Teachers' Perception and Application of Mobile Learning in Public Secondary Schools in Nsukka Urban

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Abstract

An advancement in information technology calls for a step further in harnessing the relationship between what and how the students learn in the school and what they face outside school. This paper examined the teachers' perception and application of mobile learning in public secondary schools in Nsukka Urban. Descriptive survey research design was adopted. Four research questions guided the study. A 4 point scale questionnaire was used to obtain information from a population of 440 teachers in the thirteen public secondary schools in Nsukka Urban. Data was analyzed using mean scores, percentages and standard deviation. The result showed that teachers had low awareness on mobile learning. Secondly, the study also revealed lack of mobile learning devices in public schools and that teachers do not apply mobile learning devices in their teaching activities due to their negative feeling about mobile learning. It was recommended that programs related to m-learning should be integrated in the curriculum. It was suggested that further research can be carried out in other communities and states of the federation, and that studies should be carried out on how to design learning activities using mobile technologies.

Introduction

Mobile learning has become our new reality. It carries along with it the social, technological and environmental changes in the trend of events in the society which have necessitated the need to reason towards mobile learning technologies in education. It is a ubiquitous learning activities occurring through person to person communication using a mobile device such as Ipods, Ipads, android cell phones, e-readers, computer laptop among others. which could be supported by an appropriate ICT user interface and a pedagogical approaches (Nyiri,2002; Petrova,2007; Sharma & Kitchen,2004). The United Nations Educational, Scientific and Cultural Organization (UNESCO) policy guidelines for mobile learning (2012), notes that mobile learning is the use of mobile technology, either alone or in combination with information technology (ICT) to enable learning anytime and anywhere. The rapid change from material value to knowledge value in the national economic trends cannot be over emphasized. This change is gradually replacing the role of manual worker to knowledge worker, leading to high rate of educational but unknowledgeable graduates. From the foregoing understanding, Ecclestone, Biesta, & Hughes (2010), as cited in Corkill (2011) states that transition has become a fundamental feature of twenty-first century life where factors like economic challenges and globalization are disturbing traditional pattern and introducing new risks and uncertainties. It is inline with these new risks and uncertainties that, Appleby &

Bathmaker (2006) notes that educational transition likewise have become increasingly complex, characterized by rapid changes at system and institutional levels. Along with the evolution and popularity of telecommunication and devices, Peters (2007) opined that mobile learning has emerged as an enhanced learning model that would allow people to gain knowledge and to develop skills through electronic material and activities available anytime and anywhere through mobile device.

From the educational point of view, teachers remain the major tool to be used in producing graduates that can blend with the emerging technologies. A teacher is a person (an expert) who is capable of imparting knowledge that will help learners to build, identify and acquire skills that will be used to face the challenges in life (Senge 2002).

The use of mobile learning has been identified according to UNESCO (2012), to include; expanding the reach and equity of education; facilitating personalized learning; providing immediate feedback and assessment; enabling anytime and anywhere learning; ensuring the productive use of time spent in the classroom; bridging formal and informal learning; assisting learners with disabilities; and maximizing cost efficiency. The rate at which the above mentioned uses of mobile learning can be achieved is largely dependent on teachers' general overview about mobile learning. Also on this note, Mahart, Ayub and Luan, (2012) argued that it is important to ascertain the perception of teachers on mobile learning, since their perception will influence their willingness and readiness for using the instructional approach. Hope (1997) noted that understanding teachers' belief towards technology play an essential role in successful technology adoption. Thus, perception according to Lindsay & Norman (1977), is the process by which organism interpret and organize sensation to produce a meaningful experience of the world. Perception helps us define how we see situation and how we behave towards the situation. It also determines our behavior towards a situation and can cloud our judgment of others. Teachers' perception which is the thought, opinion or mental images teachers have about students or teaching methods is very crucial in any transition period. Determining teachers' perception and application of mobile learning in public secondary school in Nsukka urban is deemed crucial because it is the teacher that understands the nature of the institution through his professional expertise, and also that the significance attached to mobile learning requires productive school environment with efficient resources for teaching and learning.

