers' attitude towards the use of mobile technology for instructional purposes before implementing mobile learning because lecturers are central in the implementation of the teacher education curriculum at the colleges of education. And this has not been adequately researched into. Given that the Nigerian educational system is transiting from face-to-face classroom learning to technology-aided learning, and teachers being the key stakeholders of all formal education, their attitudes towards mobile technology have a significant impact on their decision of whether to accept or reject it. Hence, there is the need to assess the attitude of colleges of education lecturers' toward mobile technology utilization for Instructional purposes in North Central, Nigeria.

Objectives of the Study

This study assessed lecturers' attitude toward mobile technology utilization for instructional purposes in colleges of education in North Central, Nigeria. Specifically, the study assessed:

1. Attitudes of colleges of education lecturers towards mobile technology utilization in instruction.
2. Influence of gender on the attitudes of colleges of education lecturers towards mobile technology utilization in instruction
3. Influence of area of specialization on the attitudes of the colleges of education lecturers towards mobile technology utilization in instruction

Research Questions

Therefore, the study answered the following questions:

1. What is the attitude of the colleges of education lecturers towards mobile technology utilization for instruction?
2. Does gender influence the attitudes of the colleges of education lecturers towards mobile technology utilization for instruction?
3. Does area of specialization influence the attitudes of the colleges of education lecturers towards mobile technology utilization for instruction?

Hypotheses

The following hypotheses were formulated and tested:

1. There is no significant difference in attitudes of Colleges of Education lecturers towards mobile technology utilization for instruction based on gender.

2. There is no significant difference in attitudes of Colleges of Education lecturers towards mobile technology utilization for instruction based on the area of specialization.

Methodology

This study adopted a descriptive survey design of the cross-section type. The population for this study was made up of all lecturers in colleges of education in north central, Nigeria. There are 24 state and federal colleges of education in north central, Nigeria. A random sampling technique was used to select eight colleges of education. The sampled was stratified alongside lecturers' gender and area of specialization. A sample of 665 respondents was sample using stratified random sampling technique.

To collect data from lecturers, a questionnaire tagged "lecturers' attitude toward mobile technology utilization for Instruction" (LATMTUI) was used. The questionnaire consisted of two sections. Section A elicited respondents' information on gender and area of specialization while section B solicited for information on lecturers' attitude toward mobile technology utilization for Instructional purposes in colleges of education. The instrument consisted of 50 items with response mode of the Likert type with four degrees of strongly agree, agree, disagree, and strongly disagree.

The instrument was validated by an educational technology expert in the Federal University of Technology, Minna and a lecturer from Federal College of Education, Kotongora for face and content validity. They were asked to give their opinions on the appropriateness of the items of the instrument to measure what they have been designed for. Their suggestions and criticisms were effected before a final copy of the instrument was produced for administration.

A pilot study was carried out to verify the reliability of the instrument. The instrument was administered to 25 lecturers of the Kogi state college of education (Technical), Kabba while Cronbach alpha was used to calculate the reliability coefficient which yielded a satisfactory level of 0.83. This adjudged the instrument effective for the studies.

Copies of the questionnaire were administered to the sample respondents after permission was sought from the authorities of the sampled colleges. 665 copies of the questionnaire were randomly administered to lecturers in the sampled colleges of education in north central, Nigeria. A total of 650 copies of the questionnaire were returned completely filled representing 97.7% return rate.

Mean was used in answering research question one while t-test was used in testing hypothesis one and ANOVA to answer hypothesis two. A mean of 2.0 was used as a benchmark for analyzing research question one.

Results

The results are presented in order of the research question and hypotheses generated for the study.

Research Question 1

What is the attitude of the colleges of education lecturers towards mobile technologies utilization for instruction?

Table 1:
Mean of lecturers attitude toward mobile technology utilization for instruction in colleges of education

S/N	Items	Mean
1	I think it is convenient to use mobile technology for educational purposes.	2.63
2	Mobile technology usage for educational purposes requires good planning and preparation.	3.19
3	I want to use mobile technology for instructional purposes.	2.94
4	I encourage my colleagues to use mobile technology for instructional purposes	2.43
5	I hope that lecturers communicate with their students by using mobile technology for the instructional purposes.	2.54
6	Mobile technology usage in instructional requires more time than the other methods.	1.65

