New spaces, new tools, new roles: two case studies on the impact of open educational resources

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This paper reports on two case-studies on the impact of Open Educational Resources taken from an investigation carried out on OpenLearn, the UK Open University Open Content Initiative funded by the Flora and Hewlett Foundation between April 2006 and April 2008. The project has re-purposed several thousand hours of learning materials selected from the university’s course provision into freely available units of study on a pair of twin sites, the LearningSpace (aimed primarily at learners) and the LabSpace (the experimental space aimed primarily at other educators). The case-studies form part of a broader investigation into engagement with communication and discussion tools provided by OpenLearn.

Each of the case-studies revolves around a collaborative mini-project involving OpenLearn staff and a subject-specialist. The mini-projects were set up with the twofold aim of providing a test bed for the use of resources and tools provided on the OpenLearn Web site whilst providing a context at the boundary between ‘formal’ and ‘informal’ learning. Each mini-project was structured around a series of videoconferences supported with a study unit on the LabSpace (containing resources as well as further communication tools), the first focusing on the area of ethics and technology for practitioners, and the other focusing on the area of collaborative design at introductory level.

This paper describes the process of organising and supporting the mini-projects as one of co-creating new spaces and roles for stakeholders involved in teaching and learning. The learning situations created in the mini-projects are located as samples from the ‘informal learning’/’formal learning’ continuum afforded by OpenLearn, which suggests a number of boundary issues in relation to curriculum and pedagogy for online learning as well as discourses and technologies of ‘openness’.

Keywords: Open Educational Resources; engagement with Open Educational Resources; teaching and learning online
Introduction

This paper reports on two case-studies in the broad area of Open Educational Resources (OER). Carried out with the support of the UK Open University’s (UKOU) Centre for Open Learning of Maths, Science, Computing and Technology (COLMSCT – please see http://www.open.ac.uk/colmsct/), the studies were part of a broader investigation into engagement with computer-mediated communication (CMC) in an institutional context yet on an ‘informal’ (not certified) basis. The investigation focused, in particular, on engagement with the communication and discussion tools provided by OpenLearn, the Open University’s Open Content Initiative (http://www.open.ac.uk/openlearn).

With the support of a major grant from the William and Flora Hewlett Foundation to fund its two-year pilot stage (2006-2008), OpenLearn has delivered, for free re-use within a Creative Commons Attribution-ShareAlike-NonCommercial license, a wealth of self-study learning resources that correspond to about 3% of the UK OU’s current course provision. Two sites were created, the LearningSpace (http://openlearn.open.ac.uk), aimed primarily at learners, and the LabSpace (http://labspace.open.ac.uk), aimed primarily at other educators. Indeed, OpenLearn offers an integrated learning environment encompassing not only ‘content’ but also a variety of communication and social networking tools available or attached to the Moodle environment upon which the project Web sites are built.

Despite the rapid development of the OER movement (Atkins et al., 2007) and some convincing arguments supporting its development (Hylén, 2006), ‘engagement’ with OERs is not an entirely unproblematic proposition. A study of the attitudes to the rights and rewards for contributors to open repositories (Bates et al., 2007) identifies a number of tangible concerns that are not easily allayed by claims such as that ‘for most faculty, open educational resource initiatives are no more of a threat than the university library’ (Wiley, 2006). Although OERs may be generally viewed as a ‘cause’ worthy of more evangelism, they may also be viewed with scepticism and, in more extreme positions, varied degrees of cynicism. Indeed, ownership, a core theme underlying broader discussions of the implications of digital formats to Intellectual Property Rights and Copyrights (IPR/CR), appears to play a major role in determining reactions to and, consequently, engagement with, the idea of offering open access to educational materials, often in subtle ways (Ferreira & Heap, 2006).

Background

Two ‘Pilot Learning Projects’ were run as part of the broader investigation, one in the subject of Ethics and Technology, and the other in the area of Design. With the researcher acting as coordinator as well as participant observer throughout the process, each of these projects was devised, organised and
supported by an organising group that included a subject specialist, a videoconferencing specialist and a Communications professional. They were entitled ‘Learning projects’ as they were envisaged as learning experiences for all of those who participated, including the organising group(s). Indeed, each project was presented to potential participants as an ‘experiment’ that, whilst part of a broader research project, might also inform future course development within the university.

