Reflections on sustaining Open Educational Resources: an institutional case study

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Summary

This paper reviews some of the literature on the sustainability of Open Educational Resources (OER) and what it has to say about successful or sustainable open content projects on the internet.

It goes on to argue that OER need to be considered with respect to the different types of economy - market, public and social - that operate for educational materials in particular and education in general. The paper then examines what sustainability means to different actors in these economies and the relationships between them, notably within organisations, between organisations and amongst communities and individuals, but not within or with political institutions. This is followed by a case study of one project within one higher educational organization: OpenLearn at The Open University in the UK.

The case study outlines the objectives of the OpenLearn project; notes its relationship to The Open University's mission; lists the major internal and external benefits that have arisen from the project; and sets out the future directions for the project. These traits are then compared with some key factors for successful projects listed in Guthrie et al (2008). The paper concludes by looking at the different sources of funding for OER projects and issues of both financial and social sustainability. It notes that sustainability for these projects, at least within organizations, depends upon the activity fitting closely with the goals of the organization such that most of the activity is absorbed into existing systems and practices. It also argues that they can act as a test bed for extending activities and securing a mix of new or improved funding streams.

Keywords: OER, distance learning, open educational resources, OpenLearn, Open University, content, educational materials

1   Introduction

Open educational resources (OERs) have become a significant feature in discourses about the future of education, and higher education in particular (Atkins et al, 2007; Geser, 2007; OECD, 2007). Many institutions and other organisations have actively created and published such resources over the past few years, following the lead of the Massachusetts Institute of Technology with their Open CourseWare initiative (MIT, 2008) and the prior inception of Creative Commons' licences[1]. Currently the majority of OERs are the products of single institutions, such as MIT, but some are more community based such as Connexions[2] and WikiEducator[3], albeit with the publishing infrastructure supported by particular institutions. And what nearly all these activities have in common is that they have relied in part on the support of

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[1] www.creativecommons.org
[2] www.cnx.org
[3] www.wikieducator.org

charitable organisations, most notably The William and Flora Hewlett Foundation (Hewlett, 2008) to happen. While charitable organisations are continuing to pump prime a variety of OER initiatives, they also expect that such initiatives will have to become self sustaining as they will not provide recurrent funding, and this issue of sustainability has also been a significant feature of many reports (e.g. Geser, 2007) and papers (e.g. Wiley, 2006).

This paper both reviews and adds to the debate about why OERs need sustaining and what might constitute sustainability with reference to different types of activity and economies. It will then go on to examine the strategy for sustainability in a specific higher education case study, that of OpenLearn at The Open University in the United Kingdom, and finish with a wider review of the sources of funding available to OER initiatives.

2   Why publish open educational resources?

Open educational resources are championed as a public good, with those supporting them believing that knowledge used for educational purposes should be freely available to all at no or minimal cost (OECD, 2007; Hewlett, 2008). This is in contrast to the use of knowledge and ideas to create products and services that are sold for commercial gain and where there is some protection in law to generators of those products and services about others using their knowledge and ideas without due payment. I have argued elsewhere that the former is largely operating in a social economy and the latter in a market economy, with both being mediated by a public economy (Lane, 2008a). The social economy usually involves a social exchange rather than a monetary exchange where, most often, it is people's time and personal knowledge/experience that is brought to bear on a common need. Alternatively it involves an individual or organizational monetary exchange (a gift or donation) to another organization that provides a social exchange service on behalf of the donors, albeit by working with the market and public economies.

Gifts are not always wanted and not always useful to the intended recipient, so if OERs are to be more than a grand vanity publishing exercise by some organizations that makes the donor at least feel good, what is the higher goal donors want to achieve? My view is that it is to open up education, particularly higher education, and help alleviate the disparities in access to educational provision not yet achieved by the market, public policy and even current social programmes. Much current educational provision is closed or partly closed off due to the economics of scarcity and the paucity of public policy on these issues (Lane, 2008a).

3   How can we make open educational resources sustainable?

So, if we are talking about the opening up of education, with OERs as one, possibly major, factor in this, this begs the question of what is being sustained, for whom and by whom?

Sustainability within organizations

Currently most OERs are generated by Educational organizations, usually Universities, using new or existing grant funding to do so. Even where there are other types of organizations publishing (or using) OERs it is important to determine whether the activity is central or marginal to the existing mission of the organization and whether it is there simply to maintain existing activity, albeit in a new form, or to act as an incubator or test bed for a new activity that serves the mission in previously unthought-of ways. In other words how do OERs fit both with organizational strategy and with organizational practices?