7	I practice well using mobile technology.	3.71
8	I would like to receive more knowledge, experience and training on mobile technology use for instructional purposes.	3.28
9	I consider the availability of the modern mobile technology for the lecturers to use for instructional purposes is a must.	2.33
10	I think that mobile technology will play an important role in e-learning in the future.	3.16
11	Mobile technology usage in colleges of education is not a priority for me	1.58
12	I need more convincing reasons to use mobile technology in instruction	1.36
13	Many materials will be replaced by mobile technology in the future	2.53
14	It is difficult to develop effective teaching methods by using mobile technology.	1.68
15	Mobile technology will increase my instructional qualifications and my scientific achievement.	2.37
16	I plan to develop my skills in mobile technology for using it for instructional purposes.	2.43
17	I think I can catch up with the development of mobile technologies for using it in colleges of education.	2.86
18	I hate using mobile technology in instruction because I do not know its use.	1.42
19	Mobile technology usage consumes a lot of time.	2.39
20	The practice of using mobile technology is an easy process.	3.19
21	Benefits of mobile technology usage in instruction do not worth its costs.	1.97
22	I think that using the mobile technology in instruction will be expensive financially.	1.48
23	I like to take pictures and record portions of lectures or practical things that I study by using the mobile technology.	2.96
24	It is beneficial to use mobile technology on the personal level.	3.33
25	Using mobile technology provides valuable information.	2.65
26	I like to use the mobile technology because it connects me with any person at any time anywhere.	3.48
27	I think we will be forced to use mobile technology in colleges of education in the future.	2.24
28	I feel that mobile technology use for instructional purposes will cause social rupture between lecturers and students.	1.41
29	I am worried about thinking of the widespread use of mobile technologies in colleges of education.	1.53
30	I do not think that mobile technology will provide good instructional opportunities.	1.91
31	I tend to generalize the use of mobile technology in instructional because it makes a revolution in the world of education.	2.24
32	I think that mobile technology usage in education reduces depending on textbooks.	2.61
33	I prefer using mobile technology in instructional because it is possible to use it anywhere and anytime.	2.92
34	I think that using mobile technology enables students to learn many skills and a lot of knowledge within a short time.	2.65
35	I think that mobile technology usage and its technological development have helped to improve our lives.	2.92
36	I feel comfortable when I use mobile technology for instructional purposes because it saves time and effort.	2.83
37	I like to use mobile technology for its advantages such as indexing names, calendar, calculator….	3.14
38	I enjoy reading topics or access to information related to mobile technology.	2.25
39	I think that learning by mobile technology will be easier to forget than learning in other ways.	1.61
40	I think the educational evaluation process cannot be carried out by using mobile	1.43

	technology.	
41	I like mobile technology usage in education because it can transfer information wirelessly between devices (Bluetooth).	2.87
42	I think mobile technology usage is destructive to the human values.	1.95
43	I feel that mobile technology use for educational purposes deactivated my curiosity.	1.93
44	I feel that mobile technology use for educational purposes does not benefit students and does not attract that their attention.	1.88
45	I think that using mobile technology application enables me to develop my skills in the use of the English language.	2.74
46	I feel that mobile technology should not be used for all instructional purposes.	2.59
47	I am afraid of mobile technology use for educational purposes because of the wrong practices by some students.	2.55
48	I do not encourage using mobile technology for instructional purposes because of some of its applications which pollute values and belief.	1.86
49	Lecturers prefer to use mobile technology for instructional purposes because they are advanced technologies.	2.86
50	I think that mobile technology can help me do a lot of diverse and useful things for me in the field of education.	2.94
	Grand Mean	**2.43**

Table 1 reveals the mean of lecturers' attitude towards mobile technology utilization for instructional purposes in colleges of education. The grand mean of 2.43 reveals that lecturers had a positive attitude toward mobile technology utilization for instructional purposes in colleges of education. A mean of 3.0 - 3.99 was recorded on items 2, 7, 8, 10, 24, 26, and 37. Items 3, 4, 5, 9, 13, 15, 16, 17, 19, 23, 25, 27, 31, 32, 33, 34, 35, 36, 38, 41, 45, 46, 47, 49 and 50 had mean within 2.0 and 2.99. Also, items 6, 11, 12, 14, 21, 22, 28, 29, 30, 39, 40, 42, 43, 44 and 48 had mean in the range of 1.00 – 1.99.

Hypotheses Testing

Ho_1: There is no significant difference in the attitudes of the colleges of education lecturers towards mobile technologies utilization for instruction based on gender.

Table 2: t-test Result for influence of Gender in lecturers attitude towards mobile Technology utilization for instruction

Gender	N	Mean	SD	df	t	Sig (2tailed)
Male	330	17.52	4.01			
				648	2.01	0 .00
Female	320	14.32	3.15			

Table 2 shows the mean of male and female lecturers' attitude towards mobile technology usage in instruction. Male lecturers (M =17.52, SD 4.01) and the female lecturers (M =14.32, SD 3.15) are significantly different, t (648) = 2.01, p = 0.00. Hence there was a significant difference between male and female lecturers' attitude towards mobile technology utilization in instruction. This necessitated the rejection of the hypothesis. The difference is the direction of the male lecturers.

Ho2: There is no significant difference in the attitudes of the colleges of education lecturers towards mobile technologies use for instruction based on the area of specialization.

