ADOPTION OF BLENDED LEARNING INTO THE NIGERIAN EDUCATION SYSTEM: PROSPECTS AND CHALLENGES

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Abstract

Technology-mediated learning is a generic term which encompasses different teaching and learning approaches that is supported by the use of Information and Communication Technologies (ICTs). Technology-mediated learning has in several ways contributed significantly to the advancement of education globally. The advantages it offers are being leverage on by governments and educational institutions world over to improve on the quality and quantity of education in the most efficient and cost effective way. One example of a technology-mediated learning is blended learning. Blended learning is defined as a teaching and learning approach that combines online learning and face-to-face instructions in the most effective way for optimal learning outcome. This paper discussed the meaning and benefits of blended learning and ways some of these advantages could be used to reduce the many challenges facing the Nigeria educational system. Reduced cost on expansion and maintenance of infrastructures, improved safety of lives and properties in schools, reduction in national illiteracy level are some of the identified prospects. While poor power supply, inadequate skilled

man power, poor internet connectivity and corruption by government officials are among the identified challenges of adopting blended learning into the Nigerian educational sector. The paper recommended organisation of seminars/workshops/trainings, setting up of pilot study centres, collaboration with international institutions among others, as strategies that would enhance effective adoption of blended learning into the Nigeria education system.

Keywords

Adoption, Blended Learning, Technology-Mediated Learning, Online Learning, Face-to-Face Learning, Instructions

1. Introduction

The falling standard of education in Nigeria has been a major concern to all stake holders for many years now. Inadequate funding, poor and inadequate infrastructure, poor policy implementation, frequent closure of schools, lack of adequate qualified teachers, examination malpractices and corruption are some of the commonly cited reasons responsible for this unfortunate situation (Asiyai, 2013; Ifenkwe, 2013; Akinwale, 2010; Odia & Omofonmwan ,2007; Moja, 2000) . Despite attempts by successive governments to reverse this ugly trend, the situation is yet to improve. With dwindling global oil prices which is the main stay of the Nigerian economy, unchecked corrupt practices especially in government institutions, a high and uncontrolled population growth rate, coupled with increasing rate of insurgency and other vices, the future of education in Nigeria remains bleak.

However, one viable option that can revive and transform the ailing educational system in Nigeria is the adoption of technology-mediated learning. Like most fields of human endeavours, education, globally has witnessed tremendous advancements and innovations both in quality and quantity occasioned by the adoption of Information & Communication Technologies (ICTs) as observed by Mac-Ikemenjima (2005). This has given rise to several related concepts such as e-learning, distance/online learning, virtual laboratories, virtual libraries, distributed learning, blended learning among others.

The advantages offered by technology-mediated learning include- increased, enhanced and transparent synchronous and Asynchronous communications between teacher and students, as well as between students, flexibility and convenience in teaching and learning without

restriction to time and space (geographical location), increased and ease of access to learning materials, increased students carrying capacities by institutions, cost effectiveness among others (Nganji & Nggada, 2014; Daniels & Pethel, 2014).

Despite these significant advantages, adoption and integration of technology into the Nigeria educational system is still very low. In institutions where technological facilities are provided, for several reasons are either not functioning or functioning below expectation. It is from this perspective that this paper- 'adoption of blended learning into the Nigerian education system: prospects and challenges' is written as another wake-up-call to the government and other stake holders, to urgently embrace fully, the adoption of technology-mediated learning into the nation's educational sector with emphasis on blended learning.

2. What is Blended Learning?

Blended learning has been defined in a number of ways by different authors and at different times in the evolutionary stages of the concept as observed by Friesen (2012). Since the concept is still relatively new in Nigeria, an attempt is hereby made to present several definitions of blended learning from different authors so as to make its meaning clear. Sharing this view Staker & Horn (2012), in their definition of blended learning noted that "in emerging fields, definitions are important because they create a shared language that enables people to talk about the new phenomena".

Some earlier definitions as summarized by Friesen (2012), viewed blended learning "as a mix appropriate to training and job performance, one which would include performance support technologies, knowledge management and online training technologies". These earlier definitions were rather broad, incorporating according to him "almost any combination of technologies, pedagogies and even job task". However, some of the recent definitions of blended learning which are considered appropriate and adequate for this study, as seen from literatures reviewed, are presented below.

Graham (2005) defined blended learning as "a teaching and learning system that combines the traditional face-to-face instructions with computer mediated instructions". According to Friesen (2012) Blended learning "designates the range of possibilities presented by combing internet and digital media with established classroom forms that requires the physical

co-presence of both the teacher and students". Also,(Krause, 2007) as cited by (Bath & Bourke, 2010) noted that "blended learning is realized in teaching and learning environments wherethere is an effective integration of different modes of delivery, models of teaching and styles of learning as a result of adopting a strategic and systematic approach to the use of technology combined with the best features of face to face interaction". On the other hand, Staker & Horn (2012) defined blended learning as "a formal education program in which a student learns at least in part through online delivery of content and instruction with some element of student control over time, place, path and /or pace and at least in part at a supervised block-and-mortal location away from home".