As outlined by Wiley (2006), the sustainability of OER projects in Universities will be achieved by making OERs part of the normal fabric of the University's business, whether that is around teaching and learning, research and/or business and community engagement activities. If the activity is seen as a nice-to-have one rather than a must-have one then it will always be fighting for attention and resources. But to be a must-have one, the activity has got to provide benefits

or value to customers/users/members of the organization that in turn provide benefits or value to the organization. Such benefits or value may be monetary but may equally be reputational as discussed below. Similar issues of the importance of institutional strategy are also discussed in an OECD report (OECD, 2007) and the OLCOS Roadmap (Geser, 2007); and have been reported on in even more depth in a recent study looking at the sustainability of a wider array of open academic resources than just open educational resources (Guthrie et al, 2008).

Guthrie et al (2008) argue for a change in mindset on the part of OER project leaders and list 8 key factors to take note of:
1. Assuming that grant funding will always be available is not likely to lead to a successful sustainability plan.
2. Project leaders need to adopt a more comprehensive definition of 'sustainability'.
3. The value of a project is quantified by the benefits it creates for users – what it allows them to do that they could not do before.
4. Project leaders need to consider a range of options for long-term governance.
5. The web is a highly competitive environment.
6. Leaders must also embrace the fact that their environment is rapidly changing.
7. Running a start-up is a full-time job and requires full-time leadership.
8. Innovation depends on experimentation, and project leaders should embrace the fact that there are generally no straightforward solutions.

I will return to these points later in this paper when looking at OpenLearn[4] at The Open University in the United Kingdom as a case study.

Sustainability between organizations

While all the above has focused on sustainability within organizations, we also have to recognize that the sustainability of OERs may also be dependent on a thriving and healthy OER movement (social or public market place) where there is full and open sharing and collaboration between organizations and with individual users of OERs.

Open educational resources offer potential benefits to educational institutions, individual teachers and both formal and non-formal learners. The size and scale of these benefits are yet to be fully determined, but the size and scale of the educational challenge worldwide is vast and will require much greater efficiency and effectiveness in teaching and learning policies and practices in the coming years and decades. Recent experiences in Higher Education in the UK indicate that successful change will require a mixture of both competition and collaboration (known as coopetition[5]); in that individual institutions do not have sufficient wherewithal to meet these needs alone but where some competition for funding, students and staff forces institutions to closely examine the programmes they offer and the support services they provide.

To date most collaboration around OERs has been on a bilateral basis between educational institutions not directly competing with each other. The open and free sharing philosophy behind OERs directly creates an informal multilateral relationship unless all but the first movers decide not to cooperate by entering the 'marketplace' of OERs. Even if there are no informal or formal institutional relationships, some individuals will be tempted into sharing materials as it is so much a part of academic culture (this is beginning to happen within OpenLearn's LabSpace[6] -as well as being central to Connexions and WikiEducator). But although individuals may dominate the transactions or exchanges in the 'common' market place many will do so as a representative or employee of an organization that may benefit from the exchange as much as the individual.

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[4] www.open.ac.uk/openlearn
[5] en.wikipedia.org/wiki/Coopetition
[6] www.open.ac.uk/labspace

Projects and programmes that involve others will provide financial benefits if they are able to reduce the cost of developing educational content which an individual or organization employs in its courses and programmes and also expand the curriculum areas it covers to those for which there is not significant demand, since currently large numbers of students are needed to help justify the investment in such educational content and recoup the costs of delivering them. However, there is a high transaction cost associated with partnerships and/or other forms of collaboration and managing partnerships is a capability that is required within organizations as well as the capacity to act on agreed joint activities.

Two main paths are likely for organizational involvement (they are not mutually exclusive). The first is that a sufficiently large 'volunteer' community of professional or semi professional educators will continue to develop, refine and add to a growing worldwide bank of OERs in an open source software-like mode because they individually benefit from this collective activity (e.g. Connexions). Their employers are happy for this to happen and activity to even take place in paid time because the teaching and learning at their institution improves from these high quality materials and support network. The second is that institutions, supported by politicians, become the main developers and exchangers of OERs, in order to provide public policy and social benefits for the country in which they mainly operate. There have been attempts to do this in more restricted ways such as with the JISC[7] supported JORUM website in the UK, which is now going to be made more open (Jorum, 2008).

