Fostering the use of ICT in Pedagogic practices in Nigerian Universities.

By: Elizabeth Balogun (Mrs)

Kwara State College of Education, Ilorin

deyoalagbe72@gmail.com

Abstract

The paper reviews the current pedagogic practices in Nigerian Universities and finds that the face to face mode of delivery is the most commonly used method in Nigerian Universities. ICT-integrated learning or e-learning has been highlighted and seen as a plausible alternative to the face to face method which is capable of solving the problem of limited access to Higher education and inadequate quality of teaching.

The Nigerian University system is the focal point of education because the training and development of an individual for a life career takes place there. Whatever an individual acquires in the course of his training in the university equips him for employment or entrepreneurship within the society. This implies that the university contributes immensely to the economic development of the society by turning out trained and qualified human resources for the society.

The University lecturers are the key figures in attaining the objective mentioned above because they are responsible for guiding and directing the orientation of learning. Thus, the teaching methods a lecturer employs will determine to a large extent the level of attainment of the educational objectives stated above.

Presently the face to face mode of teaching is predominantly employed in the Nigerian Universities consisting of the lecture method and others such as discussion, demonstration, project, cooperative learning, laboratory methods. The choice of the particular method for instruction depends on the subject and the topic being taught. The distinguishing feature of this teaching mode is that the lecturer and students are in the same place prescribed for instruction at the same time otherwise referred to as the synchronous mode of instruction.

In the face to face mode of instruction, audio or visual aids such as videos, experiments, slides, maps, charts, graphs and many other instructional materials can be provided to enhance effectiveness of the lesson. The roles of the teacher are described as the content provider who initiates the class, specifies the syllabus, and dictates the direction of the instruction (Redmond, 2011). Here a lesson is often scheduled for a limited space of time as such reducing the amount of interaction time between lecturer to students and student to student.

This mode of teaching has been found to have advantages and disadvantages (Diana, 1994).The method is associated with the benefit of direct connection between lecturer and students which goes a long way in impacting the student strongly depending on the passion of the lecturer. Several of its benefits are succinctly summarised in the work of Redmond (2011), who stated that face to face learning offers critical thinking, demonstrations, group interactions, convey and generates enthusiasms that may not be possible online. In addition, the fact that students are on campus enables them to gain access to on-campus resources, have non-academic social interactions and personal interactions with other students more easily.

The face to face mode of instruction is not without its limitations namely the limited number of students that can be accommodated for lectures, requirement of many lecturers in proportion to the number of students and insufficient infrastructural facilities that occur in many institutions. If adequate resources are to be made available for the following things, the cost of education will go up substantially. Inadequacy of

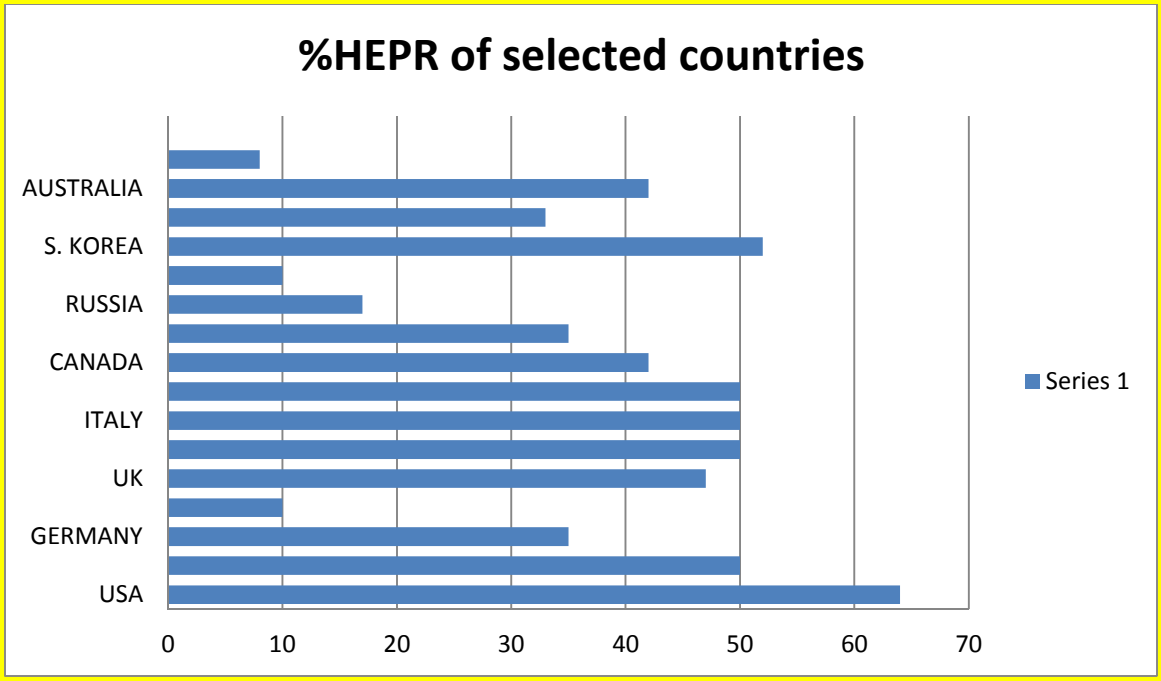
infrastructural facilities, number of lecturers and funds to upgrade them makes access to education for a large number of students a mirage. The students do not enjoy flexibility of time and space.