The initial motivation for this work was to experiment with techniques that might encourage further participation in the (asynchronous) forums available within different areas of the LearningSpace. In particular, lengthy discussions took place with potential collaborators (subject specialists based in different academic units) around the idea of using devices such as mini-lectures or short commentaries (prepared with FM or video blogging) to somewhat ‘personalise’ the main ‘content’ areas of the space. These discussions, however, suggested an overall lack of interest amongst academic staff in attempting to reproduce online what was perceived as an ‘old-fashioned’ model. From an original group of 9 members of staff with whom these ideas were discussed, all presented arguments neatly encapsulated by one colleague’s comment: ‘we ought to be using these tools to get out there and do really innovative things, not old-fashioned stuff’. From these discussions, the idea of fostering a more hands-on involvement of subject specialists emerged. Crucially, the research focus on communication was translated into the possibility of engaging directly with learners throughout the process, not a usual aspect of the academic work at the UK OU. This possibility emerged as an exciting prospect to course developers working within the development/presentation framework of the institution.

Aims and objectives

Each of the pilots had the following broad aims:

• To explore ways in which OpenLearn can contribute to course development at the OU by providing a platform for experimentation and trial of new ideas
• To encourage further use of FM by creating, evaluating and reporting on interesting exemplars which demonstrate a range of features provided by the application
• To document and reflect on the opportunities afforded at the boundary formal/informal learning at the interface between the OU and OpenLearn as an externally-funded initiative

The overall structure of these pilots revolved around the idea of using the communication tools available on OpenLearn, in particular, FM, a Web 2.0 videoconferencing tool developed at the University and freely available on OpenLearn, to experiment with curriculum and/or ‘delivery’ innovation. Nevertheless, relatively prolonged negotiations took place before these aims and
structure, which tentatively bring together the wide variety of interests represented in each organising group, were agreed and, crucially, circumstances were such that staff was able to commit to the projects despite their very busy schedules. Indeed, time availability (rather, lack thereof) emerged as a major issue for staff. In themselves, these negotiations (including the discussions with colleagues who were eventually unable to commit to experiments in their own subject areas) were quite revealing.

It is important to note that both projects counted initially on significant technical support regarding their videoconferencing tool. In discussion with the researcher and the two main subject specialists, the videoconferencing specialist developed a downloadable training guide that was distributed to all participants. This guide was modelled after existing training resources used in staff development within the university, and it capitalised on the support materials available via the FM Project Homepage (http://flashmeeting.open.ac.uk/home.html) and the unit on FM available at http://openlearn.open.ac.uk/course/view.php?id=3101, all of which are openly and freely accessible.

Case-study 1: Ethics and Technology for Practitioners

The Subject Perspective

From the perspective of its subject area, the first pilot was designed to explore the possibilities of using drama and dialogue in teaching and learning ethics in engineering and technology. Professional bodies in the area have relatively recently begun to require, as a condition for curriculum accreditation, the inclusion of ethics-related topics, and new pedagogies for teaching these topics are gradually emerging (e.g. Willis, 2009), perhaps partially in response to these requirements, with the use of drama, case-studies and scenarios figuring prominently amongst potential techniques.

Although OU courses in technology-related subjects have traditionally covered aspects related to professional practice and the social significance of technology, often under the umbrella term of ‘social impact’, ethics is only beginning to be included explicitly within the set of learning outcomes used to outline courses and frame their development. The OU is widely recognised for the quality of its audio-visual materials (many created in the long-standing collaboration with the BBC, whereby academic staff act as specialist consultants), but the use of drama in teaching technology-related subjects remains an idea relatively unexplored. Against this background, this pilot set out ‘to explore a number of examples of dialogue to uncover how ethics and the theatre might inform engineering practice’, as put by the subject-specialist. In addition to providing a sample learning context for this study, the experience should be used to inform the creation of materials for a new course currently in its early stages of development.
Participants

A group of 6 participant-learners took part in this experiment. From this group, one participant was a student registered (but not with the OU) on a distance learning degree in IT with Business, but all other participants were professionals at different stages of their career in an IT-related area, including education, management and engineering. The group comprised mostly UK-based participants (albeit geographically spread across the country), but it included also one individual based overseas (Australasia). Interestingly, gender representation was even (50/50%) although this was not set as a deliberate recruitment goal. Only two participants had had a previous involvement with the OU as students, with one of them currently reading for a degree in an area that is not directly related to their work. Also, only two participants described themselves as ‘regular’ OpenLearn users, one re-using resources in their own teaching practice, the other using resources to support their current studies and future choices within the options embedded in their chosen degree structure.

Recruitment was initiated via messages posted in selected areas of the LearningSpace (‘LearningSpace forum’, ‘IT & Computing forum’ and ‘Arts & History forum’ – the latter category houses materials in the area of Philosophy). The initial call was a brief message that had the purpose of gauging interest in ‘a series of Webinars on ethics and technology’. ‘Interest’ presented itself as a potential issue, as there was no way to ascertain whether participants would come forward that would be interested in a relatively specialised topic and able to commit. An initial number of 6-8 participants had been agreed as an ‘ideal’ by the organisers, taking into consideration the need for a minimal number that would afford a ‘critical mass’ for discussions, but envisaging potential issues if too many participants were to be involved in discussions in a medium that, to most, might be new. Indeed, although all participants described themselves as experienced email and text-based forum and messaging applications users, as well as proficient in using the Web for gathering information, only 2 individuals in the group described having had previous experience using videoconferencing, but that was restricted predominantly to one-to-one communication (e.g. using Skype or Messenger instead of the phone to keep in touch with friends and family abroad).

Within a two-week period, 15 individuals replied to the dedicated mailbox created to manage the recruitment process with some degree of privacy. From these initial queries, most of those who did not join the discussion group were unable to do so because of the time commitment required. From the justifications received, some were based on personal circumstances (‘family time’), given the proposed time of 8 pm for the weekly discussions (suggested partially as an attempt to accommodate different time zones). All potential participants had Internet access via broadband, with only one individual in the process of switching providers and technology (at the time, 56k modem) who decided not to join due to technology-related questions.
Structure

The overall structure of the learning experience was developed collaboratively by the organising group around the idea of supporting discussion of a selection of resources available as text, audio and audio-visual. Participants were expected to engage with the recommended resources for a given session prior to joining the discussion, when they would contribute their own understandings and relate them to practical examples, many drawn from their own everyday experience or the media. Main discussion was synchronous, convened by the subject-specialist in weekly 1 ½ hour sessions over FM.

A LabSpace unit was created to provide a ‘home’ for the participant group. The unit contained most of the resources, a single (asynchronous) discussion forum to support discussion between FM sessions and relevant links, including links to the homepage of the FM sessions. To allow for some flexibility and ongoing updating, the unit was created using the in-situ editing features made available to the researcher and the subject specialist, instead of the usual bulk-production methods of OpenLearn using XML tagging and automated publishing (for details on this process, please see Connolly et al., 2007). The editor’s view of the unit’s Homepage is shown in figure 1; participants did (do) not have editing permissions (although all are contributors to the forum) but had (have) a similar view of the Homepage.
The unit had a structure that mirrored the structure proposed for the synchronous discussion, that is, a series of pages referring, each, to a given synchronous discussion session. Each page was directly linked to from the unit’s Homepage but also accessible via other navigation options available on the site. Each page was titled according to the discussion session to which it referred, and each was sectioned similarly, as follows (please see figure 2 for an example):

- At the top of the page, a section containing the link to the relevant FM session to be used for joining or, later on, replaying the discussion (links were also circulated to the group via email)
- A main section with the resources (links) recommended as preparation for the synchronous session;
- A section with notes and links to the session summary, completed soon after the session took place
- A section containing the resources (links) recommended as preparation for the subsequent synchronous session
Figure 2: LabSpace unit page for Session 2 of the Ethics and Technology for Practitioners Learning Pilot

The experiment involved a series of 7 FM sessions, each with its own aims, with the last session in the series dedicated to general debriefing on the experience, as shown in Table 1. Also, three preliminary familiarisation sessions took place prior to the main discussion, convened by the tool specialist and attended by different sub-groups of participants.

Table 1: Structure and resources for the Ethics and Technology for Practitioners Learning Pilot

<table>
<thead>
<tr>
<th>Session</th>
<th>Aims</th>
<th>Resources</th>
</tr>
</thead>
</table>
| Session 1: Introductions | • To provide the role of an icebreaker  
• To look at the project aims, schedule and protocol for the subsequent sessions.  
• To begin to identify components of the topic of ethics | • Extracts from George Bernard Shaw (1907) *Major Barbara*  
• Extracts from G.E. Moore (1903) *Principia Ethica*  
• Extracts from Richard Rorty (1989) *Contingency, Irony and Solidarity* |
| Session 2: Exploring ethics | • To explore the question 'what is ethics?'  
• To explore the use of video as a learning resource | • John Monk's video *Ethics* available online at [http://tinyurl.com/bx365b](http://tinyurl.com/bx365b)  
• Annotated extracts from Plato’s *Protagoras, Meno* and *Gorgias* |
| Session 3: Dialogue and emotion | • To explore the role of emotions in ethical considerations  
• To discuss the use of audio as a learning resource | • Extracts from Martha Nussbaum’s (1998)  
• Audio play by Katie Hims (2006) *Call Waiting* |
| Session 4: Loyalty | • To look at how negotiations might resolve apparent ethical differences  
• To examine how the play *Last Call* introduces ethical issues | • Audio play (in LabSpace unit) by Mike Walker (2006) *Last Call* |
| Session 5: Analysis | • To study the text of a play and locate and identify a variety of ethical issues and | • Act 1 of Joe Penhall (2007) *Landscape with weapon* (printed copy provided to participants) |
rhetorical styles aimed at altering other people's ethical perceptions.

**Session 6: Trauma**
- To complete the study of *Landscape with Weapon* and to extract the lessons about ethics from this and previous sessions.
- Acts 2 and 3 of Joe Penhall's *Landscape with Weapon*

**Session 7: Debriefing**
- Final Debriefing
- Participants’ notes, questions and reflections on the topics, resources and tools used in the pilot (free discussion)

In addition to the resources shown in Table 1, weekly summaries of the FM discussions prepared by the subject-specialist were made available to participants via the relevant session page in the LabSpace unit soon after each session. These summaries include slides with images and text prepared by the specialist, providing an elaborate conceptual structure that helped to organise the discussions. A brief description of this conceptual framework in respect to the resources chosen is provided in Monk & Ferreira (2008).

**Case-Study 2: Online Design Studio**

**The Subject Perspective**

This pilot was directly linked with the main provision of the university in the area of Design, where there is a strong interest in trialling emerging tools that can support collaborative work online, and the experiment was directly associated with a particular course currently in presentation (T211 *Design and Designing* – course description available at [http://www3.open.ac.uk/courses/bin/p12.dll?C01T211](http://www3.open.ac.uk/courses/bin/p12.dll?C01T211)). In contrast with the requirements of the subject area of the previous pilot, Design has more stringent needs in terms of the types of interactions that a tool must afford to be considered ‘appropriate’, and part of the motivation for this pilot was to trial FM, with particular focus on its whiteboard feature, as a potential tool to support collaborative work in the area.

**Participants**

In contrast with the previous pilot, which sought participants from amongst OpenLearn users, this pilot recruited participants directly from the T211 student
cohort. The initial call to gauge interest took the shape of a message posted directly in the T211 Course Conference on FirstClass (the conferencing system used in the institution), and the recruitment process was managed by the Course Chair, who acted as the main subject specialist in the experiment.

This pilot also counted on 3 other subject specialists, a colleague who had recently joined the campus-based academic staff of the university and two experienced Associate Lecturers (ALs), staff who provide direct support to registered students. The ALs, who are not normally involved in course development within the existing development/presentation split that characterises teaching at the OU, warmly welcomed the opportunity to participate in what was perceived as a 'cutting-edge experiment'. Their participation was on a consultancy basis.

Similarly to the ‘Ethics’ pilot, here too a group size of 6-8 participants was originally envisaged, but response to the initial call, which made it clear that the project would consist of an ‘experiment’ entirely independent from the course in that it would not gain participants any extra credits, was quite low. Within a 2-week period, 7 students came forward, and 6 participants were recruited (the seventh was eventually unable to dedicate any further time to studying outside what was already required to complete the course). Although using email, FirstClass conferencing and CAL resources as a matter of course in T211, participants presented themselves in very different ways regarding their fluency and confidence in using IT as well as in their professional/academic background. Indeed, whilst two of the participants presented themselves as ‘professionals’ in different roles within the area of Design, most described themselves as future returners to the job market. Also, only 2 out of 6 were male.

Structure

The overall learning experience was developed around the idea of supporting collaborative problem-solving by a group of participants including ‘designers’ at different stages of their career, as might be the case in a design studio. Studio-based learning supports ‘learning by doing’ as Green & Bonollo (2003) put it: ‘the studio brings together disparate thinking into a forum of discussion and idea exchange. Students experience the …struggle for understanding the requirement’. Crucially, in the studio ‘students may have to find or establish the problem’ (ibid.) (original italics).

With the purpose of creating an activity consistent with a studio-based approach that could be then later adapted and used to introduce beginner design-students to collaborative work, the original task or ‘problem’ had a fairly broad brief but a relatively clear structure in terms of stages leading to expected outcomes or ‘deliverables’ to be produced by the group at every stage. The overall task was split clearly into separate steps, each corresponding to a stage in the design process model studied in the course with which the pilot was associated, as shown in Table 2. Participants were expected to dedicate some time working
through these steps before joining the main group discussion, a weekly 1-hour FM discussion.

Table 2: Structure and tasks proposed in the Online Design Studio Learning Pilot

<table>
<thead>
<tr>
<th>Session</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session 1: The design brief</strong></td>
<td>To explore and discuss the initial brief</td>
</tr>
</tbody>
</table>
| **Session 2: Understanding the market and users** | To explore the perspective(s) of users. Questions for discussion include:  
  • What do you need to know to make design ideas more attractive to purchasers?  
  • Where can you find information on usability, marketing etc? |
| **Session 3: A design specification** | To discuss and agree on specific design brief and a product design specification |
| **Session 4: Concept generation** | To explore ideas for resolving the product design brief using, in particular, the whiteboard |
| **Session 5: Embodiment and detail design** | To agree on a concept and develop some detail such as shape, components and materials |

Similarly to the other pilot, a LabSpace unit was created as a ‘home’ for the participants, and the unit contained not only resources and links proposed by the organisers, but also summaries of discussion sessions published as these unfolded as well as asynchronous forums hosting discussion and feedback-sharing amongst all. In total, 5 main design discussions took place, and two familiarisation sessions, also convened by the tool specialist, were run prior to those. The unit was created using the in-situ editing features made available to the researcher and the main subject specialist. The student’s view of the unit’s Homepage is shown in figure 3 below.
Figure 3: Homepage of the LabSpace unit for the Online Design Studio Pilot

A description of the main sessions is provided by Schadewitz et al. (2008), where a particularly exciting outcome of this project is advanced: the creation of a potentially marketable idea around the problem agreed and tackled by the group (ways to take this forward are being investigated by one of the participating ALs).

Participants in this pilot were also provided with a token ‘participation pack’ by OpenLearn (containing a Webcam, a headset and a Flash Memory Pen), but a limited amount of initial learning resources was volunteered, as searching and selecting resources for discussion by the group was part of the expected contribution of participants. Similarly to the previous study, the LabSpace unit remains accessible by participants only, as do the FM session replays.

Sharing and building upon experiences

As noted above, these pilot studies were carried out within the remit of a broader project, which included an investigation of the uses of asynchronous communication tools across the site. Crucially, the studies strongly suggest the combined importance of facilitation and subject expertise in the establishment and growth of a lively learning community. The process of organising and supporting each project can be described as one of co-creating new spaces and roles for stakeholders involved in teaching and learning. With the learning situations thus created located as samples from across the ‘informal learning’/‘formal learning’ continuum, the process raises a number of boundary issues in relation to curriculum and pedagogy for online learning, the relationship between teaching
and learning and the discourses and technologies that construe ‘openness’. A detailed discussion of these issues is provided in Ferreira (2009).

Upon completion of the work discussed here, further developments have taken shape in the guise of three research and development projects that build upon the knowledge and experience gained in the pilots. Partially building on the lessons learnt in the ‘Design’ pilot as well as further ideas around the notion of an ‘online studio’, a third project (http://designthinking.typepad.com/atelierd/) is currently underway, funded by the UK Joint Information Systems Committee. Also, with the support of a grant from the UK Higher Education Academy (http://www.ics.heacademy.ac.uk/projects/development-fund/fund_details.php?id=117), an OER is currently available on OpenLearn (Ferreira & Monk, 2009) that was created with basis on the evaluation of the ‘Ethics’ pilot. A second successful bid to the HEA (http://www.ics.heacademy.ac.uk/projects/development-fund/fund_details.php?id=137) will support further developments. The new project consists of an investigation of Web 2.0 tools to provide a space where technology students can be encouraged to identify, engage with and discuss ethical issues, and this will involve repurposing the recently published OER.

Conclusion

This paper presented two examples that illustrate how the perspectives of subject specialists, educational technologists, researchers, communications staff and learners themselves can be usefully brought together within an OER environment. Bringing together different points of view in a productive way is always a difficult enterprise, but this is a challenge that the OER movement must grapple with since the success of any initiative in the area is strongly linked with reuse, and reuse does require, in different ways, that perspectives are adjusted or re-aligned.

The pilots discussed also lend strength to the idea that small initiatives may constitute powerful contributions to support broader institutional change. The pilots suggest ways in which OER initiatives can contribute to support innovation and development in association with teaching and research endeavours. A crucial finding has been that it is possible for OER initiatives to guarantee engagement of academic staff by providing support to activities that are directly meaningful to their own professional practice and interests. Although staff buy-in may require subtlety and diligence to obtain, partly because of the onus it imposes on already busy professional lives, the pilots illustrate that this costly element can be secured inasmuch as good communication and some degree of flexibility provide the necessary support for collaboration in an enthusiastic pursuit of potentially very different goals.

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