

Chapter 7

The Adoption of Instructional Technologies in Teacher Education: Re-Conceptualising Instructional Technologies within the Context of Nigeria's Level of Development

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ABSTRACT

This chapter advocates for a turn to the positive side of the situation and the need to create a multiplier effect with available technologies and capabilities which at the long run could enable Nigeria to leap-frog and catch up with the advanced countries in terms of quality of teaching and learning. The chapter consequently discusses some of the new ideas and concepts that may well be exploited to improve teacher education through technology. It calls for more research, sensitization and capacity building of teachers and students about such new ideas and concepts for the benefit of the Nigerian education system. The chapter is written primarily based on the practical experiences of the author as a teacher educator and active participant in world conferences that, over the years, have devoted attention to best practical cases that have worked in various developing parts of the world.

INTRODUCTION

The information society has information and communication technology (ICT) as its pivot. Today, information has become the heart and soul of society. The ability of any nation or system to acquire information either for strategic use or for

educational application gives the nation the real advantage in the comity of nations. Through the spread of information and communication technology, people across national boundaries can instantly access information mainly through the internet, computer devices, and other technologies (Ubaru, 2005).

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In schools (Power & Hedges, 2011) as in the health sector (Kommalage & Thabrew, 2008; Ross and Talib, 2012), governance (Hussain & Shareef, 2010; Nam, 2010), military and business (Nwokeocha, 2010), the exploitation of technology for maximum information acquisition is in vogue and gives an organisation, system or country the best opportunity to emerge as a leader on the global scene. For this reason, the quest for the integration of technology in teaching and learning has become an endemic issue and many authorities propagate its usefulness. Abanikannda (2011) asserts that technologies have tremendously transformed modern society producing a global economy and system of things. According to him, this transformation affected education as it did to other activities across the world. Therefore, technologies have transformed the nature of education, how and where education takes place; the role of the teachers and learners; and standards of literacy. In effect, students and teachers must be enabled to deal with large volume of information, make quicker decisions and work more as a team.

Vasquez and Findikoglu (2011) in their work on “ICTs in education and the influence of modernization in developing countries” confirm that most authorities in education and ICT agree that technology is a “*sine qua non* condition for economic growth and local improvement in developing regions” (p. 101). The positive influence of technology is felt not only in agriculture and economy but also education. The authors referred to the work of Oliver (2003) which analysed the role of students, teachers and institutions and showed that the integration of ICT in education facilitated student-centred learning and promoted competency and performance based curricula. It gives students “access to various information sources, forms and types, creating learning environments focused on problem-centered and inquiry-based activities” (Oliver, and Stephenson, cited in Vasquez and Findikoglu, 2011, p. 104). Other great benefits of ICT deployment in teaching and learning as recounted by Vasquez and Findikoglu (2011, p. 104) are:

1. Changes the paradigms of what, when, how learn;
2. How much students learn;
3. The cost of learning;
4. Students take responsibility of their learning and get deeply involved in the reconstruction of knowledge;
5. The constraints experienced by learners with special needs are temporarily removed by the use of ICT by “offering asynchronous support for learning so real-time participation is not necessary (Moore & Kearsely, 1996)”.

In Nigeria, therefore, the desire is high to empower teacher education to leverage on the advances brought about by technologies in order to render educational services that are of global standard. But achieving this desire has not been easy because of the country’s poor technological attainments. However, rather than resigning to fate or dissipating more energy and attention on the country’s technological problems, there is a need to turn attention more to how best the available technological resources could be used as improvisations to fill the gaps in teaching and learning created by the absence of the ideal technologies. It is this latter idea that forms the thrust of this chapter and the aim is to point to likely usefulness of available technologies and how they could fill existing gaps. This is the kind of issues being investigated in other developing countries and which is leading to breakthroughs (Bangaly, Koffi & Mbarika, 2008).

BACKGROUND

Nigeria’s Low Level of Technological Development and the Wide range of Teacher Education Technologies

Instructional technologies and tools are of various types and profound in their ability to facilitate teaching and learning. The computer, internet,

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