JEEI

JOURNAL OF
EDUCATION
& EMERGING ISSUES

ICT AS AN INSTRUMENT FOR EFFECTIVE CONTENT DELIVERY IN COLLEGES OF EDUCATION IN NIGERIA

Oduma Justice,
Department of Educational Foundations/Administration
College of Education, Agbor

Efeurhobo Davis,
Political Science Department
College of Education, Agbor

And
Oduma Ewoma Oghoghene
Biology Department
College of Education, Agbor

Abstract

Information Communication Technology (ICT) has great influence in teaching and learning in schools. It is virtually needed in every aspect of human endeavours in present day Nigeria. Since the Colleges of Education in Nigeria are saddled with the responsibility of producing teaching manpower at the basic education level, it is pertinent for Information Communication Technology (ICT) to be integrated into the teaching and learning process. This paper focused on the need for effective content delivery using ICT in Nigerian Colleges of Education, the constraints and as well as its benefits. The concept of ICT, its importance and the constraints of using it for effective content delivery in Colleges of education were discussed.
Key words: *Content delivery; Colleges of Education; Information Communication Technology (ICT)*

Introduction

The role of technology in the learning process cannot be over emphasized, as a result, government all over the world invest heavily on its acquisition. This has made the business of education in the developed world highly hinged on digital technology to the effect that any teacher who is not digitally incline may not have a place in the electronically driven classroom. Literacy is now synonymous with acquisition of computer literacy, skills and competencies.

The Federal Republic of Nigeria is not oblivious of this modern trend and seriously recognizes the role of ICT in the advancement of knowledge at the tertiary level of education (FRN, 2004). The launching in 2004 (through the Federal Ministry of Education)'of the ministerial initiative, making e-education one of the initiatives for the attainment of Education for All (EFA) and the Millennium Development Goal

(MDG) was a practical demonstration of this fact. ICTs were meant to be used as the mode for instructional delivery. The benefits of ICT include:
> The enhanced and consistent mode of delivery of knowledge
> Easy and regular administration of individual and group assessments.
> Awareness of the educational institution
> Unhindered interaction among teachers and students.
> Collaboration with other institutions like universities

E-learning makes learning self-paced for the student and put the student on the driving seat on the highway of learning. .
> ICT such as videos, television and multimedia computer software that combine text, sound and colourful moving images can be used to provide challenging and authentic content that will engage the students in the learning process.
> ICT have also been used to improve access to and the quality of teacher training.

Colleges of Education in Nigeria are responsible for the training of middle level manpower. As tertiary institutions, it admits and train candidates for three years after senior secondary school education for the award of the Nigeria Certificate in Education (NCE). The products from the Colleges of Education can teach at the pre-primary, primary and junior secondary school levels of Nigerian educational system. (Ibidapo-Oba, 2007: Ololube, 2006).

Despite the establishment of ICT centres in Colleges of Education to cater for the Information and Communication Technology needs of the staff and student, it has not been fully utilized in the delivery of Instruction to students.

This paper discusses the need for use of ICT In the training of basic level teachers in Colleges of education, the prospects and constraints. Conclusions were also drawn.

INFORMATION COMMUNICATION TECHNOLOGY (ICT)

Information Communication Technology (ICT) is the processing and maintenance of information, and the use of all forms of computer, communication, network and mobile technologies to mediate information

Communication technologies include all media employed in transmitting audio, video data or multi-media such as cable, satellite Wireless (ratio, Infra-red, blue tooth, wifi) Network technologies include Personal Area Networks (PAN) Campus Area Network (CAN), and the internet computer technologies include all removable media such as optical disc, disks, flash memories, video book, multi media projectors, interactive electronic boards and continuously emerging state of the art PCS, mobile technologies comprising mobile phones, palm tops etc. These technologies have information as their material object.

ICT applied to education enhances the delivery and access to knowledge, improves the curriculum. It produces richer learning outcomes compared to education without ICT. It encourages critical thinking and offer unlimited means of achieving educational goals. The key thing is not ICT itself, but in understanding ICT

and effectively employing it in the delivery of knowledge and reaching goals in less time. ICT is used as a means but not as an end.

Sometimes, ICT employed in education does not reach expected goals or at times introduces some type of complicated educational reform. Students and Teachers of educational institutions can lose focus of the essentials and get distracted by rapidly changing technologies. This usually results when students and teachers especially have not yet understood the technologies. The role ICT plays: Where, how and what technology to use. When the meaning of ICT and its unlimited offer to education are understood, then rapidly changing technologies are not seen as overwhelming issues, but enablers to more critical thinking and problem solving in education. Optimizing the use of ICT in education would depend on understanding ICT, when, how and where to use ICT and what technology to adopt.

In teaching and learning process, the teacher assumes a delicate and unique position as an important factor mediating the effects of educational services, instructions and system. The success of any teaching/learning situation depends on how effectively the teacher manages all the variables that affect the process.

