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Accessing the Adoption of Mobile Learning in Nigeria: The Library Perspective

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ACCESSING THE ADOPTION OF MOBILE LEARNING IN NIGERIA: THE LIBRARY PERSPECTIVE: A CASE OF CRAWFORD UNIVERSITY, FAITH CITY, IGBESA OGUN STATE, NIGERIA.

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Abstract.

With the influx of new technologies in the world, learning is becoming more interesting than ever before. The study was conducted to access the adoption of mobile learning in Nigeria. Three objectives and three research questions were formulated to guide the researcher. 200, 300 and 400 levels of College of Natural and Applied Sciences and College of Social Sciences were the study population. The sampled population was 83 respondents which is the 10% of the entire population. Structured questioner was the instrument used for data collection. It was discovered that smart phones and laptops were the mobile technologies preferred for mobile learning. It was also discovered that mobile technologies enhance learning but the adoption in Nigeria educational system has been hindered by lots of challenges. Conclusion was made on the need for educators, curriculum designers/ planners, librarians etc, to promote the use of mobile technology for rendering and extending academic services that is education 2.0, library 2.0 and web2.0 to be incorporated into the school curriculum. It was also recommended that similar study should be carried out to identify the readiness of educators, teachers/ librarians towards adopting mobile learning into Nigeria educational system.

Keyword: Mobile Technologies, Communication, Mobile learning, UNESCO, Learning

Introduction

When a unique strategy is developed in learning which enhances the advancement of educational materials and its availability to the masses through mobile phone anytime, anyday, anywhere, such strategy could be seen or regarded as mobile learning. For UNESCO, mobile technologies refer to a combination of hardware, operating systems, networking and software including content, learning platforms, and applications. Mobile technology devices range from basic mobile phones to tablet PCs, and include PDAs, MP3 players, memory sticks, e-readers, and smart phones. In other words, Mobile learning is the ability to obtain or provide educational contents/ materials through electronic devices as mentioned above. Mobile phones have been upgraded in recent decades to contain many functions such as Internet connectivity, sending multimedia messages, information storage, displaying audio and video files, and other functions. Alqahtani and Mohammad (2015) stated that Internet-enabled mobile devices can help students to access learning resources and online courses, anywhere and at any time.

It is a well-known fact that in the issue of mobile learning less stress is involved since the devices are quite affordable and there is no power failure. In addition, when we talk of mobile learning, it includes the use of mobile phones primarily, and other hand-held communication devices in performing different kinds of academic task receiving lectures, checking results or making other necessary enquires.

The contemporary world is changing fast that many people are seeking for the delivery of information and learning materials through so many media. The electronic mail services, social media platforms and uncountable apps on our smart and mobile phones have made this a mainstay. Corbeil & Valdes, 2007 added that you can use this type of mobile devices to enrich the educational environment with educational activities that are provided by mobile phones.

Some examples include the ability to browse the Internet, and to participate in discussions simultaneously.

A critical study of the Nigeria environment shows that in all spheres of human endeavours, people are making use of mobile technology in different avenues to meet the needs of others in one way or the other. Also, it is evidence that our younger generations of learners are using mobile technologies for entertainment, socialization, collaboration, and sharing of multimedia and massages. It's obvious today that all categories of people are using mobile devices to access information materials, communicate and share with friends' .According to Ukairo (2013)," One thing very clear to all and sundry is that our new generations of learners do not see technology as something very foreign but it seems our educators do. The new learners readily accept technology and consider it as part of their life.

However, new generation libraries and librarians, especially in academic environment have adopted the user of electronic mailing services, social media platforms (face book group, tweeter group, whatsapp group, Google apps and drive etc.) to discharge library services to their end users. Online databases of eBooks and eJournals are mobile learning hubs, the internet libraries (electronic libraries) hence can be accessed anywhere and anytime irrespective of time or boundaries.

