



Utilization of Blended Teaching for Bridging ICT Gaps in Teacher Education

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Abstract

This paper is about utilization of blended teaching for bridging ICT gaps in teacher education. Traditional teaching paradigms have been shaken by the impact of the integration of blended teaching into educational practices at the time that teachers and trainers are confronted by challenges. These challenges range from the acquisition of skill and literacy in the usage of information communication technology to the delivery of the necessary tools which will lead students and learners to become knowledge creators and users. Teachers and trainers are therefore confronted with the need to develop and adapt to different ways of teaching because of the highly varied learning capabilities. Blended teaching uses multiple teaching and guiding methods by combining face-to-face sessions with online activities and utilizing a mix of technology-based material. Becoming engaged in blended teaching means for the teacher a constant movement ahead of the learners, a process itself which is a most powerful motivation mechanism, where all the agents, human and technological depend on and enrich each other. Blended teaching is an opportunity to create your own teaching materials as a teacher and also offer 'do-it-yourself' possibilities. Blended teaching also will also provide an update or completion of the existing ready-made courses, and also tailor the course according to the specific needs of learners. This paper therefore concludes that blended teaching will enhance the interaction between teachers, students and environment. The paper suggested that teacher educators should imbibe blended teaching competence as they are instrumental to effective teaching and teacher education.

Keywords: Utilization, Blended, Teaching, Bridging, ICT Gaps, Teacher, Education.

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INTRODUCTION

The use of technology in teaching-learning worldwide has increased. Much of this investment has been made based on the assumption that technology-mediated teaching environments provide opportunities for teachers students to search for and analyse information, solve problems, communicate and collaborate, hence equipping them with a set of competencies to be competitive in modern day education. Thus, blended teaching is a style of teaching which combines technology-based tools with the traditional face-to-face teaching methods in achieving pre-set teaching objectives (Campbell et al., 2003). However, the history of the use of technology in schools has suggested that educators would abandon technology that does not fit the social organization of schooling. Thomas Edison predicted that television would largely replace textbooks. In 1932, Benjamin Darrow suggested that radio would challenge the role of teachers and textbooks (Darrow, 1932). In 1984, Seymour Papert forecasted that computer would emerge as the key instructional tool (Papert, 1984).

These transformations brought about include a shift in the role of the teacher from being the sole source of information to a more complex role of negotiating lesson objectives with students, providing a varying degree of support for different students, mentoring and monitoring students' progress, and encouraging reflection on classroom activities. Teachers have also taken on a more active role in their teaching process by using technology to search for and collate information, and publish and share knowledge. They are now more engaged and are able to make better connections between their previous teaching experiences and the new concepts or principles being taught (Kozma, 2003).

CONJECTURAL CONTEXT

Utilization of Blended Teaching

Application of technology-based tool for teaching is not only, as traditionally conceived, a new tool that we use to enhance our lives in the physical world, but has created a whole new digital world. Teacher education could use different technologies to seek and provide resources and information, communicate with students; a teacher might attend classes in a real-world classroom setting and then supplement the lesson plan by completing teaching tasks online (Adewuyi, 2012). As such, the teacher would only have to physically attend class only when it is not avoidable to be free to go at their own pace. While some institutions may only use blended teaching techniques on rare occasions, others might utilize it as a primary teaching method within their curriculum. At the same time, the size of the involvement in blended teaching is phenomenal and its growth dramatic in utilization of blended teaching for bridging in teacher education (Tawalbeh, 2001).

When blended teaching is used within the scope of teacher education courses, students enjoyed taking part in the learning environment and this aid and improve educational technology, language learning, preserves general teaching skills, in-service teachers and educational leadership (Oyelekan & Olarundare, 2012). Accordingly, Philip (2007) posits that through the technological innovations in blended learning, students can create flexible study plans. Teachers can adjust to custom teaching styles which best suit them. Teachers can have improved interactions through effective electronic correspondence and they can track their progress or results on online platforms. Tech-based teaching has been proven to increase the retention of

students in classrooms or in online education (Zhao & Frank, 2003). Blended teaching methods involve tools that allow creativity in lessons and subjects. This keeps learners engaged and the use of online resources creatively recreates what they are learning (Selwyn, 2008). This method of teaching is not monotonous but it is always evolving to improve teaching and training. Lessons become interactive sessions that teachers and students look forward to and enjoy. Blended teaching enables students to stay focused for longer which brings them academic success. Tamim, et al (2011) opined that digital teaching mechanisms can sustain the interest of students through graphics, videos and other methods. Teachers have the freedom to create instructional videos and give real-time feedback that promotes engagement with students. Blended teaching allows teachers to design the content and structure of their lessons. Teachers can choose suitable tools for subjects so that the lessons are effective and meet the teaching and learning objectives (Tondeur et al., 2007)

