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THE NETWORKING EFFECTS OF OER

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Summary

Open Educational Resources (OER) give an openly available set of content and tools that in principle provide a basis for formal and informal communication and collaboration between groups of individuals around teaching and/or learning. In practice, most communication and collaboration around OER appears to be asynchronous, loosely connected and not sustained. The success of social networking sites is also based upon content and tools to enable and support communication and collaboration. However, that success is seemingly based upon more immediate, closely connected and sustained activities. In both cases much is made of the online, virtual aspects of networking and less about its relationship to offline, real world networking. This paper reviews the experiences with the OpenLearn site from the UK Open University which combines open content within a learning environment that offers tools for communication. Drawing upon the action research findings from its first two years of operation this paper describes examples of individual learners and institutions communicating and collaborating online and considers the influences of offline networks. It examines the motivations behind the communication and collaboration and suggests an emerging typology for such effects depending on who is involved and what the drivers (and restraints) are for their activities.

Introduction

Open Educational Resources (OER) is a term used to describe:

"*teaching and learning resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials or techniques used to support access to knowledge*" (William and Flora Hewlett Foundation, 2009).

This is a comprehensive definition and although other terms have been used to describe a similar phenomenon – open courseware, open educational content, open learning content –

they focus on the content at the expense of the tools. This coverage of content and tools is important for two reasons:

1. Effective software tools are essential if people are to be able to actively engage with the content to create meaningful learning experiences for themselves; and
2. Appropriate collaboration and communication tools are also needed if learners are to be able to engage with other learners and create possibly even more meaningful learning experiences that involve others (Lane, 2008a).

Educational resources are classic social objects (Conole et al, 2008) that help to mediate interactions between teachers, learners and that resource, especially when they are not physically present in the same room. Research into open and distance learning has shown that many of the barriers to such learning are due to learners not being able, or not believing they are able, to interact with such resources and other members of their community of learners (Lane, 2008b). To overcome these barriers requires significant amounts of pedagogical support being built into the content itself as well as encouraging the social elements of learning (personal, peer and professional support) (Lane, 2008c). Much open and distance learning practice involves the design of closed and controlled environments in which groups of learners operating as a cohort are taken through a series of activities, some of which will require communication, collaboration or cooperation with fellow learners and their teacher(s). In some cases the learners will take the opportunities afforded by being in a group and having communication technologies at hand to self-organize peer to peer interactions that they find helpful to their studies. In other words they are acting like a community of practice (Wenger, 1998), where learning the topic is the principle practice.

With teachers, while there may be an existing community of practice within and across institutions based on teaching particular topics, the closed and individualistic nature of the teaching process in the class or lecture room has meant that the collaborative or cooperative design, development and sharing of educational resources has not been a significant feature of such communities. There have been attempts to overcome this issue through the establishment and work of professional bodies, both topic led (e.g. in the UK the British Ecological Society has a group dedicated to the teaching of Ecology) and teaching led (e.g. the Higher Education Academy in the UK supports a number of Subject Centres to support teaching and learning in those subject areas).

The situation with OER is fundamentally different since their very openness means there may not be any fellow learners associated with the resources and in many cases there are no obvious means to communicate, collaborate or cooperate with fellow learners even if they are 'looking' at the same OER. So, OER are not currently designed to readily support learner based communities of practice. In contrast, the open licensing of OER invites and encourages other teachers to use them and to consider how they might collaborate or cooperate on their re-use or re-working for new situations. Such open sharing therefore has the potential to strengthen communities of practice and also social learning (Lave and Wenger, 1991).

Social networking and communities of practice: the experience of OpenLearn

The Open University (OU) has had 40 years experience of creating communities of practice around teaching and learning using a supported open learning model of open and distance education. First, its educational materials have always been devised and developed by a team of academic authors supported by professional media staff. These course teams provide focused communities that are both specific to a single course in a subject area that is linked to a wider community of similar courses within a programme area, but also they are involved in the practices of educational technology and so link to an even wider network of practice around pedagogy, learning design, and instructional design that may extend beyond

the University. Furthermore, the delivery of courses is supported by another community of practice represented by the many Associate Lecturers that provide tuition to cohorts of 20-25 students each. Each of these cohorts is in turn a specific community of practice for learners. The widespread adoption of digital communication technologies has enabled these smaller communities to also link to each other such that there can be a 'fully networked' community of several thousand students on the same course presentation.

The advent of OER, particularly through the launch of MIT OCW, led the OU to review the relationship between the openness of OER and the OU's mission to be open *'as to people, places, methods and ideas'* (Gourley and Lane, 2009). Its most visible response to this new challenge was a two year start-up project begun in April 2006 now known as OpenLearn (www.open.ac.uk/openlearn). It was devised as a large Institutional initiative that would help to answer some fundamental questions - through action research - about the potential role and impact of free educational content and an open, web based, learning environment on the work of the OU in particular, and systems of education in general. Three of the planned outcomes were:

- Enhanced learning experiences for users of OER;
- Greater involvement in higher education by under-represented groups and empowerment for various support networks that work with them;
- Enhanced knowledge and understanding of OER delivery, how it can be effective, and the contribution it can make to further development of e-learning;

So from the outset we were concerned with this very issue of the social aspects of learning and teaching and would OER change the dynamics of the relationships that participants in an open learning environment may have with both content and each other.

