

## How OER Support Lifelong Learning

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### Introduction

The Open Educational Resources (OER) movement is a little over ten years old if we take the launch of Connexions (<http://cnx.org>) from Rice University in 1999 and the launch of MIT (Massachusetts Institute of Technology) OpenCourseWare (MIT-OCW) (<http://ocw.mit.edu>) in 2001 as the earliest seminal moments in its history.

Today the OER movement is still dominated by higher education institutions (HEIs) publishing their own resources, as witnessed by membership of the OpenCourseWare Consortium ([www.ocwconsortium.org](http://www.ocwconsortium.org)) and the development of the OER university ([http://wikieducator.org/OER\\_university/Home](http://wikieducator.org/OER_university/Home)).

Much of the discussion and debate about the potential value of OER has centred on the benefits of OER to those HEIs, to higher education teachers and to higher education students (McAndrew et al. 2009; Lane 2011; Masterton and Wild 2011). Such dominance has been reinforced by the more recent emergence of proprietary channels for the publishing of openly accessible, if not always openly licensed, online content from HEIs, namely iTunesU and YouTubeEDU.

There is little doubt that the publication of open educational content as OER by HEIs is generally seen as one way of providing a glimpse of the education to be had at that institution. (I use the term “content” to distinguish what I mean by OER in this chapter as the term also includes software tools.) Such content provides a showcase for teachers and students alike, and enables both to variously use such resources to supplement their teaching and their studies respectively (Lane 2010; [in press]). For instance, MIT-OCW has found through surveys (MIT-OCW 2006) and unsolicited feedback that there are large numbers of HEI teachers from around the world who use their OER, and even larger numbers of HEI students and self-learners using them as well (<http://ocw.mit.edu/about/ocw-stories/#self->

learners). On top of this, many recent alumni from HEIs are also using such OER as refreshers or top-ups for their previous studies.

The interest by alumni immediately indicates that higher education OER are not just useful for studying by people while registered at an HEI for an undergraduate or postgraduate qualification, but also for study by people throughout their working lives. However, while prospective, registered and past higher education students will inevitably be interested in higher education OER, the very openness of OER means that they can be used by more than just this already highly educated group in society: they can also be used for more interest-driven informal learning or career-driven non-formal learning at a time and place when it is needed or wanted.

The value of OER to lifelong learning is possibly less clear than it might be assumed to be for formal higher education study, but there is growing evidence of what it might be. A significant issue is that it is not easy to know who exactly is looking at something online and for what reason and what they might do with that information offline, which probably explains the dearth of papers and studies in learners' use of online — let alone openly licensed — educational resources, as noted by Bacsich et al. (2011).

## **Lifelong Learning**

There is no commonly agreed definition of lifelong learning (see, for example, [http://en.wikipedia.org/wiki/Lifelong\\_learning](http://en.wikipedia.org/wiki/Lifelong_learning)). However, the main sentiment is that it represents the learning that occurs continuously throughout life whether that be in mainly cohort-based, formally accredited education at primary, secondary and tertiary levels; through group-based, non-formal, non-accredited training, development and mentoring within the workplace or adult education classes; or through the informal learning that people do by themselves.

This certainly includes HEIs as noted in, for example, the European Universities' Charter on Lifelong Learning (EUA 2008) which asks universities to commit to, amongst other things, embedding concepts of widening access and lifelong learning in their institutional strategies, providing education and learning to a diversified student population and adapting study programmes to ensure that they are designed to widen participation and attract returning adult learners. The Charter also asks governments to commit to recognising the university contribution to lifelong learning as a major benefit to both individuals and society and promoting social equity and an inclusive learning society.

However, because lifelong learning is an all-encompassing term and can involve more than just HEIs, it is better to focus not on the definitions per se but on the perspectives of those learners.

## **The Lifelong Needs of Learners**

Learning is not an amorphous undifferentiated activity. Learning can be for many purposes and with different intensities. One way to look at learning is to note that it can be about:

- Learning to know – to be able to recall information and knowledge about something and to understand how it is organised and connected — in other words, largely a cognitive dimension.

- Learning to do – to develop and master a practical skill or talent through regular and repeated practice. This favours a kinesthetic dimension to learning.
- Learning to be – to be able to deploy a defined set of cognitive and kinesthetic practices and, particularly, to perform in a given work role or as a professional. (Of course this can also refer to learning to “be yourself” in general, not just a particular role you may play in society, but here I am focusing on the latter.) This is a behavioural outcome.

Any individual person only spends a minority of his or her life in formal education, so it is inevitable that more learning can potentially take place in non-formal and informal ways throughout the rest of their lives. The consequence of that is that individuals have, in principle, more time to organise their own learning rather than have it organised for them. The obverse is that so much choice of resources can make it difficult for learners to understand what may be useful and how to get the most from them. In this case, OER can add to the already rich and diverse landscape of self-organised possibilities, as well as offer opportunities for the organisers of non-formal learning activities.

## **What Can OER Offer Lifelong Learners?**

One way to answer this question is to examine what the provision of closed educational resources offers lifelong learners first, before looking at what different types of openness in educational resources offer lifelong learners. For higher education resources, only those written by academics and published by academic publishers are widely available to lifelong learners. There are public engagement events such as public lectures, which those living near an HEI can access, but often the exposure to the resources is ephemeral and only possible at the event itself. So, often closed educational resources have come at a price (“buy the textbook”) unless a free-to-borrow copy is available from a library or friend.

