

Mobile Learning: A Need for Curriculum Reform in Nigerian Library Schools

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ABSTRACT

The present revolution of Information and Communication Technologies (ICTs) in the 21st century has necessitated a change in the curriculum as well as teaching and learning processes in library schools in Nigeria. New compact and electronic gadgets take the place of old text books and most teaching and learning now takes place virtually. Hence, there is urgent need to review the curriculum to integrate ICT-related courses which also reflects use of handheld devices and similar technologies to facilitate teaching and learning. This paper highlights an overview of mobile learning (m-learning) which is an emerging trend, types of m-learning was discussed, merits, demerits and the justification for curriculum reform in Nigerian library schools to reflect contemporary courses. It also highlights the various challenges of integrating ICT (m-learning) in the curriculum and finally suggests some recommendations that could be adopted for effective curriculum reform in the Nigerian library school system.

Keywords: *Mobile, curriculum, learning, handheld technologies, reform, library school.*

Introduction

The emergence of mobile learning (m-learning) is a considerable phase of fulfilment in the present era to the need of easily transferred educational system especially to candidates that cannot access the physical educational facilities and the high cost of educational services around the world especially, the technologically connected environments. This is obtainable within the successful invention and effective initiation of some technological ideas such as mini-computers, Local Area Network (LAN), Wide Area Network (WAN), mobile phones, tablets, video converters, portable network transmitter, digital protocols, social media plat forms, online research organizations and the facilitation of world wide web (WWW) protocols. This new system is effective and preferable even when there are some disadvantages mostly to users who are from

areas with less technological interest. As the traditional means of acquiring education and the sustainability quotient of such traditional system have some highly demanding processes and its effectiveness is determined by the physical presence of candidates involved, mobile learning enshrined in the curriculum of Nigerian library schools is crucial.

Over the years, mobile computers have gradually gained entry into educational contexts over the past 2 decades. Mobile technology has prompted most people to carry their own individual computers that contain exceptional computing power, such as laptops, personal digital assistants (PDAs), tablets personal computers (PCs), cell phones, and e-book readers. This large amount of computing power and portability, combined with the wireless communication and context sensitivity tools, makes one-to-one computing a learning tool of great potential in both traditional classrooms and outdoor informal learning hence the justification for the integration of

ICT and ICT-related courses in the educational curriculum of library schools.

Mobile Learning: An Overview

Mobile learning otherwise referred to as M-learning, is a concept that started around the early 2000's with the introduction of tablet computers. It is a combination of two words 'mobile' and 'learning'. The word 'mobile' means being able to move or be moved freely or easily. It could also mean relating to mobile phones, handheld computers, and similar technology either way, both definitions are relevant in this context in that for learning to be mobile, it has to be unrestricted to a particular location and that can only be possible with the aid of gadgets or handheld devices viz-a-viz mobile phones. Learning on the other hand is the acquisition of skills or knowledge by means of study, experience, or tutelage. It could be formal or informal learning. Formal learning is a synchronous type of learning that is provided by trained teachers restricted within the confines of a classroom while informal learning of which m-learning is part, is an asynchronous type of learning that occurs in or most times away from a structured or formal classroom. For instance, viewing videos, self-study, reading articles, taking part in online forums and chat rooms among others. This can only be possible with the presence of mobile learning by means of mobile phones, handheld computers and technologies of similar nature.

Mobile learning comprises any sort of learning which is done on any kind of handheld devices either in or out of class, or learning which happens on-the-go, as a major aspect of class time, or outside. It is the effective provision of educational services using technologically enhanced channels. Alsaadat (2017) defines mobile learning (m-learning) as the use of mobile and handled IT devices, such as Personal Digital Assistants (PDAs), mobile telephones, laptops and tablet PC technologies, in teaching and learning. According to Biswas (2012), mobile learning or m-learning is a ubiquitous form of learning through mobile devices. It is a flexible form of learning as you do not need to be at a given or predetermined location at a predefined time for learning to

