Motivations for OpenLearn: the Open University's Open Content Initiative

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Abstract

This short paper is a contribution to the OECD's expert workshop to help identify "motivations, benefits and barriers for institutions producing open educational resources". The motivations will be examined by looking at the reasons behind the launch by the Open University in the UK of a web based collection of open educational resources, OpenLearn. OpenLearn is launched on October 25th 2006 and reflects an initiative backed by the William and Flora Foundation and the Open University to develop a learning environment (LearningSpace) and an accompanying educator environment (LabSpace) giving free access to material derived from Open University courses. There are of course many reasons for the taking part in open educational resources and so this paper considers motivations in community, organisational, technical and economic terms.

Joining a community

The move by MIT in providing access to its course materials as Open CourseWare (OCW) has been a clear influence on our own project as well as on those of others. The MIT experience has received relatively little published analysis, with one of the clearest descriptions of rationale in Vest (2004). There Charles Vest, then president of MIT, explains the core aim as to "enhance human learning worldwide". OCW reflected a rejection of the concept of an 'MIT.com' based on distance-education taking an alternative path to "use the Internet to give our teaching materials away". The overall intention of the initiative is stated to be to advance education and widen access but other benefits cited in the article include greater opportunity for MIT faculty to see and reuse each others work, a good record of materials, increased contact with alumni, and a way to help their own students become better prepared. The article emphasises the opportunity to become an open courseware movement bringing in more and more organisations and, indeed, other initiatives reviewed in the early stages of our work included Carnegie Mellon's Open Learning Initiative, Utah State University, the community college based Sharing of Free Intellectual Assets (SOFIA), Rice University Connexions, and John Hopkins Bloomberg School of Public Health. The Open University has now made the step to join this community but with a different approach and perhaps different motivations as well.

Hylén (2006) explores five incentives to become involved as a provider of OERs that can be summarised as: 1. sharing knowledge is a good thing in itself; 2. it increases the value of existing investment of public money; 3. it can cut costs and improve quality; 4. it can be good for public relations; and, 5. it provides a chance to explore new global business models. While there are more pragmatic reasons for moving into OERs the feeling *it is the right thing to do* has an important place. The Open University has a long-standing position to be "open to people, places, methods and ideas" (http://www.open.ac.uk/about/ou/p2.shtml) and operates as an organisation that is concerned about world matters. The existence of the OER movement and earlier initiatives has a scaling effect on the intentions to take part; it gives the Open University something to join with and emphasises that it is a viable and useful thing to do. The value to the world and to other organisations can be observed at a general level and joining the movement is seen to generate a feel-good factor that extends

beyond the team involved directly in the work. The notable difference for the Open University compared to many other participants in the movement is that we are a distance learning organisation. As Sir John Daniel stated "By putting the lecture notes of its faculty on the web with the aid of external funding MIT did not create a threat to its core business …. However, for a large, high-quality distance-teaching institution like the UK Open University to make its self-instructional materials freely available could create a clear threat to its core business". (Daniel et al., 2006) The material that we provide has typically already been used to support students working away from a campus – though this does not mean without support and backup. A review of the potential impact for the Open University considered listed out several potential motivations including (drawing on an internal report to the Open University Senate in 2005):

- The philosophy of open content matches the Open University's mission.
- Open Content is a developing movement that we should join sooner rather than later.
- The risks in doing nothing when technology and globalisation issues need to be addressed.
- A route for outreach beyond our student body that builds on our good experience of broadcast with the BBC.
- A chance to learn how to draw on the world as a resource and introduce new technologies.
- Demonstration of the quality of Open University materials in new regions.
- A testbed for new technology and new ways of working.
- A way to work with external funders who share similar aims and ideals.

The Open University made the decision that it would carry out a large scale experiment in open content offering free access to some of its resources. A two-year project was planned to fully evaluate the technical and business implications. This became a proposal to The William and Flora Hewlett Foundation (OCI, 2005); their generous funding helped turn the ideas into concrete practice with ambitious timescales sooner than might otherwise have been possible.

A place to go next

The online economy has become very difficult to understand and predict. Looking at successes such as Google, MySpace, del.icio.us, and Skype their enormous popularity and funding flow can be difficult to understand and a puzzle to evaluate. However, what is clear are the risks in continuing to operate on existing models without being prepared to change. There are several dimensions that can be considered. Looking from the point of view of complexity and the changes need to operate in a complex world. McMillan (2006) provides a useful comparison of a traditional view of the world with a complexity science view.