Of course, it can be argued that with sufficient organizations contributing to and taking from the educational commons, most of these transaction costs will be greatly reduced, but this is only likely to be so if content is the only thing being exchanged and there are no other goals associated with the collaboration such as reaching a particular excluded group or teaching a particular topic; which brings us on to the eventual beneficiaries of OERs – individual learners.

Sustainability amongst communities and/or individuals

A major issue here is whether most people, most of the time will interact with OERs as self interested individuals or as part of a community of interest or practice. And is that interaction a simple transactional one of seeking to learn from or with the OER and related tools and services (a consumption approach) or is it to engage in new ways with other learners and not just to seek information (a contributory approach)?

In part the approach adopted will reflect the desires of the learners and whether they make seeking personal benefits as a primary or a secondary consideration. If the former dominates then there is likely to be much greater interest in paying for value added services or access to more content than is available free. If the latter dominates then they are being more virtuous and seeking to contribute to a common good where they get value from contributing to the common project.

Successful communities basically need to be self organizing and sustaining without continued third party involvement as with Wikipedia, Ebay and Flickr (although most of these communities depend on simple one or two way exchanges with minimal social interaction). That does not mean there is not some type of organizing body but it is one that manages the environment in which the many individuals and communities can collaborate (e.g. Connexions and WikiEducator). Communities for open education could be, for example, groups of individuals, groups of institutions and voluntary groups. A successful community will most likely be a community of interest around a topic, a discipline or an issue but some may be construed as communities of practice where it involves professional or semi-professional practitioners. The latter is needed to get open education started but it should be the communities of interest that dominate in the long term. However in all cases a large enough community of users is needed.
Another point to make is that most of the exchanges in this 'common' market place for education will probably highlight very asymmetric relationships. Most teachers are learners but

[7] www.jisc.ac.uk

many learners do not want to act as teachers even if given the opportunity. Indeed most participants will act as learners and a minority act as teachers. Few learners will probably produce significant de novo (even remixed) teaching material (in the sense of being a creator of a sense making narrative) as opposed to augmenting existing materials with comments, essays, questions etc (as a co-learner). All markets and/or commons see variable engagement with them on the part of all potential users.

Sustainability for political institutions

Political institutions can help or hinder economies through public funding and/or the regulation of activity. I will return to the issue of funding later but am not going to say much more about regulation as it is not particularly relevant to the case study.

4   OpenLearn at The Open University: a case study

Following the emergence of OERs as a new activity, most notably the launch of MIT's OpenCourseWare project supported by The William and Flora Hewlett Foundation[8], strategic discussions were promoted by the Vice Chancellor and a Review Group convened to assess how the University should adapt to something that fits so closely with the University's mission (Gourley and Lane, 2008). The Review Group submitted a report to the University's Academic Board and Council in mid 2005, both of which fully supported its recommendation to establish a major OER project. A Planning Group was then established that devised the project proposal that was subsequently submitted to The William and Flora Hewlett Foundation in early 2006 (Stage1). The Foundation granted the University a substantial sum to establish an Open Content Initiative over 2 years at The Open University, known as Stage 2 (The Open University, 2006; 2007). We are now in Stage 3, building upon this initial work and using other sources of funding.

This 2 year Stage 2 began in April 2006 and became known as OpenLearn[9] (see Figure 1). It was devised as a large Institutional project that through action research would help to answer some fundamental questions about the potential role and impact of free educational content and an open, web based, learning environment on the work of The Open University in particular and systems of education in general. The major planned outcomes were:

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

We could not claim that any one of the above aspects of our initiative was unique but it was the combination and configuration of them in one project that we believed was unique at the time. Certainly we could, and do, claim that the OpenLearn initiative is a direct extension of our mission:

> 'The Open University is open to people, places, methods and ideas. It promotes educational opportunity and social justice by providing high-quality university education to all who wish to realise their ambitions and fulfil their potential. Through academic research, pedagogic innovation and collaborative partnership it seeks to be a world leader in the design, content and delivery of supported open and distance learning.'