The use of blended learning in teacher education will empower students to have suitable competencies for the workplace. The exposure to digital environments, platforms and devices equip trainee teachers with skills that are required for their careers (Akpan-Atata, 2013). Institutions can encourage blended teaching methods to teachers through their curriculum. This will shape teachers for the digital expertise that is required in the teaching profession. Blended teaching offers the best of both worlds of face-to-face and technology bases teaching on one hand (Brynjolfsson & Hitt, 2000). Both the teacher and learner benefit from a synchronous teaching-learning strategy, on the other hand, they reap the fruits of asynchronous teaching-learning at individual own pace and convenience.

Many institutions are now leveraging digital resources to enrich their teaching development strategy without sacrificing the benefits of instructor-led classroom interactions. Through blended tools, teachers have the freedom to create lessons that emphasise the desired focus point. This helps teachers to plan their lessons for each subject efficiently and ensure the best results.

Bridging ICT Gaps

Globalization and technological innovations are processes that have created a new global change in teacher education (Harrison et al (2004). It is a change powered by technology, fuelled by information and driven by knowledge. The emergence of this change has serious implication for the nature and purpose of teacher education. For the effective utilization of blended teaching for bridging ICT gaps in teacher education, teacher trainees needs to be information literate, be able to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information (Fishman & Zhang, 2003). The digital age is characterized with enormous challenges as new innovations in ICTs are emerging in Nigeria. The skills to find, locate and use information from print sources, computer and other storage media are to be acquired. To acquire these skills, Nigerian teacher trainees need an education which is ICT-based. According to Lim (2007) this type of education will assist them to:

- Articulate content knowledge of effective blended learning with the use of technology and face-to-face teaching and also create materials and communicate content effectively (Abdukareem, 2001).
- Acquire broad-based professional skills and practice, participating in professional development, supporting colleagues and the broader role of liaising and communicating

their information literacy competence through which they can communicate their ideas in data to the word of scholarship.

- Stimulate student's interest positively and sustain their awareness of their expected roles and provide evidence to show the reasons why teachers adopt particular practices.
- Create teaching climate that will challenge students, develops a sense of competence, attribute success to effort rather than ability, and values resilience to failure in students.
- Deploy techniques such as reviewing previous learning online, and giving adequate time for students to practice and providing skills that are embedded securely.

Besides the professional training of teachers, professionals who would want to make a difference in the hi-tech information superhighway must acquire computer and internet literacy skills. As ICT literacy deals with the knowledge of computer that is necessary to function effectively in today's world, internet literacy consists of understanding of how to use the internet to obtain information at each step of the problem-solving process and how to share that information with others (Dede, 1998). These skills will enable the proactive, progressive and positive teachers and academic professional to access information sources beyond the immediate confines of his operational environment. This will make the information provided more effective and efficient in the discharge of his responsibilities to satisfy client's information needs and therefore contribute to eliminating challenges of bridging the gap in education in Nigeria (Greenhow et al., 2009). Electronic mail, web browsing, web page design, web resources, abstracting and indexing, desktop publications, e-advert, e-learning, e-banking and cataloguing are the necessary areas where specialized skills are required. Education is the greatest device man has created for his own continued improvement. It trains his head, hand, heart and has placed him in the position of leadership on earth. Education gives man understanding and enlightenment, improves his intellect, knowledge and skills as well as attitudes to his environment

Teacher Education in Nigeria

According to Okonjo-Iweala (2012) teacher education is the provision of professional education and specialized training within a specified period for the preparation of individuals who intends to develop and nurture the young ones into responsible and productive citizens. This process is informed by the fact that teaching is an all-purpose profession which stimulates the development of mental, physical and emotional powers of students (Shao et al, 2007). The utilization of blended teaching bridge ICT gaps in teacher education thus being sensitive and equipped with peaceful co-existence, environmental management and democratic process.

The heartbeat of manpower development and training for prudent use and sustenance of resources in nation building is teacher education. Teacher education, being inextricably linked with general education and social goals, is constantly caught up in the series of dilemmas derivable from educational expansion, political, technological development and social change. The prevailing crisis in Nigerian education and its society as typified by unemployment, poverty, corruption, crime, indiscipline and underutilization of capacities in all facets of human life and national development, could be ascribed to the neglect of utilization of blended teaching in teacher education and pitiable plight of the teachers. Vanderlinde et al. (2010) contends that education should be globally adopted as an agent of change and stability to promote probity, equity and equality of opportunities and a launching pad for sustainable human development. Herein, teacher education should embrace and radiate the energizing forces of change backed up

purposefully by democratic leadership and rational economic policies. This provides the basis for sustainable development and environment which largely facilitate harmonious creation of wealth and well-being of humanity.

