INTEGRATING INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN TEACHER EDUCATION PROGRAMME IN NIGERIA: PROBLEMS AND THE WAY FORWARD

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Abstract

This paper is on integrating Information and Communication Technologies (ICTs) in Teacher Education in Nigeria. The paper looked at what teacher education is, the goals of teacher education as contained in the National Policy on Education, ICTs and their benefits. Problems militating against the integration of ICTs in the teacher education programme in Nigeria were critically examined. The paper further proffered suggestions on how the identified problems can be solved.

Education is a veritable instrument for the achievement of societal transformation as well as national growth and development, and the teacher plays a pivotal role in ensuring all these. The importance of the teacher in any educational system cannot be over-emphasized, this is because, it is the teacher that is responsible directly for ensuring that the educational policies and programmes of government are translated into actions. A functional and qualitative education can only be ensured when there are quality teachers, products of a functional and qualitative teacher education programme. It is with this in mind that the Federal Government in the National Policy on Education (2004: 39) asserted that 'since no education system may rise above the quality of its teachers, teacher education shall continue to be given major emphasis in all education planning and development'.

Teacher education is the emphasis of this paper and the role of Information and Communication Technologies (ICTs) in the production of quality modern teachers cannot be over looked, this is the reason why this paper examined the topic –integrating ICTs in Teacher Education in Nigeria: problems and the way forward.

Who is a Teacher?

A teacher according to Hornby (2005: 1518), is 'a person whose job is teaching, especially in a school'. The teacher plays a very important role in every education system; this is because it is the teacher that is directly responsible for the student's academic performance. President Barak Obama of the United States of America noted in his best selling book: The Audacity of Hope (2005: 161) that, "recent studies show that the single most important factor in determining a student's achievement is not the color of his skin or where he comes from, but who the child's teacher is".

Since the teacher's role is very crucial to the success of the education industry, it is therefore very important that the education of the teacher should be given a priority place in our education programmes and plans. This is in line with Butt (1966: 375) that 'we must view the education of teachers as belonging at the very heart of any human resources development plan that hopes to contribute to the modernization and building of a free nation'.

What is Teacher Education?

Teacher education according to Decree No. 16 of 1985, is the professional training given

to teachers entering or already in the teaching profession either as part of secondary or higher education. It is '…education designed to groom those who teach or would like to teach or would be engaged in relevant professional services to our schools, colleges and ministries of education as needed' (Aleyideino, 2002 cited in Tahir, 2006). Ipaye (1995:1) also opined that it is.

> a process whereby the prospective teacher or aspirant teacher is provided the opportunity to develop cognitive perspective, affective dispositions and psychomotor competencies which will imbue him or her with the qualities and capacities for teaching.

Teacher education occupies a very important position in all education systems, this is because, it is the teacher that 'translates policies into practices and programmes into actions' (Ukeje, 1991: 12). The success of an education system therefore depends to a large extent on the quality of teacher education subsisting in that education system.

Goals of Teacher Education in the National Education Policy

The National Policy on Education (FRN,2004:39) lists the goals of teacher education in Nigeria as to:
 (a) Produce highly motivated, conscientious and efficient classroom teachers for all levels of our educational system.
 (b) Encourage further the spirit of enquiry and creativity in teachers.
 (c) Help teachers to fit into social life of the community and the society at large and enhance their commitment to national goals.
 (d) Provide teachers with the intellectual and professional background adequate for their assignment and make them adaptable to changing situations,

 (e) Enhance teachers' commitment to the teaching profession.

The policy further stated that all teachers in educational institutions shall be professionally trained. Teacher education programmes shall be structured to equip teachers for the effective performance of their duties. Providing teachers with professional training for effective performance of their duties is an important objective of the National education policy because, 'teaching involves the mastery of an extensive repertoire of skills without which, no matter how penetrating a person's intellectual capacities may be, he or she will be pedagogically inept' (Kirk, 1988).

The modern teacher of the 21st century unlike his counterpart of the past century, require more training to be better equipped to cope with the demands of teaching in a technology driven world. However, as Tahir (1995) pointed out 'teacher education in Nigeria is oblivious of the recent advances in the area of telecommunication and digitization of information technology". Hence 'there is the acute need to avail teachers the opportunity of learning to use multimedia in instructional delivery.

ICTs and What They Are

Ezekoka (2007) see ICTs as 'a means of accessing or receiving, storing, transferring, processing and sending ideas, perception or information through computers and other telecommunication facilities. According to Zorkzopzy (1990: 12), it is
> …the collection, processing, dissemination and use of information. It is not confined to hardware and software but acknowledges the importance of man and the goals he sets for his technology, the values employed in making these choice, the assessment criteria used to decide whether he is controlling the technology and is being enhanced by it.

In yet another definition by the Hornby (2005: 738) ICT is said to be 'the study of the

use of computers, the internet, video and other technology as a subject at school'. ICT is an interdisciplinary science primarily concerned with the collection, classification, manipulation, storage, retrieval and dissemination of information (Wikipedia, 2008).

The advent of telecommunication and computer technologies, especially, their present combination to form an integrated system have brought about great innovation in access to and processing of information. Through these new technologies, information can be widely disseminated within a very short time. The user of information today, thanks to ICTs, can easily access remote data from any location in the world without necessarily moving from where he or she is stationed.