'Classical Science' model	**Complexity Science model**
Linear	Non linear
Hierarchical	Non hierarchical
Reductionist	Holistic
Controlling	Flexible
Uniform	Diverse
Centralised	Networked

Table 1: Comparison of principles of a complex and 'classical' view of organisational change (derived from McMillan, 2002)

Words associated with the new view are dynamic, self-organising, non-linear, uncontrollable, networked, non-hierarchical, highly connected, diverse, effect leading to effect, unpredictable, holistic, subjective as well as objective, process focussed, patterning, inclusive and revolutionary as well as evolutionary. While it is far from straightforward to operate with complexity this set of words lines up well to an initiative that moves services from pay-for to open no-fee as doing so releases controls, generates new opportunities and extends out to a diverse network.

Tim O'Reilly (O'Reilly, 2005) writing in 2005 presented a review of what he saw as the new ways in which people were using the internet. He characterised these as Web 2.0 and discussed the eight characteristics they possessed

No.	Title	Description	Impact on OpenLearn
1	The Long Tail:	Reach for many small niche areas, rather than only mass interest.	Offer specialist subjects and consider everyone as a potential user
2	Data is the Next Intel Inside	Success can be data driven using the uniqueness of what is on offer to attract users.	Build on the quality assured content that we have.
3	Users Add Value	Involve users as active participants so that they add to the data available.	Allow users to contribute to increase the value of existing content by participation in forums and journal, and by providing new content in the LabSpace.
4	Network Effects by Default	Gather information from the network and all users, not just active participants.	Let users rank content easily and use highlight active areas to identify what is working and where users are going.
5	Some Rights Reserved	Avoid limits on what users can do caused by rights and restrictive conditions.	Adopt Creative Commons and make clear that reuse is permitted and encouraged.
6	The Perpetual Beta	Release early and release often so that features appear and get judged by users.	Release new tools in the LabSpace while monitoring use and getting feedback from users
7	Cooperate, Don't Control	Operate in an open way so that others can make use of your services and you can call on the services of others.	Separate availability of sensemaking tools and look for new tools to come in from the users.
8	Software Above the Level of a Single Device	Consider other devices than just the PC by avoiding formats that are difficult to rework.	Use XML as the basis for our material and work on conversion to accessible formats such as DAISY and to be viewable as print and mobile.

Table 2: Mapping the eight characteristics of Web 2.0 to OpenLearn

Web 2.0 is not actually a new set of tools but rather a description of emergent patterns of use. The eight characteristics give a checklist on behaviour that aligns with other successes for the web. For our process of change from Open University to OpenLearn we can review each in turn and in general argue that our approach is more enabling of Web 2.0 operation. Another way to carry out this form of analysis is to view Web 2.0 principles in an activity structure. Using the activity triangle view of how different aspects interact (based on Engeström (1987)) we can create a view of the influences on a subject trying to achieve a particular object (figure 1).

