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The Impact of Using Mobile Devices For Educational Purposes Among Students In Umar Suleiman College Of Education Gashua, Yobe State

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ABSTRACTS
Mobile devices such as smartphones and tablets are becoming increasing popular among students, setting out a new way to communicate, collaborate and learn. The use of portable devices has the capability to inspire new approaches to learning. It is therefore important to examine the education society viewpoints about the educational use of mobile technology in supporting the teaching and learning process. The purpose of this study is to determine the impact of mobile devices for learning purposes by exploring the kinds of interactions that students in Nigerian universities have with their portable gadgets. A sample of 240 higher education students and teachers participated in the study by completing the researchers‟ questionnaire. The results of the study indicate the students use their portable devices to exchange education-related messages and academic files with classmates, search the internet and library databases for academic materials, practice online quizzes or tests and hold discussions with classmates among others.
Keywords: Mobile, Devices, Student, Education, Academic Performance

INTRODUCTION

Mobile learning is the delivery of educational materials and learning contents through mobile technologies (Sitthiworachart and Joy 2008). Mobile technologies used in education include mobile phones, smartphones, PDAs, MP3/MP4 players, e-book readers (e.g. Kindle), netbooks, tablets (e.g. iPad, Galaxy Tab), hybrid tablet/smartphone gadgets (e.g. Galaxy Note) and specialist portable technologies used in science laboratories (Maiti and B. Tripath 2012). The use of these mobile technologies in learning improves accessibility, efficiency and quality of learning by facilitating access to education resources and services. The capability of m-learning technologies to present learning materials, not only in text, but also graphics, video and sound, and easy access via many different devices further enhances the interest of the learners (Okeke and Umor 2012). Mobile learning can take place anytime anywhere, including conventional learning environments such as university classrooms, lecture theatres, libraries, and even canteens as well as learners‟ homes, community locations, parks, and in public transport. Students can have access to lecture notes and assignments by using mobile technological devices. It involves connectivity of mobile devices for downloading, uploading, online working via wireless networks, mobile/smart phone networks or both, and linking to university systems such as virtual learning environments (VLEs) and management information systems (MIS) (Hashem et al., 2011). It could also be in the form of mobile educational apps installed or pre-installed on certain mobile devices. A focal point of m-learning is information sharing, which makes it possible for learners to interact with each other and share knowledge anytime. It therefore, promotes collaborative learning, extends learning beyond lecture

theatres and diminishes barriers such as distance and space significantly. It can be made to support modern classroom learning tools as well as distance learning and e-learning, as a result of which lectures can be delivered in remote areas for the benefit of people across countries and continents (Okeke and Umor 2012). A good implementation of mobile learning will complement and add value to existing formal learning, teaching, assessment and educational administration and management (Ozuorcun and Tabak 2012). However, the impact of mobile learning in teaching and learning delivery has not been ascertained by university students in many developing countries. This study was designed to investigate the impact of this mobile phones on the academic achievement of learners in Umar Suleiman College of Education Gashua Yobe State, Nigeria.

The use of smartphone is gradually becoming a compelling learning tool used to enhance teaching and learning in distance education. Its usage ensures flexible course delivery, makes it possible for learners to access online learning platforms, access course resources and interact digitally. The purpose of this study was to examine the use and effects of the smartphone as a learning tool in education at the University of Nigeria and specifically Umar Suleiman College of Education Gashua. The use of mobile learning can help to deliver communication, information and training to large number of people regardless of their location, targeting changes in teaching and learning, and enhancing collaboration and active learning (Attewell and Savill-.smith, 2004). This study was designed to help lectures and the University as a whole to integrate its findings into future lecture plans that will make life easier for both students and lecturers and subsequently improve learning. The world today is changing fast in terms of social networking and communication. Any news gets directed to the remotest corners of the world within seconds of its happening with the help of a few button clicks. Lehner and Nosekabel (2002) defined mobile educational applications as any facility that supplies a learner with broad computerized information and educational content that supports knowledge acquisition regardless of place and time. Examples include real video and flash animation which permit content transfer for educational documents. The usefulness of mobile learning is further confirmed by Cochrane (2006) who concluded in his report that student efficiency will be enhanced through the production of an ever-present mobile learning environment. The aim of this study is to find out what mobile technology is commonly used among students, why they are used and what role they can play in enhancing learning.

