Chapter 8
Mobile Technologies and Rich Media:
Expanding Tertiary Education Opportunities in Developing Countries

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ABSTRACT

This chapter focuses on the emerging possibilities and issues arising from the rapid adoption of mobile technologies for learning in tertiary and higher education contexts in developing countries. In particular, it explores the implications for developing nations of the rapid proliferation of mobile devices. Many opportunities are forecast along with some lessons learned from an Australian investigation into the use of rich media technologies in higher education.

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INTRODUCTION

Mobile technologies and rich media can enable greater opportunities for situated and personal learning in both real and virtual higher education contexts in developing countries, thus providing increased access and opportunities for higher education for larger numbers of people for whom this kind of education is often difficult to obtain. As Naismith et al (2004) state

Mobile technologies are becoming more embedded, ubiquitous and networked, with enhanced capabilities for rich social interactions, context awareness and internet connectivity. Such technologies can have a great impact on learning. Learning will move more and more outside of the classroom and into the learner's environments, both real and virtual, thus becoming more situated, personal, collaborative and lifelong (2004, p. 5).

For the purposes of this chapter, which concerns learning in tertiary education contexts, we define mobile technologies as devices which enable interactive learning to take place anywhere, anytime and at the pace of the learner who we assume will be technology savvy, 'nomadic and continually on the move' (Ally, 2007). Such a definition assumes connectivity via mobile phone broadband networks for devices with the capability for basic functionality expected of any personal computer as well as devices enabled to receive Internet based services including email, browsing, social networking and shortly video and audio conferencing.

BACKGROUND

The take-up of mobile technologies worldwide, particularly mobile phones, is expanding rapidly with more than half the world's 6.5 billion people owning mobile phones in 2007, a significant increase from the 2 billion people identified as owning mobile phones in 2005 (Miller, 2007). Of this number, two thirds of mobile phone owners are located in developing countries. Developing countries are described by the World Bank as those countries where the majority of people are low or low middle income earners (Donner, 2008). While in the developed world there are currently more mobile phones than there are people, in the developing world one mobile phone is often shared amongst several users, expanding access to these devices. Subscriber rates in many parts of the developing world are increasing at a minimum of 25% year and 50% a year in Africa (Miller, 2007). Mobile phone ownership in South Africa is now reported as 60% of all people over the age of 16 (Kreutzer, 2008). Amongst the 2.4 billion people living in the world's poorest nations including India, Pakistan, Bangladesh and Vietnam, a median concentration of 7.5 mobiles per100 people was reported in 2006 (Donner, 2008) and growing rapidly. In the more advanced low-middle income countries such as China, Egypt and the Philippines, median penetration of mobile devices in 2006 was already 30 per 100 (Donner 2008).

While much of this ownership is amongst the more prosperous members of these nations, mobile ownership is spreading rapidly across all levels of these societies.

As mobile services are pulled increasingly into rural and low-income communities, mobile phones are riding the strength of rapidly growing networks, low power and maintenance and increasingly affordable pricing (Lehr, 2007, p 3).

This rapid acquisition of mobile technologies amongst the worlds' poorest nations and people is creating considerable opportunities for economic development, improved health care and improved access to education for the people living in these countries. In the developed world, a high level of access to broadband internet has been accompanied by an expansion of access to rich media technologies. This uptake of rich media technology

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