INTEGRATION OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) INTO TEACHER EDUCATION TRAINING PROGRAMME IN NIGERIA

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Abstract

The paper considers the integration of information and communication technology (ICT) in teacher education training programme as a necessity, bearing in mind the global educational reforms currently taking place world – wide. The functions of ICT in education were highlighted. The paper went further to identify the challenges facing teacher education institutions today as that of preparing a new generation of teachers to effectively use new learning tools in their teaching practices. Advantages of introducing ICT into teacher education training programme were discussed which include; advancement of knowledge, improvement in instructional effectiveness and transmission of skills necessary for effective functioning in the modern world. Some factors that can impede the integration of ICT such as absence of ICT equipment, and other relevant learning facilities as well as human resources were pointed out. The paper concludes by presenting approaches necessary for the integration and sustainability of ICT in teacher training programme in Nigeria such as efficient training of teachers, provision of funds by the government and effective coordination of ICT in teacher education institutions etc.

Introduction

Every nation seems to be caught up in a search for ways to improve teaching-learning effectiveness. Consequently, there is the continually search for means, materials and methods that will enhance the facilitative process of learning. Information and communication Technology has come as a panacea to be used as a remedy for the inherent deficiencies in the system; in one way to offset teachers' lack of skills, in another to speed up the introduction of new subjects or education methods; and yet in another to take over activities of which the schools have fallen down using outmoded methods.

In the light of the above, the concern of this paper is how ICT can be integrated into Nigerian teacher education training programme in advancing knowledge, improving efficiency and transmitting skills necessary for effective functioning in the modern world.

The Meaning and Functions of ICT in Education

Information and Communication Technology (ICT) in its most simplistic form means the technologies used in collecting, storing, editing and passing information in various forms. These include communication satellite, radio, television, telephones, video, tape recorders, compact disc, floppy disc, and the personal computers (Salawu, 2003).

The ideas and devices of information and communication technologies can be used in education in the following ways:

i.   To support conventional classroom work. The teacher could ask his Students to use ICT facilities in school work.
ii.   They can help in the design and development of learning materials. Many materials can be

down loaded in the internet and adapted to suit specified instructional objectives
iii.   Electronic teaching materials such as books, journals, newspapers, magazines etc. can be exchanges through ICT.
iv.   The virtual library "stocks" electronic revisions of books, journals etc. through ICT, we can access, store and analyze information in electronic form.
v.   ICT is particularly useful in research as it gives access to a world
   of resources, especially in electronic form.
vi.   Independent study and individualized instruction are facilitated by ICT.
vii.   ICT makes learning more vivid and engaging.
viii.   ICT can assist the teacher in assessment and testing.

In recognition of the prominent role of ICT in education, there is an urgent need to integrate its devices into teacher education training programme.

The Challenges of Teacher Education in the New Millennium

In recent times, the press, the radio and other media of information carry daily news of the possibilities through the new information and communication technologies (ICTs) which can no longer be ignored, especially in education. Education systems around the world are under increased pressure to use the new ICTs in university teaching and particularly in teacher training to teach students knowledge and skills they need in the 21st century. Teacher education institutions are therefore faced with the challenges of preparing a new generation of teachers to effectively use the new learning tools in their teaching practices (UNESCO, 2002).

In view of the above, there is the need for adjusting, modifying and restructuring of our teacher education training programme to meet up with the rest of the world. As observed by Suleiman (2008), modern developments of innovative technologies have provided new possibilities to teaching professions, but at the same time have placed more demands on teachers to learn how to use these new technologies in their teaching. These challenges demand that the modern teachers will continuously train and retrain themselves to acquire new knowledge and skills to be relevant while maintaining their jobs.

Teacher education institutions faced with the challenges of continuously upgrading the quality of the Nigerian teachers, through training and through challenging assignments should as a matter of urgency evolve and embark on intensive training programme on the modern technologies available in education to meet the nation's manpower requirements with quality graduates. The above calls for educationists in the country to engage in in-depth examination of the quality of the nation's current teacher education training programme at all levels, with the aim of promoting and generating relevant ideas that will meet the global educational standards.

ICTs' advances have provided a rich global resource and collaborative environment for dissemination of ICT literacy materials, interactive discussions, research information, and international exchange of ideas which are critical for advancing meaningful educational initiatives, training a high skilled labor force, and understanding issues related to economic development. For these reasons, ICTs in education in Nigeria though still in its embryonic form, with a slow start and growth needs speedy development in the institutions producing teachers and be established for the entire school system.

The Importance of ICT in Teacher Education Training Programme

ICT is an inevitable tool in teacher education programme for its ideas and devices will

increasingly affect education and man's destiny in the new millennium. The advantages among many are the following:

Improvement in Instructional Effectiveness

The integration of ICT in Nigerian teacher education programme will lead to the development of knowledgeable, skillful and capable teachers for the education system. Development is a process of establishing people to accomplish things that they could not do before – that is, to learn and apply information, attitudes, values and skill previously unavailable to them (Bell, 1978). Once teachers' skills are developed through training, there will be improvement in instructional effectiveness and productivity.

National Development

Teacher education in any nation contributes to national development. In this new millennium, the prosperity of nations, to a large extent, depends on their ability to adapt, create and use technologies in education. This can be achieved through intensive training of teachers on the use if ICTs in teacher education institutions for the development of high level manpower within the context of the need of the nation.