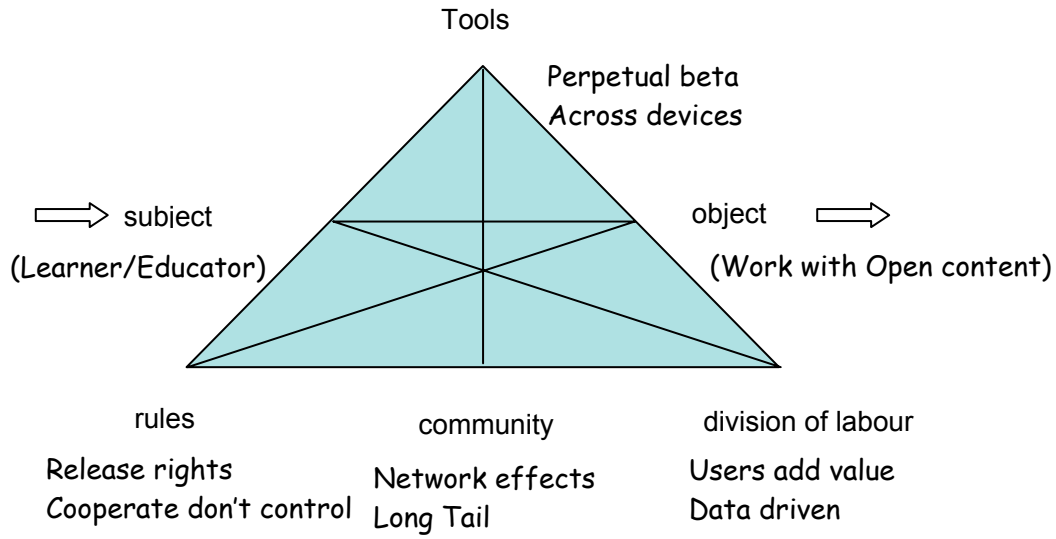

Figure 1: Activity triangle representation of Web 2.0 principles

The Activity Triangle offers a way to look for tensions and contradictions both in planned scenarios (semiotic view) and actual implementation (technology view) (McAndrew et al., under review). Applying this to the Web 2.0 structure at the semiotic level we can see that the relaxation of rules releases tensions for the casual learner but can raise contradictions in the uncertainty of a motivation, reward and trust in the community. In other words the risk is greater but the flexibility makes emergent solutions more feasible. At the technical level the initial OpenLearn system has a tension between supporting the potential flexibility and offering a more limited set of solutions. This leads to pressure to release the planned fuller range of tools and to make it more apparent how to use them, but also indicates that further work is needed to fully embrace Web 2.0 and open ourselves to the solutions that emerge from the user. Our LearningSpace is more closed than the LabSpace and so we need to understand how to bring them together as use of the OpenLearn system increases.

Economics and sustainability

The simple proposition that we offer free access to our resources seems to lack economic sense; we are taking something that has previously been paid for and making it available for free? Moreover, in many of the existing initiatives release of material has been from campus based universities enabling them to reach to a wide audience but not competing with the existing market. In OpenLearn we are offering distance material that will be available to the same market as well as to others.

OpenLearn is an adventurous project – in classic terms (see figure 2) it can be seen as a diversification for the Open University to produce a highly technically innovative system that reaches beyond our current market of predominantly UK-based registered students. However while OpenLearn gives global reach with a new product it does not give a direct aim to turn that reach into revenue. Instead the motivations are more complex.

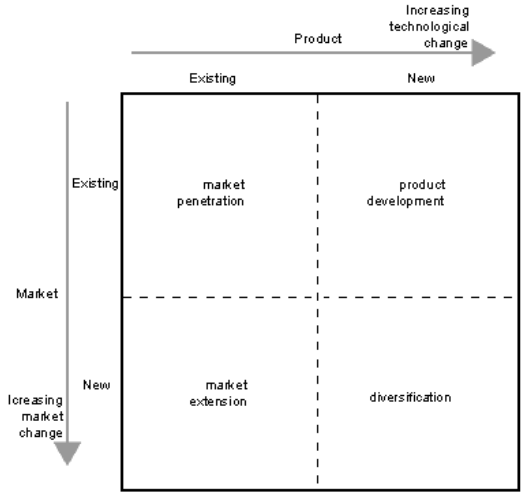

Figure 2: Ansoff matrix showing opportunities for development (from bized.ac.uk)

The Open University receives the majority of its funding on a per student basis made up of direct fees from the student and an allocation from the government via its funding councils calculated on the number of students who “complete” each course. Completion typically means carrying out the assessment element, in particular any exam or final assessment. Learners using OpenLearn will not count as Open University students and are outside of the system, and hence could be seen as a rival in the market. However, the more optimistic view is that The Open University is justifiably proud of its materials, support, assessment, and qualification structure. Releasing the materials element could lead to increased interest in other options to study with the Open University including recruitment to formal courses. There is some evidence that this is a reasonable strategy, though with risks attached. The Open University has an existing approach in commissioning popular programmes broadcast by the BBC which generate interest in education and in the Open University in particular. It is clearly important to monitor the effect of OpenLearn on student numbers. Simple pull through and increased numbers would help to enable economic sustainability; however it cannot be relied upon and indeed the impact on student numbers could also be negative and is not in itself an economic argument for establishing the initiative.

A crude calculation can help place the initiative in context: typical recruitment costs of a student are around €600 and so for a project that is costing around €9m then the project would cover all of its costs if it brought in 15,000 students over the two year life of the funded project. Actually estimating recruitment is difficult, however this is comparable to the number of students that we estimate are attracted to apply to the Open University by our existing BBC programmes at higher cost. In the context of this project it would be unreasonable to look for full coverage of its costs and it might be better to consider that such figures imply that a running cost of 10% of the project could be argued on the basis of recruiting around 1,500 students over two years.

