

Mobile Phones and Adult Education in Nigeria:

Prospects and Future Challenges

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Abstract

Many educators believe that Nigeria is poised for positive educational transformation due to the rapid and widespread uptake of mobile phones across the country over the last few years. Various attempts have been made by researchers and educators at using mobile phones in both formal and non-formal learning and Open and Distance Learning (ODL) settings in the country. This has resulted in increasing number of studies on mobile learning in recent years and this has lent credence to the widely held view that mobile phones open up new vistas for extending the scope, scale and quality of education in Nigeria. Therefore this paper focused on mobile phones and Adult education in Nigeria: prospects and future challenges. It discussed various views by educators and researchers on the use of mobile phones in teaching-learning process in Nigeria- Relevance and challenges of using mobile phones were discussed extensively. The concept of Adult Education and future challenges were considered appropriately. Also, it was recommended that adult learners should be exposed to new innovations of the 21st century which was regarded as century of knowledge and that the Adult Education curriculum should be incorporated using mobile phone for instructions. Conclusion were equally made that mobile phone be incorporated into adult education, for effective global development)

Keywords: Mobile Phones, Adult Education, Literacy and Numeracy, Open and Distance Learning

1. Introduction

In recent years there has been considerable interest among educators in finding ways of integrating mobile and wireless technologies in learning and teaching. Mobile phones have been seen as the most popular among younger and adult learners, and probably the most widely handheld device in Nigeria. Although there are still some technical problems providing content such as graphics or complex web pages, for highly interactive future models that will be more powerful and several current problems will be solved (Trinder, 2005). Arrigo and Cipri (2010) opined that mobile phones add new educational opportunities because they are personal, portable and permit new forms of interactions among all that is involved in the learning process and their perspective surrounding environment. Also, present day mobile phones are complete multimedia centres that combine the capabilities of a still camera, a video camera, a personal organizer and a web browser in one device (Marriott, 2005).

Csete, Wong and Vugel (2004) emphasized the possibilities of introducing mobile phone as a learning tool. They stated that the learning curve of the mobile phone is very short and therefore it is easier to begin to use mobile phones and Personal Digital Assistant (PDAs) rather than laptop computers. They equally pointed out that the mobile phones menus are designed with icons and text descriptions that help anyone to identify the functions easily.

For more than two decades, Nigeria have experienced a continuing, debilitating crisis in education, including limited access to educational opportunities and resources, a lack of highly qualified teachers, and low level of literacy and basic education skills. Governments, educators and researchers have launched numerous Information and Communication Technology (ICT) in education initiatives aimed at ameliorating these problems, to varying degree of success. The rapid growth of mobile phones access over the past years potentially opens up new avenues for addressing the systemic educational challenges in Nigerian most especially the non-formal education or Adult

education.

There are different mobile learning initiatives in Nigeria in terms of their capacity to help the country achieve Education For All (EFA) goals, their tendency to enable new pedagogies and modes of learning, and their potential to increase the efficiency of education systems.

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United Nations Educational, Scientific and Cultural Organization (UNESCO,2012) highlighted the six EFA goals which are the broad objectives of expanding access to education, improving the quality of learning and promoting equity in education. Mobile learning initiatives have demonstrated how each of the EFA goals, can be supported by mobile learning.

GOAL 1: Early childhood care and education;

- 2: Universal primary education;
- 3: Lifelong learning;
- 4: Adult literacy;
 - 5: Gender parity and equality, and
 - 6: Educational quality (UNESCO, 2012)

This paper emphasis the adult literacy Goal number 4. The goal 4 calls for 950% improvement in adult literacy rates, especially for women, by 2015, as well as equitable access to basic and continuing education for all adults. Project alphabetization de base par cellulaire (Basic literacy through mobile phones, or AB) in Niger is a mobile phone based literacy and numeracy programme. This project is a collaborative initiative between Tufts University in the USA, the University of Oxford in the UK, and the Niger branch of Catholic Relief services, an-international humanitarian organization based in the USA. Project ABC uses multimedia phones pre-loaded with a digital curriculum in the local languages of Hausa and Zarma. The project incorporates a practical literacy component tied to obtaining market information via text messages. The literacy curriculum is taught by local facilitators, trained by the Ministry of Education of Niger. Short Message Sentences (SMS) were used, learners study functional literacy and numeracy of three hours per day.