Lecture method of instruction is one of the most widely used among the face to face mode of learning techniques in the Nigerian Universities perhaps in an attempt to reach the large number of students compared to the number of lecturers within the shortest time possible. Adesina (2011) found that many university lecturers employed lecture method of teaching while using other methods sparingly. On the contrary, researchers and educators are discouraging the use of conventional or lecture teaching strategy in Universities but rather advocating the use of active learning strategies which makes the students more active and participatory in the learning procedure (Yunus & Ali,2009; Ekundayo, 2012).

The current trend in education is that the application of ICT to teaching and learning makes the process an active learning one in contrast to the use of lecture method or any of the face to face teaching strategies. Educators worldwide are seeking to adopt on-line system to improve instruction delivery in schools and universities.(NEEDS, 2006; Nwakonobi & Obiagwu, 2010).Many experts believe that the inability of institutional structures to cope with the escalating number of eligible candidates and problem of insufficient teachers can be tackled by the application of ICT for a possible solution (Evoh,2007; Leach, 2008; & Olakulehin,2007).

The limitations of the face to face method such as inadequate access to higher education, number of lecturers, provision of infrastructural facilities for students and the use of teacher-centred lecture method of teaching are issues that are rampant in the Nigerian University Education System (Olatoye & Adekoya,2010).

Access to Higher education can be evaluated by the rate of participation in education at the Tertiary level which can be referred to as Higher Education Participation Rate (HEPR) . It has been defined as the proportion of adults 18 – 35 years of age enrolled in tertiary education (Okebukola, 2008). The HEPR for selected countries including Nigeria is shown below:



Source: Okebukola, P C. (2008,) Education Reform: Imperatives for achieving Vision 2020. Paper presented at the National Summit on Education Organized by Senate Committee on Education, Held at Sheraton Hotel, Abuja.

The HEPR of the other 15 world economies range from 10% - 64% and that of Nigeria is about 8% which is the lowest out of the countries considered. The research findings show clearly the urgent need for the nation to find a way of increasing access to education for the teeming population of youths desiring to have Higher Education in Nigeria. Studies which further highlight the necessity of increasing access of the youth to Higher Education is provided in the table below which depicts the demand and supply of University education in Nigeria.

TABLE 1:

	No of Universities	Application	Admission	% Admitted	Unplaced	% Unplaced
1998/99	39	537,226	64,176	11.9	473,050	88.1
2002/03	53	994,381	51,843	5.2	942,355	94.8
2003/04	54	1,046,950	105,157	10	941,793	90.0
2004/05	56	841,878	122,492	14.5	719,386	85.5
2005/06	75	916,371	NA	-	-	-
2006/07	76	806,089	123,626	15.3	679,846	84.7

Source: Okeke, E. A. C. (2009). Access in Nigerian Education. Lead Paper presented at the 23rd Annual Conference of the Nigerian Academy of Education, held at the University of Nigeria, Nsukka.

From the data above, between 5.2% to 15.3% of candidates that apply are able to secure admission leaving an overwhelming majority without placement in the university. There is a need to meet the objective of providing education for all as a step towards alleviating poverty and illiteracy in the nation. Furthermore education is believed to be a means of ensuring rapid economic and social transformation therefore methods and innovations must be employed to provide adequate access to University education in the country.

Another major factor that is to be considered in the achievement of the mission and vision of any university system is the sufficiency of lecturers. UNESCO (2007) cited in Okebukola (2008) reiterated that there is evidence that teacher quantity, quality and motivation have immense effects on education outcomes. In 2006, the total number of academic staff in Nigerian Universities was put at 27,394 whereas about 50,000 was required for an effective instruction delivery (FME, 2009). There is an obvious shortfall of lecturers which would in turn give a high lecturer/student ratio and could lead to low productivity and decline in the quality of teaching in the Nigerian University system (FME, 2009; Okebukola, 2009).

