Chapter 4
The Era of Digital Technology in Teaching and Learning in Nigeria Educational Institutions

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ABSTRACT

The influence of digital technology in society has made it critical for all students in the 21st century to become literate with the use of digital tools. One way to understand the evolving role of digital technologies in education in Nigeria is to review the literature and see how the use of digital technologies in the classroom are documented. The development and proliferation of the internet have contributed to a revolution in teaching and learning; it has also provided new opportunities for delivering instruction through various media. Despite all the plentiful opportunities of learning through digital technology and improving access to education in the country at all levels, there are, however, some setbacks. In this chapter, some success stories were presented with some benefits and setbacks. Even though many educational institutions from elementary levels to universities levels are using digital devices and applications for teaching and learning purposes, the tools may fail in many places due to the domination of traditional pedagogical approaches and methods.

INTRODUCTION

The influence of digital technology in society has made it critical for all students in the 21st century to become literate with the use of digital tools. Also, the advent of the mobile devices such as smartphones, iPhone, iPads, phablets, tablets, apps, drones and the rapid rise of the number of Information Communication Technology (ICT) users and the number of people with Internet access has opened up more opportunities as well as challenges that affect education worldwide. Information Communication Technology initiatives in Africa have also opened a new understanding of technology that is applicable in Africa educational institutions at all levels. Most universities in Africa have integrated variety of media devices and technology applications into teaching and learning (Adeoye & Anyikwa, 2014).

In the publication, "Era of Digital Technology in Teaching and Learning in African Universities," Adeoye and Anyikwa (2014) indicated that during the Information Age, the digital industry creates a knowledge-based society surrounded by a high-tech global economy that spans over its influence on how the manufacturing throughput and the service sector operate in an efficient and convenient way. They indicated that the information industry could allow individuals to explore their personalized needs, therefore simplifies the procedure of making decisions. Educational institutions have taken advantage of this by developing virtual learning tools and providing education services across the globe.

Adeoye and Anyikwa (2014) indicated that educational institutions had been bombarded with technological tools such as the Internet, Information Communication Technology (ICT), electronic resources, digital technologies, and interactive games in Nigeria. For students to compete effectively in this digital age, they must be familiar with digital tools. Students in the 21st century learn not only in the typical traditional classrooms, but most importantly in a virtual environment. While the students are more inclined to find information by using digital tools, the teachers are teaching, communicating, and collaborating with the use of digital tools. Adeoye and Anyikwa (2014) further stated that:

1. Over time, the use of technology in education could be traced from the time of crudest form of communicating with stone, pebbles, skin to modern days technology devices such as smart boards, the Internet, and e-learning. All these together are interactive and collaborative tools that have transformed teaching and learning, and they have all bought tremendous change to higher education.
2. Technology such as course management systems, learning management systems, portals, PDAs, wireless technology, and Web services are being used to create virtual communities that provide interactive platforms for learning.
3. The development and proliferation of the Internet have also contributed to a revolution in teaching and learning; it has also provided new opportunities for delivering instruction through various media. Information capitalism is the link in the expansion and use of modern computer technologies for large-scale record keeping to a set of social practices. According to Kling and Jonathan (1993), technology is a useful metaphor because it marries information with capitalism's dynamic and aggressive edge.
4. Education is now seen as a crucial factor in ensuring economic productivity and competitiveness in the context of informational capitalism (Ball, 2008). The continued economic success in an ever-changing and technologically advanced economy requires those things both within and outside the labor market to engage in a constant updating of their employability profile through a process of constant re-engagement in education and training. This need for a flexible labor force has opened challenges of constant up-skilling and retraining of the workforce; hence, universities have a significant role to play in producing lifelong learners. Capitalism as an institutional system also depends upon structure that facilitates reinvesting profit into a development organization since information capitalism refers to a different, but contemporary, shift in the ways that information is managed (Mcfarland, 1984; Ives & Learmonth, 1984); therefore, the era of information age in teaching and learning in African Universities started with the introduction of ICTs.

Adeoye and Anyikwa, (2014) concluded that educators must understand this phenomenon of digital age and restructure themselves to take advantage of emerging technologies so that students can be prepared to be leaders who not only realize the benefits of using collaborative tools in virtual space, but also

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