Issues and Challenges in the Implementation of Blended Learning in Higher Education Institutions (HEI's) in Nigeria

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Abstract

Blended learning is a hybrid of in-person instruction with technological integration. Students and institutions everywhere gain from blended learning as a teaching strategy. It promotes enhanced educational outcomes, flexibility, a feeling of community, efficient resource usage, and student satisfaction. Despite the advantages derivable from the adoption and integration of technology into the educational system, the Nigerian educational system, and notably the Higher Education Institutions (HEIs) in Nigeria, seem to be excluded from this global impetus owing to a plethora of challenges which if not addressed, will hinder them from the opportunity of harnessing converging technologies that creates an inclusive learning environment. Using a systematic literature review approach the study identified challenges of blended learning in Higher Education Institutions to include: lack of clearly defined and streamlined strategies for teachers' professional development supportive of blended learning implementation, poor ICT skills of teachers, lack of ICT infrastructure, under-funding, inadequate electricity, lack of access to software that will facilitate teaching and learning, lack of internet access, absence of a well-articulated strategy to guide ICT implementation, lack of political will to implement blended learning, all of which account for blended learning implementation challenges.

Keywords: Blended Learning, Challenges, Higher Education institutions, Technology

Introduction

Although it is clear from research on Nigerian education provision that innovative and effective teaching approaches and strategies are key to keeping pace with a fast-changing knowledge-based world, it seems that appropriate strategies to integrate ICT Higher Education Institutions (HEIs) curricula are still lacking with great deal of instructional and administrative work in HEIs in Nigeria still carried out manually without the use of information technology (Mondal and Mete, 2005). 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 (Awodeyi, Akpan, and Udo, 2014; Eli-Chukwu et al., 2023).

Despite the advantages derivable from the adoption and integration of technology into the educational system, the Nigerian education system and more specifically the (HEIs) appear to be discounted from this global momentum owing to a plethora of challenges. These challenges according to the Nigerian Education Sector Report (2010) range from lack of reliable access to electricity, limited technology infrastructure (especially internet access, bandwidth, hardware, and software provision), language of instruction and available software; geographical factors such as country size, terrain, and communications, demographic factors such as population size, density and dispersion.

Despite these concerns, Nigeria, as well as other developing countries, are expected to "ensure inclusive and equitable quality education and promote life-long learning opportunities for all" as specifically outlined in Sustainable Development Goal 4 (SDG4) of the UN Sustainable Development Goals (SDGs) 2016–2030. Achieving inclusive and quality education by 2030 as carefully outlined in the SDG4 goal depends on the adoption of technology-mediated learning as it can help all types of learners break down some of the barriers to access and effective teaching and learning in the educational system (McGreal, R. 2017).

In furtherance of the Incheon *Declaration and Framework for Action* (UNESCO, World Education Forum, 2015) to which the Nigerian government is a signatory, the Federal Government of Nigeria on Monday the 29th of August 2016, launched a new three-year education strategic plan for the country, stretching between 2016 and 2019. According to the Minister of Education, Mallam Adamu Adamu, the three-year education strategic plan is in response to the country's need for relevant, dynamic, and globally competitive education that will ensure socio-economic and national development. The strategic plan emphasised the deployment of technology in the teaching and learning process in the education sector in Nigeria.

Despite these seemingly laudable programmes and strategic plans of action by successive administrations in Nigeria, the education sector and more specifically the higher education sub-sector in Nigeria is still beset with a plethora of challenges ranging from lack of leadership commitment, inadequate or poor allocation of funds, lack of basic infrastructure to ensure quality teaching and learning, corruption as well as a lack of administrative willingness and capacity to drive effective teaching and learning (Ebisine, 2014; Olujuwon and Perumal, 2015; Hope Sr, 2017). The National Teacher Education Policy (NTEP, 2014) noted that the major challenges include inadequacy and inappropriateness of teaching and learning materials and a generally low level of IT penetration and utilization in an IT-dominated area. Specifically, Egwu (2009) summed up the challenges in Nigeria's education sector in the following words:

> The education sector has historically suffered from years of neglect and mismanagement and inadequacy of resources commensurate with national needs, population growth and demand. As a result, education as a strategic priority of the government has not been well positioned as a transformational tool and a formidable instrument for socio-economic development (Roadmap for the Nigerian Education Sector Report 2010:7)

With the challenges in the education sub-sector in Nigeria carefully outlined, one viable option that can revive and transform the ailing higher education sub-sector in Nigeria is the adoption of technology-mediated learning. Like most fields of human endeavours, Mac-Ikemenjima (2005) observed that significant tremendous advancements and innovations have been witnessed in education globally both in quality and quantity occasioned by the adoption of Information & Communication Technologies (ICTs) giving rise to several related concepts such as e-learning,

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distance/online learning, virtual laboratories, virtual libraries, distributed learning, blended learning among others.

