



Education Lecturers' Perceived Use of Mobile Technologies for Instruction

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ABSTRACT

The mobile technology can be beneficial for higher education due to its ubiquitous nature and ability to shape information processes. The objectives were to (i) investigate education lecturers perceived use of mobile technologies for instruction; (ii) investigate the effect of gender on lecturers perceived use of mobile technologies for instruction. The study was a descriptive research of survey type. Random sampling technique was adopted to select 148 respondents that were involved in this study from the faculty of education. Data were analysed using frequency and percentage to answer research questions while t-test was used to test the hypothesis at 0.05 significant level. The findings established that education lecturers have optimistic perception in the use of mobile technologies for instruction. It was thus concluded that lecturers in the field of education who perceived mobile technology to be useful are those who used it for their teaching activities. The study recommended that Lecturers should be encouraged to explore different ways in which mobile technologies can be used in teaching and learning.

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1. INTRODUCTION

Etymologically, the word "Education" is derived from the Latin words "educare" and "educere". Educare refers to "to bring up" or "to nourish", whereas the word "educere" means "to bring forth" or "to drag out". Some others believe that the word has been derived from another Latin word "educantum" which has two components. "E" implies a movement from inward to outward and "duco" refers to developing or progressing (Alani, 2021). The rationale of these words reveals that education aims at providing a learner or a child a nourishing environment to bring out and develop the latent potentiality hidden inside him. Also, education seeks to nourish the good qualities and draw out the best in every individual. According to John Dewey, Education is not a preparation for life, rather it is the living. Education is the process of living through a continuous reconstruction of experiences. It is the development of all those capacities in the individual which will enable him to control his environment and fulfil his possibilities. The word "technology" has often been misconstrued to relate only to professionals, and the school has found it difficult to give it an appropriate place in the curriculum (Benade, 2020; Biesta, 2015). Traxler (2010) clearly shown that the development of technology begins from the society and end with the society and that is in every technology, the overall aim is to exploit the existing scientific and other knowledge for useful ends.

Gulek and Demirtas (2015) observed that students who used mobile technologies had increased collaboration, participation, access to information, time spent on assignments as well as improvement in research. Students also showed independent study, a more active learning approach, problem solving skills, critical thinking and showed greater enthusiasm in using mobile phone technologies. Gulek & Demirtas (2015) further explains that mobile phone, just like any other instructional technology, are not supposed to substitute personal interactions between lecturers and their students, but rather should be used as an additional means to support and enhancing students learning experiences.

According to Simsek (2020), instruction requires not only systematic guidance for learning but also a purposeful organization of experiences to help students achieve the desired change in their performances. Instruction is also known as an action taken by lecturers to create a stimulating learning environment for the purpose of providing guidance along with the necessary instructional tools and carrying out activities that will facilitate learning and help develop behaviour appropriate for the gains students are supposed to have (García-Gómez, 2022; Iyamuremye et al., 2022). According to Smith & Ragan (2004), instruction is the development and delivery of information and activities that are created to facilitate attainment of intended, specific learning goals.

When learners are actively involved with technology-enhanced learning, they may be more likely to understand the sense of applying technology in learning; also, learners might feel more supported and be willing to accept the technology if they are. Despite the importance of pedagogical roles that students and teachers play, to our knowledge, no empirical studies explicitly examine how users' pedagogical role moderates the relationship between their perception of mobile technology. Sha et al. (2012) suggest that students' perceptions might positively impact their engagement in mobile learning in a self-regulated learning process. Yet, we do not know how students' perception of mobile technology impacts teaching and learning process.

Mobile technologies for learning can enlarge the scope of tertiary education and allow it to better reach students (Alani et al., 2022; Nuhu et al., 2022). The use of these technologies

for learning is equally capable of providing a more interactive and effective type of learning to meet individuals' learners needs (El-Hussein & Cronje, 2012; Vavoula, et al. 2012) Mobile technology can be beneficial for higher education due to its ubiquitous nature and ability to shape information processes.

