

## Lecturer's Awareness and Attitude towards Utilization of Mobile Technologies for Instructional Delivery in Colleges of Education in Niger State

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### Abstract

*This study investigates Lecturers' Awareness and Attitude towards Utilization of Mobile Technologies for Instructional Delivery in Colleges of Education in Niger State. Descriptive survey research design was used for the study. Four research questions were raised and two correspondent null hypotheses were formulated 0.05 level of significance. Randomly 234 sampled lecturers from Federal College of Education Kontagora Niger State and Niger State College of Education Minna were used for the study of (males = 163 and females = 71). The instrument used to collect data named Questionnaire on Lecturers' Awareness and Attitude towards Utilization of Mobile Technology for Instructional Delivery (QLAATUMTID). Data collected was analyzed using mean and standard deviation while ANOVA was used to test the two null hypotheses that was formulated. The findings of the study indicated that there was significant difference between male and female lecturers' in the level of awareness on the use of mobile technologies for instructional delivery in Colleges of Education in Niger State. There was no significant difference between attitude of male and female lecturers' on the use of mobile technologies for instructional delivery in Colleges of Education. Based on the findings of the study, it was recommended that tax should be remove from any mobile technologies materials imported to the country strictly for educational purpose. Free mobile learning programmes, particularly on the use of mobile technologies should be organized by the appropriate governments' agency for the lecturers of colleges of education in Niger State. This will enable the lecturers to acquire basic and needed skills in mobile technologies for effective and efficient instructions delivery.*

**Key works:** Mobile Technologies, awareness and attitude

## 1. INTRODUCTION

Technology has become a tool for advancement globally in the 21<sup>st</sup> century in all aspect of human endeavors specifically in classroom instruction for enhancement of learning outcomes. Trentin and Repetto, (2013) Opined that the latest innovation in this field is the development and use of mobile devices (also referred to as hand-held devices) such as iPads, android and smartphones. These mobile devices are affordable and accessible, hence are within the reach of the masses. Varieties of new tools have being introduced which are user friendly, to the extent that they facilitate teaching and learning in our educational system. Likewise, developments in wireless communication networks such as the 4G/3G/data card, data bundles, Bluetooth, wi-Fi and general pocket radio service (GPRS) further extend this opportunity for mobile technology users (Charles, 2013). The term 'mobile technologies or devices', as used in this research, are electronic devices that enables some kind of computing, and which is small enough to be carried around easily. Mobile devices are used for a whole range of digital services that we rely on every day. Use of desktop computer is still relevant but the use of mobile devices for digital services has skyrocketed in the last couple of years, these includes mobile computers (such as laptops), mobile devices and wireless communication tools that are used to enhance mobile learning in the field of education (Aicha, 2014).

Mobile learning (M-learning) is a new trend that attracts many researchers to explore this technologies and also study its impacts on lecturers and students, thereby develop the required learning skills. M-learning researchers attempt to maximize the utilities of mobile technologies in higher institutions. Mcconatha *et al.*, (2008) opined that M-learning is a learning employed through the use of mobile devices. This devices include smartphones and small handheld devices. Whereas Alzaza *et al.*, (2011) stated that, M-learning is the next generation of E-learning that uses mobile technologies. Homan and Wood (2003) sees M-learning as the technology that changed the ways teachers and learners communicate, interact, and behave with each other and their perceptions towards their learning. In addition, Al Emran *et al.*, (2014) demonstrated that M-learning facilitates knowledge sharing among students and educators while interacting with each other. Matias and Wolf (2013) expressed that M-learning is not only the learning that is based on the use of mobile devices but also the learning that is mediated across multiple



learning outcomes. M-learning assist students with disabilities to be taught and motivate them to attend classes remotely with the help of their mobile devices (Rajasingham, 2011). M-learning has gradually penetrated the traditional teaching and learning by integrating the mobile technology applications which could be the "new-breath" in almost all of the classrooms, whether direct or indirect ways. With the advent of mobile technology applications, higher education has been enriched by extending the conventional educational platforms and encouraging the distance learning or what is called "out-of-class" settings. Mobile technology also enables students to drive their own learning and explore their own interests since it offers more flexible and accessible learning and thereby influence students' attitude (Crescente & Lee, 2011). However, currently, there has not been much research to explore on lecturers' awareness and attitude towards utilization of mobile technologies for instructional delivery in Colleges of Education in Niger State, given that it is still an emerging technology.