Although it is expected that mobile learning approaches should increase student performance by facilitating their access to educational materials from anywhere in the world. In the other hand, accessing students' attitudes toward mobile learning would inform decision makers, curriculum designers, academician, librarians and anyone that cares to know about the students' level of acceptance and use of mobile technologies for mobile learning in Nigeria.

Objectives of the Study

- To determine the types of mobile technologies utilized most for mobile learning in Nigeria.
- To ascertain the threats and challenges affecting the adoption of mobile technologies in Nigeria libraries and educational system.
- To determine the extent to which mobile technologies can be used to enhance the quality of education and transform Learning processes.

Research Question

- What are the types of mobile technology utilized most for mobile learning?
- What are the threats and challenges that affect the adoption of mobile technologies in Nigerian libraries and educational system?
- To what extent does mobile technology enhance the quality of learning?

Literature Review

UNESCO in 2012 launched four pilot projects to explore how mobile technologies can be used to support and develop teachers in Mexico, Pakistan, Nigeria and Senegal. To inform these ;in their deliberations UNESCO (2011) believed that ICT can contribute to achieving universal education worldwide, through the delivery of education and training of teachers, improved professional skills, better conditions for lifelong learning, and the potential to reach people outside the formal education process. According to the 2011 Education for All Report from UNESCO, the world is facing a massive teacher supply problem. The planet needs approximately two million new teachers as at 2015 and 5.4 million if attrition is considered. Many countries must double or triple their teaching forces. Another hurdle is that many

practicing teachers, particularly those from developing countries, lack ICT skills and are therefore unqualified to help students access and manipulate information in electronic mediums, a skill that will be become increasingly vital in this 21st century.

Furthermore, mobile technologies, especially mobile phones, carry potential to transmit varieties of functions. Even in areas where computers and effective teacher training institutions are scarce, mobile phones are common, and, more often than not, teachers understand the basics of how to use them. For these reasons, UNESCO is committed to exploring how mobile technologies might be used to develop teachers, improve their ICT skills, and prepare them to teach others how to leverage technology for learning. Joanna, N. (2011) in his view said that "unfortunately, up to date, there are very few examples of teacher support and professional development programmes that employ mobile phones and research on the few programmes and initiatives that do exist is emergent at best".

According to Wagner (2005), the demand for mobile learning will inevitably increase in the future. In the other hand, he added that the academic community in higher education institutions does not have sufficient background about teaching and learning capabilities provided by this type of learning, as well as the requirements needed to apply this type of educational technologies. Elsewhere, Mattmiller, 2005 conducted a research with the students in the University of Wisconsin, US. The results showed that a large number of students have abandoned the use of desktop PCs in favor of the use of laptops, and a very high percentage of the students were found to have smart mobile phones. Croop, (2008) stated that individuals are showing a considerable interest to move toward using wireless communication devices, such as the massive increase in the sales of laptops and iPads that have the wireless feature, as well as the widespread use of laptops. The Pew Research Center's Internet & American Life Project

(2012) stated that about half of all adults of the nation possesses a smartphone and smartphone users are more than those with basic phones. Also, in Asia, Alfarani (2015) argued that the number of students who uses mobile devices as educational resources will continue to rise sharply in Saudi Arabia. The United Nations Educational, Scientific and Cultural Organization (2011) declared that mobile networks serve 90% of the world and 80% of individuals living in rural areas.

Challenges of Mobile Learning

Efforts to leverage mobile technologies for learning are fraught with social, technical, and economic challenges. Perhaps due to the intellectually-light and entertainment-heavy content that has been optimized for mobile devices over the past decade, the primary social challenge is convincing people that phones are not a barrier to learning.

However, Broskoske and Harvey (2000) have found that one of the biggest difficulties that face the application of the e-learning programs in a number of universities is the lack of pre-preparation and careful planning based on field data. Messinger (2012) stated that a group of obstacles that limit the widespread adoption of mobile learning, including the distractions that mobile devices can cause within a teaching classroom; lack of research support regarding their effectiveness in the teaching class that could inspire teachers to integrate them in their own classrooms; the lack of efficient models in m-learning for accomplishing the aims of the today's learner; and resistance of some teachers to educational innovations.

