

Chapter 11

Revolutionary Integration of Information and Communication Technology in Nigeria's Higher Education System: Dimensions and Impacts

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ABSTRACT

Emergence and integration of information and communication technology (ICT) in the global education system has significantly enhanced intelligible teaching and learning, particularly in the developing countries. Among the developing countries, Nigeria has equally integrated ICT in its educational system. While the information driven technology has little or no integration in the lower level of education, it is intensively integrated in the higher education system. Although the Nigerian education system lacks integration of robust ICT tools to support virtual and in learning, the installed basic ICT tools such as computers, multimedia projectors, process, and internet have greatly changed the face of the country's educational administration and teaching and learning from the traditional practice. Effective and efficient use of ICT are however affected by extrinsic and intrinsic barriers. The need to strengthen the ICT framework and deployment for a more robust teaching and learning process in the country's education system is emphasized.

DOI: 10.4018/978-1-7998-3468-7.ch011

INTRODUCTION

In the drive to enhance teaching and learning in the global education system, several countries have leveraged on the potentials of ICT to accomplish these tasks of education. In the Nigerian education system is integration of ICT to complement the instructional delivery and enhance learning across the schools in the country. Consequently, this article reflects the extent of ICT integration and its impacts on Nigeria's education system. To guide the development of this article are the following salient research questions: What are the common ICT usage in the Nigerian education system? To what extent is ICT integrated in the country's education system? In what dimension is the ICT deployed in the Nigerian education system? What is the impact of ICT in the Nigerian education system? What are the challenges to effective use of ICT in the country's education system? What is the way out of the challenges?

Before providing answers to these questions, the article first gave insight to the concept of ICT in education, background to ICT deployment in the global education system, revolutionary ICT development in Nigeria, scope of the Nigerian education system and extent of ICT integration. Thereafter is the reflection of the dimensions of ICT in the Nigerian higher learning institutions, impacts of ICT on the Nigerian education system, challenges to ICT usage, solution and recommendations to overcoming the challenges, and rounding up with the conclusion.

Concept of ICT in Education

ICT in education, as opined by Linways (2017), refers to any electronic device that supports, enhances, and optimises instructional delivery and learning in a given teaching and learning situation. Taking this further, EduSys (2019), regarded the information-driven technology in education as a set of electronic devices that allow or enhance presentations, demonstrations, drills and practices, interactions, and collaborations to add value to teaching and learning, promote smart classroom, and simplify administration procedures and operations. These concepts, suggests that ICT in education exists in varying forms with each of them serving specific educational purpose. ICT in education could thus be in form of teaching aids, such as the convergence of computers and multimedia projectors, audio and video playing devices; or virtual learning tools, such as the teaching and learning apps, parent-teacher communication apps, mobile learning apps, lesson planning software, home-tutoring websites, revision blogs etc. (Wastiau et al., 2013; Huda, 2016; Hannah, 2018). The teaching aids, as expressed by Olakulehin (2007) are meant to complement teachers' instructional delivery for effective learning. The virtual or e-learning on the other hand is often aided by Internet-laden ICT applications, which allow for educational networking, web-based learning and mobile learning (Luo & Lei, 2012). These concepts of ICT thus guide the outlook of the expected ICT in the Nigerian education system.

BACKGROUND TO ICT DEPLOYMENT IN THE GLOBAL EDUCATION SYSTEM

Schools across the globe generally serve the purpose of providing educational service with the aim of imparting knowledge and understanding of certain subject matter in students who are officially enrolled for learning. The inculcated and acquired education provide the foundation for the learners' contributions to the development of societal social and economic wellbeing (Ozturk, 2001). According to the European University Association [EUA] (2007), creative thinking by graduates of higher education is a

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