The coming of ICT into instruction is supposed to mark a paradigm shift signaling the end of the teacher being perceived as the sole repository of knowledge especially with the availability of numerous amount of information on the Internet and the worldwide web. Gone should be the days of "hypodermic needle" method of teaching when teachers and academic practitioners saw themselves as knowledge oracles and sage of the stage delivering data, information and knowledge to eager learners whose minds are empty vessels that needed to be filled (Ajayi, 2001).

The coming of ICT into teaching and learning have necessitated a paradigm shift from the traditional method that was teacher centred to the modern method which is learner centred (Trucano, 2005). The gains of such a new approach have been extolled by Buabeng-Andoh (2012) who affirms the great capabilities of ICT in the spreading of knowledge, making education more real and the development of more efficient educational service.

Abolade and Yusuf (2005) posit that information and communication technologies are essential tools in any educational system with the possibilities of being used to meet the learning needs of individual learners, support equality of educational opportunities; offer high quality learning materials, increase self-efficacy and independence of learning among students, and enhance teachers' professional development. The integration of ICT in the classroom creates a more inclusive learning platform which kindles interaction there by removing passivity (Ibeh, Adamu and Owoseni, 2007). Similarly, Olorundare (2006) asserts that ICT is important in teaching and learning as it guarantees unrestricted access of teachers to relevant information and development in subject area as well as the provision of efficient and effective tools to take care of students' individual differences.

NEED FOR ICT IN COLLEGES OF EDUCATION

The need for ICT in Nigerian Colleges of Education cannot be overemphasized. In this technology-driven age, everyone requires ICT competence to survive. Organizations are finding it very necessary to train and re-train their employees to establish or increase their knowledge of computers and other ICT facilities (Adomi and Anie, 2006; Tyler, 1998). This calls for early acquisition of ICT skills by students.

In recent years however, there has been a growing interest to know how computers and internet can best utilized to improve effectiveness and efficiency of education at all levels and in both formal and non - formal settings. As there is a shift of theories explaining learning processes, ICTs become handmaiden for learning activities.

The uses of ICT is making major differences in the learning of students and teaching approaches. Given the role education plays in the development of any nation, Kwache (2007) notes the indispensability of the school in the growth of an ICT learning culture of any country. He maintains that the school should offer efficient leadership in ICT integration through research, modeling of effective integration of ICT and provision of opportunities for professional development of citizens of a country. The teacher education institutions such as the colleges of education as we have them in Nigeria should play a leading role in this regard.

The ability to use computers effectively has become an essential part of everyone's education. Skills such as bookkeeping, clerical and administrative work, stocktaking, and so forth, now constitute a set of computerized practices that form the core IT skills package: spreadsheets, word processors, and databases (Reffell and Whitworth, 2002). Notwithstanding the so much emphasis on the need for ICT in education, in government policies (FRN 2001; FRN 2004), the state of infrastructure on ground is not commensurate to the media attention generated. There seem to be a dearth of research information as to the actual impact of ICTs in instructional delivery in the Nigerian Higher institutions especially at the Colleges of Education sector. Ajayi (2008) reported lack of ICTs in colleges of education in South-Western Nigeria and as such ICT were not adequately used in teaching and learning.

In a study carried out by Jude and Dankaro (2012) at the College of Education Katsina-Ala, Benue State of Nigeria, it was also discovered that ICT resources were not available in the institution. Since accessibility and utilization of any resource is dependent on availability, they concluded that ICT has not been used effectively in instruction. In a study tagged "Pattern of computer and Internet use among teachers in higher institutions in Nigeria", Awoleye, Siyambola, Egbetokun, Yesufu and Adewoyin (2008) found out among other things that the only college of education involved in the study ranked least on computer and internet use out of the seven higher institutions from South-west Nigeria that participated in the study.

The integration of ICT in teaching and learning is a major problem, due to the fact that available ICT resources can be used by both lecturers and students for other

174

purposes other than in the classroom. Ajayi (2008) studied effective use of information and communication technology in teaching in colleges of education in western Nigeria and reports only 23% ICT usage in teaching. The study further revealed that what was actually available and used in teaching were the standard technologies. The digital technologies which are presently the crux of ICT integration in education were not available. It is rather sad to note that some educational administrators at the college of education level in Nigeria tend to perceive ICTs as tools to pass NCCE accreditation rather than a necessary tool for effective teaching and learning.

It is a fact that most lecturers in the colleges of education were trained without the use of ICT, which makes it a bit difficult for them to put it into use because you cannot give what you do not have. The capability and readiness of any teacher educator to infuse ICTs into his/her teaching will largely be determined by the professional training and development which such a lecturer receive (Pearson, 2003; Watson, 2001; Williams, 2003; Selinger & Austin, 2003).