Blended learning from the preceding definitions can therefore be summarised as a formal teaching and learning approach that combines in the most efficient manner, teaching and learning activities of both the traditional face-to-face (brick-and-mortal) classroom and online environment; harnessing the strengths of each into a unique learning experience that is in agreement with the desired learning outcome.
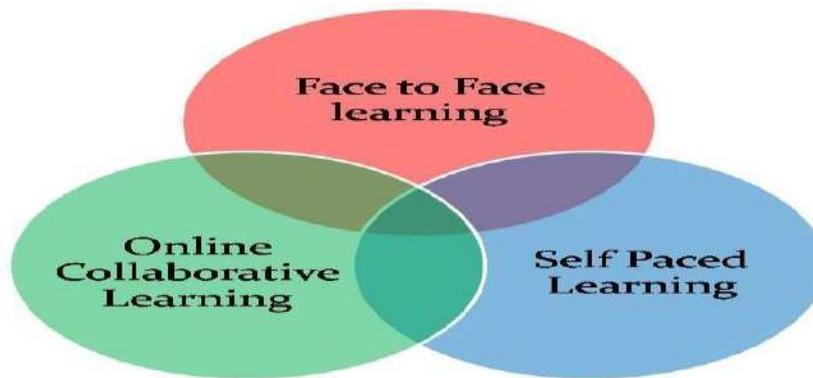
Figure 1 below is some images illustrating the meaning of blended meaning:

Figure 1: *An Image of blended learning*
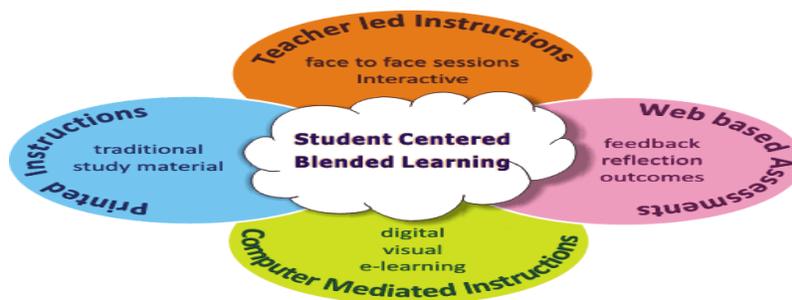
Figure 2: *An Image of blended learning*

Figure 3: *An Image of blended learning*

Source: The above images are adopted from 'images of blended learning' via Google search.

2.1 Why Blended Learning.

Talking about what blended learning technologies could achieve distinctly in teaching and learning, four key areas were identified by Griffith institute for higher education, Australia, as cited by Bath & Bourke (2010). According to them, blended learning technologies could be used to "broaden the spaces and opportunities available for learning; support course management activities (e.g., communication, assessment submission, marking and feedback); support the provision of information and resources to students; engage and motivate students through interactivity and collaboration." Also, the Centre for Teaching Excellence (CTE), Cornell University (2014) equally identified the following as some of the benefits of blended learning. These include- "more flexibility for students and instructors; varied ways for students to engage in and demonstrate their learning; both instructors and students have the opportunity to develop their technology skills".

Blended learning as shown above, could add a number of distinct values to teaching and learning when well implemented. Supporting this view, Bath & Bourke (2010), noted that blended learning is not all about using technology because it is available but most importantly, it seeks for better ways of supporting students in achieving defined learning objectives optimally by "providing them with the best possible learning and teaching experiences", and equally supporting teachers in the management and administration of their courses. These benefits could be achieved by carefully planning and determining what topic(s) or subtopics of a course and what percentage (s) of these topics/subtopics that could best be taught at a particular time and

level by either using a face-to-face approach or online/technology supported approach.

It is also important to add that the percentage that is how much of a course/program that could be handled either by technology or face-to-face is determined among other factors- the nature of the course, the class to be taught, the learning objectives and the policy of the institution. Other considerations are availability and adequacy of ICTs facilities as well as the requisite skills on the part of the instructor and students to use technology in teaching and learning; especially in developing countries like Nigeria where ICTs skills and usage are still low. Again, some or all of these factors will determine the appropriate blended learning model(s) to be adopted in teaching a particular course/program.

