

APPLICATION OF INFORMATION COMMUNICATION TECHNOLOGY IN THE SCHOOL SYSTEM: AN EFFECTIVE TOOL FOR PREPARING THE NIGERIAN CHILD FOR THE CHALLENGES OF GLOBALIZATION

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Abstract

One of the great challenges of the twenty first century education is the application of Information Technology (IT) to teaching and learning process. This paper is focused on the application of Information Communication Technology (ICT) as an effective tool for preparing the Nigeria child for the challenges of globalization in a rebranded or New Nigeria. This has become imperative as education is known to be a veritable tool for national development. To be a competitive player in today's globalized world, the methods and techniques of the 19th and 20th century education must change. This paper examined the role of incorporating Information Communication technology (ICT) in Nigeria school curriculum since it will help the Nigerian child acquire necessary skills and competences which will remain with him throughout life time and also equip him for effective living in modern Nigeria.

Introduction

The role of education in society is in flux, as a result of the progression of the forces of globalization. As the 21st century world is undergoing rapid changes in information technology, there is urgency for new educational needs in Nigeria and this calls for the application of information and technology in the Nigerian education system so as to enable its products face new educational issues and challenges occasioned by modern trends in the teaching learning process across the globe.

Any nation that reflects on the future, will agree that the world is undergoing a process of social and technological changes for economic advancement. Information and Communication Technology (ICT) is the dynamic force for these changes; information technology has positively impacted on the educational systems of many nations which care to embrace it.

Advances in technology and changes in the goals of education are having dramatic effects on both people and organizations. Schools today, have a responsibility for preparing their products to be productive and contributing members of a technological society. It is on this note that, the paper is joining teaming Nigerians who have seen the need for the full incorporation of the Information Communication Technology into the nation's educational system.

Concept of Information Communication Technology

Communication, which is a major component of ICT is a process by which people exchange information or express their thoughts and feelings. ICT can be described as a whole range of technologies involved in information processing. It is a term used to describe technologies which receive, record, processing, transmit and retrieve information. It is the handling and processing of information by means of electronic and communication devices such as computers, cameras, telephones etc. It involves the collection, processing, storage, dissemination, retrieval and use of information for decision making planning, operating and controlling, public enlightenment and entertainment. It is a scientific method of sharing, exchanging and sending or moving such information from one place to another. ICT is not one but consists of different complimentary

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technologies, which are all digital. ICT is the convergence of computer networking and telecommunication to process, store, retrieve, and send information of all kinds to pupil all over the globe (world)

Central to ICT in information handling is the internet. The internet is a vast numbers of networks that connect countless computers connected by telephone lines or satellite systems all over the world. This explains why, it is usually said that ICT has tuned the world into a global village.

Application of ICT in Nigerian Educational System: A Tool for Preparing a Nigerian Child for Global Challenges

Information Communication Technology (ICT) in education is the wholesome integration of modern telecommunication, particularly the internet into the education system. It has numerous advantages and if it fully integrated into the educational system will help to solve some problems in our educational system. Some of the advantages include:-

- ICT can be used as in instructional tool to explore, investigate, solve problems, interact, reflect, reason, and learn concepts in the classroom.
- It permits alternative types of educational patterns for facilitating learning especially as it can be adopted and adapted to serve all types of educational instructions and interests.
- It provides a common ground for all professionals to contribute towards effective and productive learning/teaching environment
- It gives room for independent and individual study.
- With ICT in schools, education is made more productive by making instructions more powerful, more scientific and real.

Strategies for Using ICT as a Tool for Preparing a Nigeria Child for Global Challenges

Many strategies can be adopted in trying to use ICT to enhance instructional process. Central to the application of ICT in teaching and leaning is the role of the computer. The diverse roles the computer plays in teaching and learning has aptly being grouped into five by Ofoefuna (2005). These are:

- Virtual teaching:- is a situation in which the teachers and learners interact through the videoconferencing technique, In videoconferencing, distance is no barrier to the student getting information from the teacher or the teacher giving directives, instruction and guidance to the learner. Therefore, the video conferencing is a more robust means of presenting information in a teaching and learning environment because learners will learn and appreciate concepts quickly with pictures and interactive discussions with other learners through the computer. The level of interaction between teacher and students approximates to that of a face to face session in the classroom.
- Multi treading: This is a feature of the web that enables different parts of a course material to be connected in order that makes sense to the students. The use of cross indexing and the ability to navigate forward and backwards while studying course content enhances students' engagement with the materials being learned. This will make learners put different parts of a concept together to become a whole. In order wards, multi treading can bring about wholistic learning.
- Web – based instruction: The web- based instruction uses the internet and the World Wide Web (WWW) as the main component to learning materials and resources for teaching/learning a course. Course information is gathered from the internet by browsing. The internet can be regarded as the link between millions of computers with each other

through the telephone systems. For instance, the spider web helps to achieve instant global communication and this enable large amount of educational information to be assessed through the internet.