CONSTRAINTS TO THE USE OF ICT IN INSTRUCTIONAL DELIVERY

Despite the benefits of ICT in instructional delivery, many factors constitute constraints to its use at the college of education level in Nigeria. Such factors include:

➢ Inadequate ICT facilities in Colleges of Education in Nigeria: In most of the Colleges of Education in Nigeria, there is lack of adequate ICT facilities for both the use of lecturers and students. Desktop and laptop are still very expensive in Nigeria such that most students and even lecturers cannot afford one for their academic utilization.

➢ Lack of stable electricity supply: This is a major problem in Nigeria, as the nation cannot boast of twenty four hours electricity supply to its citizens. Most worrisome is the inability of some of the schools and departments to provide a generating set that can power the entire computer fro teaching and learning.

➢ Lack of ICT manpower in the Colleges of Education in Nigeria: The quest for information and communication technology in Nigeria today is on the high side and the number of qualified information and communication technology teachers is on the very low side. In as much as most students want to acquire ICT knowledge, there are very few manpower to train them.

➢ Lack of / limited knowledge of ICT among lecturers: Most older lecturers in the Colleges of Education are afraid of acquiring information and communication technology skills, due to the fact that they are finding it difficult to cope with it and also afraid that they may be rendered redundant as a result of ICT.

➢ Lack of maintenance culture: This is a very big problem in Nigeria most of the computers are not maintained. The lack of competent hands for the services and repairs of the computers is another problem. As most engineers damage the computers when taken for repairs.

> Lack of interest in ICT application for academic purpose on the part of students: Most students prefer to use the internet for fraudulent acts, pornography, cyber bullying and other anti social behaviors that affects them negatively, instead of carrying out academic research work with it.
> High cost of ICT resources: The cost of ICT resources is not within the reach of the average Nigerian citizen. Modem is expensive and the prices range from #6,000 to #10,000. Airtime is also very expensive which limits the use of ICT by students to download materials.
> None availability of internet in the classrooms: Most classrooms in Colleges of Education in Nigeria do not have internet facilities. This has makes it difficult for lecturers/students to access the internet when the need arises.

CONCLUSION: ICT plays a very important role in the educational sector through enhancement of knowledge and skills through access to information. The adoption and use of ICTs in schools influence teaching, learning and research positively. Despite the benefits of ICT to education, it is yet to be harnessed positively by the colleges of education which is saddled with the responsibility of producing teaching manpower at the basic education level.

ICT tool is needed in all aspect of human endeavours in present day Nigeria, education inclusive. A time frame should be given to teachers in service to acquire ICT skills and let it also be a condition for employing the services of teachers in our colleges of education in Nigeria.

REFERENCES

Abolade, A. O. and Yusuf, M. O. (2005) Information and Communication Technologies (ICTs) and the Nigerian Teacher Education Program. *African Journal of Educational Studies,* 3(1), pp 1-19.

Ajayi, A. I. (2008) Towards effective use of information and communication technology (ICT) for teaching in Nigerian Colleges of Education. *Asian Journal of Information Technology* 7(5), pp 210-214.

Buabeng-Andoh, C. (2012) An exploration of teachers' skills perceptions and Practices of ICT in Teaching and Learning in the Ghanaian Second cycle Schools. *Contemporary Educational Technology,* 3(1), pp 36-49.

Federal Republic of Nigeria (2004). National policy on education. 4th ed. Lagos: Nigerian Educational Research and Development Council.

Ibeh, A. E., Adamu, B. & Owoseni, A. A. (2000). Innovation in the Teaching and Learning of Adults: The changing Role of the Teachers of Adults in a connected Learning Environment. *Ikere Journal of Education, Special Edition on ICT.* pp 79-87.

Ibidapo-Obe, O. (2007) *The Challenges of Teacher Education in Nigeria: The University of Lagos Experience.* Paper presented at the Second Regional Seminar for

Africa, UNESCO Forum on Higher Education, Research and Knowledge, Accra, Ghana.

Olorundare, A.S. (2006) Utilization of ICT in Curriculum development Implementation and Evaluation. Lead paper presented at the National Conference on ICT. University of Nigeria Nsukka.

Pearson, J, (2003) Information and communications technologies and teacher education in Australia. *Technology, Pedagogy, and Education, 12* (1), 39 - 58 (Electronic Version), Available from http://www.triangle.co.uk/jit/index.htm [Accessed 15th August, 2014]

Reffell, P., & Whitworth, A. (2002). Information fluency: Critically examining IT education. *New Library World 103* (1182/1183): 427-35.

Trucano, M. (2005) Knowledge Maps: ICTs in education. Washington, DC: infoDev/World Bank.

Williams, K. (2003) Literacy and computer literacy: Analysing the NRC's being fluent with information technology. *The Journal of Literacy and Technology, 3*(1). Available from http://www.literacyandtechnology.org/v3n1/williams.htm [Accessed 10th June 2014].