Several blended learning models have been designed by different institutions according to their learning needs. For instance Staker & Horn (2012) of the Innosight institute identified four different models suitable to the K-12 blended learning programs. These are Rotation, Flex, Self-blended and Enriched virtual models respectively. According to them, the rotational model is "a program in which within a given course or subject students rotate on a fixed schedule or at the teacher's discretion between learning modalities, at least one of which is online learning". The Flex model on the other hand is "a program in which content and instruction are delivered primarily by the Internet, students move on an individually customized, fluid schedule among learning modalities, and the teacher-of-record is on-site". The Self-Blend model is a program "in which students choose to take one or more courses entirely online to supplement their traditional courses and the teacher-of-record is the online teacher". While the Enriched-Virtual models' whole-school experience in which within each course, students divide their time between attending a brick-and-mortar campus and learning remotely using online delivery of content and instruction".

3. Prospects of Adopting Blended Learning into the Nigeria Educational System

Considering the benefits of blended learning to the overall teaching and learning process as mentioned above; it is therefore arguably correct to say, that when adopted and well implemented in Nigeria, it will contribute immensely in improving the nation's educational system in a number of ways; some of which are listed and discussed below:

- **Improved usage of Available Icts Facilities in Institutions of Higher Learning**: Over the years, government agencies such as the Petroleum Technology Development Fund (PTDF), Education Trust Fund (ETF), to mention but a few as well as some non-governmental agencies like commercial banks have remarkable invested in ICT learning facilities in the nations' institutions of higher learning either through intervention grants or through partnership with the benefitting institutions. Some of these investments include the provision of education portals, ICT centers/cyber cafes, computers, internet services, virtual libraries, trainings of staff in ICT skills acquisition among others (Iloanusi & Osuagwu, 2012). Unfortunately services derived from these facilities have not exceeded development of websites for purchase of forms, online registrations, information and advertisements about the institutions. On the other hand, the internet services and cyber cafes are at best, use for browsing and downloading accessible study/research materials while the aspect of e-learning are yet to be explored fully (Kamba, 2009). Thus leading to under utilization of these resources. Blended learning, if adopted and well implemented can correct these short comings, since a portion of the courses offered will be online based. This will bring about increased e-learning activities as well as optimal utilization of installed facilities;

- **Increase in Supply and Maintenance of ICTs Facilities:** To sustain a well integrated and functional blended learning system, specific ICTs facilities, applications and services such as computers, fast internet connection, alternative power supply, virtual applications among others, of the right quality and quantity will have to be provided with improved maintenance culture to avoid frequent breakdown and disruption of services;

- **Increase in Staff and Students' Knowledge Levelin ICTs:** ICT knowledge and skills are still considered to be generally low among teachers and students in Nigeria (Obiozor, nd). Therefore, with blended learning, students and teachers/instructors will interact with technology more frequently and this will improve their ICTs skills and competence;

- **Improved Safety of Lives and Properties in Nigeria Schools:** One major challenge facing the country's educational sector is violent crimes such as killings, maiming, rapes, kidnappings and other forms of assault occasioned by the activities of cultists on campuses. Institutions have been closed severally as a result of violent confrontation of

opposing cult groups. More recently, the situation has even become worst with the advent of insurgency launched by the extremist Islamic group Boko haram (Western Education is evil). One of the prime targets of this sect is academic institutions. This group has launched several attacks on schools especially in the North-Eastern states of Nigeria, leading to the killing of hundreds of students and scores of staff, abduction of students including the 2014 internationally condemned abduction of about 260 female school girls in Chibok, Borno state, as well as destruction of infrastructures. These have reduced academic activities greatly in the affected states. With a well designed suitable blended learning model, most teaching and learning activities can be done in virtual class rooms, laboratories and libraries while lesser portions of the course(s) such as seminars/projects (for post secondary school) presentations and examinations could be scheduled with minimal students per time in the physical school setting. This can sustain academic activities and ensure minimal casualties in the event of further attacks. Also, this will lead to reduced cult activities as a result of reduced student population in school per time, and also minimize frequent closure of schools due to the reasons mentioned above;

- **Improvement on the Academic Performance of Students:** Blended learning is student centred. Students study independently at their pace; according to their learning abilities and convenience as well as participate in group discussions/activities either online or in the face-to-face classroom. This help students to discover and have better understanding of concepts; resulting into better learning outcome, thereby leading to a reduction in students failure rates;

- **Reduction in National Illiteracy Level:** By designing appropriated models, blended learning could be used to reach and educate the teaming population of young Muslim Koranic disciples known as 'almajiris', the children of the nomadic farmers, as well as millions who for either religious, cultural, social and other reasons could not attend the formal school system;

- **Reduced cost on Expansion and Maintenance of Infrastructure:** Due to large and increasing population of students on campuses, basic facilities such as power supply, water, furniture, laboratory equipments among others are often over stretched leading to

frequent breakdown of these facilities and hence high cost of maintenance. Additionally, efforts are constantly been made by government to continue to expand and increase facilities such as hostel accommodation, classrooms, libraries, laboratories and their equipments due to increasing population and ageing infrastructure. With blended learning virtual applications such as- classrooms, libraries, laboratories could help to reduce the rate of breakdown of infrastructures, reduce the need for physical expansion of same. Also, in comparison, the development, expansion and maintenances of infrastructures of the brick-and-mortal school, is more expensive than technology-mediated learning of which blended learning is a part.

