

THE USE OF OPEN EDUCATION RESOURCES IN HIGHER EDUCATION PROGRAMMES OF ACADEMIC PRACTICE

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Abstract

Digital technologies provide a wide range of tools which research shows can enhance and support teaching and learning. However, this knowledge is not uniformly available across disciplines. This paper reports on a project that aims to provide materials that are cross disciplinary, applied in an online context and used to support the development of understanding of the power of collaboration and the re-purposing of open educational resources (OERs).

Introduction

This paper reports on a project to develop a module of academic practice centred on the use, and re-use, of open educational resources (OERs). The project is funded by the United Kingdom (UK) Joint Information Systems Committee (JISC), UK Higher Education Academy (HEA), University of Bedfordshire and the IT in Teacher Education Association (ITTE). The main contractor is Core Education, UK. The project's lifespan is October 2011 to July 2012 and so this paper reports on the initial ideas, approach and theoretical background. Later papers will report on the extent to which objectives were achieved and the reflexive findings from the project team.

The project aims to provide materials that are cross disciplinary, applied in an online context, and used to support the development of understanding of the power of collaboration and the re-purposing of open educational resources (OERs). These aims are encapsulated in an online module focused on the ways in which digital technologies and OERs can support teaching, learning and administration. The module's title, *Digital Literacy and Creativity*, emphasises the locus of the application in developing pedagogical knowledge in the application of digital technologies in a creative or innovative way.

Assessment processes for the module induct participants into the re-use and publication of OERs for colleagues nationwide providing a self-renewing resource. The paper reports on the design philosophy for the module and the

use of an online environment in developing a community of practice in their use.

The paper will also analyse the ways in which the OERs, and the module, align with the UK Professional Standards Framework (UKPSF) and how this in turn facilitates membership of the HEA. While this framework applies to academic staff in HEIs, the paper will also discuss the application of the OERs and module to initial teacher education and teacher training education programmes.

Theoretical framing

The term *Open Educational Resource* appears to have been first coined by UNESCO (2002). These were defined as “technology-enabled, open provision of educational resources for consultation, use and adaptation by a community of users for non-commercial purposes” (UNESCO, 2002, p.1). Atkins, Seely Brown & Hammond, (2007) focus this definition to include, as necessary, the domains of teaching, learning, and research resources. They give a list of examples of OERs that includes course materials and that ranges from textbooks to videos and from software to other “techniques used to support access to knowledge” (p.4).

Taking these definitions one could argue that OERs are not new to education. Materials have always been freely shared amongst teachers, albeit at small localised levels or narrow cast through individual contacts. Central to the current definition, however, is the use of technology for the creation, sharing and adaptation of OERs. It is within this technologically enabled world that the project under discussion in this paper sits.

Atkins et al. (2007) propose the extension of OERs to an Open Participatory Learning Infrastructure. Here resources are bound up in an online environment for use by those who have access to it. This extension brings with it the notion of a community of people around the OERs. The understanding of the value of computers in joint work is not new or restricted to OERs, however. It started to emerge in the late 1990s with the widespread access to Internet-connected computers. Computer-mediated activities in education started to become collaborative, interactive, shared, focussed and analysed. Models of working were being established; research and reporting (Conole, 2007; Conole & Oliver, 2007; Laurillard, 2002; Salmon, 2000; Somekh, 2007; Wenger, McDermott & Snyder, 2002; Wenger, White, & Smith, 2009) moved the agenda of online learning to the social dimension. The term *communities of practice* (CoP) is recognized as the interaction between people who have a common goal in learning, either in formal contexts or informal contexts (Lave & Wenger, 1991; Wenger, 1998, 2006). Within the realm of OERs this common learning goal is manifest in the shared use and development of the resources and the development of a community around them (Conole, de Laat, Dillon, & Darby, 2008).

The project conceives of the use of OERs in this community-focused way. Here the community has three main constituents – those from whom the OERs are derived, those who are engaged in the design and presentation of an online

teaching module on exploiting their use and those who are learners on the module. These categories are not mutually exclusive – a learner may also contribute OERs. Indeed, this would be an expected outcome of such a module. This model of membership goes some way to allaying the concerns Hylén (2006) raises with the use OERs – quality assurance and sustainability. Quality is assured through the development of a focused teaching module and the development of the community's shared understanding of the purposes of OERs. Sustainability is promoted through the use of the module in empowering the community to generate new resources. Margulies (2005) considers three aspects of OER deployment – tools, content and implementation. These will depend on teachers' subject focus and the infrastructure at their institutions. In this respect the use of OERs is inherently bound to curriculum (Pountney, 2009). The design of learning and the design of OER, especially in considering reuse and adaptation are intrinsically linked.

Project Overview

Project Summary

Digital technologies provide a wide range of tools that research shows can enhance and support teaching and learning. However, this knowledge is not uniformly available across disciplines. This project aims to provide materials that are cross disciplinary in application and which, through collaborative pedagogy and innovative assessment processes, supported by Web 2.0 online community working, provide an environment for staff to develop an understanding of the power of collaboration and the re-purposing of OERs. This proposal is submitted by the University of Bedfordshire in partnership with Core Education, a not-for-profit company with expertise in digital technologies and ITTE, which is the Association for Information Technology in Teacher Education - a national professional/subject association whose members are staff in UK universities. Figure 1 outlines the relationship between the various project stakeholders.