Both Croop, 2008 and Harrison et al., 2013), believed that the major obstacles related to the speed and storage capacity is one of the factors that negatively affect the use of mobile phones in the mobile learning. The slow devices and difficulty in connecting them to the Internet compared to laptops or desktop computers, is an obvious obstacle. In a study conducted by Kim et.al

(2006), the findings showed that mobile learning is still in the initial stages of adoption in the United States, and that the studies in this field are still scarce, compared to the countries of Southeast Asia such as Taiwan, where many studies have been conducted in this field. Steve Vosloo, and Riitta Vanska,(2011) submitted" that mobile phones are not particularly conducive to creating content due to small screens and awkward keyboards, and even viewing and sharing content is often frustrating: apps crash, batteries die, reception is poor. Users of the most cutting-edge smart phones recognize that the devices, despite their dizzying utility and power, still have non-trivial limitations. Thus users say, we have not yet abandoned our paper, pencils, and desktop computers, nor do we appear likely to do so in the next few years".

There is concern that in the media saturated world of young people there is too much "screen time" – TV, PCs, video games and now mobile phones. There is a distraction factor with mobile phones. Many teachers have experienced the frustration of student's texting on their phones during class. There is a concern that online social networking, including via mobile phones, is leading to anti-social behaviour. (On the other hand, there is the question of whether social networks and mobile phones actually create more social behaviour, just not all face-to-face?) The majority of mobile learning projects have failed to scale up. While scaling is not necessary or even appropriate for all projects, it is often a requirement by governments for investing in a new educational approach. Online safety and security: there have been reported cases of advance free fraud, kidnapping and rape after victims' fronded perpetrators on mobile social networks. Cyber-bullying or harassment via mobile phones, "sexing" (sexual harassment via sms), and risk of radiation from mobile phones. Country such as France, have banned the use of mobile phones at schools because of the potential cancer risk of using mobile phones.

Advantages of Mobile Learning

Mobiles devices are use to create, identifies, disseminate, distribute, store, edit, receive and transfer ideas via audio and video messages, information, multimedia, eBooks, electronic serial publications etc, with mobile devices, distance and time is not a barrier. Information is accessible and also in abundance (not scarce) 24/7 and this actually could disrupt the role of the teacher from his bank of knowledge as facilitator of learning. The lines between formal and informal learning are being blurred. According to M. Sharples (2011) who says that "Mobile learning is creating more and more space for informal learning and challenging formal learning". It becomes important to understand how the boundaries are shifting and what the implications are, as well as to clarify our assumptions about 21st century learning.

Mobile devices are not procured and distributed by government (the usual top down e-learning ICT in education approach) but acquired, used and maintained by the teachers and students themselves (bottom-up approach). There are low levels of mobile learning initiatives in education, but outside the school walls there is massive, and ever increasing uptake. Mobile phones are touching peoples' lives in many ways: communication, entertainment, socializing, health, etc. But education is struggling to make sense of this change. Does this reflect the bigger challenge of education, one is tempted to ask?

Mobile Learning versus E-Learning

According to some experts, like George. Kuh, J.H.Shuh, E.J.Whitt and Associate (1991)" mobile learning is not "e-learning gone for a walk" and unfortunately mobile learning has too often been shorthand for mobile e-learning. This has made institutional learning sexy, instead of creating a whole new technology permeated learning society (a large part of mobile learning is happening outside of the formal education system)". The technologies for e-learning are scarce, fragile and

expensive. They are only affordable by institutions. Mobiles are cheap, reliable, and pervasive owned by individuals. It is a different situation to 10 years ago when debating e-learning.

As this writer engages himself with this topic, it is important to clarify collective understandings of the shifting boundaries between formal, non-formal, and informal learning and where mobile learning fits (or should/can fit). Opined Ronda Zelezny-Green(2012).