Chen and Denoyelles (2013) found out in their research that a large percentage of students own one or more mobile device with tablets being the most commonly used for educational purpose, they discovered that students find it easy to use mobile devices from outside classroom without any help from their lecturers. The new fame of mobile devices such as smart phones, (BlackBerries, Androids), tablets, and e-book reader is attracting a lot of interest from education researcher. Smart phones, for example have been said to be a continual acquaintance of a substantial percentage of the world's population (Abowd, Iftode and Mitchell, 2005) and these devices are also said to be cheaper and readily available compared to a laptop and desktop computer.

These mobile devices are said to have changed student learning style as they link users to the world straightaway, improve access to information and allows social interaction with peers. Student will therefore take advantage of their familiarity these devices which have the ability to produce and discover contents to improve their learning style (Ureigho, Agbogidi and Ureigho, 2005; Chen and Denoyelles, 2013). According to Kukulska-Hulmes and Traxter (2005), studies in the area of mobile learning had received more attention from researchers in the last 10 years in the form of pilot trials and they believe the use of mobile devise for learning will open new opportunities for independent research, field work, professional updating and on the spot access to information that enhances knowledge. Below are a few reasons they believe are forcing Universities to expand their services through mobile learning;

- Need to deliver informal and lifelong learning programmes.
- Improving access to learning materials and resources.
- Increasing flexibility of learning for students (especially working students)
- Compliance with special education needs and disability regulations.

Statement of the problem

Little research has been carried out to determine the effects of having lectures notes and slides on mobile devices to help students learning and whether m-learning has real impact on students‟ academic performance in Nigerian universities. Consequently, any study on the effects of m-learning on students‟ academic performance from learners‟ perspectives in a developing country like Nigeria can never be underestimated. The purpose of this research work therefore, is to discuss the impacts of mobile learning on students‟ understanding of learning materials and subsequent academic performance on their courses, by providing justifiable answers to the following research questions.

Research Questions

1. Does having course materials such as slides and lecture notes on a mobile device make learning easier?
2. How does using a mobile device for learning improve students'‟ academic performance?
3. Why does the students willing to use or continue to use their mobile device for learning on a regular basis*?*

Purpose of the study

Although the mobile phone has been conspicuously proliferated in the past decades, little is known about its influence; especially its effect on student learning and academic performance. Although there is a growing interest in mobile devices and their correlates and consequences for children, effects vary across related studies and the magnitude of the overall effect remains unclear. The purpose of this study is to further examine any relationships that may exist between mobile phone use and educational achievement.

RESEARCH METHODS

Research Design

The design of this study is a survey type. A survey research design according to Nworgu (1991) is one in which a group of people or items is studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group of population. This design was considered appropriate and suitable for this study because it focuses on obtaining information and analyzing data from a group of student from Umar Suleiman College of Education Gashua Yobe State.

Population of the Study

The target population for this study was NCE student at Umar Suleiman College of Education Gashua Yobe State.

Sample and Sampling Techniques

The sample of this study was comprises the two hundred student (240) students and teachers from NCE I-III and the undergraduate student. Simple random sampling was used to select 200 students, from each level and 40 lecturers were also selected using same technique.

Research Instrument

Structured questionnaire was the major instruments to collect data for this study. The researcher designed the questionnaire titled "The Impact of Using Mobile Devices For Educational Purposes Among Students In Umar Suleiman College of Education Gashua, Yobe State." for the respondents to respond to four (4) likert's types rating scales of Strongly Agreed (SA), Agreed (A), Disagreed (D), and Strongly Disagreed (SD) respectively. The items in the questionnaire were structured based on stated research questions.