The OpenLearn website was launched in October 2006, using the open source product Moodle as the basis of the learning environment and with current content from OU sources. The site was divided into two parts: a LearningSpace aimed mainly at learners, and a LabSpace, mainly for educators. Over time we have added to the content (as have others) and added to the open learning environment with various tools and technologies to support registered users of the site. Much of the content is now available in eight alternative formats for downloading by users of both the LearningSpace and LabSpace with the ability to upload repurposed content, or even new content, only to the LabSpace. It was hoped that the LabSpace would encourage educators throughout the world to share, contextualise, repurpose, translate content and then put it back on the site for others to use and alter to suit their purposes.

The OpenLearn initiative is increasing our understanding of the impact on learners and teachers of materials developed specifically for self study, whether for formal or informal learning, whether for pleasure or for professional development. In particular, by placing as much emphasis on the environment, tools and support as on the content itself, we are reinforcing our belief that learning does not take place in a social vacuum. To illustrate our findings so far we will look at general usage of OpenLearn as well as two short case studies before making some general conclusions (for a full report on the research findings from the first two years see McAndrew and Santos, 2009).

Since launch OpenLearn has had over 4 million unique visitors. While such browsing visitors can search the site and see much of what is there, they cannot use the inbuilt communication and collaboration tools such as forums and learning clubs. To do so they need to register on the site. Over 80,000 people have done so and for these more enthusiastic and engaged people we can say more about their motivations for using OpenLearn and what they want from it, both from observing what they do and by specifically asking questions of what they do.

From log data we know that nearly 15% of registered users are also students of the OU and from observations of what they do it is possible to see that a proportion of these students are using the forums associated with study units to engage in discussion about the course the study unit comes from and which they are about to begin studying or are studying. In other words, students are using OpenLearn as an extra communication channel to those already available to them (we have seen a similar phenomenon with OU students on Facebook using it as a way to 'socialize' and communicate outside of the set OU channels). In other cases, prospective students are also using study units on OpenLearn to gain a feel for what studying will be like and to make early contact with people who have studied the parent course before or are also about to study the parent course. As a survey respondent put it, it gives *"the chance to dip in and take bits out of courses without having to worry about doing the whole thing"*.

From the formal surveys we have been able, using cluster analysis, to characterise registered users into two main groups. The first group we have called 'volunteer students' as they are mainly interested in the content available and who would like to see more in built exercises, the linking of content and assessment and possibilities of gaining recognition/accreditation for their study. The second group we have called 'social learners' because they are more interested in the communication and collaboration tools and in connecting with fellow learners. They are the ones who will also link what they do on OpenLearn with other social networking sites such as Facebook and in contributing their own views of the content through persistent objects such as public learning journals or knowledge maps that others can then vicariously learn from.

These findings highlight how emerging communities on OpenLearn are linked to existing communities elsewhere.

This linking up of 'real' and 'virtual' communities is also seen in our many case studies. One such is The University of the Third Age, or 'U3A', which is a worldwide movement encouraging older people, in the third age of life (those who are no longer in full time gainful employment) to take up or continue educational interests in friendly and informal settings.

The collaboration started as a result of joint interest in exploiting OpenLearn for U3A members in the UK and as a result of signing a wider memorandum of understanding between the OU and U3A. The main goals of the collaboration are to:

- assist U3A to adopt OpenLearn units and tools for the benefit of all their members but especially those members taking online courses (they already have a limited set of online courses that are difficult to maintain for a volunteer based organisation);

- analyse how U3A plans to make use of OpenLearn in comparison with other institutions.