Table 3:
ANOVA Result on influence of Area of specialization on lecturers attitude towards mobile technology for instruction

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2751.007	2	1375.503	26.54	1.10
Within Groups	77909.532	647	51.836		
Total	80660.539	649			

From table 3, it was revealed that, F (2, 647) =26.54, P>0.05 for the lecturer's attitude towards mobile technology utilization for instruction. There was no significant difference among lecturers attitude towards mobile technology utilization for instruction based on their areas of specialization. This necessitated the accepting the hypothesis.

Summary of Findings

1. Lecturers attitudes were positive towards mobile technology utilization for instruction with a grand mean of 2.43
2. Gender had an influence on lecturers attitude towards mobile technology utilization for instruction in favour of male, t (648) = 2.01, p = 0.00.
3. Area of specialization had no influence on lecturers attitude towards mobile technology utilization for instruction

Discussions

Analysis of the attitude of lecturers towards mobile technology utilization for instructional purposes is accepted as an indicator of positive attitudes towards mobile technology utilization for instruction in colleges of education in North Central, Nigeria. This result can be interpreted that lecturers realize the benefits of mobile technology use for instruction in colleges of education. The multi-uses and applications due to its great capabilities rendered by mobile technology both the way of access to information or access to data and the speed to get it in an interesting way to attract the attention of the lecturers. Lecturers may realize these benefits through the use of mobile technology, both on the smartphones, Android phones tablets and I-Phone, and so on. This result is consistent with the results of the studies of Al-Fahad (2009), Tenant (2008), Waycott and Kuklsca-hulme (2003) and Cook (2007).

The results show that there was a significant difference among the lecturers' attitudes towards the mobile technology utilization for instructional purposes attributed to gender. This result may be attributed to the attitudes of male and female lecturers towards the mobile technology. Besides, the general characteristics of males and females and the different cultural, social and economic contexts in which they live, reflecting divergent views of both males and females towards the mobile technology use for instruction in colleges of education. This reveals that there was a significant difference in the attitude of male and female lecturers toward mobile technology utilization for instructional purposes in colleges of education. This result is inconsistent with the results of the studies of Pascler (2007), Al-Fahad (2009), Tenant (2008), Cook (2007), and Dang and Agogino (2004). Hence, the issue of gender and mobile technology remains inconclusive.

Area of specialization had no influence on lecturers' attitude towards mobile technology utilization for instruction. The findings revealed no differences in the lecturers' area of specialization on lecturers' attitude towards mobile technology use for instruction. This finding negates the findings of Oludipe (2004) but it is in agreement with the findings of Alcuin (2006), Thomas and Mart (2006), Olumorin (2008), Agbatogun (2010) and Daramola (2011). This indicates that lecturers in colleges of

education irrespective of their area of specialization want to take the advantage mobile technology had to offer in the teaching-learning process.

Implications of the findings

The results of this study revealed that lecturers in colleges of education manifested positive attitude to mobile technology use for instruction. This indicates that lecturers had some measure of interest in mobile technology. This implies that the non-usage of mobile technology by colleges of education lecturers might be attributed to the non-availability of mobile technology facilities in colleges of education. It could be deduced from this finding that if the facilities are available, lecturers might adopt mobile technology for instruction in colleges of education.

Gender difference in lecturers' attitude towards mobile technology for instruction in colleges of education in north central, Nigeria, calls for concern while planning to adopt mobile technology tools for instruction. This is very important if female lecturers are to benefit maximally from the current drive to integrate mobile technology into teacher education programmes in Nigeria.

Therefore, there were no significant differences in lecturers' attitude towards mobile technology for instruction with respect to the area of specialization. This indicated that lecturers, irrespective of their area of specialization, had the same attitude. This implies that lecturers are aware of the importance of mobile technology in the teaching-learning process and in their professional calling.

Conclusion

Mobile technology coupled with Internet accessibility has increased not only how we communicate but also how we might engage in learning. The ubiquity of mobile technology, such as smartphones and tablet devices, makes it a valuable tool for accessing learning resources on the Internet. This study revealed lecturers' positive attitude towards mobile technology for instruction but gender had an influence on their attitude while lectures' area of specialization had no influence on their attitude towards mobile technology for instruction.

In conclusion, findings from this study suggest that teachers' positive attitude to mobile technology is essential if colleges of education need to successfully transform its instructional process from the current classroom face-to-face methods to use of mobile technology. Teachers are the key stakeholders of education and their attitude towards mobile learning has a significant impact on lecturers' adoption of the new technology for instructional purposes in colleges of education across Nigeria.

Recommendations:

Arising from the findings of the study, the researcher recommended the following:

- Mobile technology literacy should be spread in colleges of education in view of the positive attitudes of the lecturers towards the utilization of the mobile technology for instructional purposes. Also, Colleges of education authorities should provide an enabling environment for lecturers to encourage the adoption and utilization of mobile technology for instruction to sustain the positive attitude.
- Programmes should be designed and implemented to educate female lecturers in colleges of education about the adoption of the mobile technology for instructional purposes and equally train them on the utilization of mobile technology for instructional purposes.

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