

**Role of ICT in Social and Political Change: Utilisation of Mobile-learning to achieve
Secondary School educational goals in Contemporary Nigerian Society.**



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Abstract

This research adopted survey descriptive research type to find out what Nigerian youths and professionals perceived about using mobile-learning to achieve secondary school educational goals in contemporary Nigerian society. Purposive and cluster sampling technique was used to sample a number of 300 youths and 100 teachers of secondary schools across the south-western state of Nigeria. Questionnaire developed by the researcher was used for data collection. The instrument's validity and reliability co-efficient of 0.68 was determined using face and content validity approach and test re-test approach. Collected data were analyzed using percentages. Findings revealed that a high percentage of sampled students and teachers of secondary school were in support of provision for utilising mobile-learning as this will help to achieve the secondary school educational goals of the contemporary 21st century of Nigerian society. However, few sampled respondents said that it will be a sort of distraction to some category of students. Based on these findings, recommendations were given

Keywords: *utilising mobile-learning; secondary school educational goals; contemporary Nigerian society*

Introduction

Concept of Mobile Phone Usage in Contemporary Nigerian Society

Students prior knowledge about topics is always very vital to better understanding and teaching effectiveness both in and outside classroom situation (Samuel,2005).Mobile phones are carried everywhere by virtually everyone at almost every time of the day in contemporary Nigerian society. Even banks are accessed from holes in the wall, cars are becoming travelling offices, airplane seats are entertainment centres and computer games are handheld (Sharple, 2007).With mobile assisted learning, students are able to access content and communicate with their teachers and peers at anytime, anywhere(Kukulsha-Hulme & Shield,2008).

Concerning e – learning, mobile learning is distinguished in its focus on learning across contexts and learning with mobile devices.

The term mobile learning or M – learning has different meanings depending on the experiences, uses and backgrounds of those concerned. Polsari (2003) sees mobile –learning as a form of learning which has the network as its site of production, circulation and consumption. O'Malley, Vovoula, Glew, Taylor, Sharples & Lafrere (2003) see mobile – learning as any type of learning that happens when the learner is not at a fixed predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies. Generally, mobile assisted learning covers learning with mobile technologies including but not limited to mobile phones, MP³ players and handheld computers. Mobile -learning focuses on the mobility of the learner interacting with portable technologies, and learning that reflects a focus on how society and its institutions can accommodate and support an increasingly mobile population.

The acceptance of mobile phone throughout the world as an instrument of sociability is obvious, but its pedagogical potentials have been neglected (Chiluwa, 2008; Taiwo, 2008). Tagney (2006) argued that prior knowledge is better facilitated by mobile assisted learning which is enhanced by wireless portable devices like palmtop/handhelds, smart phones and mobile phones.

Features of Mobile Phone That Make It Considerable for Educational Purposes

The mobile phone provides the easiest and most accessible means of mobile - learning among the mobile technologies existing in modern era. Ofie (2011) stipulated some of the key features of the mobile phone that provide mobile learning as:

I Voice – only: These are radios that pick up and send signals on certain predetermined frequencies; through such devices students can learn public speaking, writing languages, literature and even mathematics.

ii *Short Text Messages(SMS)*: This is a common feature of the mobile phone that is being utilized by many users of mobile phones. As a learning device, SMS can be used for informational quizzes in practically all subjects. It can also provide timely reminders on key concepts to students so that they can become much more understandable to them.

iii *Graphic display*: Through this device, meaningful amounts of educative texts can also be displayed. Such displayed texts can also be accompanied with pictures and animation.

iv *Internet browsers*: Most of all the mobile phones produced recently have internet browsers built in them. These give the students, opportunities to access a lot of information on key concepts related to their subject of study. Many mobile phones also have cameras and video clips built in them. It is obvious that such devices are capable of helping students to document learning materials both within and outside the classroom.

v *Downloadable programmes*: Students also have the opportunity to download important learning materials which they got as they utilize the internet browsers built in their mobile phones. This is possible because mobile phones have memories that store information which can be easily downloaded whenever the need arises.

Roles of mobile learning that would enhance secondary school education in contemporary Nigerian society

Mobile – learning perform some functions which would help to achieve secondary school educational goals in contemporary Nigerian society. Some of them as listed by Ofie(2011) include:

1 *Variety of learning styles*: Mobile technologies offer learners the opportunities to access reading (text and graphics), listening to broadcasts, contributing to discussions (forums or SMS), researching on internet, working through decision trees and making use of animated materials.