The aim of this project is to produce an online module to support the use of OER materials that will focus on the ways ICT/digital technologies can support, teaching, learning and administration. The OERs that are created, collated and re-purposed will be made available through a creative commons licence. The OERs (unit resources) can be used individually as well as accredited by universities in order to gain 30 M level (level 7) credits and can form an online module *Digital Literacy and Creativity*. Assessment processes will induct participants into the re-use and publication of OERs for colleagues nationwide, providing a self-renewing resource.

A key goal of the project is to raise the level of digital literacy for academic staff in the Higher Education sector and through this to raise the status and quality of teaching with university lecturers being as digitally competent as the students they teach. This project extends the use of the OERs beyond traditional HE practice as the module will also be used by ITTE HEI ITE (initial teacher education) tutors with HEI students on education studies and teacher training education programmes. Information about the OERs and module will be disseminated by ITTE members to other tutors in ITE and to other university staff (including programme leaders of PG Cert HE Teaching

and Learning) via professional networks such as the Staff and Educational Development Association (SEDA) and conferences across the HE sector.

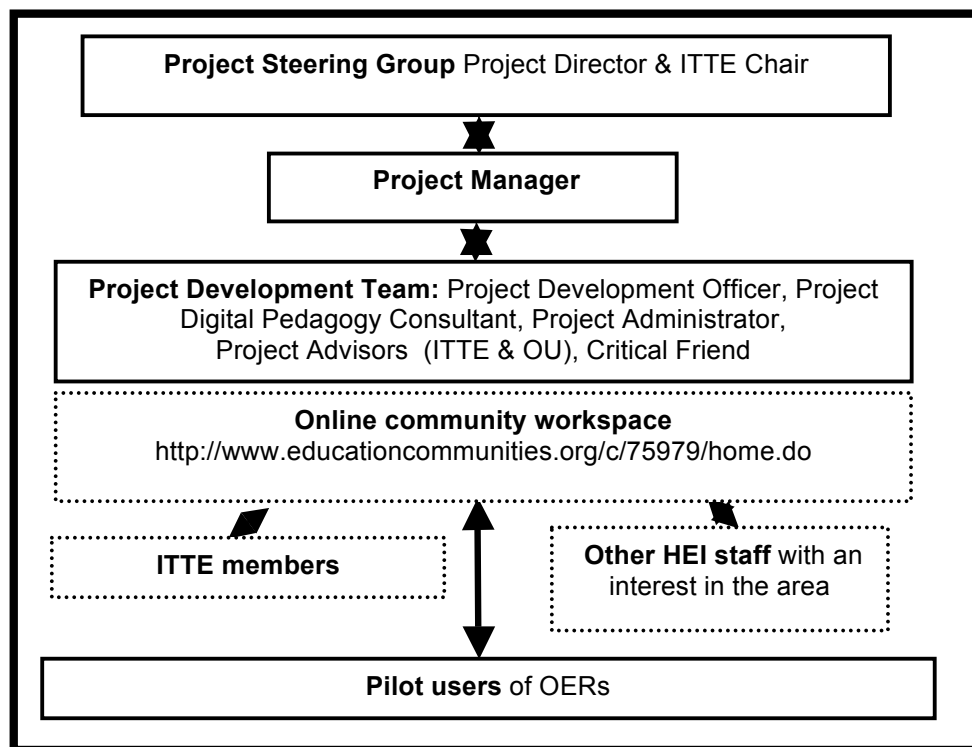


Figure 1. Project stakeholders

Objectives

The aim of the project is to create a module, with a pedagogic framework to support the deployment and use of OERs to promote and develop digital literacy and creative approaches to teaching and learning in higher education. The objectives of the project are to:

- Create an online module framework that will support the use of OERs on digital literacy and creativity.
- Create and bring together accessible teaching and learning resources (OERs) around digital literacy and creativity.
- Re-purpose existing OERs from the Information Technology in Teacher Education (ITTE) community that develop digital literacy and creativity.
- Create detailed and accessible pedagogic structure for the use of these resources (existing OERs) on digital literacy and creativity.
- Develop and release guidance materials indicating pathways through the resources on digital literacy and creativity.
- Deposit the above resources across three forums (Jorum, ITTE website, Education Communities website; the latter also provides an online community space).

- Create an online community of practice (on the Education Communities website) to develop and take forward the collaborative creation and re-use of OERs that is self-renewing and based on peer review practices.

The module is designed to be at level 7 of the English National Qualification Framework (i.e., Masters level) and has a value of 30 UK HE credits (15 ECTS).

Approach

The module framework is being co-created through collaboration with experts in the fields of teaching and learning and the use of digital technology. This is enabled through ITTE being a project partner with its members' expertise in this domain. The Education Communities online environment (www.educationcommunities.org), hosted by the University of Bedfordshire, is being used to share resources and develop the module. The project launched with a workshop to collect and share ideas for the project leading to the development of a skeleton for the module.