take place. According to him, you can take up learning at your own comfort or convenience even while you are on the go utilizing portable gadgets like mobile, mp3 players or tablets. Like some other types of learning, m-learning additionally offers collaboration and networking among other students and teachers and instant feedbacks can be shared. Although mobile learning is often taken to be synonymous with the utilization of cell or mobile phones, it is progressively connected with different gadgets, for example, tablets, convenient games machine, digital books and different gadgets which permit individuals to proceed increasingly with traditional approaches to learning as they move through their daily lives. All things considered, it fits serenely into meanings of mixed or blended learning. Beal (2019) defined m-learning as education by means of the internet or network utilizing individual or personal cell phones to acquire learning materials through versatile applications, social communications and online instructive center points. It is adaptable, allowing or permitting students' access to education anyplace and whenever.

Mobile learning gives an approach to instructive establishment to convey information and intellectual substance to students on any platform, anyplace and at the time of need. Students utilize portable applications and tools to finish and upload assignments to educators, download course guidance and work in online social groups to complete tasks. The expression mobile learning is frequently used to depict the innovation, that is, the mobile phones and applications utilized in the classroom; however it might likewise be utilized to portray the support of always-on learning with mobile technology. M-learning innovations incorporate handheld PCs, mp3 players, notebooks, mobile phones and tablets. It centers on the mobility of the student/learner cooperating and interacting with portable technologies. Utilizing mobile tools for creating learning aids and materials turns into a significant piece of informal learning.

M-learning is advantageous in that it is accessible from practically anyplace. Sharing is practically immediate among everybody utilizing a similar content, while prompts the

reception of instant tips and feedbacks. M-learning additionally brings convey ability or portability by replacing books and notes with little gadgets, loaded up with customized or tailored learning contents. M-learning has the additional advantage of being financially savvy, as the cost of digital content on tablets is falling strongly in contrast to the conventional media i.e. books, CD and DVD among others (Alsaadat, 2017).

M-learning is the next big evolution in mobile technology. E-learning is a passé and m-learning is the alluring future. The capacities of mobile phones are gradually expanding which is encouraging further development in m-learning technology (Biswas, 2012). At the point when the idea of m-learning advanced ten years back, nobody envisioned that it will experience such remarkable improvement. Thanks to the rapid development in mobile technology and advancement of mobile phones into smart phones. Biswas (2012) opined that m-learning comes in various types which include:

- **mVLE Based Learning:** This is an extension to Virtual Learning Environment like Moodle and Atlas. These E-learning providers have started offering Mobile Apps for facilitating learning through Smart Phones. So Mobile users can take advantage of activities happening in the non-mobile version of the environment.
 - **Apps based learning:** These are specific mobile apps that help in improving vocabulary, mathematics and other skills. This is kind of discrete learning. This method supports interactive learning and hence works pretty well. There are free and paid apps available on different platforms in the app stores which can be installed on the smart phone to begin study. Few examples are – moodle mobile, teachermate, Martha speaks dog party (for children to improve vocabulary), dictionary apps, Johnny grammar's quizmaster and a host of others.
 - **Podcasting:** It is a form of passive learning where in the study materials are provided in the form of audio files. These can be played using mobile phones or mp3 players. Podcasting is more effective if it is accompanied with related slides and videos. If the audio podcast is instructional and allow users to follow certain instruction and perform task while listening to the podcast it becomes more effective.
 - **Augmented Reality Based Learning:** Augmented reality is a direct or indirect view of a real world based on the images captured through mobile phone camera and using the GPS. This technology can be utilized to impart M-Learning in a sophisticated way. Through Augmented Reality based learning users can input information and interact with other users as well. For instance, the HARP (Handheld Augmented Reality Project) project from Harvard University is based on an augmented reality game to teach students Math and Science.
 - **Experience Based Learning:** This is a mode of learning that utilizes the device functionalities like GPS, Camera to enhance the user experience while learning. Students can share information on the go while on a field visit.
 - **Content Delivery Based Learning:** This is another passive learning. The learning materials can be distributed in the form of e-books, SCORM packages or html files to be read in mobile devices. This method is mostly available for Smart phones.
 - **Game Based Learning:** Game based learning is a very effective way of teaching with highest memory retention. This method is quite popular in offline learning as well as in E-learning. Due to the development in mobile technology it has now been offered through mobile too.
- Social Learning:** Social learning is also known as collaborative learning. This involves users networking with other users as well as peers using social network. Social Networking

sites like Facebook, WhatsApp, Telegram and Twitter are facilitating this with their mobile apps (Biswas, 2012).