2 *It encourages social networking and social learning*: Through Mobile devices, learners have opportunities to associate and communicate easily with peers and teachers through SMS texts, knowledge sharing forums and telephony. Such interaction is always done with fun and as such motivates learners to learn at their own pace.

3 *Convenience and flexibility*: Mobile learning can take place anywhere at any time. This means that the learner can utilize it at the exact moment he/she requires to learn

4 *Learner control and freedom*: The relationship between the use of mobile devices and learning especially informal learning is quite beneficial and motivating to the learners because they have the freedom to define tasks and relate activities to their own goals and also have control over their own goals.

5 *Beneficial to students with special needs*: Mobile learning can be a useful add-on tool for students with special needs. He added that mobile devices can be used as a ‘hook’ and ‘bait’ to re-engage students who have lost interest in learning since handling mobile devices is fun.

Possible challenges of utilizing mobile- learning to achieve secondary school education goals in contemporary Nigerian society.

Some of the possible factors that would impede the utilization of mobile learning to achieve secondary school educational goals in contemporary Nigerian society as cited by Ofie(2011) include:

- 1 The small screens of mobile phones impede the amount of information that can be displayed on them.
- 2 Accessed data can be lost if batteries are not charged regularly and properly.
- 3 *Internet connectivity*: Unavailability of internet connectivity or slow internet speed can impede the rate of using mobile devices for teaching and learning.
- 4 High costs of mobile phones which can make them unavailable and inaccessible to some learners who cannot afford them
- 5 Some students lack the knowledge and skill of using mobile devices for academic purposes. This may debar them to use them for academic purposes but may be using them for fun and relaxation.
- 6 Lack of developed secondary school educational goals for teaching and learning as well as mobile – based software and activities. Some existing applications are not easily integrated in the mobile technology. For example, the fonts/characters/letters for typing Nigerian indigenous languages are yet to be developed in the mobile devices.
- 7 Security and piracy are challenging issues when accessing networks.
- 8 Mobile phones are less robust than desktops.
- 9 Mobile devices are attractive to thieves and are prone to be stolen from the learner (owner).
- 10 Frequent changes in mobile models /functionality could be disturbing.

Problem Statement

The National Policy on Education sees secondary education in Nigeria as the form of education children receive after primary school and before tertiary education (FRN,2004).One of the stated objectives include providing technical knowledge and vocational skills necessary for agriculture, industrial, commercial and economic development (FRN,2004:13-14).It is pertinent that secondary school students should be creative, develop needed entrepreneurial skills and be able to embrace the learning opportunities that the changing technology of today offers. It is expected that the secondary school student in

Nigeria should be resourceful and be able to carry out goal oriented activities particularly those that ensure personal as well as national wellbeing.

However, the secondary school student is exposed to a limited amount of instructional opportunities caused by scarcity of learning materials, shortage of qualified teachers, dilapidated classroom and poor learning environment and so on. It is doubtful whether the Nigerian secondary school student is capable of meeting the challenges and opportunities of technologically developing world. These limitations need to be urgently addressed if secondary schools are to meet the challenge of producing students who are equipped with the latest knowledge that a challenging and ever changing world offers. This study investigates whether the incorporation of utilization of mobile - learning into the Nigerian educational system particularly at the secondary school level would help to achieve the secondary school educational goals so as to give the students opportunity for quality education in the constantly changing contemporary Nigerian society.

Purpose of the Study

The purpose of this study is to examine:

- 1) The ways mobile - learning will impact the quality of instructional process in Nigerian secondary school.
- 2) Roles of mobile - learning in achieving secondary school educational goals in contemporary Nigerian society
- 3) The factors that will impede the utilization of mobile – learning to achieve secondary school education goals in contemporary Nigerian society.

Research Questions

- 1) What are the ways mobile – learning influences the quality of instructional process in Nigerian secondary school?
- 2) What are the roles of mobile - learning in achieving secondary school educational goals in contemporary Nigerian society?
- 3) What are the factors that impede the utilization of mobile – learning to achieve secondary school education goals in contemporary Nigerian society?

