Chapter 21

Culture Aware M-Learning Classification Framework for African Countries

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ABSTRACT

African countries are currently experiencing proliferation of mobile phone subscriptions but no prevalence of personal computers or electricity (Parker, 2011). It is estimated that, by the end of 2015 in Sub-Saharan Africa, the percentage of people with mobile network access will surpass that of access to electricity in homes (Rao, 2011). This phenomenon is also experienced in learning institutions, particularly universities, where almost every student owns a mobile phone (Kashorda & Waema, 2009). Although there is a great potential for Mobile Learning (M-Learning) in education, the formal integration of M-Learning in the education systems is in its infancy since there is limited number of M-Learning projects in the region. This is in contrast with the rapid increase and integration of mobile phones in the daily lives of the population in the region (Isaacs, 2012). According to Olaniran (2009), online learning needs to be culturally aware and investigate the dimensions of cultural variability as well as its influence on learning within global education. In an attempt to address this need, this chapter focuses on the African region in describing dimensions of cultural variability and proposes four categories for M-Learning projects as well as their influences on dimensions of cultural variability.

INTRODUCTION

Society is made up of different sub-cultures that exist among its members. These differences cause many barriers such as communication and due to lack of effective communication there are misun-

derstandings among people depending on their values, beliefs, backgrounds (Kawar, 2012). The mobile phone technology is the quickest growing technology innovation in history, which can be used to remove such barriers. According to industry estimates, by the end of 2010, there were

more than 500 million mobile phone subscribers out of 110 million people in Africa. This was more than 50% of the continent's population and an increase from 246 million in 2008. The number was expected to surpass 750 million people by the fourth quarter of 2012 and reach one billion before the end of 2015 (Reed, 2012).The fast growing trend of mobile phone technology presents a great potential for delivering learning content on mobile devices especially in Africa where most of the countries are characterized by poor ICT infrastructure (Kashorda & Waema, 2009).

Mobile learning (also known as m-learning) has various definitions by researchers in this field. For the purpose of this chapter, we adopt definition proposed by Viberg & Grönlund (2012), who defined m-learning as a process of learning across multiple contexts among people and personal interactive technologies with a focus on contexts. These technologies include any type of handheld devices that can be used when walking around such as mobile phones, personal digital assistants (PDAs), smart phones, Ipads and soon.

According to Olaniran (2009), online learning discussion needs to be culture aware and investigate the dimensions of cultural variability and their repercussions on learning within global education. The primary objective of this chapter is to get a better understanding of m-learning applications for multi-cultural context such as African countries while the specific objectives include:

1. To describe cultural variability dimensions that exists in African countries.
2. To establish a classification framework that integrates and provides a theoretical framework for integrating emerging cross-cultural m-learning projects launched in African countries.
3. To identify influences of cross cultural m-learning applications in African countries.

BACKGROUND

M-Learning Projects in Africa

The rapid growth of mobile phone subscriptions in African countries has triggered interest in how mobile phones might enhance open and distance learning opportunities for the professional development of educators, and support educators in their pedagogical practices and administrative responsibilities. However, the limited but growing number of m-learning projects in the region indicates that the formal integration of m-learning in education systems is in its infancy stage. Majority of m-learning projects in Africa are found in South Africa, Kenya and Uganda with the highest concentration being in South Africa. Mobile phones are the dominant tools for supporting teaching and learning within classrooms or improved learner performance in both formal and informal learning environments with majority focusing on formal education in primary and secondary schools (Isaacs, 2012).

Studies show that, there are some researches that contextualize online learning from intercultural perspectives but majority of these researches ignores the multicultural contexts (Thatcher, 2012). This chapter therefore focuses on exploring various categories m-learning applications that target multicultural target users that have been launched in African countries, as a case study of multicultural context.

Motivation

According to Vieira (2009), Mobile phone is now a utility and not just a communication device. Mobile phones capabilities have improved over the years from just communication device for chatting, organizing contacts and diaries to small pocket-sized computers. These devices can now

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