A coherent teacher education programme should systematically embrace integrated curriculum innovations which reflect the social, economic and political environment of a modern society to solve societal problems. Law et al. (2008) opines that the purpose of teacher education is to produce well-qualified professional teachers that can adjust to the changing needs of the students and developmental prospects of the modern society.

Integration of blended teaching into educational practices

Integration of blended teaching into educational practices will provide such benefits in teacher training process as cost reduction, free time schedule and location convenience. Online teacher training programs have is designed to accommodate different types of learner's activities and ensure their educational success for professional development. Traditional online teacher training programs do not offer enough face-to-face interaction, either with instructor, or with colleagues that attend teacher training courses. Therefore, nowadays teachers require new forms of professional development which should include both online and face-to-face learning in blended approach (Hyams, 2002). The development of blended teaching in education increases the influence of information and computer technologies (ICT) on the teacher education system which serves as a tool providing adaptation of an educational system to changes in the educational environment. This leads to changes in forms and methods of teacher training, placing a higher emphasis on teacher's self-education, collaboration between teachers, and wide use of ICT.

The aim of blended teaching in teacher education is to provide the professional development of teachers and their professional activities through in-service training. This kind of teacher professional development is realized as teacher training courses provided by regional institutes of postgraduate pedagogical education and ministry of education in Nigeria. Another way of integrating blended teaching into educational practices is the inculcation into curriculum (Johannessen, 2009). This will increase the value of teacher self-development both as a professional and as a personality, on the basis of mastering the modern knowledge and skills in theory and methodology of the subject taught.

The evolution of blended teaching has profoundly changed the teacher professional development and activities. These new forms of technological-based and face-to-face communication and resources give a possibility for teachers to share their ideas and get new information without any influence from traditional educational actors like school authorities or teacher trainers. In addition, blended teaching have has provided access to new forms of education. These changes deeply affect the ways of teacher training process and tend to fuse both online and traditional learning in a new strategy called blended teaching. Blended teaching is a widely-accepted understanding that integrating both modalities of online learning and face-to-face learning and ensures flexibility of access to and use of knowledge. Blended teaching conceptualisation involves the addition of ICT to traditional learning methods in combination with different instructional delivery modes by fusing the socialisation opportunities of the classroom with the technologically assisted teaching possibilities of the online environment. However, blended teaching does not mean locking technology onto a traditional course and/or using technology as an add-on to teach a difficult concept or deliver supplemental information.

But, according to Nardi and O'Day (1999) the current definitions of blended teaching tend to address three commonly related aspects of instruction and learning thus, a blend of online and face-to-face instruction, a blend of instructional methods and a blend of instructional modalities.

Challenges of Utilization of Blended Teaching for Bridging ICT Gaps in Teacher Education

There have been various recommendations and reforms that targeted at utilization of blended teaching in teacher education in Nigeria for optimal performance, the challenges facing ICT gaps in teacher education in Nigeria are still numerous. While some of these emerged with the changing socio-economic and political condition of the time, others evolved as a result of government neglect of the education sector especially as it concerns keeping pace with emerging realities, such as, servicing Nigeria's growing population, education demand and needs with matching supply of education services and facilities. Russell and Higgins (2003) posits that some of the challenges facing utilization of blended teaching for bridging ICT gaps in teacher education are as follows:

- ***Insufficient knowledge and use of information communication technology:*** The knowledge, and use, of computer technology as well as the internet is a necessity for blended teaching and to guarantee the relevance of the system and its products in the 21st century. Many schools in Nigeria still operating the traditional education system with little or no adaptation to blended teaching. To benefit from the ubiquity of information and to facilitate communication among professional networks, school teachers need, not only be trained and re-trained in blended teaching, but facilities must be provided by government to enable teacher and their students access to these remain uninterrupted, more so that the world is gradually becoming a global village. For our future teachers to be able to operate effectively and efficiently, they must imbibe the new technologies and methodologies of the modern times.
- ***Non-Professionalization of Teaching:*** Many teachers in Nigeria have not measured up to the minimum international standard. This is because a large number of teachers have not adapted to blended teaching as a result are half-baked with the career still unprofessionalized. Many teachers are unskilled in blended teaching thus, they need proper training in the utilization of blended teaching for bridging ICT gaps in teacher education. Until government makes this training mandatory and pursues the policy vigorously, teaching will continue to be open to anyone and this situation holds the potentials of further eroding professionalism in teaching profession.
- ***Poor Conditions of Service and Brain Drain Syndrome:*** The utilization of blended teaching to bridging ICT gaps in teacher education do not hold enough incentives to attract and retain the best brains in Nigerian educational system. As a result of the weakening attraction to the teaching profession, and by extension the resultant dwindling enrolment in the teacher education programs, those who remain in the profession maintain relatively low in their social status with accompanying psychological problems. Consequently, within the remaining pool, some teachers either seek opportunities in other sectors with better service incentives or even migrate to other countries where teachers' conditions of service are much better, in search of greener pastures.

