

# THE RELEVANCE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN THE TEACHING-LEARNING PROCESS IN NIGERIAN SCHOOLS

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## **Abstract**

*The paper views ICT as a modern development that creates innovative approaches to the teaching-learning process to make education relevant and functional. It is believed that the knowledge and the use of ICT will be of great benefits to both teachers and learners. These benefits include, the advantages of being familiar with different media common to the work place by students, ensuring dynamic interaction between students and teachers, increasing collaboration and team work in problem solving activities, stimulating creativity in students and in monitoring their own learning. Limitations against the utilization like lack of funds, inadequate number of computer specialists and instability of electricity power supply were discussed. Recommendations to overcome the identified problems such as the supply of computers and the provision of ICT facilities to all schools in Nigeria were highlighted.*

The nature of the society in which we live is constantly changing as a result of an increase in knowledge. As the world moves through the information age, technological advances are changing the way that many organizations operate. Education according to Griffin (2003) is not immune to these changes. The results of these changes demand for fresh approaches to address persistent problems of the past and provide students with an education appropriate to the needs of a modern information-based global economy.

Schools cannot truly prepare students to function and be relevant within the society if the curriculum fails to cover the equipment and skills the students will actually use in the real life situation. Neither can schools hope to improve the academic achievement of their students to the overall value of their programmes without sufficiently integrating technology. According to Miller (2007) in Ibe (2011), students must be able to use technology if they are going to live and work successfully in an increasingly complex and information-driven society. In essence, students must be

technology literate in order to excel in future jobs and to be productive citizens (Griffin, 2003).

Information communication technology is needed for changing the role of the teacher, and a compelling rationale for using ICT in schools is its potentials to act as a catalyst in transforming the teaching-learning process (Hawkridge, 1990). Also talking about the transforming nature of Information and Communication Technology, the World Bank (2002) stated that, ICT has the potential of transforming the nature of education where and how learning takes place and the roles of pupils and teachers in the learning process. Indeed, ICT holds out the opportunity to revolutionize pedagogical methods, expand access to equality education system.

Considering the trend of global changes educationally, it is imperative to introduce ICT at all levels of education in Nigeria as an effective instructional tool to promote learning. It is only by so doing that the country can keep in-tune with the changes in the world at large. These changes according to Forsyth (1996) means that the process of education which could be described as teacher telling is changed to the process of teacher facilitating access to information for learner, who is expected to take control of their learning.

### **ICT as an Innovation in Teaching and Learning Process**

Yusuf (2001) described the term innovation as a generic term that connotes an idea, practice or object considered as new, or that has not been functionally adopted by an individual, group or social system. In the field of education it can be considered as the introduction of new idea, practice or object and organization into the educational system. Thus, it is a positive change in the known or accustomed practice in learning or teaching in objectives, contents or methods (Farrant, 1981).

Innovation in teaching and learning according to Kolawole (1965) in Medahunsi (2001) is an idea of practice that departs from those generally prevailing among people who may be regarded as targets of directed change-effort. This may range from simple changes such as substitution of a simple material element for another to those requiring changes in basic modes of thinking and behaviours. Subsequently, a new way of teaching or learning may be seen as simply a departure from the old ways of teaching or traditional ways of learning. In the light of these, Information and Communication Technology is an innovation that has brought new ways of teaching and learning in to the educational system. The modern teachers therefore are to keep abreast of these changes if they are not going to be caught in a web of ignorance and frustration.

According to Egbowon (2008), the innovation introduced by ICT into teaching among others includes the following:

- a. Fast, accurate and direct exchange of information.
- b. Rapid processing of huge amount of information in a flash.
- c. Easy handling of large amount of information.
- d. Increased availability of information.

- e. Educating more people at a time.
- f. Learning more about learning.
- g. Reformation of the curriculum.
- h. Improving the process in teaching and learning and
- i. Articulating the educational system.

All the above factors make teaching and learning to be interesting, and relevant to the modern educational demands. Iwu (2006) postulated that ICT is a way to describe existing and innovative ways to provide life-long learners with global access to information learning and support.

It is in recognition of all the potentials of ICT that the government deems it fit that there should be a shift from the conventional mode of teaching and learning to an innovative one whereby both the teachers and the students will benefit from teaching-learning process and in turn improve the quality of instructional delivery (Egbowon, 2008).

### **ICT and it's Characteristics**

To Abimbade (1996) in Eke &Nwangwu (2011), ICT is a concept, method, function, process or system of collecting, using electronic equipment or technological tools. Achuonye (2004) simply sees ICT as the application of computer and telecommunication to process, store, retrieve and send information to all kinds in whatever form or distance. By these, ICT is a means of accessing, receiving, processing, storing, retrieving, transforming and sharing information through computer using its capacity in bringing about all-round effective development and enhancement in teaching and learning (Eke &Nwangwu, 2011).