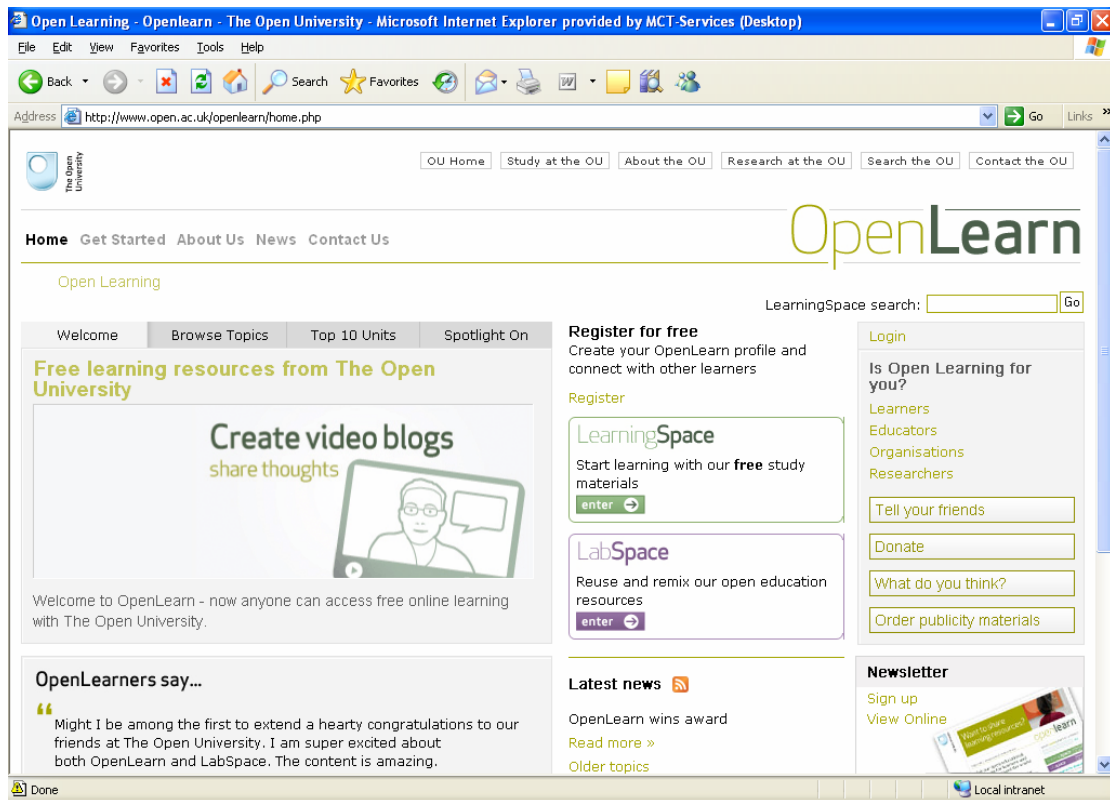[8] www.hewlett.org
[9] www.open.ac.uk/openlearn

Figure 1. *A screenshot of OpenLearn's front page highlighting the buttons through to the distinctive LearningSpace and LabSpace.*

