Chapter 2

Academics’ ICT Capabilities in a New Educational Paradigm in Developing Countries: A Capability Approach

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ABSTRACT

Tertiary institutions in the developing countries are investing a lot in equipping their institutions with Information Communication Technologies (ICT) for teaching and learning. However, there is still a low adoption rate in the use of the new technologies among many academics in these countries. This chapter aims at analysing the factors that impact on the academics’ effective use of ICTs for teaching and learning in the new education paradigm. Sen’s Capability Approach was used as a conceptual lens to examine the academics’ phenomena. Data was collected through in-depth interviews. The analysis of the findings has shown that individual, social, and environmental factors are preventing some academics from realising their potential capabilities from using the new technologies. It is recommended, therefore, that institutions in the developing countries should look into, and deal with accordingly, the conversion factors that are impacting on the academics’ capabilities when utilising the new technologies.

INTRODUCTION

With the new millennium, came new educational paradigms due to dramatic technological revolutions. University institutions in South Africa like many other developing countries have responded to the paradigm by deploying Information Communication Technologies (ICTs) such as Learning Management Systems (LMS) e.g. Blackboard and other emerging technologies, e.g. face book, to enhance teaching and learning processes. Few institutions have gone as far as integrating Enterprise Resource Planning (ERP) Systems to an eLearning system. However, such few institutions find it difficult to integrate the ERP system to the proprietary LMS such as the Blackboard hence
the institutions are abandoning the proprietary LMSes; they are migrating to the Open Source LMSes such as Sakai and Moodle. Nevertheless, the adoption of the ERP systems in the South African universities is still at infancy. Anecdotal evidence shows that the institutions do not have capabilities to effectively integrate the systems into the LMSes. Elsewhere, researchers have argued that acquisition of knowledge is believed to be problematic within ERP-projects (Linderoth and Lundqvist, 2004).

While the deployment of the new technologies is recommendable, the actual benefit of the ICTs for teaching and learning in South Africa and the other developing countries is yet to be realised. Research and anecdotal evidence show that despite a commendable deployment of the new technologies, in particular LMS, into the tertiary institutions, there is a low adoption rate in the use of the technologies among many academics in South Africa (Madiba 2009, Chigona and Dagada 2011); however, the situation in other countries on the African continent is worse (Njenga 2011). It is argued that “the act of integrating ICT into teaching and learning is a complex process and one that may encounter a number of difficulties known as barriers i.e. any condition that makes it difficult to make progress or to achieve an objective”(Bingimlas 2009:237). Elliot (2010) concurs and notes that, although the new technologies in education since a decade ago have enabled higher education providers to expand and enrich teaching and learning opportunities and pedagogies, there is a concern about the professional learning of academics so that they have the confidence to exploit the new technologies to expand, extend and modify their pedagogies.

Other researchers (e.g. Madiba 2009; Mumtaz 2000) have also shown that there is a wide range of factors which influence academics’ under-utilisation of new technologies in curriculum delivery. Among others, such factors include access to resources, quality of software and hardware, ease of use, incentives to change, support and collegiality available in the institution, computer self-efficacy, and perceived credibility of the platforms (BECTA 2003; Mumtaz, 2000). Recent research has shown that for many instructors who may have the capability to use the new technologies, lack of self-confidence in using the technology is noted to be a strong limiting factor of the domestication of the new technologies for curriculum delivery (Chigona & Dagada 2011; Madiba 2009; BECTA 2003). The barriers could be viewed as deprivation of the academics’ capabilities. According to Zheng (2009) ‘capability’ in ICT research refers to abilities individuals have to use technology.

Therefore, this chapter aims to analyse the factors that impact on the academics’ effective use of the technology, hence looking at the new technology implementers’ capabilities to benefit from it in their teaching processes. The perspective of limited use of the new technologies as deprivation of capabilities provides a conceptual basis for the study. Sen’s Capability Approach is used as a conceptual lens to examine the academics’ phenomena regarding new technologies for curriculum delivery. The approach is concerned with the individuals’ capabilities and freedom. This translates into effective opportunities that individuals have, to live a type of a lifestyle they have a reason to value. It is recommended that social arrangements should aim to broaden peoples capabilities (Sen 1999).

Research Questions

This chapter aims at analysing the factors that impact on the academics’ effective use of ICTs for teaching and learning in the new education paradigm, in particular within the developing nations context. The following questions therefore, provided the focus and drive to the empirical study for this chapter:
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