Gender refers to the social attributes and opportunities associated with being male and female, the relationships between women and men and girls and boys, and the relations between women and between men (Berger, 2011; Gioli & Milan, 2012). According to UNESCO, gender refers to the roles and responsibilities of men and women that are created in our families, our societies, and our cultures. The concept of gender also includes the expectations held about the characteristics, aptitudes and likely behaviours of both women and men (femininity and masculinity) (UNESCO, 2014). In the past only the word 'Sex' was used to refer to both the physical bodies of males and females as well as the different social roles played by men and women. However, later it has been found that the word Sex is not enough to describe the many ways in which human beings express themselves, their behaviour in culture, and their social environment. That is to say, the terms male and female became questionable terms and ways of understanding difference for those who wanted to talk about the ways in which cultural norms or traditions are created and how they can change. One's physical body, after all, cannot explain how they live and are expected to live such different lives.

The concept 'Gender' was used for the first time in the 1940s by John Money in a discourse meant to legitimize sex change, and it began to be employed in the social sciences from the late 1960s onwards (Unger et al., 2014), hence from that period the question of gender has come to be central to discussions of social life (Risman, 2018; Turner & Mooney, 2016). However, the real emergence of gender as a concept on its own is largely associated with the second-wave feminism which drew attention to sexual divisions in society and to the patterns of social difference and inequality that arose. Feminist scholars began to develop different theories of how "woman" was created and began to use "gender," rather than sex, as the main way of discussing the relationship between women and men. Some feminists believe that a woman is nothing but a 'sexual object for men' and one becomes a woman by this process of objectification (Haslanger, 2018; Jütten, 2016; Turner & Mooney, 2016).

Area of specialization is referred to the course or subject a lecturer is specialized on. Being a specialist is being rooted in the subject matter and the concept used to delivery lesson effectively. It is very true that subject specialists are not versatile in other subject, but there are competent in their area of specialization. Since it has to do with students' academic performance, specialist teachers would know how to captivate and motivate students to learn by being simple to understand to content and objectives of lessons presented to students (Turner & Mooney, 2016). Carp et al. (2012) states that a teacher who specialized in a subject is an asset to the students who benefits from the teaching.

Some works like those of Trinder (2013), which provided theoretical support for the importance of area of specialization and teachers effectiveness. Also, Amadi (2012); Durojaiye (2011); NERDC (2013) and all argued from a theoretical perspective the importance of area of specialization in teaching. The empirical research findings of Cartwright et al. (2012) & Patton (2011) and also have a bearing on the teaching area of specialization and teaching effectiveness. Durojaiye (2011) stated that the major task of a teacher is to guide the students to acquire the knowledge he has acquired, to train his pupils in social, technical, and academic skills and to guide the learning process which he has passed through himself (Kim 2016). Fischer et al. (2020) observed that teachers' knowledge on the subject matter is positively related to student's achievements. Subject matter specialization is 'sine qua non' for every

teacher. Generally, it is assumed and expected that the teacher must acquire a reasonable measure of knowledge of the subject to reasonably cope with the demands of teaching. Area of specialization culminates to subject matter knowledge; knowledge is dynamic, and the acquisition of current information is sometimes costly and not easy to come by. The greatest weakness of subject matter specialization of teachers in secondary English lies on their college training. By this statement, the author recognizes that College work serves to adequately equip would-be teachers with sufficient knowledge of the content of their subject of specialization or because they are inherently not subject to manipulation (Fischer et al. 2020). But many education lecturers, educators were likely not using mobile technology to its maximum potential. Lecturers are not engaging in the frequent use of mobile technologies to support and supplement instructions and their learning experiences, as these technologies assist in simplifying concepts and could lead to improved academic performance. The potential of mobile technologies facilitates engagement and participation in discussion when used in the classroom setting, it allows students to adapt course content to fit their learning style and pace (Balakrishnan & Gan, 2016; Geng et al., 2019; Chaka & Govender, 2017). More attention is to be paid to the more obvious reality that the usefulness of this emerging technology can remain in the deep shadows if the lecturers who are supposedly meant to make use of it to facilitate their students are not either aware of its effectiveness, refrain for the use of it due to cultural beliefs or orientations or do not see it as a tool for learning rather a tool for just entertainment. Hence, the research fills the gap by investigating the education lecturers' perceived use of Mobile technologies for instruction in university of Ilorin

The main objective of the study is to investigate the Education lecturers' perceived use of Mobile technologies for instruction in university of Ilorin. Specifically, the study investigated the education lecturers perceived ease of use of mobile technologies for instruction, and investigated the effect of gender on Education lecturers perceived use of mobile technologies for instruction.