4. Challenges of Adopting Blended Learning into the Nigeria Educational System

The factors that are likely to hinder the effective adoption and integration of blended learning into the Nigerian educational system are similar to some of the previously identified factors affecting the adoption of computer/technology mediated-learning in Nigeria as revealed by some related literatures reviewed in the course of the study. Some of these factors include but not limited to- poor power supply, inadequate infrastructure, inadequate funding, inadequate skilled man power, poor internet connectivity, negative attitudes/lack of acceptance of technology by staff and students and Poor policies and programs implementation (Nwabufo, Umoru, & Olukotun, 2012; Oye, Salleh & Iahad, 2011; Mac-Ikemenjima, 2005).

In addition to the above mentioned factors, corruption and sabotage by government officials is perceived as the greatest factor that could probably hamper the successful implementation of blended learning. This fear is hinged on previous programs and projects of government in the education industry, such as virtual libraries; where inflated contracted prices and poor projects executions among others, have rendered such lofty projects fruitless.

5. Recommendation

- **Right Attitude towards Blended Learning Technology**: The right attitude of government, staff, students and other stake holders is very essential if blended learning and indeed any other technology-mediated learning is to become a reality in Nigeria.

Patience is required to understand its principles and sacrifices has to be made in acquiring new or additional necessary skills. Efforts is therefore required my government and education technology experts to design strategies of sensitizing all concerned about the importance of adopting blended learning technologies into the nation's educational system;

- **Proactive Measures required**: Due to the worsening situation of the country's educational system, government and non-government agencies at all levels as well as institutions of learning should as a matter of urgency ensure full integration of blended learning and other forms of technology-mediated learning into the nation's educational system;

- **Policies & Programmes:** Enabling policies & programmes that will guarantee successful implementation of blended learning should be put in place by government and relevant agencies/institutions. Policies should include compulsory ICTs trainings for teaching and non teaching staff of institutions to enable them acquire ICTs skills sufficient to support technology mediated-learning. In addition, there should be compulsory inclusion of online teaching and learning activities, with scope and timeline of implementation clearly stated to compliment the face-to-face method;

- **Sustainable Alternative Sources of Power Supply:** Power supply is a major challenge in Nigeria and cannot be relied on for a successful implementation of a technology based learning system such blended learning. Thus, affordable and reliable alternative sources of power such as solar panels, inverters and diesel powered generators should be provided;

- **Collaboration with International Institutions:** Collaboration with international institutions such as Griffith institute for higher Education, Griffith University Australia that are already grounded in the use of blended learning is highly recommended. This will be very helpful in trainings and development/deployment of relevant blended learning models;

- **Provision of Adequate ICTs Equipment's and Facilities**: Computer labs with high graphic configuration computers, relevant applications and fast internet connectivity are required to ensure a successful implementation of blended learning;

- **Adequate Funding:** Technology is a costly but rewarding investment. Government should through some of her agencies like ETF and PTDF, earmark money for trainings, building and purchasing of ICTs (software & hardware) facilities among others, that will ensure a successful development and implementation of blended learning in Nigeria;

- **Setting up of Pilot Study Centres:** Blended learning pilot study centres should be set up in selected universities with good ICTs pedigree, including the National Open University of Nigeria (NOUN) that is already into distance learning. Additionally, existing ICTs facilities in the selected institutions, should be enhanced with adequate virtual learning environments and other relevant applications for successful pilot tests;

- **Seminars/Workshops/trainings**: Frequent seminars, workshops and conferences should be organised to get prospective users well acquainted with the technology;

- **Additional Researches Required**: More theoretical and empirical researches on blended learning should be carried out, leading to design of conceptual frameworks and appropriate models in line with our educational environment and needs.

6. Conclusion

Blended learning as discussed above, harnesses the strength of the face-to-face with on-line instructions resulting into optimal teaching and learning experiences. Though the concept is new and still evolving, this study also revealed that blended is already in use in some international institutions such as Griffith institute for higher education, Griffith University Australia, with amazing results.

Therefore, an effective approach to adopting blended learning in Nigeria, requires a careful study and development of blended learning models suitable for the Nigeria educational system. In addition, a careful study of the challenges and recommendations mentioned above could also helpful in ensuring a successful adoption of blended learning in Nigeria.

In conclusion, blended learning has the potentials of impacting the Nigeria educational system positively in a number of ways if all that is required for its adoption and implementation are put in place.

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