Other important components for assuring the quality of Higher Education is the quality and adequacy of infrastructural facilities, supply of quality teachers and the usage of effective teaching strategies. Several challenges that militate against the effective advancement of Higher Education in Nigerian Universities have been highlighted. Among these are inadequate access to University education, insufficient number of lecturers, the traditional teacher-centred strategies and inadequate infrastructural facilities resulting in production of unskilful and unqualified teachers for the secondary schools. If Nigeria is to provide the education that a good proportion of its population would benefit from, it needs to look at other means of providing education on a large scale.

In order to proffer solution to the educational challenges outlined, many researchers and educators have advocated a paradigm shift from the traditional teaching modes of instructional delivery to the new flexible, individualized and versatile ICT-integrated teaching methods (Bada, Adewole & Olalekan 2009; Ikemenjima 2005; Varjagah, Jahani & Azadmanesh, 2010). Global interest in ICT integrated learning is growing and being adopted more and more in different countries of the world to be applied to education and training. Hedge & Howard (2004) defined ICT as an innovative approach for delivering electronically mediated, well-designed, learner-centred and interactive learning environments to anyone, at any place any time by utilizing the internet and digital technologies with instructional design principles. Similarly, Ajadi, Salami and Adeoye (2008) described e-learning as the use of electronic technology or ICT resources to deliver education and training.

Educationists have severally reiterated that ICT integrated education also known as e-learning is a plausible alternative to face to face mode of learning. The conviction emanates from the fact that research findings have shown that the shortfalls of face to face teaching can be remedied by ICT integrated learning (Okojie, 2009;).In a paper presented at an international conference by Okojie, he stated that inadequate access to education has been a major challenge in the university subsector . As a remedy, he advocated that the government should seriously consider exploiting the Open and Distance mode of learning to tackle the problem.

The ability of ICT media and technology to transcend time and space makes it possible for learners to receive instructional materials at their own convenience information given can reach as many people as are desirous of benefitting from the knowledge. As the issue of access is being dealt with, the quantity of lecturers are greatly reduced since fewer lecturers can reach a larger number of students online. Consequently, a lesser number of infrastructural facilities like buildings, laboratories, classrooms, libraries and residential places will be required because most of the students are not resident on campus. Thus e-learning has the potential to be more rapid to implement, able to reach many more students, reduces the number of lecturers and infrastructural facilities required in a setting thereby being more cost effective.

The integration of ICT into education could have a considerable impact on the pedagogical strategies of teachers and the quality of learning for students. ICT applications help to transform traditional classrooms from static environments with one-way flow of information to dynamic, learner-centred environments in which learners can interact with the lecturer and even fellow students. The communication channels are increased through email, discussion groups and chat avenues. Higher quality lessons are evolved through greater collaboration between teachers and students in planning and preparing resources. The students gain

better study and analytical skills including improvement in reading, comprehension, writing and fluency skills after consistence practice.

The prominent role of ICT's has been taken into consideration by the Nigerian government in the National Policy on Education which states that the federal government will provide basic infrastructure and training right from the basic school. At the junior secondary, computer education has been made compulsory though it becomes elective at senior secondary level.

Furthermore the Federal Ministry of education has launched an ICT- driven project known as school net (www.snng.org) (FRN,2006); Adomi 2005; Okebukola,2004) which was an initiative to equip all schools in Nigeria with computer and ICT equipment. Other efforts of the Nigerian government include the commissioning of a Mobile Internet Unit (MIU) operated by the National Information Technology Department Agency (NITDA) which takes internet to different areas of the country. The new Partnership for African Development(NEPAD) e-schools initiative also covers several African countries including Nigeria launched in 2003 to equip all African High Schools with ICT equipment.

Apart from government initiatives, the private sector is contributing significantly to the promotion of ICT'S in the Nigerian Education System.Companies like MTN and Zinnox computers, First bank of Nigeria have collaborated with other public organizations to provide computer laboratories and computers at reduced prices for selected secondary schools.

Agyeman (2007) in his study on survey of ICT and education in Nigeria found that ICT development in universities has continued to progress. The researcher observed that the National Universities Commission (NUC) is in the forefront of enacting rules and regulations for the universities to enable them take steps towards having an ICT-integrated education. The commission has also implemented some ICT-driven programs such as The Library Automation Program, Nigerian University Management Information System (NUMIS), Nigerian University Network, Virtual Institute for Higher Education Pedagogy (VIHEP) and the Virtual Institute for Higher Education in Africa (VIHEAF) between 2002 and 2006 to thrust the universities into ICT application sphere.
Some universities like the Nnamdi Azikwe University Awka, and Obafemi Awolowo University, Ile-ife have made campus wide area networking and e-learning course deliveries. University of Jos has even embarked on content development and e-learning in addition to e-campus networking (Iloanusi & Osuagwu, 2012).

