

Chapter 29

Mobile Web 2.0 Integration

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ABSTRACT

Web 2.0 tools provide a wide variety of collaboration and communication tools that can be appropriated within education to facilitate student-generated learning contexts and sharing student-generated content as key elements of social constructivist learning environments or Pedagogy 2.0. “Social software allows students to participate in distributed research communities that extend spatially beyond their classroom and school, temporally beyond a particular class session or term, and technologically beyond the tools and resources that the school makes available to the students.” (Mejias, 2006, p1). This paper illustrates this by describing and evaluating the impact of the introduction of web 2.0 and mlearning to facilitate student eportfolios within the context of a first year Bachelor of Design and Visual Arts course in New Zealand (Unitec). Core web 2.0 (social software) tools used in establishing students’ web 2.0 eportfolios included: Vox, Qik, Picasaweb, Prezi, Google Docs, and YouTube. The participating lecturers and the technology steward also used these web 2.0 tools to collaborate on the design of the project. The paper reflects upon the impact of the participants’ previous web 2.0 experience and the use of these tools to facilitate student-generated content and at the same time to act as catalysts for pedagogical change. The project is evaluated as an action research cycle within a framework of longitudinal action research investigating the impact of mobile web 2.0 on higher education from 2006 to the present.

INTRODUCTION

Built on the foundation of four years of participatory action research and implementation of mobile web 2.0 projects (mlearning), this paper outlines the second iteration of a full mlearning integration model in the first year of a Bachelor of Design and Visual Arts (Product Design) course

in 2010, informed by reflections upon the previous 2008 and 2009 mlearning projects instigated across all three years of the Bachelor of Product Design course at Unitec, involving 125 students and 4 lecturers. The Product Design mlearning projects are situated within an action research project spanning four years and seven different course contexts within the Faculty of Creative

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Industries and Business, including: Architecture, Performing and Screen Arts, Landscape Design, Product Design, Contemporary Music, Computing and Information Systems, and Accountancy and Finance. The mlearning model was informed and driven by social constructivist learning theory, using a staged and scaffolded approach to transform the learning environment from lecturer-centred (pedagogy) to student-centred (andragogy), while maintaining the critical pedagogical guidance of the lecturer (Laurillard, 2007). Analysis and reflection on the previous mobile web 2.0 projects within the Product Design course led to the integration of mobile web 2.0 tools within the curriculum via a three-stage adoption across the three years of the Product Design degree (Table 1). The first year implementation focused on the first stage in this transformation, facilitating student-generated content and collaboration. A first year course that would typically have been delivered in a traditional paper-based mode was developed by the lecturer in collaboration with the researcher in 2009 to model and embed the use of mobile web 2.0 tools facilitating a social constructivist learning environment. Examples of assessment alignment and integration of the mobile web 2.0 tools within the first year course are outlined in an earlier paper (Cochrane & Bateman, 2010a).

The goal of the mlearning integration into the course was to facilitate a student-centred, collaborative, flexible, context-bridging learning environment that empowers students as content producers and learning context generators, guided by lecturers who effectively model the use of the technology. Students and lecturers leverage the unique affordances of mobile web 2.0 tools to create an online digital identity, begin developing an eportfolio, and establish the basis of a potentially life-long international peer and professional support network, including: blogs, social networks, location aware (geotagged) image and video sharing, instant messaging, microblogging, and augmented reality. This effectively bridges the formal learning environment of the Design Studio and the informal learning environments of situated authentic practice.

THEORETICAL FRAMEWORKS

This section introduces the learning theory and pedagogical frameworks that inform the project, including: Social Constructivism, Communities of Practice, Authentic Learning, Pedagogy 2.0, Mlearning, and Learner Generated Contexts.

Table 1. Mapping the PAH continuum to a staged and scaffolded course integration of mobile web 2.0

Stage	Web 2.0 Tools	MLearning Tools	Course Timeframe	PAH Alignment
Level 1	Social Collaboration with peers and lecturer. Establishment of student generated content.	Use of student-owned netbook or mid-range smartphone, LMS and web2.0 sites	First year	Pedagogy (Lecturer directed and modeled)
Level 2	Social collaboration with peers and authentic environments. Context Aware	Student-owned laptop and/ or mid-range smartphone	Second year	From Pedagogy to Andragogy. Students become content creators within authentic environments
Level 3	Context Bridging. Student generated contexts.	Student-owned laptop and/ or high-end smartphone	Third year of programme	From Andragogy to Heutagogy. Students become independent learners within authentic environments

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