Merits of M-Learning

Mobile learning has a number of benefits or merits to education generally; these merits according to Beal (2019) include the following:

- M-Learning can be deployed in Software as a Service (SAAS) format to provide access anytime, anywhere.
- It offers freedom and power of choice which enables students to take up courses while on the go conveniently irrespective of time and location.
- M-Learning offers rich and up-to-date content on mobile even at a slower connection.
- With the help of a mobile device like a smart phone or PDA students can access the course content, download them and track their progress.
- It offers portability to students as students do not require carrying bulky copies, books and files.
- It promotes higher rate of engagement, motivation and encouragement for learners.
- It increases the scope of education and improves equal opportunities.
- It encourages the formulation of new student communities and collaborative learning.
- It facilitates continuous learning which is crucial in an ever changing world.
- Due to its ease of accessibility, students with disabilities are brought up to speed in the scheme of things.
- Students can benefit from the merits that mobile learning have to offer by introducing this trend into classrooms through the curriculum in an organized and managed way that suits all students which goes in-line with the stance of the United Nations Educational, Scientific and Cultural Organization (UNESCO) when they affirmed that the use of mobile and handheld devices should be adopted in classrooms if it is an appropriate use.

Demerits of M-Learning

- Inability of M-Learning technologies to handle complex functionality and provide better learning experience.
- Limited storage capacity of most mobile devices prevents storing large volume of learning materials.
- Some of the M-Learning techniques are not available in some types of phones.
- Mobile devices can be a great source of distraction to participants when learning constantly gets interrupted by text messages and social media notifications.
- Most of the participants tend to misuse the device for different purposes other than what it is intended for.
- In spite of the few disadvantages of m-learning, it is an emerging technology and is certainly the future of learning. This is the next generation of e-learning. Advancement in modern gadgets like PDA, tablet PC, pocket PC and smart phones are enhancing the development of m-learning. M-learning isn't about the device but about the network connectivity, capacities and experience. It should be infused in the curriculum of Nigerian library schools to better inculcate in library and information science (LIS) students the nitty gritty of mobile learning and its benefits for enhanced library education.

Concept of curriculum reform

Reform is an action geared towards evaluating, assessing and reappraising the current training framework or existing educational system in aspects of quality, standard, structure, tutelage, study halls or classrooms and most importantly curriculum. Reform according to Merriam-Webster Dictionary (2019) means to put or change into an improved form or condition. It also means to amend or improve by change of form or removal of faults. It entails adopting policies and practices to ensure better quality education. Curriculum can be seen as the

overall content, taught in an educational system or course. It refers to the lessons and academic content taught in a school or in a specific course or program. Curriculum reform therefore implies changing or improving the previously existing educational plan or curriculum to suit the societal needs and educational objectives and changes in the society. Reforming any curriculum therefore supposes that the curriculum should be redesigned to accommodate new knowledge and practice i.e. ICT-related courses etc.

A reform is a process of improving by alternation, correction of errors or removal of defects or simply to put into a better form or condition (Ekwujuru, 2007). Educational reform is a comprehensive reworking or rebuilding of the educational system for the ultimate purpose of improving teaching and learning (Achunine cited in Ozioko and Nwabueze, 2010). Reform as it relates to education depicts the efforts made by stakeholders like the government towards making the educational process functional, productive and more effective. Ozioko and Nwabueze (2010) noted that reform come up as a way of ensuring, that the educational system is structured and made to be more relevant to the needs and aspirations of the society through the injection of new ideas, new research findings and new approaches into the system. Curriculum reform in schools ensures a flexible teaching and learning environment and incorporating electronic learning techniques and facilities.

