

THE CHALLENGES AND PROSPECTS OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN THE NIGERIA EDUCATIONAL SECTOR

By

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Abstract

The paper examines the challenges and prospects of Information and Communication Technology (ICT) in the Nigeria Educational System. ICT is an acronym of Information and Communication Technology. An extended term for information technology (IT). It is a technology that provides the management of diverse set of technological tools, resources to create, store, communicate, manage and optimizes the information. Moreover, it has become an integral part of the educational system and a great asset to the development of education, specially in Nigeria. The advent of ICT in developing and its impact on the socio-economic activities and the educational sector in our country Nigeria cannot be overemphasized. In spite of the numerous advancement of ICT to educational system, there are still many drawbacks and impediments in the field of ICT. Therefore, this paper examines the challenges and prospect of ICT in the Nigeria educational sector.

Introduction:

The advent of Information and Communication Technology (ICT) in developing and its impact on the socio-economic activities and the educational sector in our country Nigeria cannot be overemphasized. In spite of the numerous advancement of ICT to educational system, there are still many drawbacks and impediments in the field of ICT. In Nigeria, there are so many challenges facing the implementation of ICT in many facets of our educational system. Besides, the use of ICTs in schools have created a great positive impact on teaching, learning, and research. Despite the roles ICTs can play in education, schools in Nigeria have yet to extensively adopt them for teaching and learning. Possible efforts are geared towards integration of ICTs into the school system, but have not yet had much impact in our educational system.

The Challenges of information and communication technology (ICT) in education

The major factor of successful integration of ICT in education is teacher who play a significant role in transmitting changes enabled by ICT in teaching and learning. Without appropriately educated teachers we cannot expect positive effects of ICT introduction on education.

Information and Communication Technology (ICT) is one of the most efficient tools for advancing knowledge and skills and it is necessary for quality education in Nigerian schools. ICT tools help to accelerate the learning process, increase teachers efficiency and effectiveness and provide remedial instruction and enrichment of material, thus guaranteeing higher quality standards in secondary schools (Osakwe, 2012). Again, the Federal Republic of Nigeria (FRN, 2004) through National Policy on Education posits that the government should provide facilities and necessary infrastructure for the promotion of ICT at all levels of education.

Therefore, the need of increasing the availability of particular educational resources in various parts of curriculum materials such as motivational training materials for learners is with great

importance to help learners in retaining what the program delivers to them. In order to achieve this goal, Information technology (IT) in learning education plays an increasingly central role in institutions.

They have proven to be extremely effective teaching tools (Mandel, 1992). Teachers and learners at all level need to embrace the new ICT education and keep up with the advance for teaching and learning process (Lishan, 2006). Its successful integration in the system would also increase students and teachers awareness to develop an appropriate level of competence make them engage with their learning and lead to produce potential graduates as well as skilled manpower that can boost science education to meet vision 20;2020 and sustainable development.

The Inadequate power supply is one of the major problems confronting teaching and learning process in Nigeria with particular reference to computer among others as it brings about digression, failure to achieve the desired goals and objectives in time (Mohammed and Yarinchi, 2013) Electricity is essential for the operation of all ICT appliances without which they cannot function effectively (Osakwe, 2012). There is also inadequacy of well qualified personnel to train others and repair the broken down computers for continuity, progress and well being of Nigerian teachers and students in general (Mohammed and Yarinchi, 2013). Osakwe (2012) observes also that there is lack of qualified personnel in Nigeria Secondary schools to manage available systems, develop and use information communication technology facilities for the teaching learning process and posits that in schools where qualified personnel exist, they lack skills in designing and delivering courses and lectures in electronic formats. Ibadin, (2001), argue that there is acute shortage of well trained ICT handlers in secondary schools. When such policies exist, they tend to remain unclear and make little reference to implementation (James, 2001, cited by Evoh, 2007). There is lack of well articulated educational policy by the Nigerian government of which more attention is given to other sectors than to education thus posing problems to the development of ICT education in secondary schools (Osakwe, 2012). Idowu and Esere, (2013) states that there is a resistance to change by both students and academics from traditional pedagogical methods to more innovative, technology-based teaching and learning methods.

Problems of ICT in Nigeria:

6. The High Cost of Gadgets and Implementation

The cost of the acquisition of ICT gadgets and the installation of softwares are challenges. The main problems are high cost of getting, installing, operating, maintaining, and replacing ICT systems, use of unlicensed software, outdated hardware and software systems, lack of technical support for maintenance of systems (Balasubramanian et al., 2009). Also large sum of money are required at the time of implementation of digital equipment for all students and teachers.

7. Poor computer literacy level among teachers and students

The other major challenges of ICT in Nigeria educational assessment system is as a result of poor computer literacy level among teachers and students, due to lack of ICT skilled personnel, inadequate ICT infrastructures and lack of fund among the schools system.

8. The integration of ICT in teaching and learning

The lack of effective training, limited time and lack of teachers' competence is another key areas that posed significant challenge to the usage of ICT tools by teachers, thereby

creating limited accessibility and network connection and limited technical support staff.

9. The implementation of ICT in education

The implementation of ICT in schools is another teething problems in areas, such as lack of genuine software, inadequate computer in the classroom, low speed internet, lack of motivation from both teacher and student to use ICT, lack of proper training skills, the unavailability of latest ICT equipment, lack of expert technical staff and poor administrative support.

10. The Lack of training from government

The lack of training from government have made the teachers clueless on how to integrate ICT properly, lack of appropriate software, makes the teachers use ICT monotonically, lack of competence, lack of operating complex application; and lack of appropriate material which makes the teaching effective and interesting.