From the initiative, it was observed that mobile phones have had a positive impact on participants' literacy skills. The learning model was designed around the context of women farmers, liking learning to livelihood and leveraging their interest to sell their products on the market to engage women in literacy training in their local languages. It was also observed that seven months after the end of classes, average Mathematics test scores were still higher in "ABC villages" than in villages that did not participate in the project's. Success can be attributed to the effectiveness of mobile phones as a motivational and educational tool: the evaluation found that students in ABC villages used mobile phones in more active ways and showed a higher interest in education than their counterparts in other villages (Aker, Ksoll and Lybberty, 2011).

2. Brief History of Mobile Phones in Nigeria

It was noted by GSM world (2004) that GSM supports more advanced data technologies. And these technologies allow for a greater bandwidth and allow the development of mobile applications. GSM dominates the world today as the most matured digital especially because of its roaming capabilities.

Telecommunication cellular standard, and its networks offers cellular switched data services more on advance of other networks. GSM is known as the second generation (2G) after the old analogue system, which was first generation (1G) (Iwhiwhu, Ruteyan and Eghwubare, 2010). It was also noted by (Iwhiwhu, Ruteyan and Eghwubare, 2010) that the advent of GSM was revolutionary,

services was introduced in Nigeria by the British Colonia Government in 1886 this is to enable the colonial administrator administer the country effectively. After the Nigeria independence, in 1960, in 1966, there were only 18,724 telephone lines for use by a population of about 40 million people (Edison, 2002). The post and Telecommunications Department splited into a postal division and a telecommunication division in January, 1985. There after the later was merged with the Nigerian External Telecommunication Limited (NITEL). The main purpose of this is to bring together the running and coordination of the internal and external telecommunications services (Edison, 2002). The ministry of communication and the Nigerian Communications Commission (NCC) approved two mobile cellular phones in September, 1997. it was noted by Ndukwe, (2003) that both the Nigerian

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Telecommunications Limited (NITEL) Cellular network and mobile communications services limited (MTs) that was managed by NITEL covers Lagos, Enugu, and Abuja only with a capacity of 10,000 lines having one mobile switching centre (MSC) in each area, while MTS limited, operates 5,000 cellular line capacity network based in Victoria Island, Lagos.

In January 2001 Nigeria joined the world's digital cellular network with the licensing of private telecommunications operations by the regulatory body, this gives room for the establishment of Nigerian Communications Commission (NCC), in 2002. Initially, there are four major global systems for mobile communication (GSM) service providers licensed in Nigeria. The providers are MTN Nigeria, Econet Wireless limited or Vmobile (now Zain), NITEL (now Mtel) and Globacom. In 2002 Globacom was issued licensed since then several other providers (starcom, O-net, Multilink, Etisalat, Visafone zoom and so on) have emerged.

In December, 2001 Nigeria has over 280,000 mobile lines in just four months of GSM operation in Nigeria. However, GSM has greatly improved the socioeconomic, security, education, and information-based sectors of the economy. Today, every nocks and crannies of the country are covered by GSM, and mobile phone booths/shops/kiosks can be seen as a mean of empowering citizens of Nigeria.

3. Relevance of Mobile phones in teaching and learning

The relevance of mobile phones in teaching and learning are numerous, that is the reason for its acceptance worldwide. The relevance are as follow:

Dawson, (2007) noted that many mobile phones are cheaper to purchase than desktop computers and laptops, and that introducing the mobile phone as a low-cost teaching and learning tool is quite possible. He also stated that mobile devices require less technical support than computers and laptops. When considering the adult learners, the mobile phones allow the learner to learn autonomously (Callums, kinshuk, 2006), collaboratively and provide opportunities to conduct learning experiences outside the teacher-managed classroom by expanding learning beyond the four walls of the classroom and thus allowing interactions in the real world including new interactions to be brought into the classroom.

