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The Role of Information and Communication Technology (ICT) Toward Teachers' Education in South West Nigeria: Impediments and the Way Forward

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Abstract

Information technology as we have today resulted from technological efforts in ancient civilization which started thousands of years ago. As civilization arose, the need to communicate, to document ideas and policies, and the need to keep track of figures became apparent. Ancient kingdoms were in desperate need of how to educate their princes and princesses in desired ways of acting and behaving. People were not able to communicate effectively across long distances, greater higher voices could be heard and preservation of ideas were impossible, were too crooked and cannot endure. It was not easy then for the society to spread its influence over others, not accumulate a rich cultural heritage. Thus, the social and cultural development of the community remained agonizingly slow. However with the recent development in science and technology the world as a whole being reduced to a global village through the application of information communication technology. The survey takes a look at the role of ICT in Teachers 'education in south West Nigeria. The design for the study was a survey method using interview. The population for the study was 1500 education students of college of Education, Ikere Ekiti where 100 pre-service teachers were purposively selected. The instrument is a questionnaire on accessibility and uses of ICT facilities for pre-service teachers in the study area. The instrument was validated by test experts, educational technologist and ICT experts, a reliability co-efficient of 0.75% were obtained from the reliability test conducted. Data collected were analyzed using simple percentage. The result shows that 35% of pre-service teachers have their personal computer and 45% of the lecture rooms have ICT facilities. Based on results of the findings it is recommended that effort should be made by the Government and stakeholders in the education sector to make ICT facilities available for pre-service teachers training. Apart from this, adequate workshop training and seminars for teachers should be organized in the colleges of Education on the operation of ICT facilities.

Keywords: *Pre-service Teacher, Impediment, Teacher's Education, ICT and Traditional ICT Tools.*

Background to the Study

The Federal Republic of Nigeria is situated on the West African coast between latitudes 5^0N and 14^0N and between longitudes 2^0E and 14^0E. The country is the land area of 924, 000 km^2, and it is bounded in the south by the Atlantic ocean, and shares common borders with Benin republic in the west, Niger in the north, Chad republic in the north east, and Cameroon republic in the east. Nigeria is the most populous country in Africa, with an estimated population of about 95,198000 by mid 1985. In fact one out of every six African is a Nigerian, Nigeria is the tenth largest country in the world.

The Nigerian National Policy on Education (NPE) asserts that no nation may rise above the quality of its teacher (FRN, 2004). A prominent inference from this statement is that the quality of its education. In the same vein many educators seem to share the perception that teachers are the repository of standards and quality in education. For instance, nearly 30 decades ago, the quality and caliber of teachers that serviced the educational system of a country could serve as an index of development and progress for the country (Rusett ,, 2001). This position was buttressed by the argument that without good teachers there cannot be good educational system, and by implication no good engineers, doctors, lawyer and cumulatively there would be no progression and no development (Ukeje, 1996).

However, Teachers education is one of the impetuses to the realization of the above assertion. Teachers' education is conceptualized as the specialized type of education that prepares the recipient to acquire requisite knowledge, skills and professional competencies defined as appropriate for their professional responsibility. The formal responsibility of the teacher is concerned with influencing learning or desirable changes in the behaviors of students. Teacher's education equally entails process by which Men and Women are prepared for work in schools for the purpose of imparting knowledge, skills and favorable attitudes (Abubakar and Dantani, 2005).

The explanation above indicates that men and women are prepared to impart knowledge the learners and cultivate favorable attitude to the learners. Furthermore teachers' education can be viewed as a type of education which is carefully designed to be paired and groom those who will teach or provide relevant professional service to schools, colleges and relevant organizations. The purpose of teacher's as provided in the National Policy on Education (FGN, 2007) is to provide the following essential services

i. Produce highly motivated, conscientious and efficient class teachers for levels of our educational system;
ii. To encourage further, the spirit of enquiry and creativity in teachers;
iii. To help teachers to fit into the social life of the community and society at large and to enhance their commitments to national objectives;
iv. To provide teachers with the professional and intellectual background adequate for their assignments.

The quality of instructional service delivery by teachers entails, the extent of effectiveness to which teachers carry their class teaching / learning process. One of the ways to ensure such effectiveness in the process of instructional delivery is through information communication Technology.