Significance of the Study

This research would alert the educators, teachers, administrators and curriculum developers to immediately pay attention and to discern the appropriate approach to teach Nigerian secondary school students in order to improve their knowledge and skills acquisition so as to meet the international demands, and be able to fully and successfully participate in the international community in this technological 21st century era .

This study therefore would be a significant step in the direction of looking into the effect of mobile –learning to enhance teaching and learning of secondary school students in order specifically develop their interests towards achieving secondary school educational goals of the technologically developing society of the 21st century.

This study would highlight the need for teachers and examination bodies to recognize the uniqueness and complexity of secondary school students and take these into consideration when choosing teaching methods and instructional aids. This would help to make the teaching and learning process more active, contextual and interactive.

Methodology

The research design for the study was descriptive survey while the population is made up of all the secondary school youths and teachers in the south-western Nigeria. The sample is made up of 300 secondary school students and 100 teachers which are 75 and 25 percents respectively. They were selected for the study using purposive and cluster sampling techniques. The instrument used for the study was a 15-point item structured questionnaire named The Utilization of Mobile - Learning to achieve Secondary School Educational Goals in Contemporary Nigerian Society. It was based on a modified likert type scale set against each of the items. The response options were weighted as strongly agreed (4), agreed (3 points), disagreed (2 points) and strongly disagreed (1 point). To ensure its validity, the instrument was given to some experts for evaluation. To establish the reliability of the instrument, a test was carried out on 10 respondents who were part of the population of the study sample. The Cronbach's Alpha Correlation coefficient was carried out and the result was highly positive with a correlation coefficient of 0.68. The data was analyzed using percentages in giving answers to the research questions.

The study was conducted in twenty randomly selected secondary schools in District IV of Lagos Mainland Local Council Developed Areas of Lagos State, Nigeria. A total of 400 respondents made up of secondary school teachers and youths formed the subjects of the study.

Instrument for Data Collection

Questionnaire was used to gather data for this study. It was designed to elicit the responses from the sample of 300 youths and 100 teachers of secondary schools across the south-western state of Nigeria to ascertain their perceptions about utilization of mobile - learning into the educational system particularly at the secondary school level to achieve secondary school educational goals in the contemporary Nigerian society.

Data Analysis

Data was analyzed using percentages and correlation analysis using statistical package for social science (SPSS). Out of 420 questionnaires administered, 400 was collected and the analysis was based on the returned questionnaires.

Ways Mobile Learning Will Impact The Quality Of Instructional Process In Nigerian Secondary Schools.

S/N	ITEMS	Strongly agreed (4)	Agreed (3)	Disagreed (2)	Strongly disagreed (1)	Mean
1	The use of mobile phones will facilitate the process of secondary school education learning in Nigeria	50(12.50%)	250 (62.50%)	100(25%)	0	2.88
2	The use of mobile phones can create interactive learning environments for secondary school learners	100(25%)	250 (62.50%)	0	50 (12.50%)	3.00
3	Mobile phones can be used to teach/learn different subjects in the secondary school syllabus	100(25%)	250 (62.50%)	50(12.50%)	0	3.13
4	The use of mobile phones for secondary school education teaching and learning is cost-effective	100(25%)	50(12.50%)	250 (62.50%)	0	2.63
5	Mobile phones will provide secondary school learners with ubiquitous(everywhere accessibility) secondary school education learning opportunities	150 (37.50%)	200(50%)	50(12.50%)	0	3.25

Factors that will Impede/challenge The Use of Mobile – Learning To Achieve Secondary School Education Goals in Contemporary Nigerian Society

S/N	ITEMS	Strongly agreed (4)	Agreed (3)	Disagreed (2)	Strongly disagreed (1)	Mean
6	The small screen size of mobile phones is a challenge	50(12.50%)	150(37.25%)	100(25%)	50(12.50%)	3.00
7	Students’ non-academic use of mobile phones in our society	50(12.50%)	250(62.50%)	150(37.50%)	0	3.13
8	High costs of mobile phones	0	100(25%)	100(25%)	200(50%)	1.75
9	Incompatibility of the use of mobile phones with secondary school educational teaching and learning	100(25%)	250(62.50%)	50(12.50%)	0	3.13
10	Lack of developed secondary school educational goals for teaching and learning as well as mobile-based software and activities	200(50%)	100(25%)	NIL	100(25%)	3.00

Discussion of Findings

From the respondents’ view with regards to ways mobile- learning will impact the quality of instructional process in Nigerian secondary schools, the respondents’ views showed that on the use of mobile phone to facilitate the secondary school education teaching and learning process,50(12.50%) strongly agreed,250(62.50%) agreed while only 100(25%) disagreed with the statement. On the item concerning the use of mobile phones to create interactive learning environment for secondary school learners, 100(25%) strongly agreed, 250(62.50%) agreed while only 50(12.50%) of the respondents strongly disagreed with the statement.