It is against this background that this paper intends to examine the issues and challenges in the implementation of blended learning in Higher Education Institutions in Nigeria.

Blended Learning Defined

As explained by Olivier (2011) the concept of blended learning is derived from two words, blend and learning. To blend means to combine things and learning refers to the process of assimilation of new knowledge. According to Milakovich and Wise (2019) blended learning allows students to engage in learning outside the confines of the classroom; with synchronous tools, such as web conferencing, Skype and group chats, and asynchronous tools that include discussion boards, blogs and social networking sites.

Scholars (Kop and Hill, 2008; Kliger and Pfeiffer, 2011; Al-Ani, 2013) describe blended learning, a cross between face-to-face learning and the integration of technology, as a student-centered approach that is framed in constructivism and in particular, social constructivism learning theories. Bersin (2004:323) notes that blended learning "is generally looked at as a combination of different training media including technologies, activities and types of events, to create an optimum training program for a specific audience". Commenting further, Bersin (2004: 323) maintained that blended learning "is an instructor-led training supplemented with other electronic formats or vice-versa". The view of blended learning put forward by Bersin (2004) appears to be broader than that, advanced by authors such as Neumeier (2005:164) who defines blended learning "as a combination of face-to-face (F2F) and computer-assisted learning (CAL) in a single teaching and learning environment or different learning environment".

According to Poon (2013:274) blended learning as an instructional approach benefits students and institutions in all places. It facilitates improved learning outcomes, accesses flexibility, a sense of community, the effective use of resources, and student satisfaction. Despite the advantages derivable from the adoption and integration of technology into the educational system, the Nigerian education system and more specifically the Higher Education sub-sector appears to be discounted from this global momentum owing to a plethora of challenges.

Challenges of Blended Learning Instructional Approach in the Education Sector in Nigeria

Even though the Nigerian government agrees that the development of the Nigerian educational sector, especially at the Higher Education level, is hinged on innovative and effective teaching approaches and strategies especially those strategies that aims to integrate ICT into Higher Education curriculum. It appears that the successful implementation of the Blended Learning Model (BLM) in Nigerian Higher Education classrooms faces many questions and challenges. It is germane that the Nigerian government puts in place strategies that will help meet these BLM implementation challenges. When these challenges are addressed, it could lead to meaningful strategic teaching and learning processes for staff and students in Higher Education Institutions in Nigeria.

Proponents of Blended learning implementation, for example, Morgan (2002) and Collins (2003), are of the opinion that addressing the challenges of blended learning has the potential of bringing about robust outcomes. Blended learning brings about a shift from a more teacher-centred approach to a learner-centred focus, with more emphasis on peer-to-peer learning and a paradigm shift in the way and manner teachers allocate time, giving room for an increase in mentoring for individual

students. The following are some of the challenges to the successful implementation of BLM in Nigerian classrooms, especially at the Higher Education level.

Inadequate ICT Infrastructure

Scholars for example Olelewe (2014) and Eze, Chinedu-Eze and Bello (2018), have identified limited availability of infrastructure, notably telecommunication networks and services as the bane of BLM implementation in the Nigerian educational system. An Organisation for Economic Co-operation and Development study was carried out by Peña-López (2016) titled *Innovating Education and Educating for Innovation. The Power of Digital Technologies and Skill emphasized* the need for adequate infrastructure – equipping schools with more and better ICT resources as a critical element in the successful implementation of blended learning in schools. Specifically, Adeosun (2010) notes that basic infrastructures in school- buildings, furniture, books, libraries, computer laboratories which require substantial computers and internet resources. Adequate classrooms- are still a big challenge which may make blending education and technology in Nigeria difficult.

Equally allied to the challenge of inadequate infrastructure is the inability of the Nigerian Government to provide stable and reliable power supply to power ICT infrastructure and hardware such as servers, computers, data centres, switches, hubs and routers, and other equipment. As noted by Yetano Roche et al, (2020), despite Nigeria's position as Africa's largest economy, it is on record that 77 million Nigerians or 40% of the population have no access to affordable, reliable, and sustainable electricity. The multiplier effect of this is that in practice, diesel- and petrol-powered backup generators supply most of the electricity in Nigeria. The situation is so bad in Nigeria that no part of the country can boast of 24 hours a day power supply.