The Concept of Information and Communication Technology

Information Communication Technologies (ICTs) according to Adeyemo(2010) is defined as a set of technological tools and resources used to communicate, create, disseminate, store and manage information. These technologies according to him include computers, the internet, broadcasting technologies (radio and television) Information and communication technology (ICT) is a term that stems from the generation impact of ICT on every aspect of human Endeavour. Custin (2002) defined ICT as"a set of activities that facilitate electronic means, the capturing, storage, processing, transmission and display of information". It is equally opined by United Nations Development Program (UNDP) as information –handling tools i.e. a varied set of goods, applications and services that are to produce, store, and processed, distribute and exchange information.

The word Information Communication and Technology (ICT) according to Euridice (2002) is the technology used for handling information, including multimedia, internet, and devices such as video, camera and mobile telephone. ICT is often referring to personal computer (PC) or laptop, with many potential functions and uses, and attached to the internet which provides access to large quality of information and enables the PC. to be used as a communication medium.It includes other devices such as digital still cameras, video cameras and others, which are used in education and mobile telephones seemingly best known in education for their nuisance value (Adewa-Oguiebgen and Iyamu, 2005).

Thus, ICT as a term is broader than computer. It is the combination of the potentials of computer telecommunication and electronic media using the digital technology. Information and Communication Technology has impacted positively on every aspect of human existence, thereby creating a powerful force for changes in how human beings live, convey information, process information, and conduct business, and in fact, determined the status of the Nations. Information technology has potential not only in introducing new teaching and learning practices, but also for acting as a catalyst to revolutionize the education system. It can empower teachers and learners and promote the growth of skills necessary for 21st century work place (Tricano, 2005).

The Position of ICT in Nigerian Education System

The use of Information Communication Technology has been a major challenge faced by the populace in their day to day activities even in higher educational institutions in Nigeria. According to Cuban (2006) "United Kingdom open University established in 1969, was their first educational institution in the world which was wholly dedicated to open and distance learning. The institution uses radio, television and in recent years, online programming to supplement print media". Many other countries like America,

Ghana and South Korea have been connected over the decades to the world of ICT when Nigeria was still lagging behind.

However, in Nigeria, traditional ICT tools have been in our radio, television, cine projectors and recorders for over 45 years, in secondary schools, colleges, and universities, even for broadcaster and mass communication scholars. According to Obeata (2008), the federal government of Nigeria launched her first satellite in 2005 and the second in May, 2007 for the purpose of bringing the ICT facilities to the reach of Nigerians. The government has on ground an ICT policy that is geared towards the rapid provision of ICT however not sufficiently wide spread at present as only few educational institutions are operationally connected especially below the university level. ICT has made a steady or slow progress in Nigeria as a result of the pace of economic and political development occasioned by prolonged military rule, though remarkable improvement has been made since the advent of the 4th republic with the emergence of the Global Mobile System (GSM).

The first national program on ICT integration in Nigeria education system was introduced by federal government 1988 policy document, "Titled national policy on computer education" (FME, 1988). The document emphasized the need for primary schools pupils to be introduced into basic computer skill, the use of the computer to facilitate learning and rudimentary use for text writing, computation and data entry. The document also states that government will provide basic infrastructure and training at the primary school. At the junior secondary school, computer education has been made a prevocational elective, and is a vocational elective at the senior secondary level.

The tertiary institutions were also required to teach computer science as a subject discipline, and also integrate it in school administration and instruction. Other components of the documents include; equipment requirement, teacher training, and specific recommendation on different tertiary institutions. However, as noted earlier, the implementation was not effective. FRN, (2001) re-emphasized the need for the integration of ICT in the Nigerian education system.

The Nigerian national policy for information technology (FRN, 2001), recognized the need for ICT to be used for education, are the three major objectives among several objectives emphasized the need to empower youths with ICT skills to prepare them for competitiveness in a global environment, integrate ICT into the main stream of education and training, and establishment of multifaceted ICT institutions as centers of excellence on ICT. The documents specifically noted the need for "Restructuring the education system at all levels to respond effectively on the challenges and imagined impact of the information age and in particular, the allocation of special IT development fund for education at all levels. However, because information applications for education in the developing countries generally have some weakness which make them to be unsuited to technological and organizational infrastructure of Nigeria, they have been over specified in terms of their technological sophistication which makes the community have the notion it cannot be applied in this area of education system, and they have been

insufficiently focused on the problem solving environment. Much of the content and style of the materials produced in developed countries may be considered unsuitable to social and cultural traditions in less developed countries and may have the effect of excluding people who are already severely disadvantaged. At the very least, epistemological access to the educational goods of information technology requires student and their teachers to become electronically literate as well as conventionally literate and numerate. They should be able to handle information technology at a level appropriately to different fields of study and be equipped to employ it appropriately to further their cognitive development. All these may be considered unavailable or inadequate at this level of education hence the lack of encouragement to apply information technology at this level of education in full swing.