Additional services

OpenLearn, in common with other OER initiatives, is primarily about the release of content. The LearningSpace and LabSpace provide an environment and tools for learning and reuse; however there are key aspects that are not provided. As has been observed of MIT's OCW "the MIT project does not qualify as an educational program" (Frydenberg, 2002) education is more than content. Open University material has an underlying model of Supported Open Learning (SOL) designed around the concept of tutor-based support and assessment. Tutor support is typically in a small group (around 20 learners) working together as a cohort. Assessment is provided as a means to recognise and reward work but also acts as a motivator in itself. From experience we know that optional elements have poor take-up compared to material that is clearly assessed. Under the OpenLearn model support and assessment are separated out and omitted from the system itself; however this does not mean that they cannot be provided in other ways. We see scope for both tutor support and assessment to arise. The Open University has an opportunity to provide those services outside of OpenLearn but need not be the exclusive provider. A role can be envisaged for "assessment only" institutions and professional tutors or "learning facilitators". It seems likely and appropriate that these are paid for services, but there is some evidence from the emergence of volunteer forum moderators and the free support offered by, for example, Wikiversity that free services may also exist, though the evidence is currently weak. Such revenue opportunities are not part of OpenLearn but need to be considered by the Open University as an organisation and by others looking to build on the base of open educational resources.

Understanding the future

This brief paper has provided a reflection on the motivations behind OpenLearn. These are not exhaustive and indeed asking the participants of the initiatives for their own motivations reveals that there are a range of concerns from reaching the tough targets we gave ourselves to transforming The Open University. One clear perspective comes from the Director of OpenLearn, Prof. Andy Lane, who describes it as "Action Research", i.e. research we can only carry out by actually being a part of a real operation. OpenLearn gives us an exciting opportunity to see what happens when we release many of the restrictions that we are used to; copyright, fees, and geography. We see Open Educational Resources as having revolutionary potential that we must study but also as a basis for further innovation. Freely accessible and changeable high quality content can underpin experiments in widening participation, use of mobile devices, development of tools for accessibility, geographically distributed experiments and community building. As a catalyst for further research Open Educational Resources have a significant part to play, as a possible indication of how people will learn in the future they are a vital move away from rigid structures that are causing their own pressures. We want to understand this future.

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Appendix 1: Answering the questions

In this section the four questions posed by the OECD are considered in the light of the OpenLearn experience. Only tentative answers are possible at this stage but they may give an indication of areas that are of shared concern or direction for further investigation and research.

1. Financial incentives/barriers for institutions: what is known about the scale of economic benefits and costs, and how can these be measured?

   The move to make material openly available has involved a range of costs. The structure of the OpenLearn team reflects these cost areas:

   Academic: the management of the project and interfacing with the university to select material and apply judgements as to how it will be used and what can be done.

   Media team: locating materials and editing to make it fit the new context and structure needed. This in turn breaks down to a process of format conversion and then content transformation and needs interaction with the academic team.

   Rights: all material released as part of the OpenLearn site will satisfy the requirements of Creative Commons. To do that the Open University must ensure that it has the agreement of each copyright holder. For material generated by Open University academics the copyright rests with the university so can act to release that copyright. However for other material and in particular graphics and video each item must be cleared.

   Technical team: setting up the Moodle servers and configuring the way that they behave to support the overall project and the content. The technical team also face new challenges in offering facilities to all users and developing a system that is suitable for other educators as well as learners.

   Tools team: addressing the way to provide advanced tools and integrate them into the environment to meet the aims of the project to go beyond content to support learner sensemaking and reuse by educators.

   Research team: charged with examining the process of production and evaluating the user experience. The research team also aims to bring in lessons and opportunities from outside the university.

   Communication team: working together with internal and external contacts to ensure that the message from the project is clear. Communication influences how OpenLearn is perceived within the organisation, who will be attracted to consider using the site, and how we can help sustain the work through external funders.

Matching these costs we are also seeking a range of benefits, some of which will be direct but the many will be indirect and hard to quantify.

   Academic: the move to open content has required reflection on how we describe and work with content. This is likely to increase the need for using course models and structured approach to designing learning experiences. These have both received significant investment from the university and the OpenLearn project is likely to accelerate their implementation.

Media: all text is being converted to XML following the newly defined internal structured authoring schema. This has cut the timetable for introducing that approach by up to 9 months. The resulting media is flexible and can be rendered into the Moodle environment but is also capable of transformation in other ways.