To bring us up to the time of writing this paper in mid 2008, while the 2 year start up phase of the project began in April 2006 as noted above, the website was launched in October 2006 using the open source product Moodle as the basis of the learning environment and with 900 hours of published current content. The project achieved, by the end of April 2008, 5400 hours of current Open University content through over 450 Study Units ranging from 1 to 50 hours in study time from all academic levels in a *LearningSpace* mainly aimed at learners; that same content plus a further 8100 hours of archived content of almost complete courses in a *LabSpace* mainly for educators; and an enhanced learning environment with various tools and technologies (e.g. chat, video conferencing, video blogging, knowledge mapping) to support registered users of the site (see Figure 2). By that same time there was also a further 300 hours of content in the LabSpace that had come from non Open University sources or were user generated modifications of Open University Study Units. All the content is published under a Creative Commons Attribution-Non-Commercial-Share Alike 2.0 Licence except for a few assets from Third Party sources that still retain a full copyright licence and cannot be downloaded with the rest of the content.
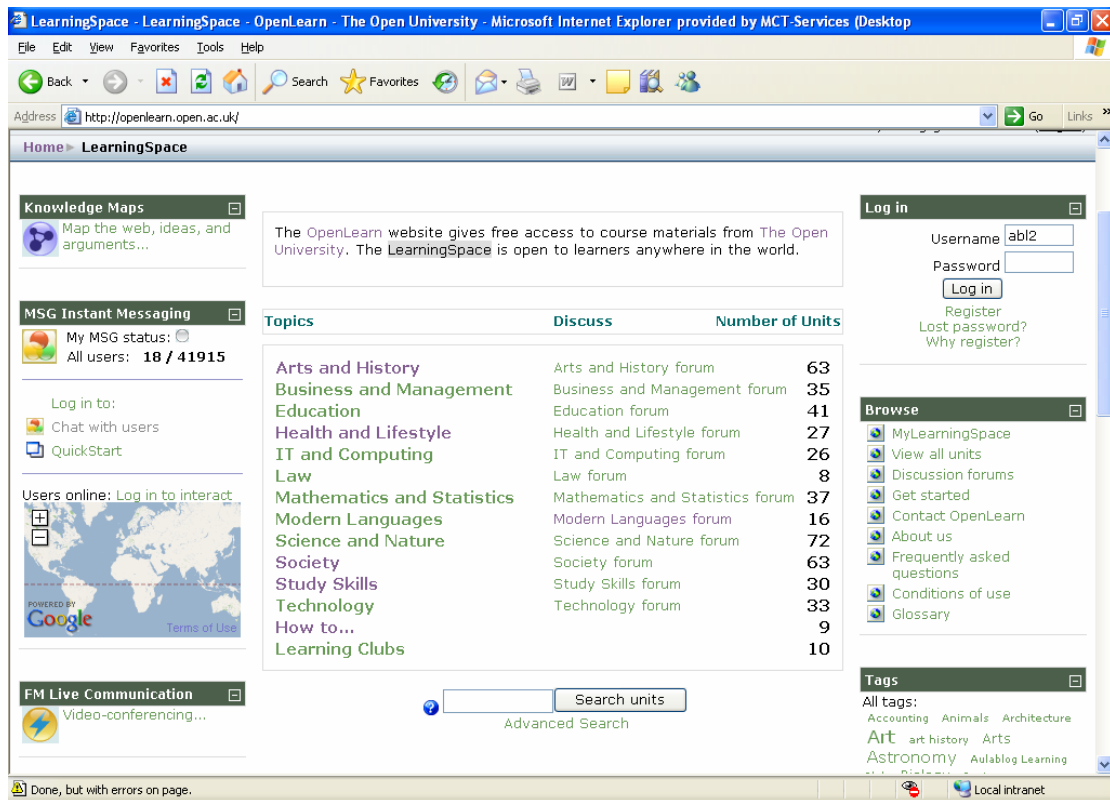
Figure 2. *A screenshot of the LearningSpace showing social computing tools on the left, high level details of the Study Units in the middle, and other learning environment features such as tag clouds on the bottom right.*

The multimedia content is displayed as text in XML or occasionally PDFs, embedded audiovisual items as MP3 files, embedded mages as jpeg files (see Figure 3) and occasionally Flash animations. The majority of the content has been taken directly from larger Open University courses and undergone only limited revision under what we have called an Integrity model (Lane, 2006). Much of the content is available in eight alternative formats for downloading/taking away (HTML print, Unit Content XML, Unit Content RSS, OUXML, IMS Content Package, IMS Common Cartridge, Moodle backup, and zip file) by users of both the *LearningSpace* and *LabSpace* with the ability to upload repurposed content, or even new content, only to the *LabSpace*.

By April 2008 there had been 2 million unique visitors from 160 different countries (rising from 100,000 to 200,000 unique visitors per month, with 35% returning at least once) and 60,000 registered users using the various social computing tools and technologies to make forum posts, create knowledge maps, book video conferences and keep learning journals as well as simply studying the Units). There have been several thousand downloads of Study Units each week, with the most popular format being an HTML print version that alone accounts for about 10,000 'downloads' per week. Understanding what people are doing both on the site and when they take the content away has been a key feature of our research and evaluation activities of this Open Content Initiative which are variously described on The Open University's Knowledge Network[10]. From all this believe that we have achieved the first and third of our planned outcomes and, as explained below, have made a good start on achieving the second and fourth outcomes.
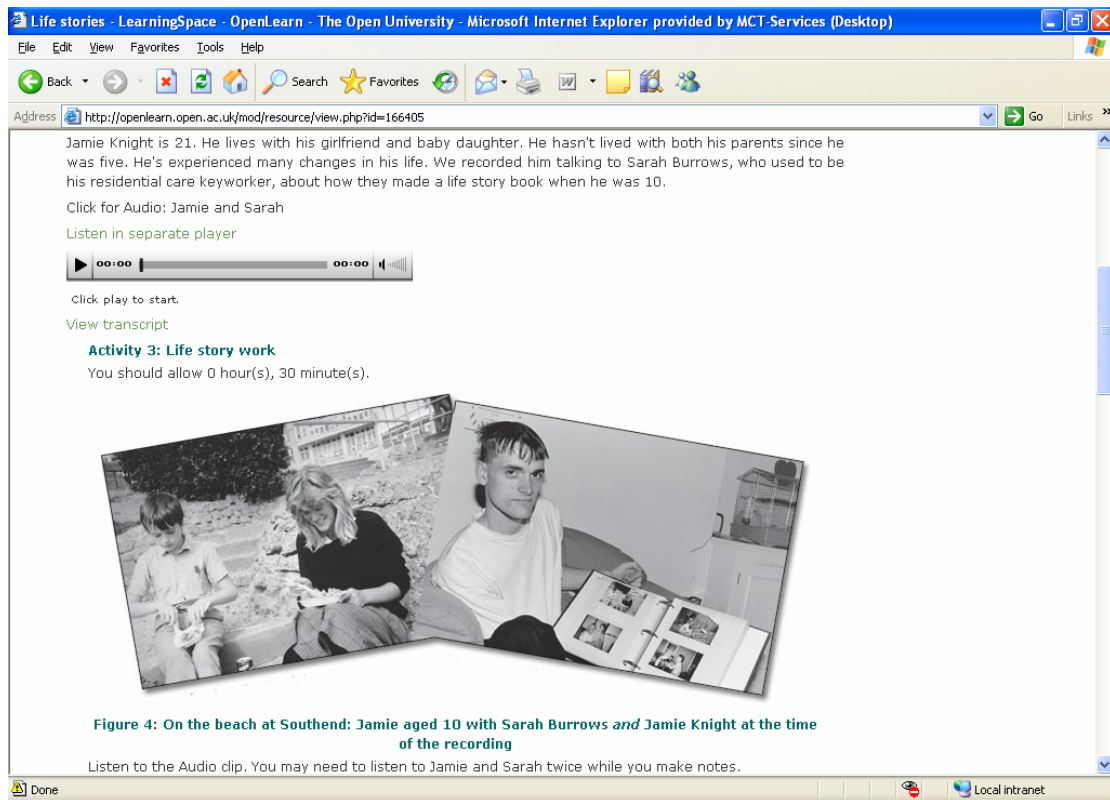
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[10] http://kn.open.ac.uk/public/workspace.cfm?wpid=6087

Figure 3. *A screenshot of a study unit on childhood life stories, displaying integrated text, an embedded audio file, an embedded PDF of the transcript of the audio file, and embedded images.*

The sustainability of The Open University's activities using OERs depends mostly upon the overall policy and practice in relation to them within the institution and the identification of funding sources for sustaining that policy and practice; and partly on developments externally, in particular the acceptance of OERs in wider higher education policy and practice.

We are still exploring in Stage 3 the areas for sustaining the project and/or its activity as outlined in our original bid (The Open University, 2006): namely cost reduction; impact on core business; additional services; sharing of materials; and additional external funding. This includes its organisational form as either a separate project or embedded practices.

As with all our teaching and learning activities we believe it is important to determine the *principles* upon which any provision should be based, principles that address a fundamental right of access to education on the part of all. And the most basic principles we believe that all education should follow, is that of *the primacy of the learner and their context* in shaping their learning experiences and *the extent of openness in the provision* that tries to meet those contextual needs.

The physical nature of much current educational provision (tied to a particular place such as a classroom or lecture hall), bound up in a particular medium (such as text or audiovisual asset), and available only at pre-defined times (to suit employment norms), has meant that the locus of control was much more with the providers of learning opportunities – the teachers, than the users – the learners. Open and distance learning overcomes some of these barriers to learning and education.

The advent of digital technologies and the internet in particular is changing this dynamic because it helps overcome more of these barriers, making digital content more accessible and available to more people and enabling new forms of instantaneous communication between people in different places and times (there is more detail and case studies on this particular

topic in Lane, 2008). However, even more significant than these digital technologies, has been the emergence of social technologies in new forms of licensing for (largely) digital content. This 'some rights reserved open licensing' (for example the Creative Commons licences) placed on new and previously 'all rights reserved' copyrighted content enables the free copying, sharing, reuse and remixing of that content within pre-defined guidelines. In principle this gives learners (and teachers) even more freedoms as they can decide when to access it, whether they want to alter it, and how they learn from it in ways they choose.

OERs flow naturally from The Open University's mission but this does not mean that we did not, and do not, have to carefully examine and assess the impact of such a move on current policies and practices and how they in turn impact on the contexts in which our learners/students find themselves.

Stage 1 of OpenLearn established that OERs fit very well with the mission and work of The Open University, particularly the fact that it already undertakes substantive educational publication. Stage 2 has been a fast track pilot that has enabled the University to begin to evaluate the impact on itself, and more widely, of its particular type of OERs based on open and distance learning materials in a technology supported environment that encourages collaboration. While there is a still a lot to discover from the planned activities of Stage 2 and now stage 3 we can already see some benefits to existing University activities and pointers to new activities.