Pedagogical Framework of Mobile Learning

In this paper I do not propose a newer version of the theory but attempt to adapt it in order to review a variety of educational applications of mobile technologies and categorize them into several types to gain a better understanding of current mobile learning. While this paper follows the original concepts, I wish to make my own perspective of this theory clear and consistent.

Many researchers have interpreted TD theory in different ways and the various interpretations and operational definitions have influenced its evolution. Garrison (2000) pointed out earlier that "understanding transactional distance very much depends upon whether we are discussing a two-by-two matrix, a single continuum, or distinct clusters" (p. 9). For this paper, I choose to regard transactional distance as a single continuum from high transactional distance to low transactional distance because viewing it as a two-by-two matrix or distinct clusters makes the model more confusing due to the complex interrelations of variables. Three variables (structure, dialogue, and autonomy) control transactional distance (Moore, 1997, 2007, but as other scholars (Garrison, 2000; Gorsky & Caspi, 2005; Saba & Shearer, 1994) have pointed out, the interrelationships are inverse or orthogonal between structure and dialogue and overlapping or hierarchical between structure and autonomy (Gorsky & Caspi, 2005).

Such viewpoints about variable interrelationships in TD theory might be valid. However, in this case complex variables and their relationships with each other determine transactional distance. What we need to determine is how to define transactional distance as a single continuum. For the purpose of this paper, I adhere to the original and official definition of the theory: "a psychological and communications space to be crossed, a space of potential misunderstanding between the inputs of instructor and those of the learner" (Moore 1997, p. 22).

Nevertheless, when the transactional distance is defined as a psychological gap between instructor and learner, it still contradicts definitions of structure and dialogue. Due to the recent developments of emerging communication technologies, structures of learning are built not only by the instructor or instructional designer but also by collective learners; and dialogue is also formed not only between the instructor and learners, but also among the learners themselves. Working in wikis is an example of how learners build structure through dialogue (Benson & Samarawickrema, 2009). Regarding dual types of dialogue, Moore (1997) already mentioned that a new form of dialogue called "inter-learner dialogue" can make knowledge creation possible for distance learners. Structure and dialogue, previously defined as being under the instructor's control, have evolved into something that learners can also form. Because of this, every definition regarding transactional distance must now include the interaction among learners, which contradicts the original definition of transactional distance as a communicational gap between instructor and learner. To resolve this contradiction, it is necessary to define the dialogue and structure that influence transactional distance as only the interactions that take place between the instructor and learners and to exclude the interactions among learners. Any kind of dialogue and structure built by learners alone should be discussed in a different dimension. Such a dimension is discussed below.

This new dimension connotes “individual versus collective (or social)” activities by considering the importance of the social aspects of learning as well as newer forms of social technologies. This idea was formed by the influence of cultural-historical activity theory that Kang and Gyorke (2008) compared with transactional distance theory. However, I move beyond comparing each theory and synthesize them to understand some phenomena more effectively. A number of researchers (Frohberg, Goth, & Schwabe, 2009; Sharples, Taylor, & Vavoula, 2007; Taylor, Sharples, O'Malley, Vavoula, & Waycott, 2006; Uden, 2007; Zurita & Nussbaum, 2007) have utilized activity theory as a theoretical framework for mobile learning.

Some researchers recognize activity theory as a powerful framework for designing constructivist learning environments and student-centered learning environments (Jonassen, 2000; Jonassen & Rohrer-Murphy, 1999). However, certain limitations and unsolved problems in activity theory have been raised. Barab, Evans, and Baek (1996) pointed out that “life tends not to compartmentalize itself or act in ways that are always wholly consistent with our theoretical assumptions” (p. 209). They suggested researchers move from isolated to complementary theoretical perspectives. Although I do not describe the details of activity theory in this paper (Engeström, 1987; Leont'ev, 1978; Vygotsky, 1978), I do use several elements of it to modify transactional distance theory, adding a dimension and creating a pedagogical framework for mobile learning that is illustrated in Figure 3.