The National Open University of Nigeria (NOUN) is one of the leading Nigerian universities in the application of ICT to learning particularly in its distance learning education programmes. The mixed mode of instruction delivery using different media methods is employed. The universities rely heavily on print material and face to face tutorials making it able to provide education to students far and wide. NOUN is planning to introduce electronic media like CD-ROM, e-mail, internet and interactive e-learning systems. Furthermore NOUN has established its own radio station in Lagos to disseminate its programmes in Lagos in the first instance then later to spread the facility to other parts of the country (shenya & morea, 1995).
An example of increasing enrolment of student's when ICT is applied to education is shown in the academic programmes of NOUN. The University started with a population of 10,026 students in 2003, became 16,987 in 2005 and 16,240 registered in 2007 for a University using conventional face-to-face methods of instruction it would be difficult cope with such a high number of students registering each year.

Gradually, conscious effort is being made for the rapid expansion of ICT in Nigeria. Its inclusion in the primary and secondary school curriculum will go a long way to give students the foundation required to build on as they go higher up in the educational system.
Even the higher institutions are just preparing ground for ICT infusion into education. Olakulehin, 2007 gave a model for the process of ICT integration as comprising of the emerging, applying , infusing and transforming phases. The Nigerian Higher institutions can be classified to be in the emerging stage which is the first one out of four. Ogechukwu & Osagwu (2009) echoed this by stating that " ICT is still in the emerging phase in the Nigerian Education System" meaning that they are at the infancy stage of ICT application in education. In another study, Ajadi, 2008 observed that the number of universities that have adopted any form of ICT application to their instructional practice is quite low compared to the government universities in the country.

The ever increasing population of Nigeria and the continued demand for education at all levels, the urge to route education through more student centered pedagogical methods and the need to provide education for all means that the country must find an appropriate and effective means to meet the great demand for education. The need to take advantage of emerging developments in the field of ICT to revolutionize instructional deliveries has become evident.

Nigeria, like other developing countries have become aware of the invaluable role of ICT in fostering all round development especially in the Education industry. Despite the awareness, the nation has not been able to make significant progress in improving education through this medium evidenced by different research studies (Ajadi, 2008; Emuku & Emuku, 2009, Okebukola, 2007 ; Olakulehin, 2007 ;& Okojie, 2009).When it comes to the tertiary level of Education where ICT is said to be functional it is just used for the promotion of distance education. In this era of ICT in Education, if Education For All (EFA) is to be made a reality, it is worthwhile to explore the possibility of applying ICT to all fields of Education.

The benefit of ICT usage and its application to teaching and learning is evident but ICT infusion into education in Nigerian Higher institutions is rather low (Akuegwu,Ntukidem & Ntukidem, 2011; Bada, Adewole & Olalekan, 2009; Oshienebo& Ushie, 2011; Sofowora, 2012; Yusuf, 2005;). Studies reviewed attributed the slow pace of ICT infusion to several challenges posed in the integration of ICT into education. The challenges enumerated include:

- **Limited ICT infrastructure and facilities**
- **Frequent electricity interruption**
- **Low internet connectivity**
- **Limited access to ICT facilities**
- **Limited ICT skills among teachers**
- **Lack of content developers**
- **Lack of Technical Support Specialists**
- **Lack of specific educational policy and planning**
- **Non-integration into school curriculum**
- **Low levels of government funding**

Conclusion

The paper has targeted the pedagogic practices in Nigeria and demonstrated how e-learning has the potential to absorb much of the demand for additional access to post- secondary education without building more campuses. It is also able to address the issue of quality learning resources and reduce the number of lecturers and facilities needed to offer effective instructional practices thereby raising the quality of education with less cost. Recommendations:

i) A review of the National Policy on IT needs to be reviewed to include specific guidelines on Education.

ii) The Federal government needs to increase the budgetary allocations for ICT in Education

iii) Teachers should be trained to be computer literate and also to master how ICY can be infused into learning.

iv) University administrators should provide ICT infrastructural facilities to ensure that both lecturers and students have adequate equipment to work with.

v) Research should be conducted nationally on the status of ICTs in Universities to assess the progress periodically.

References: