Chapter 13

Open Educational Resources and Web 2.0 for Formal Learning in Information and Computer Sciences: A Case Study

Giselle Ferreira
The Open University, UK

Tina Wilson
The Open University, UK

ABSTRACT

The availability of Web 2.0 and open educational resources affords the emergence of novel learning spaces, but debate on these innovations has tended to emphasise technical, logistical, and legal issues. This chapter focuses on pedagogy, reporting on the experiences from a piece of action research that has taken students’ views to its heart. The context for this research has been provided by a distance-learning project-based course in information and computer sciences, equivalent to a final year project in a face-to-face setting. The study consisted of a practical investigation into the potential of such resources to support the necessarily intense episodes of interaction required for productive supervision, whilst providing a space where students can be encouraged to identify, engage with, and discuss ethical issues that arise in their work.

INTRODUCTION

The availability of Web 2.0 tools and Open Educational Resources (OER) offers opportunities to develop novel types of learning spaces. Ongoing debate on these innovations, however, has tended to focus on technical, logistical and legal issues. This chapter proposes to look beyond these issues to focus on pedagogy. By exploring views that students hold on Web 2.0 tools, this chapter seeks to contribute to the practical exploration of the potential of such arenas to support “formal,” “informal” and, perhaps, new and less fragmented models of, learning in which the distinction be-
between “formal” and “informal” learning experiences is blurred.

Drawing upon a study funded by the UK Higher Education Academy (UK HEA), the chapter examines the use of Web 2.0 tools and OER to support project-based learning within the context of a distance-learning course in Information and Computer Sciences (ICS). The study (Wilson & Ferreira, 2009) has used the community-oriented facilities available through OpenLearn (http://www.open.ac.uk/openlearn), the UK Open University (UK OU) open learning portal that currently provides access to the institution’s original twin OER repositories LearningSpace (http://openlearn.open.ac.uk) and LabSpace (http://labspace.open.ac.uk) whilst also pointing to a wealth of further open resources and spaces where the university has an online presence. The study has also counted on the support of the Open Learning Network (OLnet http://olnet.org), which is undertaking research into design, use and reuse of OER within an open, international and collaborative setting.

BACKGROUND

This chapter draws upon a small-scale investigation in the area of teaching and learning in ICS. The context for this investigation has been provided by the Open University (OU) course M450 The Computing Project (http://www3.open.ac.uk/study/undergraduate/course/m450.htm). This is a level 3, 60 CATs points course (600 study hours) taught at a distance over a period of 9 months. M450 provides opportunities for students to put into practice the knowledge gained in previous courses as well as their professional experience, which equates the course to a final year project in a face-to-face setting.

M450 is centred on a piece of project work in which students are expected to gain “practical experience of independent learning and reflective practice (…) [and] apply advanced principles and techniques to solve problems” (Open University, 2009). The course materials are all presented online on a dedicated, password-protected Web site built within the university’s Moodle-based VLE. Tutorial support is also provided online to groups of 6-8 students, each working in their own chosen topic or area. In addition to prompting and moderating discussions as well as providing individual, tailor-made support to students whilst they work on their projects, tutors also mark and provide feedback on the 3 pieces of summative assessment completed throughout the course (Tutor-Marked Assignments or TMAs). Tutors are also responsible for marking and providing feedback on the final, examinable component of the course, the project report (End-of-Course Assignment or ECA).

Although the ethical dimension entailed in research and development in ICS is highlighted in course materials and explicitly included in the set of assessment criteria for the course, engagement with ethical issues poses a particular challenge for students in M450. The ethical guidelines provided to students focus almost entirely on issues that arise in respect to participation in developmental testing (with the exception of some commentary on collusion and plagiarism, standard to all ECA-based courses). Little is said in terms of ethical issues apart from general advice concerning the issue of possible “harm” that could occur to any participants in the students’ projects, with the notion of “harm” presented as unproblematic. Most of the issues raised are, therefore, procedural and relatively extensively covered in the various codes of practice brought to students’ attention in the course materials. Interestingly, a popular choice of previous level-3 course taken by students enrolled in M450 has been the third level course M364 Fundamentals of interaction design (http://www3.open.ac.uk/study/undergraduate/course/m364.htm), and a significant proportion of the project proposals submitted entail the involvement of participants, making ethical reasoning central to project development.
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