2. METHODOLOGY

The study is a descriptive research of the survey type. Survey is chosen for this study because it enabled the researcher to collect information about education lecturers perceived use of mobile technologies for instruction. A researcher designed Questionnaires were used to collect information. The populations for the study were Education lecturers in the University of Ilorin, Ilorin, Nigeria. The target populations for this study were based on Education lecturers in university of Ilorin, kwara state, Nigeria. The sample were purposely drawn from university of Ilorin lecturers on the premise that they make use of mobile technologies for teaching and learning. Faculty of Education is two hundred and six (206). All the entire population in the entire faculty in the faculty was purposely sampled.

A researcher designed questionnaires titled "Education lecturers perceived use of mobile technologies for instruction in university of Ilorin, Nigeria. The questionnaire was divided into two (2) sections. Section A consisted of demographic data of the respondents and Mobile technology tools availability; section B sought information on the variables selected from the study. The questionnaire consisted of twenty (20) questions and adapted attitudinal scale with reference option of SA=Strongly Agree, A=Agree, SD= Strongly Disagree, D=Disagree. Response to each statement was identified by ticking the appropriate column assigned to the statement.

The research instruments were validated by three (3) lecturers in the department of Educational Technology and the supervisor in the department of Educational Technology for

face and content validity. All necessary corrections, amendments, modification, and suggestions were made before and administration of the instrument. The questionnaires were distributed to the respondents in the selected faculty and be administered by the respondents. It was collected immediately after they have been adequately completed. The data obtained through the questionnaires were subjected to descriptive and inferential statistics. Frequency count and percentage were used to answer the research question while t-test was employed to answer research hypotheses.

3. RESULT AND DISCUSSION

A total of 206 education lecturers from University of Ilorin, Kwara State made up the sample for this study. The 206 respondents were given the research instrument with the items, and eventually but 148 were available and responses from the 148 lecturers were properly filled and returned amounting to 71.8% response rate.

Table 1. Respondents Information based on Gender

Gender	Frequency	Percent	Cumulative Percent
Male	81	54.7	54.7
Female	67	45.3	100.0
Total	148	100.0	

The respondents' information as shown in table 1 showed that 81(54.7%) of the respondents are male while 67(45.3%) of the respondents are female.

3.1. What is the perceived use of mobile technologies for instruction by education lecturers?

In other to deduce the perceived use of mobile technologies for instruction by education lecturers, mean and standard deviation was employed.

Table 2. Education Lecturers' Perceived Usefulness of Mobile Technologies

S/N	Perceived Usefulness	Mean	Std. Dev
1.	Mobile technologies enhances easier access to information anywhere and anytime	3.65	0.481
2.	I feel more connected with my students by using mobile technology	3.51	0.53
3.	Mobile technologies increases communication between the lecturer and the student	3.45	0.527
4.	I use mobile technology to create an easy communication with my colleagues.	3.43	0.599
5.	Mobile technologies help lecturers be more prepared for class by easily accessing information before class.	3.49	0.579
6.	I utilize mobile technology for the purpose of teaching and learning	3.43	0.575
7.	I feel safe or secure using mobile technology	3.41	0.639
8.	I can research at my own pace using mobile technology	3.47	0.687
9.	Mobile technologies allow students to get access to up-to date Information through the Web.	3.41	0.595

S/N	Perceived Usefulness	Mean	Std. Dev
10.	I can send emails to my science or education students to discuss subject content and attach course outline and other important information using mobile technology	3.34	0.668
11.	I access and download textual materials, audio and video clips for my class directly using mobile technology	3.36	0.732
12.	I use my mobile technology to contact my students for important information.	3.93	4.644
13.	I can send notifications (class cancellations, change of lecture venue, change in time of lectures and other administrative duties) with the help of mobile technology	3.38	0.735
14.	I encourage students submit their assignments online using their mobile technology devices	3.32	0.643
15.	I have course materials such as slides, lecture notes and practice quizzes available on my mobile technology.	3.31	0.681
16.	I read news, books and articles online directly from my mobile technology in order to gather more information on topics treated in class	3.47	0.602
17.	I use online science dictionaries on my mobile technology to get definitions for my class.	3.38	0.59
18.	Mobile technologies fostered interaction and teamwork between me and my colleague.	3.30	0.635
19.	Mobile technologies make it easier for me to communicate with my colleague and science lecturers.	3.49	0.625
20.	Mobile technologies with scientific, educational software have increased my research in the university.	3.53	0.529
		3.45	