It is intended that the module that will result from the project could be taken, used and validated by any university as part of their provision. A partner project at Sheffield Hallam University (UK) provides further collaboration opportunities and a particular location to test this model of reuse. That the module itself is an OER is an intentional part of its design. Additionally it is intended that it can be reused in two ways.

First, the module is designed to fit into an institution's larger programme of study. It is, in this way, one module of many in a Masters programme. Typically it would be complemented by modules that lead to a qualification recognised by the HEA for teachers in higher education (henceforth called participants to distinguish them from the students they teach). Such awards, commonly known as Postgraduate Certificates in Higher Education or in Academic Practice, are accredited by the HEA and are mapped onto the UKPSF. A similar mapping is to be carried out in the design of this module.

Second, it is intended that the module materials form a stand-alone resource that can be studied without registration on a module. It may be that accreditation can be given in the form of a 'certificate of attendance' for those who use the resource in this way.

Existing OERs

The project will develop new OERs to support participants' study and is itself an open and reusable resource. It will also draw on existing OERs and incorporate them as objects of study. These existing materials will be drawn from a range of sources, but particular attention will be given to those developed by ITTE members under licence from the UK Government through the erstwhile Training and Development Agency for Schools (TDA). This agency, now brought into the work of the Department for Education, sponsored the Subject Resource Networks (SRNs) to support subject knowledge development in trainee teachers. In the case of digital literacy, and

the creative use of digital technologies, the SRN was awarded to ITTE. The project will enable these resources to be preserved and reused, where appropriate, now that SRN funding has ended.

Other OERs will be drawn from other sources as suggested and provided by members of the project team and the wider community engaged in its development. One particular source is the Vital programme for CPD (see Bradshaw, Twining, & Walsh, 2011, 2012) that has developed a wide range of open resources – self-study course materials, case studies, lesson ideas, recordings of TeachShares. While such resources have been developed for school use and may not always be generally applicable to higher education, they will be usable by teacher trainers and will provide exemplars in the design and use of such materials in teaching more generally. A workshop led by Vital to explore this approach has been planned for July 2012 as part of the annual ITTE conference.

Following this workshop, the project team developed the structure of the module and the pedagogical approach. The former consists of a number of discrete units, each drawing on the use of OERs and can be seen in Table 1 below. The latter draws on the notions of participant engagement to form a community of learners as outlined in the theoretical frame above.

Having established the module structure and outlined it, the next phase was to develop the content and activities in each unit, supported by OERs. Some of these resources were to be developed from existing material on the ITTE website, originally commissioned by the TDA for ICT tutors. Once developed, the units are to be peer reviewed and piloted with dissemination of findings at the ITTE conference in July 2012. The intention is to make the module available by September 2012.

Module Outline and Theoretical Underpinning

The module is conceived as having nine sections as shown in Table 1. This design is, to some extent, subject to the range of OERs being utilised (see Pounteny [2009] for the link between curriculum and OERs) and may change in subsequent iterations as a result. It is also expected that when the module is taken on by different members of the community from which it came it will also take on different emphases. This underlines the nature of the module as being both about open educational resources and being one itself. It is thus designed to be subject to adaptation and reuse.

Table 1

Proposed Module Outline

1.	Overview	Introduction to digital literacy and creativity and expectations and role of university teachers in using digital technologies
2.	Pedagogical approaches	Enabling and supporting e-learning (general evaluation of emerging e-tools & online practices)
3.	Online community working	Engagement with professional networks (professional versus social networking) for academics for CPD, and developing practice
4.	Curriculum specific e-tools	Searching for, evaluating and applying resources via the internet
5.	Assessment & feedback	Developing and evaluating e-tools
6.	Administration & data management	Using e-tools for support
7.	Researching practice, collaboration and management	Using e-tools for module review, reflecting and transforming practice
8.	Technology resources	Identifying, selecting, modifying, using and applying technology resources, including OERs in practice (storing, using, sharing, evaluating: co-creation of OERs)
9.	E-safety and ethics	Including digital footprint / identity

Anticipated Impact

It is anticipated that the project will impact in four arenas.

First, there will be institutional impact in higher education. This will be on teaching and learning, and professional development, in respect of the use of OERs and digital literacy as part of programmes for teachers in higher education.

Second, the wider higher education community will have opportunities to use the resources through open access. This will enable those who are not engaged in formal programmes of study, perhaps being experience university teachers, to gain from the project.

Third, there will be opportunities for knowledge transfer through the involvement of Core Education who works in other domains in a not-for-profit

capacity. The experience gained by them on this project will be applicable to other contexts for their work.

Finally ITTE's role as a subject association focused on the initial education will facilitate impact on the pedagogical development of new school teachers. This in turn can be applied in the school situation where OERs may also be used and where digital literacy and creativity are key aspects of the curriculum review currently being undertaken (DfE, 2012).

These aspects of impact will be evaluated by the project team and reported on in subsequent papers.

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