Another relevance of the mobile phone is its image capture function allowing teachers and students to bring the outside world into the classroom (Ekamuake & Wishart, 2010). The mobile phones' video camera helped student to capture an event of interest that could be otherwise be missed. Mobile phone can be used to connect the lesson content to students' prior knowledge and correct misconceptions during the classroom. A sensor system for environmental education was developed using mobile phones as a means of enhancing learner participation and motivation. A participatory design approach was used to develop the sensor system. And it enables the learners to collect a range of sensor data using probes and mobile phones. Also, mobile phone video and image capture can be used to produce a snapshot of the conditions they had experienced. On their retain to the classroom, the data were downloaded onto a personal computer.

Adomi (2006) carried out research on mobile phone usage patterns of library and communication science students at Delta State University, Abraka, Nigeria. He enumerated some of shortcomings of mobile phones usage as follows:

- i. Frequent network failure.
- ii. High cost of recharge cards/airtime.
- iii. Limited area of coverage.
- iv. Occasion scarcity of recharge cards
- v. Power outage
- vi. Lack of privacy in mobile shops/booths/kiosks.
- vii. Interconnectivity problem
- viii. Delay in delivery of text messages.
- ix. Congestion in mobile phone shops/booths/kiosks.
- x. Handset interception through duplication of SIM cards.

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4. The Concept of Adult Education in Nigeria

Adult education has been defined by various writers and researchers in different perspectives. Some use the biological parameter in defining adult education, while others use the chorological, historical, economic, psychological, political and social parameters in defining who an adult is. Ibe, (2008) see an adult as one who has achieved full physically and psychologically mature, and the individual is socially, economically, politically, culturally and environmental responsible. He also noted that in advanced countries an adult is one who has attained the voting age of 18 years. UNESCO (2012) defined an adult as a person regarded as such by society to which he/she belongs, this definition sees who an adult is as culture referenced. Therefore, it depends on who a particular society considers to be an adult in that society.

However, UNESCO in her international Conference in Nairobi, Kenya, (1976) as reported in Onyenemezu, (2012) defines adult education as:

The entire body of organized education process whatever the content, level and method formal or otherwise, whether they prolong or replace initial education in schools, colleges and universities as well as apprenticeship whereby persons regarded as adults by the society to which they belong develop their abilities, enrich their knowledge, improve their technical or professional qualifications and bring about changes in their attitudes or behaviour in the two fold perspectives of full personal development and participation in balanced and independent social, economic and cultural development.

The above definition is broad and encompassing because it does not only define adult education but it also defines its content and scope. Omolewa, (1985) defines adult education as the education (formal, informal and non-formal) given to any person regarded as an adult by society in other to socially, economically, and culturally improve and empower him/her so that the person will be able to contributed meaningfully as a useful and responsible member of society. It is education based on the needs of the adult.

5. Fundamental Requirements for Adult Education in 21st Century

The purpose of adult and non-formal education according to the Federal Republic of Nigeria (2004) are:

- i. to provide functional literacy and continuing education for adults and youths who have never had the advantage of formal education or (dropouts). These include the nomads, migrant families, the disable and the disadvantaged gender.
- ii. to provide functional and remedial education for those who did not complete secondary education.
- iii. to present education for different categories of computers of the formal education system in order to improve their basic knowledge and skills.
- iv. to provide in-service, on-the-job, vocational and professional training for different categories of workers and professional in order to improve their skills and
- v. to give the adult citizens of the country necessary aesthetic, cultural and civic education for public enlightenment.

6. Recommendations

The use of mobile phones has not been fully incorporated into adult education programmes in Nigeria. Therefore, the following recommendations can be considered for effective incorporated of mobile phones into adult education in Nigeria.

- i. Adult education should be re-positioned to excessively launch the present adult into the orbit they can respond to the challenges of the 21st century and this will enable them to contribute meaningfully to national development.
- ii. Policy makers and the curriculum planners of education programmes in Nigeria need to incorporate into adult education curriculum the use of mobile phones, an innovation which have made the 21st century unique.