General Benefits of ICTs

On a general note, ICTs have the following benefits;

i.   They provide a very efficient and effective means for generating information, its storage, retrieval, dissemination and utilization.
ii.   They provide a means for reducing the cost of information management both for the individual and for organisations thereby making it easy for them to carry out information related functions both efficiently and with great ease.
iii. Information can be disseminated to a larger global community of receivers and users directly, faster and accurately.
iv.   It promotes global business transactions.
v.   It is the biggest promoter of globalization as it helps to shrink the world into a global village.
vi.   It serves as a tool for handling large amounts of data, increasing productivity and decision making.
vii. It promotes access to knowledge in ways never thought possible in the past; and;

viii. It provides a very effective and efficient means of conducting a two-way communication with immediate feedback.

Integrating ICTs in Education

Gill (2000) defined ICT as the modern science of gathering, storing, manipulating, processing and communicating desired types of information in a specific environment. Iwu (2005: 340) sees ICT from a broader perspective, to him;

ICT is an umbrella term that includes any communication device or application encompassing radio, television, cellular phones, computer network, hardware, software, electronic mail, facsimile, satellite systems as well as the various services and applications associated with them. This includes but not limited to video conferencing, distance learning, internet technologies, audio conferencing and multimedia utilization.

ICT resources are integrated in education because of the potentials they have and the opportunity they provide to revolutionize pedagogical methods, expand access to quality education, and improve the management of education systems (World Bank, 2002). The uses of ICT in education as identified by Liverpool (2002: 163) include:

1.   As an assisting tool - It is used or making assignment, collecting data and documentation, excommunication and conducting research.
2.   Medium for teaching and learning - It is a medium through which, teachers can teach and learner learn.
3.   Information and communication technology as a tool for organizing and managing schools. This it does through the handling of school records. For example, timetable, attendance, results, fees and so on.

Specific Benefits of Integrating ICTs in the Teacher Education Programme

According to the National Policy on Education (FRN, 2004: 54) 'All states, teachers, resource centres, universities, institutes of education and other professional bodies shall belong to the network of Information and Communication Technologies (ICTs). This shows the importance that the education policy attaches to the integration of ICTs in the teacher education programme. Below are some specific benefits that can be derived from integrating ICTs in the teacher education programme in Nigeria:

i. ICTs have the ability to help in the delivery of learning and cognitive activities anywhere and at anytime.
ii. It provides an innovative and exciting means for promoting life long learning because it facilitates easy access to information at all times.
iii. It provides access to vast amounts of resources for promoting teaching/learning activities electronically. Through the virtual library project, access is provided to both teachers and their students to vast resources for promoting teaching/learning electronically.
iv. The immediate feedback it provides makes it possible for teachers and their students to closely keep track of their progress.
v. ICTs provides a high degree of user interaction, the lesson is self-spacing, provides reliable instruction and gives ease in monitoring/managing learning progress (Gushen, 1998)
vi. ICTs provide a vehicle for conveying programmed instructions.
vii. ICTs promote distance education. The National Teachers Institute (NTI) and the National Open University of Nigeria (NOUN) both use it.
viii. It makes it possible to create new learning horizons that are designed to connect students and teachers to the global networks of information and ideas.
ix. It is a very effective tool for managing school records, processes and activities.

Problems Militating against the Integration of ICTs in Nigeria's Teacher Education Programme

The problems militating against the full integration of ICTs into the teacher education programmes in Nigeria are numerous and complex, among some of the generally visible problems however are:

i. Poor or erratic power supply. Constant power supply is necessary for the full utilization of ICT equipments and where this is absent as is the case with Nigeria, problem arises.
ii. Inadequate funding of the nation's educational sector makes it difficult for our teacher educational institutions to acquire and implement ICTs in their programmes.
iii. Majority of the trainers in the nation's teacher training institutions do not have enough of the competence required to pass instructions using ICT gadgets.
iv. Problem of adapting to change. Nigerians find it difficult adapting to change, the average Nigerian teacher prefer to hold to his/her old method of instruction and suspects all forms of innovation.
v. Shift from the orthodox method of teaching to one that is ICT based required retraining, and such retraining programmes are currently absent in most if not all, of the nation's teacher education training institutions.
vi. Poor ICT infrastructures in the country.

Conclusion

For the products of the Nigerian education system to be able to compete favourably with their counterparts from other parts of the world, there is the need to give priority attention to the production of quality teachers who will in turn serve as the foundation

for quality education. ICTs should be fully integrated into the nation's teacher education curriculum as provided for in the National Policy on Education; this will go a long way in ensuring that the Nigerian teacher is always abreast of developments in his profession in the present globalized knowledge economy.

The Way Forward

i. Government should tackle the problem of erratic power supply in the country and ensure power is more stable especially in all of the nation's education institutions.

ii. Government should increase its funding of the nation's education institutions, with more funding it will be easy for these schools to acquire both hardware and software equipments necessary for integrating ICT into their training programmes.

iii. Government should make computer literacy programme compulsory in all the nation's educational institutions.

iv. ICTs should be made compulsory and a part of the teaching/learning process.

v. The current virtual library project in our educational institutions should be pursued vigorously.

vi. Government should partner with the private sector of the economy to improve the ICTs infrastructures in the country.

vii. There is the need for training and retraining of teachers to handle the new technology (ICTs).

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