- **Poor Policy Implementation:** Poor policy implementation is a challenge to the utilization of blended teaching for bridging ICT gaps in teacher education and quality delivery of teachers' education. The poor quality delivery is responsible for the abysmal low performance of teachers' graduates from the institutions of higher learning in Nigeria. Okonjo-Iweala (2011) argued that our policies are written by knowledgeable writers who have foresight and believe strongly in what they write for the future but the problem comes when it comes to translating theory into practice by implementers. However, several factors could be adduced as inhibitors to smooth implementation of educational policies and thereby resulting to poor utilization of blended teaching for bridging ICT gaps in teacher education. Such as government underfunding of education and injudicious utilization of available funds by implementation agencies: vice chancellors, rectors, provosts, deans of faculties, heads of department etc. when funds meant to deliver quality education is misappropriated or embezzled, the education which learners receive becomes worthless.

ICT in Teacher Education

ICT helps teachers in both pre-service and in-Service teachers training and when blended teaching is applied, it will help teachers in preparation for teaching. In order to introduce ICT in pre-service teacher education different methods and strategies are applied. Different tools are used such as word processing, Database, Spreadsheet etc. Various technology based plans are used to help the teachers for their practice teaching. When teachers are digitally literate and trained to use ICT, these approaches can lead to higher order thinking skills, provide creative and individualized options for students to express their understandings, and leave students better prepared to deal with ongoing technological change in society and the workplace (OECD, 2010).

Teachers need specific professional development opportunities in order to increase their ability to use blended teaching for formative learning assessments, individualized instruction, accessing online resources, and for fostering student interaction and collaboration. Such training in blended teaching should positively impact teachers' general attitudes towards ICT in the classroom, but it should also provide specific guidance on ICT teaching and learning within each discipline (Brown et al, 2004). Without this support, teachers tend to use ICT for skill-based applications, limiting student academic thinking. To support teachers as they change their teaching, it is also essential for education managers, supervisors, teacher educators, and decision makers to be trained in ICT use.

CONCLUSION

In conclusion, Nigeria like many other developing countries in the world can utilize blended teaching for bridging ICT gaps in teacher education for a vital and strategic profession for national development. This is so because teaching is that important activity which makes possible the acquisition of knowledge and skills that brings about the mark of an educated and useful person in the society. Utilization of blended teaching for bridging ICT gaps in teacher education remains a single major factor for in the teaching profession for national development. The teacher is central in this enterprise, and no tool has been able to replace the teacher yet; this is because no educational system can rise above its teachers. The teacher holds the remedy to the many problems ravaging Nigeria. The teacher's efficiency matters in these regards. The central

purpose of teacher education according to the NPE is to provide teachers with the intellectual and professional background for their assignment. Notwithstanding the laudable objectives and efforts made by various administration of Nigerian government to promote utilization of blended teaching. This paper concludes that although various Nigerian governments did a lot to improve the system, teacher education programs in Nigerian higher institutions are largely lacking in quality neither do they conform to international standards, thus the importance of blended teaching for bridging ICT gaps in teacher education. This situation is mainly because of the governments' inability to keep up their commitments in the education sector in a way that answers to the needs and the changing (socio-economic) dynamics of the country, in spite of the long years of the oil booms and the vast amount of foreign exchange earned.

Suggestions

This paper therefore suggests that:

- An instructional action plan for teacher trainees should be developed by teacher training institutions to address and train teachers of in the use of blended teaching for bridging ICT gaps in teacher education.
- Government and stakeholders of education should accelerate the existing blended teaching programs to enhance innovation and implementation of the use of ICT in teacher.
- Teacher education stakeholders should identify challenges that influence and impede utilization of blended teaching so that the gap bridging ICT in teacher education can be closed through sufficient funding, adequate training and personnel provision.
- There should be modifications by educational managers in the teacher training course to include blended teaching.

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