Validation of Research Instrument

The instrument to be used to collect data for this study was validated by the senior lecturers in school of Science Education, Federal College of Education (Technical) Potiskum, Yobe State. The correction and suggestion made was strictly adhered before producing the final copy of the instrument.

Method of Data Collection

The questionnaire design for this study was distributed to the selected teachers in junior secondary schools. The researcher was assisted by four research assistants who are the students and teachers. After respondents filled the questionnaire, the researcher was then collected the filled questionnaire on-the-spot.

Method of Data Analysis

The data collected for this study were analyzed using mean and standard deviation as statistical tools. A four (4) of points rating scale of likert's types was used with assigned values of 4, 3, 2 and 1 as options to the items on the questionnaires. These options are-:

Strongly Agreed	(SA)	-	4points
Agreed	(A)	-	3points
Disagreed	(D)	-	2points
Strongly Disagreed	(SD)	-	1point

The mean of the above was determined by calculating the average.

$\bar{X} = \frac{\sum fx}{n}$

Where,

$\bar{X}$= mean

F= frequency

X= nominal value of option

∑= summation sign

N= number of the respondent

A cut- off point of 2.50 was used to determine the mean which is thus:

$\frac{4+3+2+1}{4} = \frac{10}{4} = 2.50$

This means that any mean score equal to or greater than was considered as agreed response and any mean score less than (<) 2.50 was considered as disagreed responses.

RESULTS AND FINDINGS

The empirical findings of this study are organized into three sections in order to provide answers to the research questions as analyzed below:

Table 1: *Does having course materials such as slides and lecture notes on a mobile device make learning easier?*

SN	*Statement Strategy*	*Mean*	*S.D*	*Remarks*
1.	It makes taking notes in the class easier and faster	3.85	1.46	Accept
2.	Provide easy mode of studying and Researching	3.54	1.66	Accept
3	Facilitate sharing materials and information	3.89	1.49	Accept
4	Allow students to practice online exercises	3.74	1.67	Accept
5.	Provide room for communicating with fellow students	3.67	1.46	Accept

Source: Field survey 2022

The table above discusses the impact of mobile devices such as slide and lecture note on the student academic achievement. Item 1 state that mobile devices makes taking notes in the class easier and faster, the respondent agree with the statement with a mean and standard deviation of 3.85 and 1.46 respectively. This is true as mobile devices such as IPad, handset and laptop can easily be used to collect data directly as the teacher is teaching. Item 2 also state that mobile devices provide easy mode of studying and researching, with a mean and standard deviation of 3.54 and 1.66 the respondent agree with the statement. Similarly item 3 state that mobile devices facilitate sharing materials and information, a mean and standard deviation of 3.89 and 1.66 respectively, the respondent agree with the statement as mobile devices provide opportunity for learners to share academic information easily. The result from item 4 and 5 also gives a positive response as learners used mobile devices to learn and practice online. They can attain youtube lectures and more defined explanation on concepts and topics discussed in classroom. With

a mean of 3.67 and standard deviation of 1.46 the respondent agree with the statement that mobile devices provide room for communicating with fellow students.

Table 2: *How does using a mobile device for learning improve students'" academic performance?*

SN	*Statement Strategy*	*Mean*	*S.D*	*Remarks*
1.	Improved learning outcomes	3.85	1.46	Accept
2.	Increased engagement among students,	3.64	1.64	Accept
3	Easier ability to keep students up to date about assignments.	3.89	1.49	Accept
4	Teaching and learning anytime, anywhere	3.74	1.67	Accept
5.	Learning becomes accessible and portable Learning aid	3.67	1.46	Accept

Source: Field survey 2022

The table above discusses the impact of mobile devices in improving learning outcomes during teaching and learning process. Item 1 state that mobile devices improve learning out. With a mean and standard deviation of 3.85 and 1.46, the respondent agrees with the statement. Studies have shown that most of the students that have access to mobile devices perform excellently during examination than their counterpart. Item 2 state that, mobile devices increased engagement among students, with a mean and standard deviation of 3.64 and 1.64 the respondent agree with the statement that the mobile devices improve student engagement with the gadgets leading to efficient learning outcomes. Item 3 also state that mobile devices allow tteaching and learning anytime, anywhere. This statement was accepted with a mean and standard deviation of 3.74 and 1.67 respectively. It is true that mobile devices allow student to move anywhere with their lecture notes and videos on phone which provide a privileged for the learners to study at random. Item 5 also state that with mobile devices Learning becomes accessible and portable Learning aid. Just like item 4 above the respondent agree with the statement that with mobile devices learning becomes portable and easily accessible. The respondent supports the statement with a mean and standard deviation of 3.67 and 1.46 respectively.