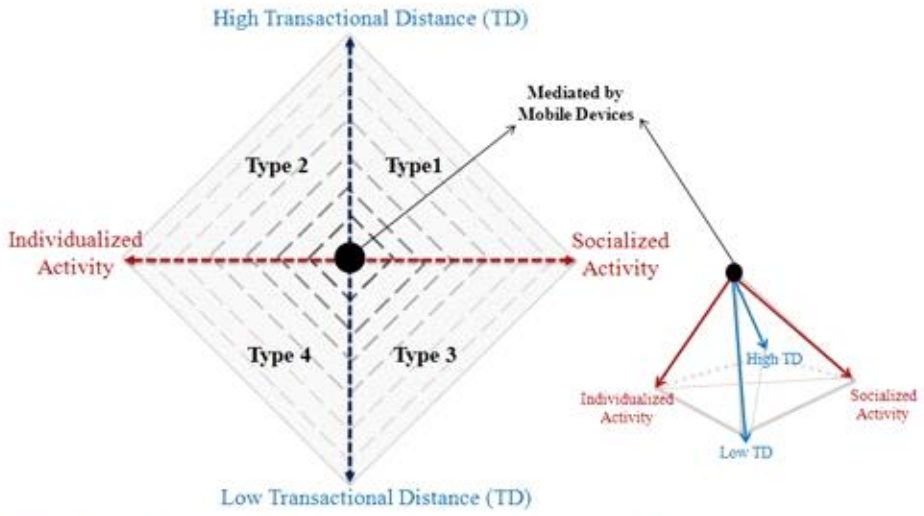


Figure 3. Four types of mobile learning: A pedagogical framework.

First, *activity* is conceived as a unit of analysis. Since transactional distance theory considers a course or program to include several lessons (Moore, 2007), this made it difficult to decide the transactional distance for the course as a whole. For example, the presentation of information is likely highly structured, while questions for discussion require high dialogue process, but both of these activities are typically course components. As a result, a course including several activities with different degrees of transactional distance cannot simply be categorized as either high or low transactional distance. Thus, by confining the unit of analysis to "activity," it is easier to determine to what extent transactional distance can exist because the activity is a "minimal meaningful context for individual actions" (Kuutti, 1996, p. 26).

Second, individualized and socialized activities are mediated by communication technology which is one kind of cultural-historical artifact in activity theory. As Kang and Gyorke (2008) pointed out, both transactional distances theory and activity theory consider mediation to be important. Thus, with "mediation" at the center of the framework, individualized activity at one extreme indicates a form where a learner is isolated from communicating with other students, and socialized activity at the other extreme indicates a form where students work together, share

their ideas, and construct knowledge. At the same time, activities are mediated by the rule which can be either highly structured with fewer dialogic negotiations (high transactional distance) or loosely structured with more free dialogic negotiations (low transactional distance). As mentioned above, mobile learning is "mediated learning by mobile technologies" (Winters, 2006) and the mobile technologies uniquely support students' learning both collectively and individually (Koole, 2009). In placing high or low transactional distance on the *y* axis and individualized or socialized activity on the *x* axis, the framework generates four types of mobile learning activities.

Third, the dualism of individual versus collective (or social) is a dichotomy, but it is also something to be connected and balanced. Activity theory has attempted to transcend the issue of dualism in such pairs as individual-society, subjectivity-objectivity, agency-structure, psychological-social (Roth & Lee, 2007; Watson & Coulter, 2008). However, according to Garrison (2001), Leont'ev's activity theory (1978) drew close to Dewey's theory of transactional coordination, but Dewey pushed his functionalism beyond describing "inter-actions" to a theory of "trans-actions." There are similarities and differences between the approach of activity theory and the approach of transactional distance theory derived from Dewey's work. Activity theory is an analytic framework for understanding an individual's (subject) actions on learning material (objects) mediated through artifacts, interacting with a community, moderated by a set of rules, and distributed by a division of labor (Engeström, 1991). It forms a part of the basis for transactional distance theory, which is a framework for understanding the relations of key variables (structure, dialogue, and autonomy) in the context of distance learning. Although a number of important concepts from activity theory are simplified in Figure 3, a dimension indicating the range of individualized to socialized activity can be a useful lens for reviewing

diverse mobile learning activities. Above all, the distinction between individual and socialized activity is a generally understood and accepted categorization; for example, Keegan (2002) stated that distance learning has two forms, individual and group learning.