Attitude is an inner psychic state influencing behaviour (Butler, 2013). The inner state of a person can be understood from his actions and words. For instance, one may presume that a person actively avoiding a computer has a negative attitude towards it. Attitude is not an inborn, instinct phenomenon; it mainly depends upon a person's experience and its impact in a new situation (Saparniene, *et al.*, 2002). Akababa-Altun (2001) opined attitude is an acquisitioned tendency, he further explained that pupils form attitude through either like or dislike, favourable or unfavourable towards event(s) in the environment. The inner state of a person can be understood from his actions and words. For instance, one may presume that a person actively avoiding a computer has a negative attitude towards it.

## **2. STATEMENT OF THE RESEARCH PROBLEM**

Over the years, the most common use of instructional delivery in Nigeria Colleges of Education has been the conventional method of teaching. Sadly, this form of teaching method has been characterized by numerous problems such as pace leaning and learning at any distance apart from been in the classroom, thereby denying students that need to listen to instructional delivery repeated before they can learn better. If instructional delivery to be conducted by the lecturers with the use of mobile technologies mode in Colleges of Education in Niger State, are the lecturers aware of

mobile technologies? More so, what attitude would lecturers have towards mobile technologies in Niger State? Therefore, It is necessary to look into the current method of instructional delivery which is mobile technologies, in order to get a suitable strategy that will lead to effective teaching and learning in Colleges of Education. It is on this note that the researcher intends to find out lecturers' awareness and attitude towards utilization of mobile technologies for instructional delivery in colleges of education in Niger State.

### **2.1 Purpose of the Study**

The purpose of this study is to determine the lecturers' awareness and attitude towards utilization of mobile technologies for instructional delivery in Colleges of Education in Niger State. Specifically,

1. Examine lecturers' awareness in the use of mobile technologies for instructional delivery in Colleges of Education.
2. Determine the awareness of male and female lecturers towards the use of mobile technologies for instructional delivery in Colleges of Education.
3. Examine lecturers' attitude in the use of mobile technologies for instructional delivery in Colleges of Education.
4. Examine the attitude of male and female lecturers towards the use of mobile technologies for instructional delivery in Colleges of Education.

### **Research Questions**

1. What is the mean level of lecturers' awareness on the use of mobile technologies for instructional delivery in Colleges of Education?
2. What are the mean level of male and female lecturers' awareness on the use of mobile technologies for instructional delivery in Colleges of Education?
3. What is the mean of attitude of lecturers to use mobile technologies for instructional delivery in Colleges of Education?
4. What are the mean of male and female lecturers' attitude towards use of mobile technologies for instructional delivery in Colleges of Education in Niger State?



### Research Hypotheses

- H<sub>01</sub>: There is no significant difference between male and female lecturers' in the level of awareness on the use of mobile technologies for instructional delivery in Colleges of Education.
- H<sub>02</sub>: There is no significant difference between male and female lecturers attitude towards use of mobile technologies for instructional delivery in Niger State Colleges of Education.

### 3. METHODOLOGY

The research adopted the descriptive survey design. The population of the study comprises 565 Lecturers of the two Colleges of Education in Niger State. The institutions are: Federal College of Education Kontagora and Niger State College of Education Minna. The lecturers' population comprises of 430 males and 135 females. The target population for the study was made up of entire 565 lecturers from both Federal College of Education and Niger State College of Education Minna. This entire population will serve as target population for the purpose of generalization of the work, because in survey study the larger the sample the better the study. The sample of this study was made up of 234 lecturers (163 males and 71 females) from the Colleges of Education in Niger State (FCE Kontagora and COE Minna). A random sampling technique was used for the study, the reason for using this technique was for every respondents to be given equal opportunity of being selected.