It is common knowledge that ICT infrastructures require an adequate and stable power supply to function optimally. The Internet service providers (ISP) and Web services in Nigeria have suffered so much loss because of irregular supply of electricity as their data centres and other equipment require constant uninterrupted electrical energy to function optimally so that they can provide the expected services to their subscribers. The lack of stable electricity supply in both urban and rural areas has compounded the challenge of accessibility to the Internet. As noted, byAgbeboaye, Akpojedje, and Ogbe, (2019) the typical firm operating an ICT business in Nigeria experiences a power failure or voltage fluctuations about seven times per week, each lasting for about two or more hours without any prior warning. They assert that given the epileptic nature of the power supply in Nigeria, it is practically impossible to keep hi-tech computers, server systems, multimedia etc. functioning at an optimal level with gross implications for BLM implementation.

Limited Access to Internet Facilities
In Nigeria, the acquisition, installation, and maintenance of Internet services in public Higher Education Institutions are quite large and they can only be acquired by the government. However, the Nigerian government according to the Nigeria Digital Economy Diagnostic Report (World Bank Group, 2019) does not appear to have a national backbone network that will enable access to internet facilities in the nation's educational system. The report notes that despite the growth in Fiber optic installation in Nigeria, national fixed-line infrastructure is still poor. The report further notes that fixed broadband penetration in Nigeria is very low, with a household penetration rate of 0.04% at the end of 2018, below the African regional average (0.6%), and well below the world average (13.6%). The limited access to internet facilities in Higher Education Institutions in Nigeria constitute an issue to the implementation of important learning approaches like blended learning, cloud computing, M-Learning etc. Owing to the limited access to internet facilities, students have had to resort to

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cybercafés for Internet access with most customers who use cybercafé in Nigeria being students (Adomi, and Kpangban, 2010).

Cost of Internet Data and Electronic Services
As a corollary to the above, one other notable challenge to the implementation of the BL instruction approach is the high cost of internet data and electronic services, which according to Etor, Mbon, and Ekanem, (2020) fundamentally constitute the determinant of ICT usage and value in Higher Education Institutions in Nigeria. Internet data and electronic services have made it easy for teachers around the globe to exchange knowledge and skills on various area of specialisation and interest, and also enables learners and educators to communicate both locally and internationally, yet the cost of accessing internet data remains very high in developing countries like Nigeria.

The high cost of internet data and fast tariffs are set by internet providers and most of them are international communication companies doing business in Nigeria, which apparently affect the deployment and full utilisation of BL interventions in Nigeria (Makinde and Bolaji, 2019). Commenting further, Makinde and Bolaji note that even where these foreign investors provide Internet gateway services to Nigerians, a majority of them provide sub-standard services to customers who are often manipulated and defrauded and the few known companies, which provide sensible services, are not affordable. Up till this moment, almost two decades after the approval of the Nigerian Information Technology Policy in 2001, Nigeria still faces the problem of how to launch reliable and low-cost Internet connectivity in Nigeria.

Lack of Attention to the Professional Development of Teachers to Support BL in Higher Education Institutions
The World Bank's World Development Report (2018), which focuses on school education, provides a stark picture of learning in low and middle-income countries of which Nigeria is one. The report describes the shockingly poor learning outcomes that students in many low- and middle-income countries achieve and attributes these poor learning outcomes to the lack of attention to the professional development of teachers in the areas of technology-mediated teaching and learning. Based on a study carried out in India and African countries, the report notes that evidence suggests that long-term teacher mentoring and coaching can result in 'sizable learning effects.'

Despite the emphasis placed on teachers' professional development that facilitates the adoption of BL in education globally, it seems that Nigeria remains discounted from this global momentum. The situation in Nigeria is such that most teachers are not prepared for the BL experience and the Federal Government appears not to be strategic enough in their quest to provide teachers and administrators the professional development that will make them knowledgeable of current trends and approaches that support student learning (Chiroma and Yaduma, 2019).

Corroborating, Bonk and Graham (2012) submit that the pitfall that could endanger blended learning is if the teachers/faculties are not prepared for the experience. Specifically, they noted that teachers need to be able to understand the process and how blended learning serves different needs as well as to provide clear direction to the students.