Library Perspectives

Libraries are now learning common instead of archives, though printed books still play a critical role in supporting learners in educational environment. But digital technologies offer additional pathways to learning and content acquisition. In the early days, libraries were banks of knowledge and information resources but the advent of internet, ICT and mobile machines has brought about rebirth in the entire processes of storing and acquiring information. The 21st century man does not need to go to the library to access information and information resources rather they require a place which encourages participatory learning that allows co-construction of understanding from various sources.

According to Holland Beth (2015) "every student has the capability to carry a global library on the device in his or her pocket, the function physical library may become even more important, not just a place to house resources, but one in which to create meaning from them. In fact, libraries of 21st century provide a welcoming common space that encourages exploration, creation and collaboration between students, teachers and a wider community. They bring together the best of the physical and digital to actually create hubs. Invariably, libraries must/ will continue to inspire students to construct new knowledge and meaning from the world around them".

Methodology

The study adopted a descriptive survey research design. The target population comprised 200, 300 and 400 level students of the two Colleges of Crawford University, College of Natural and Applied Sciences (CONAS) and College of Social Sciences (CBSS). A total population of 83m0 students and sample size of 83 respondents which was the 10% of the entire population for the study. A structured questionnaire was the instrument used to gather data from the student about mobile learning. A total of 100 copies of questionnaire were distributed randomly to 200, 300 and 400 levels of the two colleges, 90 of the questionnaire were retrieved but only 83 were found useful. Data collected were

Were analyzed using percentages and frequencies.

RQ1. Table1: Frequency of most utilized mobile technology among selected student of Crawford University

Mobile Technology	Most Utilized	Frequency	Less Utilized	Frequency
Smart phones	91.6%	76	8.4%	7
Laptops	60.2%	50	39.8%	33
Cell phones	73.5%	16	26.5%	22
Black belly phones	20.5%	17	79.5%	66
Android wrist watch	16.9%	14	83.1%	66
Radio	36.1%	30	63.9%	53
Handheld digital television	26.5%	22	73.5%	61
Smart card technology	33.7%	28	66.3%	55
Digital camera	41.0%	34	59.0%	49

`Cd Rom database	39.8%	33	60.2%	50
Video conferencing	51.8%	43	48.2%	40
Wireless internet access	67.5%	56	32.5%	27
Desktop computer	19.3%	16	80.7%	67
Intranet	60.2%	50	39.8%	33
Only databases	65.1%	54	34.9%	29
Face book	50.6%	42	49.4%	41
Youtube	62.7%	52	37.3%	31
Yahoo	50.6%	42	49.4%	41
Whatsapp	71.1%	59	28.9%	24
Google apps	73.5%	61	26.5%	22
NETBOOK	48.2%	40	51.8%	43
iPod	41.1%	34	59.0%	49
e-readers	68.7	57	31.3%	26
PDA	449.4%	41	50.6%	42
iPad	53.0%	44	47.0	39

The result from table 1Shows that mobile learners utilize smart phones mostly 76(91.6%) followed by cell phones 61(73.5%), the result also shows that desktop computers are the less utilized 67(80.7%). The findings agreed with the report of the Pew Research Center's Internet and American life project (2012) whose started that about half of all adults of the American nation possesses a Smartphone and Smartphone users are more than those with basic phones. It also agreed with the findings of Mattmiller (2005) who conducted a study on selected students of

University Wisconsin US and discovered that large numbers of the students have abandoned the use of desktop PCs in favor of laptops, and a very high percentage of the students were found to have smart mobile phones.