Mobile phones can be used to teach and learn different subjects in the secondary school syllabus, 100(25%) strongly agreed, 250(62.50%) agreed while 50(12.50%) of the respondents disagreed with the statement. Again, 150(37.50%) and 200(50%) of the respondents strongly agreed and agreed respectively while 50(12.50%) disagreed that mobile phones will provide secondary school learners with ubiquitous (everywhere accessibility) secondary school education learning opportunities. However, the respondents viewed the use of mobile phones as not cost effective for secondary school teaching and learning and this was indicated in item five(5) where 100(25%) strongly agreed, 250(62.50%) agreed while 50(12.50%) disagreed with the statement.

On the items concerning the factors that will challenge the use of mobile learning to achieve secondary school educational goals in contemporary Nigerian society which are in items six (6) to ten (10), 50(12.50%) and 150(37.25%) strongly agreed and agreed respectively while 100(25%) and 50(12.50%) disagreed and agreed respectively on the statement that the small screen of mobile phones will be a challenge to the use of mobile assisted learning. About the students' non academic use of mobile phones in Nigerian society, 50(12.50%) and 250(62.50%) strongly agreed and agreed respectively while 150(37.50%) disagreed. Also, 100(25%) and 50(12.50%) of the respondents strongly agreed and agreed respectively that high costs of mobile phones would not pose a challenge while 250(62.50%) strongly disagreed with the statement. On the item concerning the challenge of incompatibility of the use of mobile phones to achieve secondary school educational goals, 100(25%) and 250(62.25%) strongly agreed and agreed while 50(12.50%) disagreed with that statement.

Furthermore, 200(50%) and 100(25%) of the respondents strongly agreed and agreed while 100(25%) disagreed respectively that lack of developed secondary school educational goals for teaching and learning as well as mobile – based software and activities are challenges that will impede the use of mobile assisted learning to achieve secondary school educational goals in contemporary Nigerian society.

Conclusion

The aim of this study is to investigate the utilization of mobile – learning to achieve secondary school educational goals in contemporary Nigerian society. It is obvious that Nigerian society should realize the importance of utilizing mobile phones to achieve secondary school educational goals especially in this contemporary changing society. However, awareness, trainings and workshops should be duly organized and carried out so as to help the students gain the knowledge and necessary skills of using mobile phones adequately for academic purposes. On the issue of using mobile phone for teaching and learning, this agreed with Wang (2008) that like other communicating and computing devices, mobile phones can be used to learn. Therefore, with great development of mobile phone's functions and features, secondary school teachers can utilize mobile phones for its academic instructional potentials, for effective learning both within and outside the classroom.

Recommendations

This study recommends the following:

- 1) The Nigerian secondary school curriculum should be redefined so as to incorporate mobile assisted learning strategy. This would help to develop appropriate software and task- based activities necessary for contemporary secondary school educational goals.
- 2) Mobile learning should be utilized so as to facilitate collaborative and discovery learning where all learners are fully involved in learning and can as well learn at their own paces. This would also provide the students opportunities to follow their own progress and provide learning in and outside the classroom environment.
- 3) It should be utilized to promote a conducive, relaxed and convenient learning environment that should be more economically productive.
- 4) Mobile learning should be incorporated in the course of study in both pre- service and in- service teachers' training programmes in order to equip teachers with the much needed knowledge and skills about the usefulness of mobile assisted learning in the provision of qualitative secondary school education in the contemporary Nigerian society.
- 5) Private individuals, non - governmental agencies and community leaders should participate in creating awareness concerning the benefits of mobile assisted learning. Hence, the burden of ensuring its success should be shared so as to make it cost effective for the secondary school students since secondary education is one of the rights of the Nigerian child (FRN,2004).

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