In brief, internally it has:
– Demonstrated that the University can successfully deliver a large scale cross institutional project in a short time scale (useful in itself in understanding how we can cope with rapid and large scale changes);
– Shown that it can implement the Web 2.0 philosophy of perpetual beta, release changes often and release early;
– Significantly tested and enhanced its new e-Production and publication technologies such as Moodle, Documentum™ and Structured Content and provided a robust platform for wider exposure and use of technologies devised by our Knowledge Media Institute;
– Supported significant institutional R&D activities such as Learning Design for course development and helped win substantial new research grants;
– Enabled regional and enquiry staff to undertake new and successful forms of information, advice and guidance, outreach and widening participation;
– Been shown to have played some role in the recruitment and choice of fee paying courses by over 6,000 registered students;
– Enabled significant testing and evaluation of Search Engine Optimisation and Social Media Marketing (e.g. linking content to the SkyLearning™ website, placing audiovisual content on YouTube™), enhancing our external web presence and e-visibility in mass market Web 2.0 sites.

While externally it has:
– Generated substantial international attention for the University amongst individuals and institutions, with 69% of the visitors from outside the UK;
– Placed the University at the forefront of open education and web based learning through gaining several awards, positive media coverage, many institutional visits and approaches, book chapters and commissioned reports, refereed journal articles and conference papers, and active inclusion in related work instigated by major worldwide consortia;
– Enhanced relationships with major strategic partners in the UK (e.g. National Institute for Adult Continuing Education, Unionlearn, U3A) and stimulated existing or new partnerships with international organisations (e.g. Commonwealth of Learning) or organisations in other countries (e.g. UNISUL in Brazil).

Now that OERs have become an established feature of The Open University and as the nature of their impact becomes clearer, the strategy for sustaining the development and use of OERs within The Open University in Stage 3 is being built upon three strands:

– The *first* strand is to embed the development and use of OERs within all our existing activities (and hence existing funding) wherever possible, rather than commit specialist funding to the activity as has been the case so far for the start-up phase (this is part of cost reduction and impact on core business). This has already begun with plans in place to integrate open publication into the standard educational resources planning and production systems and to integrate OpenLearn into existing information, advice, guidance, and outreach activities.

– The *second* strand is to secure additional recurrent and project grant funding from a variety of sources, including public funding from political institutions, to build upon this core work and to work with partners around the World (additional external funding). Funding proposals have been developed and submitted and the outcomes are awaited.

– The *third* strand is to investigate new business models and potential revenue streams arising from differentiated or disaggregated services that support learning and that can be provided to very large numbers of learners using digital technologies (additional services and sharing of materials). A start has been made by linking to Amazon.com but this is the subject of a new strand of activity for The Open University that also links to its very new presence on YouTube™[11] and iTunesU™[12].

We feel confident that in due course the cost savings created by new and improved working methods for the development of educational materials and the promotion of courses and services, as well as the additional revenue derived from extra student enrolments and new or expanded fee paying services to existing and new clients will offset many of the basic costs of running OpenLearn (and related ventures) in the future.

Returning to the 8 factors noted by Guthrie et al (2008) I can comment on then as follows with regard to OERs at The Open University:

– *Assuming that grant funding will always be available is not likely to lead to a successful sustainability plan* – from the outset we always saw external Foundation funding as start-up investment only.

– *Project leaders need to adopt a more comprehensive definition of 'sustainability'* – as the project leader I have helped do this within the Institution and explained much of our thinking in this paper.

– *The value of a project is quantified by the benefits it creates for users – what it allows them to do that they could not do before* – as with developing courses for distant students we have taken great care to think about user needs, to make adjustments following user feedback and to build a significant research and evaluation element into the project budget. That is not to say that we have got all this right as some features have not gone down well with some users.

– *Project leaders need to consider a range of options for long-term governance* – the centrality of the project to the University was evident through a high level steering group that included 4 members of the Vice Chancellor's Executive with regular reporting as well to major University Committees. With greater mainstreaming oversight will change and probably fall solely under existing University Governance mechanisms.

– *The web is a highly competitive environment* – we have interpreted this as having to compete for people's attention and time. One of the more significant developments of the project has been experimentation with social media marketing.

– *Leaders must also embrace the fact that their environment is rapidly changing* – the project was set up because University leaders have acknowledged this and responded with a number of initiatives to understand the changes afforded by Web 2.0 and greater internet access, not just OpenLearn.