RQ2. Table: 2. Challenges affecting the adoption of Mobile Technologies to Learning, Libraries and Education system

Items	Critical	Very critical	Not critical
Connectivity can be a mess as a result of poor signal/network transmission	31 (31.3%)	43 (51.8%)	9 (10.8%)
Constantly focusing on the screen may damage the eyes of the learner	31 (37.3%)	28 (33.7%)	24 (28.9%)
Device digital compatibility (ipad, ipod and iphones hardly pairs with laptops and mobile phones	28(33.7%)	15 (18.1%)	40(48.2%)
Screen not visible under the sun	35 (42.2%)	8(9.6%)	40(48.2%)
High cost of internet networks, and database subscriptions	28(33.7%)	25(30.1%)	30 (36.1%)
The publisher can withdraw intellectual content anytime without notification or explanation	37 (44.6%)	30 (36.1%)	16 (19.3%)
It give room for frau, distraction, cheating, stealing, prostitution etc	33 (39.8%)	25 (30.1%)	25(30.1%)
The storage capacities for PDA's are limited	32(38.6%)	13(15.7%)	38 (45.8%)
Short battery life and frequent charges of battery constitutes a great nuisance and interrupt learning	20(24.1%)	34(14.0%)	29 34.9%)

processes			
Devices may become outdate quickly and students may have to keep combating obsolescence	25(30.1%)	30(36.1%)	28(33.7%)
Negative attitudes of educators , teachers and librarians towards mobile technologies	23(30.1%)	23(27.6%)	35(42.2%)

Table 2 above shows that all the items listed one way or the other constitutes a challenge to mobile learning in Nigeria. The "publisher" can withdraw intellectual content from online anytime without notification, explanation or apology and this constitutes the highest critical challenge at 37(44.6%),poor signal/ network transmission constitutes the highest very critical challenge at 43 (51.8%) while non compatibility and non supportability of digital devices with others constitutes the highest non critical challenge at 40(48.2%) respectively. However these findings are related to submission of Peters (2007) which stated that a number of factors relating to the infrastructure may prevent the application of mobile learning in higher education as quickly as required. Some of those factors are the lack of enough technical support and the lack of adequate training for faculty members in this field. Other factors include the high cost of infrastructure construction in the universities, the fact that it has not been taken into account when designing mobile technology that it will be used for educational purposes, the lack of faculty members' necessary technical expertise, and the slow movement of change in higher education systems in general (Hackemer & Peterson, 2005).

RQ3. How does Mobile Technology Enhance Quality of Learning

From the result of the analysis, the means score was 84.86 and the Std. deviation was 20.75. The mean score is very high; therefore mobile technology enhances the quality of learning.

Information materials are easily stored and circulated with easy, the barriers of boundary and time are broken, and learning is nomadic.

Conclusion and Recommendations

The use of mobile technology for learning and information sharing cannot be over stated. There is no doubt that information technology was originally meant for communication and socialization. Today, it has become a platform for learning and information sharing relating to academic and non academic matters. However, the finding of this study shows that the application and use of mobile technology for learning and academic purposes in Nigeria educational system is relatively very low. Educators, curriculum designers/ planners, librarians etc should promote the use of mobile technology for rendering and extending academic services. Education 2.0, Library 2.0 and web2.0 should be incorporated into the school curriculum.

Universities and educational institutions should create and activate their e-learning portals, and request the students to login to access the school information 24/7. Universities, educational institutions and libraries should create long lasting partnership with local telecommunications companies to provide high-speed internet services. Learners and teacher should be taught the usefulness, importance and effectiveness of the use of Mobile technologies in learning process, and also the need to incorporate mobile learning into the school curriculum, educators, teachers, and librarians should erase negative feelings about mobile technology from their mind. Lastly, similar study should be carried out to identify the readiness of educators, teachers/ librarians towards adopting mobile learning into Nigeria educational system.

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