- iii. Adult education planners need to incorporate into its schedule the knowledge and practice of information and technology. The 21st century is noted for exposition of knowledge and hi-technology which has aided development in different sectors. A century where communication and infrastructural facilities such as mobile phones and computer networking are tools that are turning the world into a global village. Today, all sectors of human endeavour in the 21st century have become technologically driven. This has eventually resulted in a shift from industrial era to information era. This century is also noted for its ability to reach people irrespective of distance, introduce changes to human problems.
- iv. Proper attention should be given to adult education programmes by the three tiers of government in due with the global concern for eradication of illiteracy in Nigeria.
- v. Adequate funds should be budgeted for the provision of mobile phones for the adult learners and their facilitators.
- vi. Special training, workshops, seminar should be organized for the adult learners and their facilitators on the use of mobile phones for instruction delivery and how to handle problems that may arise when using the mobile phones.
- vii. Non-Governmental organizations (NGOs) can assist the government in the provision of special mobile phones and their accessories.

7. Conclusion

The 21st century which has been regarded as century of knowledge has better prospects for adult education to move forward with globalization trends. The development of any nation depends on the quality of adults that nation has, therefore they should be exposed to the various innovations of this century. It is the adults who will transform the nation, not the children, therefore adult education should be a pacesetter to other professions in developmental drive of any nation. There should be radical incorporation of mobile phones into adult education programmes to enable the nation achieve the education for all goals.

References

Adomi, E.E. (2006), Mobile phone usage patterns of Library and Information Science students at Delta State University, Abraka, Nigeria *electronic Journal of Academic and Special Librarianship*. 7(1) pp10-17.

Aker, J.C., Ksoll, C. and Lybberty, T.J. (2011), ABC 123; can mobile phones improves learning? Evidence from a field experiments in Niger. <u>http://www.aae.wisciedu/mwiedc/papers/2011-jennu.pdf</u>.

Arrigo, M. and Cipri, G. (2010), Mobile Learning for all. *Journal of the Research Center for Educational Technology*. 6(1) 280- 293.

Callum, K.M. and Kinshuk, (2006), *Mobile Technology in Facilitating Learning Goals. In mLearn 2006.* Banff, Canada.

Dawson, D. (2007), Handheld Technology for mobile learning. London Latimer Trend.

Edison, T. (2002), Communications. Available: <u>http://www.Nigeriabusinessinfo.com/telecoms080903.html</u>. (Retrieved 18 November, 2012).

Ekamayake, Y and Wishart, J.M. (2011), Investigating the possibility of using mobile phones for science Teaching and Learning: is it a viable option for Srilanka? *International Journal for Cross-Disciplinary Subjects in Education (IJCDSE)*. 2(2) 372-380.

Federal Republic of Nigeria (4th ed.) (2004), National Policy on Education. Lagos: *Nigerian Education Research and Development Council (NERDC)*.

GSMWORLD (2004), Mobile Applications. Available: <u>http://www.showlater</u>? Mggld.

Ibeh, A.E. (2008), *Theory and Practice of Adult Education in Nigeria*. Port Harcourt; University of Port Harcourt press.

Iwhiwhu, B.E, Ruteyan, J.O. and Eghuwubare, A (2010), Mobile phones for library service: prospects for Delta



State University Library, Abraka. Library Philosophy and Practice (e-journal). 4(7) 1-8.

Marriott, M. (2005), Use this phone to find a date or see video or even talk, in New York Times.

Ndukwe, E. (2003), Mobile Phones. Available: http://www.unesco-org/RISI/nisicountry-profiles/Nigeria.

Omolewa, M. (1985), Adult Education Practice in Nigeria. Ibadan - Evans brother Ltd.

Onyenemzu, E.C. (2012), Adult Education and challenges of the 21st century in Nigeria. *Journal of educational practice*. 3(5)1-6.

Trinder, Y. (2005), Mobile technologies and systems In Kukkuiska-Hulme, A& Traxler, y(eds). *Mobile Learning*; A Handbook for Educators and Trainers Routledge, London.pp8-24.

UNESCO (2012), Turning on mobile leaning in Africa and the East. France, UNESCO.

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