Center on Education Policy (2007) defined public school as school that is publicly financed, tuition free, accountable to public authorities, and accessible to all students. From the above definition, an ideal public school should provide universal access to free education, guarantee equal opportunities for all children, prepare people to be self-sufficient economically and improve social conditions. These public schools are mainly patronized by citizens of lower socioeconomic class and are facing challenges of inadequate resources, inadequate school instructional facilities leading to sub-standard teaching and teaching method. These challenges are in line the opinions of Hardy (1998) and Lam (2000) which noted that funding, equipment, lack of time and knowledge are known obstacles to successful technology integration. The Nigeria public secondary school is also faced with unending social challenge to teacher's professional standard, which affects their abilities for human modification, cultural reproduction, social recreation, innovation and social placement to suit industrial development (Reddy & Sinhas, 2010;

Fafunwa, 2004). The undynamic nature of academic activities in public secondary schools primarily due to lack of proper implementation of curriculum, institutional facilities, and proper tools for educational growth have made the secondary education in public schools in Nsukka Urban to be best described as obsolete. Despite the view of the public urban schools administration, Lau and Woods (2009) argued that computers and information technology have increased opportunities in education and paved way for new educational methods. It is with the understanding of these new educational methods, which Prensky (2001) noted that students have changed radically; hence today's students are no longer the people our educational system was designed to teach. Nielson (2013) in line with the opinion of Lau and Woods (2009) argued that the consequences of not embracing real-world technologies will leave students ill-equipped to know how to harness the power of technology for learning, and unprepared to develop a respectable digital footprint. Also, Hoppe (2015) noted that technology creates new conditions for learning, and can induce new ways of learning.

The process of establishing a relationship between the world inside school and the world outside school are likely to pose a threat to people and education. Thus, there is need to ascertain the teachers' perception of mobile learning in public secondary schools in Nsukka urban as way to assist students in addition to the old-age traditional method of teaching and learning.

Statement of the Problem

It is obvious from literature and through observation that the national economic trend is changing from material value to knowledge value. The role of manual working is rapidly changing to knowledge working. Research and government agencies are emphasizing the role of collaboration in innovative problem solving technique, where distance is no longer a barrier to partnership and communication. Public secondary schools are facing the challenges of inadequate resources and instructional facilities leading to sub-standard teaching and learning methods. More schools especially the privately owned schools are moving towards mobile learning as a way of taking advantage of new wave of electronic devices that offer portability, ease of use, and more flexible approach to leaning. If this is true, could teachers in public secondary schools where students are from poor socioeconomic families and which are facing the challenges of inadequate resources, security and instructional facilities, have a positive attitude to mobile learning in their teaching activities?

The problem is that students from public secondary schools find it difficult to pass the university entrance examination without spending extra year of apprenticeship to learn the use and application of these mobile learning devices such as laptop, which are now the major tool used in examining students at this level. The researchers seems worried by the fact that there is the need to harness the relationship between what and how a student learn in the school and what he faces outside the school which forms the students' adaptive capacity in the society. It is against this background that the present study investigates the teachers' perception and application of mobile learning in the public secondary schools in Nsukka Urban.

Purpose of the Study

The purpose of this study is to examine the teachers' perception of mobile learning in public secondary schools in Nsukka Urban. Specifically, the objectives of the study include to:

1. determine the level of Nsukka urban teachers' awareness on mobile learning.

2. describe the mobile learning technologies and devices available for use by teachers in Nsukka urban secondary schools.
3. determine the extent teachers apply mobile learning in their teaching activities.
4. determine teachers' perception of mobile learning.

Research Questions

1. To what extent are the teachers in Nsukka urban aware of mobile learning?
2. What are the mobile learning technology devices available in Nsukka urban schools?
3. To what extent are teacher's applying m-learning in their teaching activities?
4. How do teachers perceive the use of mobile learning in their teaching activities?

Methodology

Descriptive survey research design was adopted to determine the teachers' perception and application of mobile learning in public secondary schools in Nsukka Urban. The population of the study was made up of all the four hundred and forty government employed teachers presently serving in thirteen public schools in Nsukka urban. The entire population of the teachers was used. This is due to manageable number of the teachers under study.

The instrument used for data collection was structured questionnaire. A 4 point scale type of questionnaire made up of four parts, were used to solicit information from the respondents. The first part obtained information on the level of awareness of teachers on mobile learning. The second part on the availability of mobile learning devices in Nsukka urban schools, the third part on the level of application of mobile learning in teaching activities and the fourth part on the teachers' perception of mobile learning. The items in part 1, 3 and 4, were placed on a 4 point rating scale of Very Large Extent, Large Extent, Low Extent and Very Low Extent, while the items in part two were placed in Yes or No scale to determine the percentages of the responses.