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[11] http://www.youtube.com/theopenuniversity
[12] http://www.open.ac.uk/itunes/

- *Running a start-up is a full-time job and requires full-time leadership* – a substantive project team was established with a full time project Director and Project Manager
- *Innovation depends on experimentation, and project leaders should embrace the fact that there are generally no straightforward solutions* – I have already mentioned how we have made several changes and adapted our work as evidence emerged, but equally there are many things we have thought we would like to do but have not had capacity or necessarily the capability at hand.

OpenLearn therefore does cover all the factors that Guthrie et al, list but even so it has not yet generated much new income that can be directly, and only, attributable to its existence and activity (there is much evidence to show that it has helped with recruitment of some students but is often one of several influences on such decisions). So how might OER projects actually make money to cover their costs at worst and provide additional income to the organization at l best?

5 Making money out of free stuff

There is much more complexity to people's motivations and actions around open educational content and education than I have portrayed above. But services or products that are free at the point of use still have to be paid for through somebody's efforts, paid or unpaid.

If authoring OERs is unpaid, then the sharing of effort only makes sense at economies of scale. So it may be that if OERs become a successful and sustainable activity there will quickly become one dominant outlet for community authored educational materials at Higher Education level with all others being distant also-rans, just like there is one major online encyclopaedia (albeit in different languages) that dominates that field. However there are many difficulties in creating an acceptable common curriculum at the higher education level as it is more changeable and more susceptible to local and factional interpretations than lower levels of education. At school level there is usually a much greater involvement of political institutions in defining curricula as opposed to the relative freedom there is at University level. The style and model of teaching in schools, with common curricula and common, often national examinations, compared to University determined curricula and assessment practices, leads to a more restricted view and interpretation of topics as represented in major texts and other educational resources. In other words school level content is generally driven towards consensus and conservatism, and may be amenable to substantively similar and larger OERs being used within and across countries, while much University level content thrives on differences and novelty that arises from research and scholarship and so would trade in smaller OER elements that encourage greater flexibility.

If efforts to author OERs are paid for, then there are no new sources of money for open educational resources as compared to closed educational resources, just possibly new ways to get at those sources of money depending on whether it a not for profit or profit seeking organization. The sources for largely public institutions remain (in contrast to commercial operations as discussed by Anderson, 2008):

- Public grant (recurrent or project based funding from taxes);
- Individual donations (the goodwill of users and non users);
- Organizational donations (philanthropy by individuals and organizations);
- Advertising (selling space for messages);
- Fees for products or services (i.e. sales or subscriptions).

All of these sources are being tried by different OER projects. State funds have been used to initiate Edu.net in Vietnam (http://edu.net.vn). MIT has received individual and organisational donations and gains some micro payment revenue from links to books on Amazon mentioned on the MIT Open CourseWare site. Selling services around free content is a major approach used around open source software and is being looked at in terms of challenge exams (e.g.

Utah State University) or eLearning services for organisations (e.g. The Open University). What is clear is that this is all very new for most higher education institutions and it will take time to ascertain the levels of income that might be generated.

6   Conclusions

The sustainability of open educational resources can be looked at in different ways. There is sustainability within an organisation and sustainability within a wider market place, whether a market, public or social economy. There is financial sustainability, where sufficient money is in place at both organisational and market level. And there is social sustainability where the social demand and support can drive the activity through 'gifting' of voluntary services and money only covers certain costs (as happens with many clubs and societies). Education and higher education in particular, spans all levels and all economies, meaning that there will be many different ways in which financial and social sustainability for Open Educational Resources will be realised.

In looking at the many ways to make money on the back of free things then Anderson (2008) sets out the wider possibilities of revenue generation (as opposed to relying on recurrent or project grants) for (mainly) profit making organizations. The approaches he talks about have a long history in commerce and have worked across more than just the internet. Meanwhile, Guthrie et al (2008) focus on open academic resources for largely public institutions, where profit is not a primary motive.

Nevertheless, both have a clear message: know what it is you are trying to do, make that central to your way of working or business model, understand your users as fully as possible, and look at more than one source of funding to sustain the activity. What is apparent so far is that everyone is still looking for those various sources of funding and that no OER projects have been going long enough to judge whether they are fully sustainable, either financially or socially. However, some, like OpenLearn, are doing much of what is thought needed to become sustainable within an institution but is not quite there yet, while there appears to be much further to go to see if there can be sustainable activity between institutions and with a wider community of groups and individuals.

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