In Nigeria, even though the National Policy On Education (NPE, 2013) makes mention of the need to attend to the issue of the professional development of teachers in schools thus; "government shall provide necessary infrastructure and training for the integration of ICT in the school system in recognition of the role of ICT in advancing knowledge and skills in the modern world" (Section 5,

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sub-section 30, paragraph f), almost two decades after this provision in the National Policy on Education, there seems not to be any streamlined programme or strategy for a teachers professional development policy framework for Higher Education Institutions in Nigeria. Thus, many decades since the coming into place of the NPE, there remains a severe shortage of teachers with adequate skills in ICT to facilitate BL interventions in Higher Education Institutions in Nigeria (Makinde and Bolaji, 2019).

Insufficient Allocation of Funds to Education
Finance is considered a sine-qua-non in the effective administration of Higher Education Institutions in Nigeria and serves as a major driver in the actualisation of the National Information and Communication Policy in Higher Education Institutions. The National Policy on Education which is the document for the effective administration, management, and implementation of education at all levels in Nigeria states that since education is an expensive social service, there is a need for adequate provision of funds from the government for successful implementation of government projects, programmes and policies at all levels of education in Nigeria (NPE, 2013).

Lack of Synergy and Harmonious Working Relationship Between Agencies Of Government In Nigeria
In Nigeria, the administration and management system in the education sector is such that the Federal Ministry of Education (FME) is statutorily required to collaborate with the Federal Ministry of Information and Digital Economy, in order to ensure the deployment of information and communication technology in teaching and learning at the various levels of education in Nigeria. The Federal Ministry of Education (FME) is the organ of Government charged with policy formulation, monitoring of implementation, setting, and maintenance of standards within the nation's education sector. While the Federal Ministry of Information and Digital Economy, among others has the mandate of promoting the utilisation of ICT in all spheres of life to optimise the communications infrastructure – digital content creation, domestic software applications and the delivery of private and public services over the internet.

The level of synergy and collaboration between these agencies of government are considered a critical determinant of the success or otherwise of the implementation of ICT policy for Higher Education Institutions in Nigeria. The need for synergy in ICT policy in education is aptly amplified by Zhang, Van Donk, and Jayaram (2020) who note that recognising the different inter-organisational patterns of relationship in policy implementation, inducing cooperation, and perhaps even coordination, among interdependent actors is one step towards effective implementation of ICT policy in education. Continuing, they emphasise the need for skilful implementation managers to find ways of working together towards policy success.

Yet, Fafunwa (2018) noted that the failure of most education programmes and policies in Nigeria is due to the absence of inter-agency as well as governmental collaboration. Collaboratively, the Federal Government document titled "*4 Year Strategic Plan for the Development of the Education sector 2011-2015*" (FME 2012:5) stated unequivocally that "it appears that the education sector faces the challenge of inadequate communication between the Federal Ministry of Education, its parastatal and stakeholders". To address the challenge of programme and policy failures due to a lack of inter-agency collaboration, Oyedeji (2016) submits that the effective implementation of policies and programme requires proper coordination, integration, and cooperation among the stakeholders of education.

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Lack of/ Poor Perception of ICT among Teachers and Administrators

Teachers and educational administrators are considered critical agents of educational innovation; therefore, ICT skills among teachers and administrators in Higher Education institutions remain a catalyst for rapid teaching and learning procedures in the Higher Education sub-sector in Nigeria. Despite the important role teachers and administrators play in the teaching and learning process, Oni, Haruna and Amugo (2017) note that a lack of qualified teachers to teach ICT and teachers' anxiety over being replaced by technology are the major factors affecting teachers' readiness and effective use of ICT in schools. Olokooba et al. (2015) note that rather than ICT being seen as a tool for personal and national development, teachers are, however, not aware of the potential that ICT offers in pedagogy. A study carried out by Ifinedo et al. (2020) revealed that teachers lack proficiency skills in ICT as a pedagogy tool in teaching and learning and this has impacted negatively on the implementation of blended learning interventions in Higher Education Institutions.

Conclusion

With the challenges in the Higher education sub-sector in Nigeria carefully outlined, one viable option that can revive and transform the ailing Higher education sub-sector in Nigeria is perhaps the adoption of technology-mediated learning. Like most fields of human endeavours, significant tremendous advancements and innovations have been witnessed in education globally, both in quality and quantity occasioned by the adoption of technology in the classroom which gave rise to several related concepts such as e-learning, distance/online learning, virtual laboratories, virtual libraries, distributed learning, blended learning, among others. Addressing the challenges of blended learning would help Higher Education Institutions in Nigeria to understand and shape the new technology revolution for maximum benefit.

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