11. Unreliable Power Supply

One of the major problems, is on the area of unreliable power supply. Besides, for the Nigerian ICT sector to be effective, the power supply must be stable. The ICT sector and the various Telecoms equipment's all over the countries are powered by heavy duty diesel generators.

The Prospect of ICT in Education:

The use as well as application of ICT in education will be very beneficial in improving the Nigeria education sector. In Nigeria, a technologically-advanced workforce will lead to a rapid growth in ICT. Obviously, with a potential to improve media communications and telecommunications as well as skilled ICT Professionals who will be well train to identify as well as solve ICT problems in the Nigeria education sector and other parts of the world. Presently there are new instructional techniques that uses ICTs to provide a totally new modality of instructions. To the student, the use of ICT allows them to increase their individual learning skill. To the school, the use of new technologies enable students gain access to new tools that provide valuable as well as immediate feedback for the school literacy enhancement. However, this is not fully implemented yet in the Nigeria education sector.

In modern day education system, it is essential for every educated person to have the ability to use computer effectively. Thus, ICT skill packages such as spreadsheet, presentation, word processors as well as database has now been constituted as a set of computerized practice in bookkeeping, clerical and administrative work etc.(Reffell and Whitworths 2010). Presently, in Nigeria education sector the demand for ICT literacy as well as computer is increasing because employees have come to realize that ICT facilities as well as ICT trained personnel can enhance efficiency in terms of service delivery in teaching the ICT core subjects in schools as well as administrative duties as it relates to ICT. Thus, with the increased demand for computer and skilled ICT personnel, the teaching and learning of IT skills is a concern among other professionals.

Besides, every country needs an effective human capacity building and this can only be achieved through an improved education, in this technologically driven age, the need for ICT in Nigeria education sector cannot be overemphasized because everyone require ICT competence to survive the technology driven age. Thus, this calls for an early and regular acquisition of ICT skills by students

Issues in ICT Application in Nigeria Education sector

The application of ICT in the Nigeria schools has brought great developments in the Nigeria education sector. According to the National Policy on Education (Federal Government of Nigeria, 2010), the Federal Government of Nigeria recognized the prominent role of ICTs in the technological driven age and as well has integrated ICTs into Education in Nigeria for the implementation of this policy. The document states that government will provide basic infrastructure and training at the primary school level. Then at the basic school level computer education has been made a pre-vocational elective. Thus, it is a vocational infrastructure as well as training for the integration of ICTs in the school system.

In 1988, a policy was enacted by the Federal Government of Nigeria on computer education to establish pilot schools as well as diffuse computer education innovation to all secondary school first and then to tertiary schools and lastly to the primary schools. However, the project did not go beyond the distribution as well as installation of personal computers (Okebukola, 2007). Thus, in 2004 Nigeria government attempted to introduce computer education schools again but could not achieve much, finally in 2020 the Federal government of Nigeria in the national policy on education (Federal Republic of Nigeria 2010) , recognize the prominent role of ICT in the modern world, decided to integrate ICTs into the Nigeria education system. Thus, computer education has been made a pre-vocational elective and is a vocational infrastructure as well as training for the integration of ICTs in the school system.

In June 2003, African summit of the world economic forum held in Durban, South Africa, in that submit New partnership for Africa's Development (NEPAD) launched an E-Schools elective for senior secondary school. This was an initiative that was initiated to equip all of African secondary schools with ICT Tools such as computers, copiers, scanners, communication devices, fax machines etc. thus, it also serve as a means of connecting African students to internet. The Human Capacity Building initiative of NEPAD was to execute over 10-years period plan firstly with secondary school for a 5-years period with the aim of reaching out to over 600,100 schools in Africa. Thus, imparting ICT skills to young African schools as well as to harness ICT to improve, enrich and expand education in African countries.

ICT Policies

April 2001, marks the beginning of ICT policy implementation in Nigeria. The Federal Executive Council approved the ICT policy by establishing the National Information Technology Development Agency (NITDA). Thus, this policy empowers NITDA to enter into strategic alliance as well as joint venture to collaborate with the private sector to realize the specific objective of the policy by ensuring that "Nigeria become an IT capable country in Africa as well as a key player in the information society by the year 2005 through the uses of IT as an engine for a sustainable development and global competitiveness. However, this vision is yet to be fulfilled. Below are some of the objectives of Nigeria's ICT policy

1. To ensure that ICT resources are readily available to promote efficient national development.
2. To empower Nigerians to participate in software and ICT development.
3. To establish and develop ICT infrastructure and maximize its use nationwide.
4. To integrate ICT into mainstream of education and training
5. To empower the youth with ICT skills and prepare them for global competitiveness
6. To encourage government and private sector joint venture collaboration
7. To develop human capital with emphasis on creating and supporting a knowledge-base society.

Conclusion

Information and Communication Technology (ICT) is a reliable tool, an asset to the development of the educational sector. It is undisputable fact that, no country can make a headway without the application of this notable technology in this digital era. However, if the government of Nigeria will embarked on the laydown policies of the information and Communication Technology (ICT) our challenges would be drastically reduced.

Recommendations

Based on the discussion above and the Nigerian's ICT policy, Government at all levels-federal, state and local should carry vigorous campaigns and activities aimed at encouraging ICT education in all schools.

2. Government should endeavor to provide adequate funds for schools for the purchase of ICT Gadgets, basic infrastructure and training for ICT programme in our various schools.
3. Government in collaboration with ministry of education should educate their workers on the trends of ICT, seminars and overseas programmes for ICT should be considered an option.
4. Government should work on our power supply in order to foster ICT development
5. Government should ensure that, Nigeria's policy on ICT are implemented.

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