Chapter 14
Reflections on 4 Years of mLearning Implementation (2007–2010)

Thomas Cochrane
Unitec, New Zealand

ABSTRACT
This paper provides a comparative analysis of five mlearning case studies involving 4 years of action research mlearning projects. The projects investigated the potential of mobile web 2.0 tools to facilitate social constructivist learning environments across multiple learning contexts. Highlighted are the design framework, identified critical success factors, and implementation strategy developed from the thirteen mlearning projects undertaken between 2007 and 2009, with an analysis of the eight 2009 projects and their subsequent adaptation in 2010. The projects illustrate the impact of mlearning supported by sustained interaction via communities of practice facilitating pedagogical shifts from teacher-directed to student-generated content and student-generated contexts.

INTRODUCTION
The researcher has been primarily interested in transforming traditional teacher-directed pedagogy into social constructivist learning paradigms facilitated by mobile web 2.0. What began as an investigation of the affordances of web 2.0 in 2007 developed into three mobile web 2.0 proof of concept projects within the third year of the Bachelor of Product Design in 2008, the Diploma of Contemporary Music, and the Diploma of Landscape Design. These then quickly spread to projects within the first and second year of the Bachelor of Product Design programme in semester2 of 2008. The success of these projects led to the implementation of integrating mobile
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web 2.0 technologies (based on an explicit social constructivist pedagogy) across all three years of the programme in 2009, and on wider scales into larger courses such as the Bachelor of Performing and Screen Arts, and the second year of the Bachelor of Architecture. Figure 1 illustrates the growth of the mlearning (wireless mobile devices or WMDs) projects at Unitec from 2006 to 2010, beginning with the two trial projects used to test the research instruments in 2006.

Mobile Web 2.0

MLearning (Mobile learning) technologies provide the ability to engage in learning conversations between students and lecturers, between student peers, students and subject experts, and students and authentic environments within any context. It is the potential for mobile learning to bridge pedagogically designed learning contexts (Laurillard, 2007), facilitate learner generated contexts, and content (both personal and collaborative), while providing personalisation and ubiquitous social connectedness, that sets it apart from more traditional learning environments such as fixed classrooms and computer labs. Non-wireless devices cannot bridge communication and share user generated content across multiple contexts with the ease and immediacy afforded by wireless mobile devices. Mobile learning, as defined in this paper, involves the use of wireless enabled mobile digital devices (Wireless Mobile Devices

Figure 1. Mlearning Projects 2006 to 2010

![WMD Projects 2006 to 2010](image)