The challenge with U3A is that as a voluntary group it is taking time for the senior members to identify and progress U3A's involvement with OpenLearn. It can take a long time to develop an active relationship with collaborators especially when new technology is involved. The continued evolution and sophistication of the site means that cascade or snowball techniques' of training/mentoring will be needed to roll use out to a very distributed member-based organisation. The cycle below represents a typology of the usual process of an institutional collaboration. These steps quite often overlap and are not exhaustive. Collaborations do differ but most of them fall somewhere into this cycle: most of it happens informally, as for example, the collaboration plan and the evaluation of outcomes.
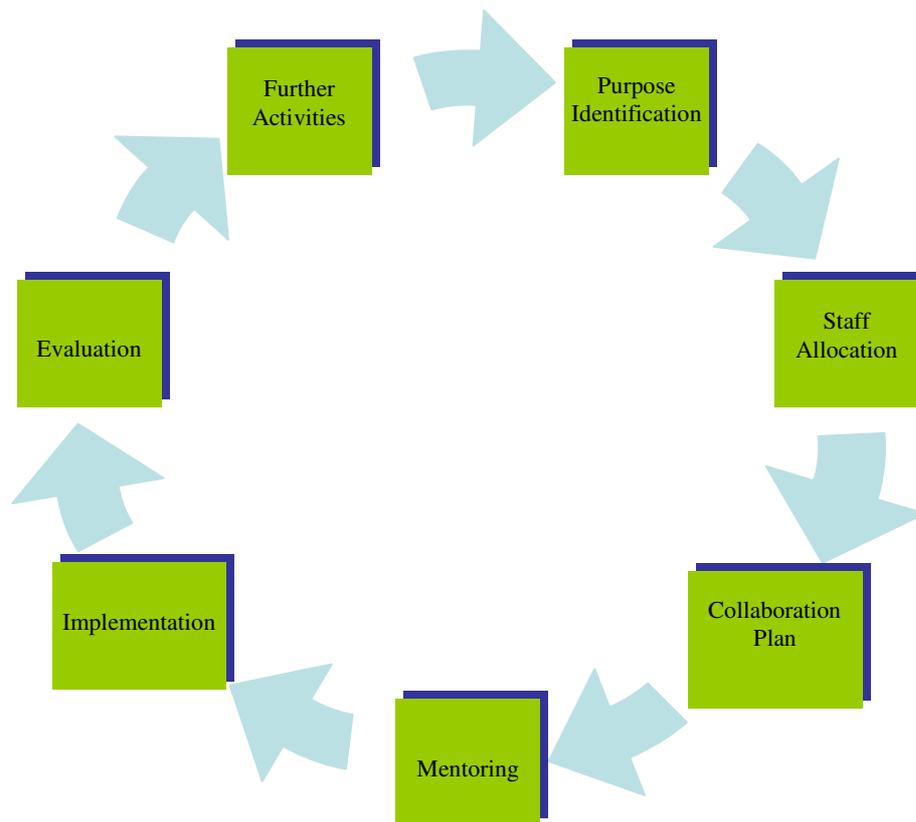
Figure 1: The collaboration cycle

The collaboration cycle is also evident in the case of UnisulVirtual, which is the higher education department of Unisul, University of the South of Santa Catarina. UnisulVirtual established collaborative links in translating and adapting OpenLearn materials into Portuguese. They have also been publishing their own content in the LabSpace and, whenever possible, these materials are translated by them into English. They decided to team with OpenLearn and experiment with content repurposing and production. They are also exploring the various ways in which these resources could be used in their own curricula to enhance the learning experience of their students.

The UnisulVirtual existing organisational arrangements help establish purpose by developing a form of collaboration we term 'an institutional collaborator'. This is because the decision to collaborate with OpenLearn has been made at a board level at UnisulVirtual, rather than being initiated by an educator. UnisulVirtual decided to allocate a staff member to coordinate the collaboration. The main role of this coordinator is to develop a collaboration plan and identify ways in which OpenLearn resources can be used by UnisulVirtual, at the same time motivating staff members to foster the use of OpenLearn resources by the learners within their discipline.

In UnisulVirtual's case, staff engagement is the key for the collaboration to be successful at the various levels they proposed: for the resources to be used as support material and for tutors to have the chance to publish their own production. The latter can be seen in two ways. As a motivation for tutors to engage with the concept of OER and use the experience in OpenLearn to bring this novelty to their teaching expertise and as a way in which the institution can show their quality standards to a wider audience and have indirect benefits from it (course registrations, reputation etc). In this way undertaking this informal relationship with the OU means partnering with the latter's reputation, values and mission but at the same time providing a very specific in-house community of practice linked to a wider network of

practice. Reflecting on this process through self-evaluation then feeds information back into the network and helps to develop further activities.

Conclusions

OER on their own appear to be insufficient to provide most people with a meaningful learning experience. They need access to appropriate tools and other users of the OER.

Lave and Wenger (1991, p.98) define a community of practice *as "a set of relations among persons, activity and world, over time and in relation with other tangential communities of practice".* The focus is on individual's learning but within communities, because communities are viewed as the "*basic building blocks of a social learning system"* (Wenger, 2000, p.229). Many different communities of practice exist and we may all be members of several, for example, through our work or hobbies. For some communities of practice we may be a core member, for others we may sit on the periphery. The theory of communities of practice is thus a social theory of learning and Wenger (1998) distinguishes it from the many other theories of learning, particularly social learning, which takes social interactions into account but primarily from a psychological perspective. In these terms, it is easy to suggest that social computing tools will help create communities of practice. However our experience is that any such communities of practice are rooted in existing communities.

As well as thinking of groups of learners or teachers as communities of practice, it has to be recognised that the very nature of the internet as a communication and collaboration channel means that many similar communities of practice can be linked together more easily into wider networks of practice.

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