Method

A survey was conducted using 100 pre-service teachers in curriculum and instruction department of college, Ikere-Ekiti in Ekiti state which was purposively selected. The survey was carried out using a questionnaire on the availability and utilization of ICT facilities by pre-service teachers. The instrument was validated by experts from test and measurement in the department including other contributors. Their observations were significant and were adequately implemented by the researchers. The instrument was pilot tested at neighboring college and the reliability co-efficient was found to be 0.75. The instrument was administered on the participant by the researcher. Data collected were analyzed using simple percentage.

Result and Discussion

Table 1: Summary of Result on the Survey of the Availability and Utilization of ICT Facilities by Pre-service Teachers at College of Education Ikere-Ekiti State.

S/N	Items	Percentage	
		Yes	No
1	Pre- service teachers with personal computers	35%	65%
2	Pre –service teachers with handsets with internet facilities	75%	25%
3	Lecture rooms with ICT facilities	45%	55%
4	Lecturers with personal computers	85%	16%
5	Teachers that have access to computer and internet outside the school setting	75%	25%
6	Teachers that ask students to do some assignment on the internet	85%	15%
7	Does the Department have LCD projector and video recorder	85%	15%
8	Does the Department have overhead projector	75%	25%

The results on table1 indicate that less than half of the pre- service teacher have personal computer which is inadequate. However a good percentage of the pre-service teachers have mobile phone with internet facilities. The result is in agreement with the work of Ezeugbor (2008) who reported the poor state of ICT facilities and the application of such

by the pre- service teacher. He further emphasized that only 35.1% teachers ask students to browse on the internet. However this report is at variance to researcher's report where it was discover that a good percentage of teacher do ask the students to do assignments on the internet.

Furthermore, it is the belief of the researcher that when ICT is adequately integrated into teacher Education, it will engender the effective training of the pre- service teacher. Therefore stakeholder in the system i.e administrators and Government at all levels should come to rescue need by providing ICT facilities for effective training of pre-service teachers.

Impediment to Effective Utilization of ICT in Teaching and Learning Process

There are many challenges being faced by teachers in using ICT to teach. It is worthy of note that in our tertiary institution, the potential of the ICT are not fully trapped. Also there are challenges ranges from inadequate or limited infrastructural facilities, difficulties in incorporate ICT use in the curriculum to lack of appropriate teachers' development programmes.

However the impediment to effective use of ICT can be traced to the following;

1. Low level of Technology education: In Nigeria, studies have shown that many end users of ICT potentials and opportunities especially lecturers are far from being literate in information and communication technology and therefore cannot fully tap the benefit offered by this modern technology (salau,2003).
2. Inadequate technical supportive staff: Almost all Nigeria educational institutions have acute shortage of ICT technicians and personal. Salgamic(2001) noted that the challenges of technology integration into the education sector is more of human than it is technological.

   Al-Oteawi (2002) point out teachers' lack of computer competences as their main challenges to the acceptance and adoption of ICT in teaching and learning in developing countries.
3. Poor power supply: It is important note that no information and communication technology equipment can function without adequate electricity. In Nigeria, irregular supply of electricity is still an apparent feature in all major cities and this has render ICT equipment less reliable.
4. Low quality service: internet service provider (ISP) depreciate in quality of their service due to congestion of the information high way.
5. Low level funding: funding is one of the major factors that made the spread of ICT move slowly. The cost of ICT equipment is a problem to be considered.

Conclusion and Recommendations

The use of ICT in teaching and learning courses in schools as reveal by this study is inexhaustible. In fact Information and Communication technologies when properly fused into the school curriculum ensures the success of instructional delivery in teachers' education system. ICT when properly used can of facts which are sometimes bring to the students and stressing the teachers' energy excessively. In this dynamic and rapidly changing world of science and technology, it is apparently clear that the use of ICT in

teaching learning is inevitable. Therefore this study is of the opinion that ICT has the potential to foster teaching and learning, hence for effective training of the pre-service teachers, ICT facilities are necessary. Based on this, it is recommended that teachers should be made to integrate ICT tools with relevant methodology into the teaching and learning process. Apart from this, all lectures rooms should be adequately equipped with ICT facilities such as computers, projectors, slide screen and video recorder. There is also the need to organized training workshops and seminars for teachers on the operation of ICT activities. Finally, there should be regular power supply to enhance effective use of ICT tools.

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