The instrument was subjected to face validation by three experts with one in the field of Education Foundation Unit in the faculty of Education, and two from the Department of Agricultural and Bio-Resource Education, Faculty of Vocational and Technology Education, University of Nigeria, Nsukka. The reliability of the instrument was determined through internal consistency measure using Cronbach Alpha reliability coefficient. Thus, the instrument was administered to 50 randomly selected number of teachers in Enugu urban. The analysis of data collected gave co-efficient of .72, .74, .67 and .68 respectively for parts 1, 2, 3, and 4.

The researcher personally administered copies of the questionnaire to the respondents. The data collected from the respondents was analyzed using mean scores, percentages and standard deviation. A criterion mean score of 2.50 was set for decision on the research question one, three and four. Hence, the following real limit of numbers were used for decision, mean score of 3.50-4.00 is termed very large extent, 2.50-3.49 for large extent, 1.50-2.49 is termed low extent while 0.50-1.49 is termed very low extent.

Results

The results are presented in Tables in line with the research questions stated.

Table 1

Mean and standard deviation analysis on the extent of teachers' awareness of mobile learning

S/N	level of awareness on M-learning	X	SD	Remarks

1	I have heard about mobile learning before now.	2.45	0.80	low Extent
2	I know what mobile learning means	2.02	0.76	low Extent
3	I can use mobile device to practice mobile learning.	2.36	0.83	low Extent
4	Mobile learning has a place in the school curriculum	2.21	0.82	low Extent
5	I have attended seminars and workshops on Mobile learning.	2.26	0.73	low Extent

Result in Table 1 indicates that teachers are minimally aware of mobile learning. This is shown by the mean scores of item 1-4 which are below 2.50, criterion mean for acceptance. The closeness of the standard deviation scores of the responses for all the items indicates less variability that exists among the responses.

Table 2

Frequencies and Percentages of the responses of respondents on the availability of mobile learning devices in public schools in Nsukka urban

S/N	Available Devices	Frequency			
		Yes	%	No	%
1	Net book	0	0	440	100
2	ipads	0	0	440	100
3	Cell phones			440	100
4	ipods	0	0	440	100
5	E-readers	0	0	440	100
6	Computer Laptops	100	23	340	77

Results in Table 2 shows that there are no mobile learning devices in most of the public secondary schools in the study area. This is shown by the percentages of the items 1-6 which is 100 percent (No) except for laptop that recorded 23 percent (Yes).

Table 3

Mean and Standard deviation analysis on the extent of mobile learning application by teachers in teaching activities

S/N	Application of M-learning in teaching activities	X	SD	Remarks
1	Giving students task to source for information on the net	2.26	0.73	low Extent
2	Using cellphones to give and receive assignment during holydays.	2.21	0.82	low Extent

3	Browsing new innovations with students in the classroom.	2.36	0.83	low Extent
4	Using laptops to teach emailing in the computer laboratory.	2.02	0.76	low Extent

Results in Table 3 shows that teachers do not apply mobile learning in their teaching activities. This is shown by the mean score of items 1-4 which are below 2.50, criterion mean for acceptance. Also, the closeness of the standard deviation scores of the responses for all the items indicates less variability that exists among the responses.

Table 4

Mean and Standard deviation analysis on the teachers' perception of mobile learning in their classroom teaching activities

S/N	Teachers' Perception of mobile learning in classroom teaching activities.	X	SD	Remarks
1	Mobile learning will improve the standard of learning in the classroom.	2.26	0.73	low Extent
2	Mobile learning devices will lead to harmful behaviors like cheating	2.97	0.72	Large Extent
3	Mobile learning devices will cause distractions in the school.	3.03	0.69	Large Extent
4	I cannot browse, thus I cannot teach the students how to browse.	2.85	0.70	Large Extent

Results in Table 4 indicates that teachers' have negative perception of mobile learning. This is shown by the mean score of item 1(which is a positive statement about mobile learning) which is below 2.50, criterion mean for acceptance. Also, the mean score of item 2-4 (which are negative statement about mobile learning) which are above 2.50, criterion mean for acceptance.

Also, the closeness of the standard deviation scores of the responses for items 2-4 indicates less variability that exists among the responses.