Rationale for reform in education generally

Change is the only constant thing and an inevitable phenomenon since it must take place once it is time and whether it is intended or not. On a general note, people do not welcome change especially when it is unplanned because such changes have unpredictable outcome which could be negative, destructive or unwanted. Planned changes are rather more preferable. The reasons according to Ozioko and Nwabueze (2010) are as follows: firstly, we live in a dynamic world where events constantly bring change. Change invites challenges and challenges require novel knowledge, skills and strategies. To address

such changes, there must be a total transformation of educational policies, programmes and methods of delivery. Secondly, there is need to enhance educational delivery processes through new knowledge and set of skills required to navigate new and unfamiliar waters and thirdly, there is also a need to identify better and improved educational delivery processes, reconsidering current methods for assessing learner achievement and accrediting work experience. Ali (2009) emphasized that "any education that does not reform itself by introducing changes engendering new processes, and addressing new challenges and expectations, modifying current practices so as to reposition the education to meet new national development challenges will become moribund and lead to national retrogression, as well as constant crises in education and ultimately incipient decay".

Educational curriculum generally is continually experiencing or undergoing changes because of the transformation in Information and Communication Technology (ICT) which has resulted to the emergence of m-learning. ICT describes the use of computer-based technology and the internet to make information and communication services available to a wide range of users. The term is used broadly to address a range of technologies, including telephones and emerging technology devices. Central to these is the internet, which provides the mechanism for transporting data in a number of formats including text, images, sound, and video. The quality of any learning activity is highly dependent on the curriculum content which is a platform for the injection of communication, collaboration, critical thinking and creativity which are regarded by Cooper (2016) as the 4Cs of 21st century skills as well as the utilization of mobile technologies to enhance smooth educational experience.

With periodic reform in the educational curriculum, students are availed the opportunity of acquiring knowledge of global best practices which include the effective utilization of mobile and handheld technologies to facilitate learning as well as boost their technical know-how of such devices. According to Paige (2009), adopting a

21st century curriculum should blend knowledge, thinking, innovation skills, media, information and communication technology (ICT) literacy, and real life experience in the context of core academic subjects. In order to possess excellent skill set to utilize technologies as well as achieve authentic learning that is demanded in the 21st century, students engage in the learning environment effectively and develop critical thinking, problem solving, and collaboration. Opara (2009) emphasized that a worthwhile curriculum should be dynamic in order to be relevant. Hence, curriculum should be constantly revised in order to effect changes in the changing environment. The major significant change in the new curriculum is the fact that ICT is now an integral part of most subjects taught in schools. This integrated approach has put more requirements on both the teacher and the students to acquire the necessary ICT skills in order to face the new challenges and adapt to new trends.

The curriculum review should emphasize or strive to strike a balance on theory, practice and practical demonstrations in classrooms in order to be well equipped to race the present challenges in the present digital/hybrid environment. Igun (2005) noted that Nigeria education system is still specializing in producing a mediocre work force in the universities by equipping the university graduates with mainly theoretical knowledge (principles), educated individual needs both theoretical knowledge and practical skills in order to be balanced. However, some institutions in Nigeria have adopted some ICT based programs in their curriculum, but then, how effective have these programmes impacted on the students? The issue is not just teaching the courses, but emphasizing on practical ICT skills which has been seriously lacking. This will enhance effective communication, teaching, learning, research and problem-solving. Moreover, some teachers are devoid of the necessary ICT skills needed to coach their students. There is also need for training and re-training of educators in order impart ICT knowledge on their students.

Justification for curriculum reform in Nigerian library schools

Education for library and information science (LIS) professionals has taken a new turn in the face of far reaching developments sparked off by the trend towards globalization (Nkanu, Iyishu and Ogar, 2013). Developments in library information science education would be irrelevant without adequate preparation of new generation of librarians to effectively use the new technologies in professional practices. Library and information science education is the study of organized collections of books and other non-book materials (Nkanu, Iyishu and Ogar, 2013). It plays a significant role in the production of high quality LIS professionals who occupy a unique position in national development (Abioye, 2013). In light of the above, it is the exclusive responsibility of the library school in training, preparing and disseminating quality education to new generation of information professionals. Reitz (2010) defined a library school as a professional school or department qualified to grant the post-baccalaureate degree of M.L.S. or M.L.I.S., supported and administered by an institution of higher learning to prepare graduate students for employment in professional positions in libraries and as information service providers.