Rights: new relationships with the publishers have emerged with block agreements coming into place so that future rights clearance can be streamlined. The level of clearance is unusual but publishers have been cooperative.

Technical: the development of the OpenLearn environment has provided an earlier test of advanced features in the Moodle environment and accelerated development of aspects to support the XML structures. The technical team for OpenLearn has worked closely both with the Open University VLE team and the core Moodle development team in Australia.

Tools: the tools that form the basis for the sensemaking environment have been under development for several years and there is now a strong motivation and the resources for integration and revised versions of the tools.

Research: the OpenLearn environment demands careful research to feed back into the project and community. This has meant developing a new view on research for such an open environment and the adoption of communication based ways to work with remote participants. OpenLearn also offers many further opportunities for research by releasing barriers of access to material and to a user group that has the potential to be very large.

Communication: OpenLearn provides an inclusive message that can reach different sectors of society. This can enhance existing relationships and bring in new contacts. By offering a free resource it also challenges communication approaches that need to include word of mouth, search engine visibility and developing suitable images.

2. Pedagogical incentives and barriers: do they exist, and what do they look like?

The pedagogical benefits remain to be fully assessed. We have had to develop models for how the material will transfer from our current ways of working to the OpenLearn online environment. A three level model was devised: at the first level we are able to preserve the *integrity* of materials, the second retain the *essence* but allowing some changes to the suit the new environment, at the third accept the freedom to *remix* to produce new content that was inspired by the original. So far the intention has been to focus on the integrity model to try to preserve as much as possible of the intent and content in the original material. This means that pedagogic redesign has not been sought. This has the downside that we are not using all the tools and techniques that we have available for the online environment. However it does mean that we can expect that we have preserved much of the characteristics of the original material. This is important as our aim is to release units extracted from material that has already undergone quality control and been proven successful in the field. In selecting the content faculties were asked to identify material they would be proud to let others see, too much change would risk the qualities that we know the material has.

The chance is there however for us to monitor and work through the pedagogic structures and identify those patterns in the materials that seem to work well. This can be addressed from the perspective of the educator; i.e. opinion for what will

work and judgement of the relevant pattern; and from the perspective of the learner by asking the users their views, and by observing which items are most used or generate greatest feedback.

3. Other incentives for institutions, e.g. outreach to disadvantage groups; what examples are there of this?

   Making material immediately available has opened up new ways to partner. Fore example, the ability to partner without any formal arrangements with external organisations free to use the material. An initial event for external organisations attracted participation from trade unions, educational associations, those addressing widening participation through youth access and those establishing education opportunities for the retired. Plans are being developed for trials that will help address the widening participation agenda already in place inside the Open University. Planned activities include working with community groups and through education units to reach both adult learners and those considering how to face the transition from school to university. For these groups the OpenLearn material will provide a "taster" to experience what higher education feels like.

4. Other barriers than financial: technical, lack of knowledge, lack of interest from staff, etc.?

   The technical barrier exists but has been reduced by the strength of open source products offering a platform to support the resources. Even so this has led to a desire to move beyond providing material to reintroduce the technical challenges in the form of new tools. In the OpenLearn system this has led to the addition of "sensemaking tools" (Uren et al., 2006) taking experience from supporting collaborative research across to supporting learning. In the OpenLearn system this has meant three new tools (Santos and Okada, 2006) added to those commonly found in learning environments, namely: context aware instant messaging (MSG), recorded video-conferencing (FlashMeeting), and content mapping (Compendium). The technical barriers to getting such tools fully integrated remain but are not fundamental and indeed form part of our motivation.

   So far we do not see any lack of enthusiasm or background knowledge from staff, however there is lack of experience. Each step in producing OERs is untested so that we have to ask people to do many new things at once. For example, selecting extracts, coding them into XML, placing them in an environment without tutor-support, and providing advanced tools are all new experiences so we cannot offer reassurance that all stages will work or fully predict the impact on our organisations. As a next stage we wish to disseminate our experience throughout the university in a process involving awareness events, liaison teams, faculty workshops and interest groups.

   The research challenge is also considerable. We need to know how the system works and the impact on our organisation. However we also need to accept that we will have limited contact with most users. Addressing this challenge has meant working towards an approach that includes passive data gathering, structured trials, questionnaires and routes to support remote feedback. These methods are not guaranteed to bring in all the information we would like but should provide interesting and valuable insight to help address the aims of understanding how open educational resources can help people learn, and describing models that are viable into the future.