The Instruments for the study was researcher-designed questionnaire named 'Lecturers' Awareness and Attitude towards Utilization of Mobile Technology for Instructional Delivery (LAATUMTID)' was employed for the study. The questionnaire is a close-ended questionnaire and it consists of three sections (Sections A, B & C). Section A was used in collected demographic data of respondents, Section B consists of statements on lecturers' awareness towards the use of mobile technologies for academic purposes and Section C was used in collected data on lecturers' attitude towards the use of mobile technologies for instructional delivery and gender was considered as moderating variable. All items was presented using a 5-point Scale in which Strongly Agree (SA) was awarded 5 points, Agree (A) was awarded 4 points, Undecided (U) was awarded 3 points, Disagree (D) was awarded 2

points and Strongly Disagree (SD) was awarded 1. The questionnaire (LAATUMTID), was validated by two Educational Technology experts and one science education lecturer from the Department of Educational Technology and Science Education Federal University of Technology Minna respectively. The reliability of the research instrument was determined after a trial testing using a simple random sample of 20 respondents (Lecturers) from the School of Technical Education, Niger State College of Education Minna, who are part of the population but not part of the sample for this study. The administration was done once and a reliability coefficient of 0.851 and 0.837 were respectively obtained for awareness and attitude using Cronbach Alpha formula, which implies the instrument is reliable. The questionnaire was administered on the groups during four weeks of the study. Mean and standard deviation were used to answer research questions and ANOVA was used to analyze research hypotheses. Conclusion it was established that there was significant difference between male and female lecturers' in the level of awareness on the use of mobile technologies for instructional delivery in Colleges of Education in Niger State. Also there was no significant difference between attitude of male and female lecturers' on the use of mobile technologies for instructional delivery in Colleges of Education.



#### 4. RESULTS

**Research Question One:** What is the mean on level of lecturers' awareness on the use of mobile technologies for instructional delivery in Colleges of Education?

**Table 1: Mean and standard deviation on level of lecturers' awareness on the use of mobile technologies for instructional delivery in Colleges of Education**

SN	Items	N	$\bar{X}$	Sd	Ag
Q1	Mobile phones can be used for instructional delivery for schools	234	3.77	1.309	Ag
Q2	Personal Digital Assistant is used for instructional delivery in institution of learning.	234	3.59	2.420	Ag
Q3	Am aware that wireless connectivity as mobile technologies for instructional delivery is vital form in education	234	3.44	1.219	Ag
Q4	e-book reader is a mobile technology for instructional delivery in school	234	3.55	1.301	Ag
Q5	Am aware that mobile technologies are good for instructional delivery in tertiary institution.	234	3.62	1.183	Ag
Q6	The use of mobile technologies for instructional delivery will create awareness to the lecturers' as a mode of instructional delivery	234	3.47	1.220	Ag
Q7	Teaching with mobile technologies saves time during instruction	234	3.57	1.226	Ag
Q8	Teaching using mobile technologies yield more than conventional teaching.	234	2.51	.944	Disa
Q9	Use of Learning Management System for instruction is feasible only by using mobile technologies.	234	3.60	1.174	Ag
Q10	I am aware that the use of internet is supported by mobile technologies.	234	3.50	1.238	Ag

#### Decision mean 3.0

Table 1 Indicate awareness of lecturers on use of new media for instruction. It was agreed with the mean values ranging from 3.44 to 3.77. From the analysis, it was revealed that lecturers' awareness on the use of mobile technologies for instructional delivery in colleges of education in the Niger State is positive. The implication is that, the awareness of lecturers on the use of mobile technologies is favourable since nine out of ten items on awareness show agreed based on decision mean of 3.0.

**Research Question Two:** What are the mean level of male and female lecturers' awareness on the use of mobile technologies for instructional delivery in Colleges of Education?