The perceived use of mobile technologies for instruction by education lecturers was investigated and the result displayed in table 3. It indicated that majority of the education lecturers perceived those mobile technologies enhances easier access to information anywhere and anytime and that they use mobile technology to contact students for important information with mean scores of 3.65 and 3.93 respectively. Also, it was perceived those mobile technologies with scientific, educational software have increased my research in the university and they feel more connected with my students by using mobile technology with mean scores of 3.51 and 3.53 accordingly. The grand mean scores of 3.45 established that Education lecturers have optimistic perceived use of mobile technologies for instruction.

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

3.2. What is the effect of gender on lecturer's perceived use of mobile technologies for instruction?

There is no significant difference between male and female lecturers perceived use of mobile technology for instruction. In other to ascertain the significant difference between

male and female lecturers perceived use of mobile technology for instruction, independent t-test was employed.

Table 3. t-test on Significant Difference Between Male and Female Lecturers Perceived Use of Mobile Technology

Gender	N	Mean	Std. Deviation	Mean Gain	df	t	Sig.(2-tailed)
Female	67	3.4267	.34692	0.07	158	1.402	0.163
Male	81	3.3569	.28307				
Total	148						

Results in table 3 shows that the calculated t-value was 1.41 with significant value of 0.16 was not significant at 0.05 alpha levels because p-value was greater than 0.05. This implies that the null hypothesis one was not rejected: hence, there was no significant difference between male and female lecturers perceived use of mobile technology for instruction. The development of mobile wireless technologies has provoked an enormous amount of interest among researchers, educators, school administrators, and scholars, among other interest groups, due to the gradual drift from the traditional educational settings to mobile learning environments (Alexander et al., 2006; Ally, 2016; Zhang et al., 2020). Indeed, many institutions of higher education nowadays offer courses by taking into consideration mobile wireless technologies as alternative instructional tools. Most of these mobile wireless technologies include web enabled wireless phones (e.g., smart phones), web-enabled wireless handheld computers (e.g., palmtop, and tablet computers), wireless laptop computers and Personal Digital Assistants (PDAs) (Kim et al., 2016; Mollah et al., 2020). Base on the result obtained in the data analysis, it was observed that majority of the education lecturers perceived the mobile technologies to enhances easier access to information and they use mobile technology to contact students for important information. Oyelere et al. (2018) states that computer application programs in mobile devices are worthy of being used as relevant learning aids by lecturers, students, anywhere or at any place. A typical example is the application of a mobile technology enabling the learner to produce pictures, videos, or animations on a particular topic with their fellow learners. It is believed that students' capability of utilizing the apps is a means of promoting their learning one way or the other. Thus, the conclusion can also be drawn that providing students with the freedom of location and time in learning, is an instructional strategy

There was no significant difference between male and female lecturers perceived use of mobile technology for instruction. The influence of gender on mobile technology adoption has received considerable attention. Studies have shown that, compared to men, women are less likely to adopt and to use new technology, have less confidence in their ability to use new technology and are less likely to choose a career in information technology (Goodman et al., 2016; Skrbiš & Laughland-Booÿ, 2019; Kim et al., 2016). Many studies have suggested that compared to men, women are less likely to adopt mobile technology and if adopted they tend to use it to a lesser degree than men.

4. CONCLUSION

From the result of this research, it was concluded that education lecturers perceived the use of mobile technologies as a useful tool in teaching and learning with great potential in both classrooms and outdoor learning. Since it has been found that education lecturer perceived the use of mobile technology as a useful tool, but nonetheless the following recommendations are being made. The government should provide an affordable platform for lecturers and students to have their personal technological devices (computer set) which they can use independently and for group learning (virtual learning). Lecturers should be encouraged to explore different ways in which mobile technologies can be used in teaching and learning. To make the students more aware of the possibilities of these technologies and therefore will try to exploit their full potential.

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