Discussion

From the result of data analysis in Table 1, it has been found that teachers in public secondary schools in Nsukka urban are not aware of mobile learning. These awareness indicators include hearing about mobile learning, knowing the meaning of mobile learning, being able to operate mobile learning devices such as laptop, having mobile learning in the curriculum content, and attending seminars and workshops in mobile learning. The finding is in consonance with Bennett (2014) which notes that there is a disconnect between student expectations and staff capabilities and motives. Furthermore, that the pedagogical reasoning and methodology for use of mobile technology is still unclear for some teaching staff and thus will prevent the utilization of mobile learning. The finding is also in consonance with Deriquito and Domingo, (2012) which also notes that lack of trained practitioners who can effectively incorporate

mobile technology into their classroom practice is the strongest barrier to the development of mobile learning.

From the result of data analysis in Table 2, it has been found that many of the mobile learning devices as perceived from the respondents were not available in their schools. This finding support earlier finding of Isaacs (2012b) which states that governments in Africa and Middle East have rarely initiated projects that attempts to fund the use of mobile devices for educational purposes in or outside of schools. Hardy (1998) & lam (2000) in line with the above also notes that funding, equipment, lack of time and knowledge are known obstacles to successful technology integration. Furthermore, Nielsen and Webb (2012) in support of the above finding notes that there is the need to support teachers with strategies and facilities for success as schools consider the movement towards mobile learning. This is disheartening situation as these public secondary schools are patronized by students and citizens of poor socioeconomic status thus, depends on the government for any infrastructure and facilities that will initiate and sustain mobile learning activities.

From the result of the data in Table 3, it has been found that teachers do not apply mobile learning in their teaching activities. This is reflected in their low extent response in giving students task to source for information on the net, browsing new innovations with students in the classroom, using laptops to teach emailing in the computer laboratory and using cellphones to give and receive assignment during vacation. This finding support earlier finding of Lam (2000) and Hyggins and Moseley (2001) which found that teachers use technology for instruction when they are personally convinced of its benefit and see the utility of using the particular technology.

From the result of data analysis in Table 4, it has been found that teachers have negative perception of mobile learning. Hence they gave very low extent response to item that said that mobile learning will improve the standard of learning in the classroom and large extent response in items that said mobile learning devices will lead to harmful behaviors like cheating, mobile learning devices will cause distractions in the school, and that most of them cannot browse, thus cannot teach the students how to browse. This finding support earlier finding of Shuler (2009) who found that public sentiments surrounding the use of mobile technology was largely unenthusiastic, with many educators and parents concerned that mobile devices causes distractions in schools and lead to harmful behaviours like cheating, sexing and cyber bulling. Furthermore, Zepp (2005) ,Scrimshaw (2004) and Simonsen and Dick (1997) noted that teachers form an impression which is favorable or otherwise depending on specific traits teachers attribute to mobile learning .

The findings of the study have implications for the government, secondary schools teachers, and parents. The Government, through the ministry of education should make policies and curriculum reform to help bring mobile learning closer to both teachers and students. Teachers should develop positive attitude towards mobile learning as it will help them acquire and impart necessary skills needed in mobile learning to the students. Parents on the other hand should encourage students by providing some of the mobile learning devices such as cell phones to the students to enable them practice some mobile learning activities like browsing, emailing among others at home. The findings in general, will provide information on the reality related to mobile learning, so that the above mentioned stakeholders can take precautionary measures required for the introduction, adoption and sustainability of mobile learning.

Conclusion

It is not surprising that public secondary school teachers are not fully aware of mobile learning, does not have mobile learning devices, does not apply mobile learning in their classroom teaching activities and thus have negative perception about mobile learning. This is because necessary attention towards mobile learning has not been created by the supposed stakeholders as it concerns proper awareness and inculcating the required expertise in teachers who are supposed to be the major instrument for mobile learning adoption and sustenance.

Recommendations

1. Government, through the post-primary school management board should be organizing workshops and seminars on mobile learning to increase the awareness of mobile learning among teachers.
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2. Government, through the ministries of education should help in providing mobile learning devices to schools.
3. Programmes that are related to mobile learning should be integrated into secondary school curriculum so that teachers will be stimulated to learn and apply mobile learning in the classroom activities.
4. Teachers should be encouraged to learn about m-learning and apply same on both the students and the society at large.
5. Similar studies should be carried out in other communities and states of the federation.
6. Studies should be carried out on how to design learning activities using mobile technologies to support innovative educational practices.

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