Table 3. *Why does the students willing to use or continue to use their mobile device for learning on a regular basis?*

SN	*Statement Strategy*	*Mean*	*S.D*	*Remarks*
1.	Enhanced Knowledge Retention	3.75	1.47	Accept
2.	Studying on The go	3.54	1.66	Accept
3	Quicker Learning	3.88	1.49	Accept
4	Increased Engagement Due To Personalization	3.74	1.47	Accept
5.	A Well-Defined Learning Path	3.67	1.46	Accept

Source: Field survey 2022

The table above discusses the impact of mobile devices on the student's willingness to use the gadget during teaching and learning process. Item 1 state that, mobile devices enhances knowledge retention, with a mean and standard deviation of 3.75 and 1.47 respectively, the respondent agree with the statement as mobile devices allow for practical teaching more than theoretical. Similarly item 2 state that mobile devices allow for the study on the go, with mea and standard deviation of 3.54 and 1.66 respectively, the respondent agree that with mobile devices teaching and learning is more easier and faster. It allows the student to even have information about the topic ahead of the lesson period. Similarly item 3 talks about quicker learning with a mean and standard deviation of 3.88 and 1.49 respectively. Item 4 and 5 states that mobile devices increased Engagement due to personalization while item 5 state that the use of mobile devices provide a well-defined learning path.

DISCUSSION

The perceptions of the learners remain very important in the adoption, implementation and use of any mobile innovation in education system. Thus, the primary purpose of this study is to investigate mobile device use in tertiary education based on students" perceptions. In particular, we are very interested to

study how Nigerian students use mobile technology and if the technology can help improve their academic performance. Since almost every student has access to smartphone for personal use, adapting the device for learning is not a bad idea through social media-based learning platform. The result from the study shows that having course materials such as lecture slides and notes on a mobile device makes learning easier for the students, as they can use their device to study at anytime, anywhere. This enables the students to engage in learning activities even when they are outside their classrooms and improves flexibility for self-study. By making academic courses more accessible through mobile devices, the amount of information retained from the personal study is often greater, which results in increased information retention and grade performance.

CONCLUSION

This article discusses the impact of mobile devices for learning in Higher Education Institutions in Nigeria, which is expanding the possibilities of open and distance learning education. The analysis of students‟ perceptions on m-learning points to the fact that mobile learning is widely embraced by the students and they are also willing to embrace the use of their mobile devices for learning purposes not only to augment classroom lectures but also to achieve the globalization objective (Hashemi et al., 2011). Students‟ interest and expertise are of great potential for m-learning if integrated into their learning curriculum (Dale and Povey 2009). Therefore mobile phones can provide students with a means of individualized learning (Kim et al., 2006) through searching the internet and library for education-related materials, and there is no need for lab or library PCs to be free before they can engage in quality study and research activities. This ubiquitous learning is made possible because students are keen to use all available sources of m-learning approaches through palmtops, tablets, smartphones and PDAs to access knowledge and information anytime and anywhere. In conclusion, university students in Nigeria are using their smartphones and tablets to support learning inside and outside the classroom.

DISCLOSURE OF CONFLICT OF INTEREST

The authors declared no conflict of interest throughout the project, however, there are constructive argument at some point in the research but valid agreement was cemented before publishing the result.

STATEMENT OF INFORMED CONSENT

The consent of the participant was adequately seek, all participants were fully aware of the importance of the research and participates with ease. The researchers also seek the consent of the school authorities where the research was conducted. Approval was granted adequately.

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