It is a school where young librarians are trained, taught and infused with knowledge and expertise in accessing, analyzing, organizing, evaluating, preserving, researching and presenting information found in all types of formats. They are trained to no longer solely depend on books, as they are responsible for managing digital data and various new modes of information. It may be a separately managed institution in its own building but is usually a department of an institution for higher education, or a faculty within a university. LIS schools have to prepare students for careers in all types of libraries and for information intensive jobs beyond libraries, including web publishing, information brokering and marketing corporate information specialty and internal management (Edzan and Abdullah, 2003). If LIS schools continue to teach the basics while at the same time expand and upgrade their curriculum in line with the demands of global best practices and ICT oriented environments, the new LIS graduates will enter the job market with ease.

For the Nigerian library schools to be able to face the challenges of the 21st century, there must be a total overhaul of the library schools' curriculum to emphasize more on theoretical and practical application of information and communication technology. The new breed of librarians needs to be well equipped and informed about the tools for facilitating his or her profession. This is because librarians has a special role of ensuring that information resources are adequately acquired, efficiently organized and effectively utilized in meeting diverse information needs (Ozioko and Nwabueze, 2010). Library schools has the exclusive responsibility of ensuring that LIS students as well as educators handling the training of students are re-trained from time to time to acquire the modern theory and practice of information and communication technologies if they are to meet up with the demands of the society and the Nigerian labor market in the next millennium. Library and information science curriculum captures mainly traditional library practices which does not entirely reflect the demands of the modern society and as such, the curriculum should be under periodic or constant review in order to embrace modern library practices relating to ICT and contemporary technologies like mobile learning or e-learning, distance learning, class simulations, teleconferencing among others so as to meet the requirements of the digital age and make better and meaningful contributions both to the field of librarianship and the society at large.

Challenges of integrating ICT in the curriculum

Information and Communication Technologies (ICTs) and the importance of its integration in the curriculum cannot be overemphasized. However, it has been bedeviled by a number of hindrances especially in developing countries. According to Aishah (2017) they include:

- **Policy issues:** The formulation of policies that will drive a proactive integration of ICT across all educational sectors. Adoption of ICT policies in teaching, learning and research in developing live-long

learning and as a transformatory tool to national development.

- **Inadequate technological infrastructure:** This refers to the inadequate provision of hardware and software and stable internet connectivity to support the integration of ICT in the curricula.
- **Epileptic power supply:** Most developing nations of the world are still facing very low electricity supply. This is a very serious issue affecting effective ICT development.
- **Lack of fund:** This is a very big challenge to the development of education in developing countries. The severe budget cut and its attendant implication of widening the digital divide between Africa and other parts of the world is a worrisome challenge. A lot of money is needed to purchase adequate bandwidth and network connectivity, server, generator, computers, software and maintenance cost.
- **Technophobia:** Most students and staff alike have not really embraced the use of ICT in teaching and learning process. Some are afraid of manipulating computers.
- **Inadequate trained personnel:** There are not enough competent personnel to impart ICT skills on students.

Conclusion/Recommendations

ICT is constantly playing crucial roles in information handling. Teaching and learning methods are constantly changing from traditional/classroom teaching and learning to ubiquitous methods through the help of mobile learning viz-a-viz mobile and handheld technologies. Owing to these changes, there is need for a proactive reform and integration of ICT in the curriculum in order to reflect these changes. From the foregoing, the following are recommended:

- The formulation and implementation of policies to integrate ICT training to all educational sectors;
- Government should provide adequate ICT infrastructure to quell the

- problems of integrating ICT to curriculum development;
- Provision of constant or alternative sources of power supply;
 - Provision of fund and adequate budgetary allocation;
 - Adequate ICT orientation to students and staff to familiarize them with various ICT facilities;
 - The issue of training and retraining of educators or teachers to adopt and utilize ICT facilities in teaching, learning and research is also very important.

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