Ruling the World through Knowledge

As knowledge continues to rule the world, so long will fortunes and reputation of nation's rise or fall indirect proportion of the quality of institutions that signify recognition of knowledge. Nations that have established the best, most efficient and magnificent models of such institutions are the most prosperous and respected around the world. ICT provides organized reservoir of knowledge that the nation through her teachers can draw from and rule with the rest of the world.

Sharing of Information with the Rest of the World

ICT is a vehicle of global interaction which encourages and ensures the sharing of information for the benefit of mankind. Since no nation is self- contained and self sufficient, nations will have the opportunity of learning from one another. ICT in teacher education will help the nation to reap from mankind's collective gains, particularly the vast advances that have been recorded in science and technology to solve the problems facing humanity.

ICT as an Impetus to Research

With ICT, lecturers and students in teacher education institutions will be made sufficiently comfortable with research materials so that they are not inferior material wise to their colleagues in the corporate world. Given exposure on the latest innovative technologies in education, teachers will be able to catch up with the rest of world and take education to greater height in Nigeria.

Credibility of the Nation's Educational Products

Without ICT in teacher education training programme, the quality of academic work would be adversely affected and the credibility of the degrees to be ultimately awarded would be brought to question. This is particularly so in this era of globalization when almost every product now faces global comparison including the products of nations' educational systems. With ICT, quality education is guaranteed as it has all what it takes to promote quality education.

With the integration of ICT in teacher education training programme, the school will be more efficient and productive, thereby engendering a variety of tools to enhance and facilitate teachers'

professional activities (Yusuf, 2005).

Obstacle Facing the Integration of ICT into Teacher Education Training Programme in Nigeria
The obstacles include:

Slow Assess to Basic ICT Equipment
The slow assess to basic ICT equipment, low Internet connectivity and lack of computers and instructional television in the teacher education programme are barriers to effective and professional development of teachers in Nigeria (Ololube, 2006).

Delay in the Implementation of Government Policies
Education in Nigeria suffers form wrong government attitude. It was stated in the revised edition of the National Policy on Education that: "in recognition of the prominent role of information and communication technology in advancing knowledge and skills necessary for effective functioning in the modern world, there is urgent need to integrate information and communication technology into education in Nigeria"(FRN, 2004). At the moment only few institutions can boast of having reasonable number of computers needed for training talk less of integrating ICT in the school system.

Poor Funding of Teacher Education Institutions
The greatest challenge facing the advancement of ICT is funding.
As observed by Nwoye (2002), Federal and State Governments turn deaf ears to financing and supply of essential scientific materials or facilities needed in higher institutions and secondary schools for effective teaching and learning. The installment of ICT equipment will be difficult without funds.

Resistance to Change by Nigerian Teachers
Akinyemi in Braimoh (2008), stated that an ever –present problem with the Nigeria teachers is their resistance to change. Despite the change in the educational systems all over the world, most Nigerian teachers prefer to hold unto their crude traditional pedagogical methods of teaching instead of replacing them with the latest skills, methods and techniques of teaching.

Incessant Power Failure
The prevalent epileptic and anaemic kind of power supply in the nation cannot support the growth of ICT in the Nigerian Institutions. Instability of electric supply can cause damages to some of the ICT equipment.

Shortage of Qualified Personnel
There is generally shortage of skilled manpower to manage ICT equipment/facilities effectively in nation's institutions of learning to gear up teacher education. Without experts to handle these facilities, some of them will be rendered redundant and may eventually lead to system collapse.

Poor Remuneration of Teachers
It is sad to note that teachers are the poorest paid professionals in Nigeria. The chronic limitations brought about by low economic status of teachers due to poor salaries cannot allow them to contribute meaningfully to their personal professional development. Most teachers cannot afford the cheapest computers in the market for their personal usage.
The cumulative effect of these obstacles if not dealt with will be lack of competent teachers

for the successful accomplishment of the nation's educational development. This justifies the assertion of Nagada (2003), when he said, the cumulative effect of incompetent teachers would be non-development rather than development and at times national retrogression instead of progress and development.

Conclusion

Nigeria has come of age to expand her educational frontiers by integrating information and communication technologies in teacher training institutions to make education effective and productive. With ICT being established on firm footing, the attainment of quality education is feasible and fulfillment of the nation's educational goals and objectives is realizable.

Recommendations

In view of the above discourse, the following recommendations are made for the sustainability of ICT in teacher education training programme in the country.

There should be effective organization and coordination of ICT in teacher education institutions, so that teachers are guided towards the achievement of national goals on education.

The fact that ICT is relatively new and an essential innovation in education calls for awareness among teachers as regards the functions expected of them in its application to education.

Training and retraining of teachers should be regularly carried out to update their knowledge. During training exercise, teachers should be provided with the opportunity to engage in profitable experiences under the guidance and supervision of ICT experts.

ICT skills acquisition centre should be created in every teacher institution so that students and teachers can go there to learn the basic things about ICT to better their careers.

Teacher education should receive a boost from the government by making funds available to embark on a rehabilitation of teacher education institutions and installation of ICT equipment for research and training of teachers.

Positive development in the area of teachers' welfare should be the central focus of the government.

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