**Table: 2 Mean and standard deviation of male and female lecturers' awareness level on the use of mobile technologies for instructional delivery in Colleges of Education**

Gender	N	$\bar{X}$	Sd	Mean Difference
Male	163	36.44	6.34	6.05
Female	71	30.39	9.79	

Table 2 shows the mean and standard deviation of the male and female lecturers' awareness towards use of mobile technologies for instructional delivery in Colleges of Education in Niger State. From the result, it can be seen that mean and standard deviation of male and female are; male  $\bar{X} = 36.44$ ,  $SD = 6.34$  and  $\bar{X} = 30.39$ ,  $SD = 9.79$ , the mean difference is 6.05 in favour of male lecturers awareness. To determine whether the mean scores have any significant difference, a corresponding null hypothesis was tested.

**Research Question Three:** What is the mean of attitude of lecturers to use mobile technologies for instructional delivery in Colleges of Education?



**Table 3: Mean and standard deviation on attitude of lecturers to use mobile technologies for instructional delivery in Colleges of Education**

SN		N	$\bar{X}$	Sd	Decision
Q1	I believed that the use of mobile technologies is a good platforms where I can impact, update my knowledge and skills.	234	3.61	1.138	Agree
Q2	I want to be involved in any mobile learning activities	234	3.36	1.120	Agree
Q3	I prefer conventional teaching to the use of mobile technologies for instructional delivery.	234	2.25	.863	Disagree
Q4	I prefer the use of mobile technologies for my instructional delivery.	234	3.32	1.177	Agree
Q5	I can spend extra money to know how to use mobile technologies for my instructional delivery.	234	3.37	1.155	Agree
Q6	I am eager to see classes well equipped with mobile technologies.	234	3.36	1.215	Agree
Q7	I use e-book reader to study online educational resources	234	3.38	1.102	Agree
Q8	I use my mobile phones to deliver lectures via whatsapp, edmodu, kahoot, instagram, etc.	234	3.53	1.120	Agree
Q9	I use 3G/4G facilities on my mobile phone.	234	3.55	1.068	Agree
Q10	I always advocate for the use of mobile technologies for instructional delivery.	234	3.55	1.084	Agree

**Decision mean 3.0**

Table 3 Indicate attitude of lecturers towards use mobile technologies for instructional delivery. It was agreed with the mean values ranging from 3.32 to 3.38, it was revealed that lecturers attitude promote usage of mobile technologies for instructional delivery in colleges of education in the Niger State. The implication is that, the attitude of lecturers towards use mobile technologies for instructional delivery is favourable since nine out of ten items on attitude show agreed based on decision mean 3.0.

**Research Question Four:** What are the mean of male and female lecturers' attitude towards use of mobile technologies for instructional delivery in Colleges of Education in Niger State?

**Table 4: Mean and Standard Deviation of male and female lecturers' attitude towards use of mobile technologies for instructional delivery in Colleges of Education in Niger State**

Gender	N	$\bar{X}$	Sd	Mean Difference
Male	163	32.96	6.49	1.1
Female	71	34.06	5.08	

Table 4 shows the mean and standard deviation of the male and female lecturers' attitude towards use of mobile technologies for instructional delivery in Colleges of Education in Niger State. From the result, it can be seen that mean and standard deviation of male and female are; male  $\bar{X} = 32.96$ ,  $SD = 6.49$  and  $\bar{X} = 34.06$ ,  $SD = 5.08$ , the mean difference is 1.1 in favour of female lecturers attitude. To determine whether the mean scores have any significant difference, a corresponding null hypothesis is tested.

**Hypothesis One:** There is no significant difference between male and female lecturers' in the level of awareness on the use of mobile technologies for instructional delivery in Colleges of Education.

**Table 5: ANOVA analysis of male and female lecturers' level of awareness towards use of mobile technologies for instructional delivery in Niger State Colleges of Education**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1805.007	1	1805.007	31.650	.000
Within Groups	13231.031	232	57.030		
Total	15036.038	233			

S 0.05 level of significant

Table 5: shows the hypothesis that stated that no significant difference between male and female lecturers' in the level of awareness on the use of mobile technologies for instructional delivery in Colleges of Education was tested. The finding in (table 4.7) showed  $f = 31.650$  with  $p = 0.00$ . Since  $p < 0.05$ ,  $H_0$  was rejected. Therefore there was significant difference between male and female lecturers' in the level of awareness on



the use of mobile technologies for instructional delivery in Colleges of Education in Niger State.