- Instructional slides and tutorial (Audio): These are teaching and learning aids made and written into compact disks with graphics and texts. This is made possible by the use of application packages or soft ware such as power point. Tutorials which are components of this are mainly learning aids recommended for self paced learning. This means that this tool has taken cognition of the slow and fast learners. When this technology is used effectively, it transforms the classroom into a student centered learning arena, with teachers as coaches and guides.
- Computer Assisted Instruction (CAI): This is an individualized method or instruction using a computer which requires the student to interact with the computer in a teaching and learning manner. The CAI work station consists of individual learning booths or wet carrels, each with a console and television screen displaying information. This information could take the form of video tape recording, motion picture sequences, slides, film stripe or other visual displays generated by the computer. The student may ask questions or feed in answers through a keyboard. The computer responds by printing out comments, answers and questions. The student may write directly on the light sensitive display screen with a light pen or gun. The computer scans these responses and notifies the students of the correctness of his responses. Audio system for listening and responding are also present to enhance learning (Nzewi, 2009).

Issues and Challenges Facing the Application of ICT in Nigeria Educational System.

The challenges of application of ICT in the teaching and learning process in Nigeria are numerous. Some are educational while others administrative. Among the key ones are

- Teacher factor: Dearth of trained personnel militates against the use of ICT for instruction. Lots of Nigerian teachers are yet to acquire the simple skills and knowledge of ICT to enable them benefit from the enormous wealth of information derivable from it, and transfer such skills to their students. This explains why it is often said that it is the level of training given to the teachers in any nation that will determine the quality of education of that nation as teachers cannot give what they do not have to their students.
- Cost of ICT Equipment: Over the years, the cost of computer and ICT equipment has been on the high side. This has been a deterrent to the adoption of computer for instructional purpose in most Nigerian schools. Coupled with this, is the exorbitant price of soft wares, which follow the same pattern as that for the hardware. Where attempts are made to purchase computers for instructional purposes, the cost of installation, maintenance and replacement are unaffordable. The depressed economic situation of Nigeria has incapacitated the government to fund the use of ICT in education effectively. The meager funding of education in Nigeria coupled with low technological level has been an impediment to the provision of instructional materials and use of ICT to facilitate learning in Nigerian schools.
- Irregular power supply: Most of the tools for ICT, because of their encoding property, need constant electricity as the source of power. In Nigeria, the Power Holding Company of Nigeria PLC has not been fully equipped in terms of power generation to face this challenge of regular and uninterrupted power supply. This is a great impediment to the use of ICT in Nigerian schools

- Resistance to change: Another impediment to application of ICT in the classroom could be attributed to the syndrome of resistance to change among the Nigerian teachers. Some teachers view the use of computer for education as a means of displacing them from their cherished job rather than as instructional materials to enrich teaching and learning. Also, they regard the use of computer as an increase in their tasks in the classroom without adequate compensation.
- Limited access to the internet: Internet providers are very few and the cost of such services is too high for many Nigerians to afford.

Recommendations

Based on the numerous benefits of incorporating ICT into the educational system, as an effective tool for preparing the Nigerian child for the challenges of globalization, the following recommendations are put forward:

- The government should employ applicants with B.Sc. (ed) and B.ed Computer Technology Education to teach ICT related subjects in our schools that is, teachers who are well equipped, professionally trained, cognitively balanced, who are at home with the new ICT skills such as videoconferencing and teleconferencing among others.
- The parliamentarian should pass a bill on stabilizing the price of computers in the markets to make it easier for people to acquire a reduced price.
- Computer spare parts should be imported to repair the damaged ones.
- The government should provide enough funds for schools to purchase computer and other ICT equipment for instructional purpose and make available suitable computer environment in our schools.
- Conferences, workshops and symposium should be organized to train the teachers and enlighten them on the need and use of ICT education.
- Curriculum developers should make ICT Education one of the core subjects to be offered in schools
- The state Ministers of Education through their Local Inspectors of Education (LIE) should monitor the implementation of ICT Education Programmes in Nigeria schools.
- The federal government should embark on total rural-urban area electrification projects to ensure that Power Holding Company of Nigeria (PHCN) provides constant electricity power supply to all schools in Nigeria.

Conclusion

Today, the economic advancement of any nation is based on a global perspective as Information Communication Technology has turned the world into a global village. Any nation that does not want to lag behind in modern trends in terms of communication technology, must incorporate ICT into its school curriculum so as to keep abreast with the global challenges of the 21st century

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