Obasedo and Opara (2011) posited that ICT is a diverse set of technological tools and resources used to communicate, create, disseminate, store and manage information. These technologies include computers, the internet, broadcasting technologies (radio and television) and telephone. He went further to point out the characteristics of ICT to include the following:

- a. It is a broad and fast changing subject.
- b. Communication of data by electronic means.
- c. Storing, retrieving, manipulating, processing and distributing of information.
- d. Involves digital sharing of information through internet or external networks.
- e. It is a technological tool for manipulating information or data.

With the spelt out characteristics above, ICT remains a process, a scientific method towards achieving instructional objectives and instructional skill which enhances the professional competency of the modern day teacher and by extension, that of the work force.

### **The Benefits of ICT Knowledge to Both Teachers and Learners**

The knowledge and effective use of Information and Communication Technology (ICT) in schools can have an immediate positive impact on the school learning environments such as, creating more dynamic interaction between students and teachers, increasing collaboration and team work in problem-solving activities, stimulating creativity in students and monitoring their own learning. Generally, ICT will be useful to the students' future academic and professional lives (OECD, 2005). Such students will have the advantage of being familiar with different media common to the modern workplace, and will be able to use ICT skills to access, compile, synthesize and exchange information (Faudel, 2008). He went further to say that technology can also accelerate, enrich, and deepen basic skills, motivate and engage student learning, helps relate academics to the practices of today's workforce, strengthen teaching and the economic viability of tomorrow's workers.

Planning and implementation of individualized instruction on mass basis is made possible. ICT makes teaching-learning process so interesting as it allows network users share common resources via inter-computerized connection through the internet. When the knowledge of ICT is fully mastered by the teacher of this generation, he will be able to confidently cope with his professional demands. Sudha (2010) asserted that it is very essential to the teacher to get acquainted with the necessary skills which are required to cope with the present scenario. Adequate knowledge of computer, internet software and related skills will enable the teacher to succeed in this new era in his profession.

Students taught with ICT facilities will be able to compete favourably with their counter parts in the western world without any feeling of inferiority complex. Research work is made possible for both teachers and learners as they have access to a reservoir of knowledge to draw from.

Dreyfus and Halevi (1991) pointed out that the use of computer programmes to produce an open learning environment allowed students to explore within a frame work and given that the teacher was working as a guide, even weak students were able to deal in depth with difficult topics. Skills in ICT will ensure the production of qualified, competent and modern professional teachers. It will also revolutionize pedagogical education methods, expand access to quality education, and improve management of education systems world-wide.

Generally, ICT holds out the opportunity to revolutionize education which is the pivot tool designed to transmit knowledge, acquire skills, potentials and abilities which will contribute efficiently to the growth and development of the nation. The knowledge of ICT is therefore considered as pre-requisite to become an effective teacher. At the end, it is the first duty of the teacher training institutions to provide an opportunity to acquire these skills (Sudha, 2010).

### **Limitations against the Utilization of ICT in Nigerian Schools**

Certain limitations have been identified which inhibit the use of ICT in Nigerian Schools by Awana (2005) in Ukegbu and Udechchkwu (2011). They are as follows:

- a. Lack of funds for the procurement of the computer system.
- b. Inadequate number of computer specialists or personnel to train students on the use of computer.
- c. Lack of training, workshops and seminars for teachers on the use of computer for instruction.
- d. Instability of electricity power supply.
- e. Poor attitude of teachers and learners to the learning of computer.
- f. Incompatibility of the use of computer for instruction with the Nigerian curriculum.
- g. Poor infrastructure and facilities which hinder the conduciveness of teaching and learning tasks.
- h. Poor system or methods of school management.
- i. Low level of technology in the country.
- j. Poor attitude of parents, government and stakeholders towards the teaching and learning of computer in public primary and post-primary schools.

These obstacles must be removed for the proper integration of ICT into the nation's institutions of learning to make teaching and learning effective.

### **Conclusion**

The use of Information and Communication Technology (ICT) has become imperative at all levels of the school system. Its utilization has brought about innovation and revolution in instructional practice world-wide. Its application therefore in the Nigerian school system will bring about the much desired educational reform for relevance and national development.

### **Recommendations**

- ICT facilities should be installed across all the institutions of learning in the country.
- Policy makers and individual stakeholder should provide enough computers for teachers and students use.
- ICT related equipment should attract little or no tariffs in importation.
- Curriculum planners should include ICT in the programmes of Schools.
- For the effective management of the ICT equipment, power supply should made stable and reliable.
- Teachers and learners should develop positive attitude to the learning of computer.
- Training, workshops and seminars should be constantly organized for teachers on the use of computer for instruction.

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