**Hypothesis Two:** There is no significant difference between attitude of male and female lecturers' on the use of mobile technologies for instructional delivery in Colleges of Education.

**Table 6: ANOVA analysis of male and female lecturers' attitude towards use of mobile technologies for instructional delivery in Niger State Colleges of Education**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	59.765	1	59.765	1.604	.207
Within Groups	8642.474	232	37.252		
Total	8702.239	233			

NS 0.05 level of significant

Table 6: shows the hypothesis that stated that no significant difference between attitude of male and female lecturers' on the use of mobile technologies for instructional delivery in Colleges of Education was tested. The finding in (table 4.8) showed  $f = 1.604$  with  $p = 0.207$  since  $p > 0.05$ ,  $H_0$ , was accepted. Therefore there was no significant difference between attitude of male and female lecturers' on the use of mobile technologies for instructional delivery in Colleges of Education.

## 5. DISCUSSION OF FINDINGS

There was significant difference between male and female lecturers' in the level of awareness on the use of mobile technologies for instructional delivery in Colleges of Education in Niger State. This is in agreement with the findings of Hamisi (2019) who carried out study on awareness and use of a mobile phone as a potential pedagogical tool among secondary school teachers. The findings revealed that teachers are well informed of the benefits, but they hardly utilize it for educational purposes also there is significant in the gender of awareness of male and female teachers in the use of mobile phone as a potential pedagogical tool. This is contrary to the findings of Venkataraman (2018) who carried out study on M - learning

awareness of high school teachers. The result indicates that there is no significant difference in the awareness of male and female high school teachers.

There was no significant difference between attitude of male and female lecturers' on the use of mobile technologies for instructional delivery in Colleges of Education. The findings is in agreement with the study of Hilao and Wichadee (2017) who carried out study on gender differences in mobile phone usage for language learning, attitude, and performance. The findings revealed that male and female students did not differ in their usage, attitudes toward mobile phone uses for language learning as well as their learning performance at a significance level. This is in disagreement with the findings of Youngkyun *et al.*, (2017) who investigated the attitudes toward mobile learning among Korean teachers. It was revealed that Korean teachers' mobile learning attitudes was low in general, female teachers were more positive than male teachers in their attitudes. Also in contrary to the findings of Halil and Saffet (2018) who investigated the attitudes of prospective mathematics teachers towards mobile learning based on different variables and examined their opinions on this subject. It was found that the attitudes of the prospective teachers towards mobile learning were on a medium-level both in the general total and sub-factor (freedom, advantages, practicality and limitations) scores, and the attitudes of the male participants were higher than those of the female participants.

## 6. CONCLUSIONS

In this study, effort has been made to investigate the lecturers' awareness, attitude and readiness towards utilization of mobile technologies for instructional delivery in Colleges of Education in Niger State. From the findings of this study, it is concluded that lecturers in colleges of education have positive attitude towards utilization of mobile technologies for instructional delivery in Colleges of Education in Niger State. Majority of respondents favoured the use of mobile technologies for instructional delivery. More importantly, they believe that the use of mobile technologies will give room for learners to learn at their own pace. Also, most of the respondents agreed that the use of mobile technologies is a good platforms where knowledge and skills can be impacted.



## 7. RECOMMENDATIONS

The following recommendations are proffered based on the findings of this study:

1. Tax should be removed from any mobile technologies materials imported to the country strictly for educational purposes.
2. Free mobile learning programmes, particularly on the use of mobile technologies should be organized by appropriate governments' agencies for the lecturers of colleges of education in Niger State. This will enable the lecturers to acquire basic and needed skills in mobile technologies for effective and efficient instructions delivery.
3. Both lecturers and students should be encouraged and taught on how to make their smart phones for more educative purpose rather than entertainment, as smart phones have been discovered to be vital tools for edutainment. This will go a long way helping both lecturers and students to maintain positive attitude towards use of mobile technologies in Colleges of Education.

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