Also, while some of these closed resources are written as a textbook for higher education students to use, it does not mean that the resource has been designed and structured to be a self-learning resource with pedagogic elements (such as in-text questions and activities; large numbers of illustrations; use of boxes to explain difficult concepts) or with guidance on how it is to be studied by a novice independent learner. (In an HEI the teachers provide direction and scaffolding on how such textbooks are to be studied.) Furthermore, these analogue resources are often substantive in size (textbooks of hundreds of pages) and not easy to access in smaller chunks (individual chapters).

As broadcasting technologies have become widespread, educational programmes have been produced for radio and television, often involving teaching staff from HEIs as advisers or presenters. Initially these were ephemeral broadcast to air events, like public lectures, but for much greater audiences than those public lectures. Gradually there has been greater sophistication in the formats of those programmes and in the ability for people to record and use such programmes many times over if they so wished. Such technologies also became part of the educational offering from distance teaching universities such as the Open University UK (Lane and Law 2011). While the granularity of these programmes is much smaller than that of published textbooks, the programmes

can be very popular, with users numbered in millions. However, the density of information and capacity for moving beyond learning to know is still limited by this broadcast medium. So, they are mostly used as a supplement to other educational resources within formal courses rather than being the main mode of instruction.

The emergence and widespread adoption in recent years of information and communication technologies (ICTs) — devices such as computers and infrastructure such as the Internet — has meant that more academic research papers and other educational resources have become more available, accessible, affordable and acceptable to lifelong learners (Lane [in press]). Open access publications in open access journals; online digital collections from museums, libraries and archives; the informational or educational products of many organisations and other projects; social media sites and personal blogs — all of these have greatly increased the number of websites that contain potentially relevant material for learning. Most of these resources are openly accessible, but are still fully copyrighted (and can therefore not legitimately be copied or downloaded), while more and more are also openly licensed (which variously can allow for repurposing as well as copying and downloading).

The question then becomes: does it matter to a lifelong learner if an educational resource is openly licensed rather than just openly accessible? In practical terms, there is often little difference. To study a resource, a learner may want to be able to both access it online and download it for later use. Some may want to share it with others or copy it, but very few will want to modify it in some way. In principle, fully copyrighted material can only be accessed online and should not be downloaded, copied or shared unless there are statements on the host website saying that is permissible. In practice, whether fully accessible or requiring onsite registration first, any online resource can be and will be downloaded or copied for that person's use if that is what he or she prefers to do. Copyright holders do not tend to go after individual transgressors of copyright, but they do sue sites or individuals who indulge in the mass downloading or sharing of such content with many other users. Custom and practice for most people on the Internet is to copy or download. While sometimes illegal, it is an understandable response and I liken it to a bookshop putting its books outside on the street unattended and the owner then complaining about passers-by standing around and reading them.

Before looking more specifically at examples of how OER are being used for lifelong learning, let us return to the issue of size and complexity of OER and what HEIs should be providing in terms of lifelong learning. Weller (2010) has coined the terms “big OER” and “little OER.” While this is more concerned with how the size and complexity of an OER influences its re-use by other teachers, that size and complexity will also influence how learners use it. Many learners prefer or require a structured learning experience put together by a teacher of some kind. A single image, which is of value to the teacher, may not be to the learner until it is mixed in with other material. So, self-organised study will benefit greatly if the OER has a pedagogic structure built in to help guide the learning. In more organised non-formal settings, study will benefit from the guidance of the teacher or trainer and from the interactions of other learners in the group. However, for HEIs, most pedagogical models rely on providing a

collection of resources, which the teacher has selected and which the teacher then provides some guidance on use.

When this model is translated into OER, as in the OpenCourseWare model pioneered by MIT, then it has been found to be suitable for confident learners already used to higher education study, but less so for other people with lower levels of educational attainment. This is in contrast to the self-study materials from the Open University, which are designed for independent use but cost much more to develop. MIT has begun producing open courses in a more open and distance learning form, but the costs are high and the courses may not fully reflect the educational resources that actual students use.

Interestingly, the biggest growth area in quantity and use of OER has been in video lectures or podcasting by academics, mimicking the traditional mode of teaching in HEIs. However, these OER suffer from the same issue noted above of not being a medium for delivering the most effective learning experiences on their own (Lane and Law 2011). Paradoxically, the conclusion seems to be that the relevance of OER for lifelong learning depends on the aim of the developer: the more structured the material, the more useful for the lifelong learner, but the less useful for re-use by teachers or other developers.

### **OER for Personal Interest Learning**

The most obvious use of OER by lifelong learners is for their own personal interest, which may or may not lead on to more formal study of some kind. The Open University has had numerous responses and feedback to its own OER site OpenLearn ([www.open.ac.uk/openlearn](http://www.open.ac.uk/openlearn)), including the following.

“I’ve been in the I.T./Electronics industry for nearly 20 years, but although I have certain formal qualifications, I’ve never had time to do my degree.... [U]sing OpenLearn takes me one step closer to that goal by allowing me to “dip my toe in the water” where studying is concerned.”

“I have now retired and I am thinking about enrolling on a course. I obtained my post-graduate degrees 30 years ago and I find the OpenLearn courses useful for two reasons. The first is to see if I can regain the skills and discipline needed for formal study. The second is that it is helping to identify the areas of study I wish to pursue.”

“I have used OpenLearn to aid me in both my work and for my studies, each time finding the units very useful.”

In fact the way many people like to mix informal and formal studies in a complex profile of activities was one of the significant findings reported by McAndrew et al. (2009) about OpenLearn. Thus, prospective students “try before they buy,” looking at study units on OpenLearn before signing up for the parent Open University module or for a module at another HEI. Actual students (not just from the Open University) often dip into study units that enrich their formal studies or for modules they would like to have studied but cannot fit into their degree pathway. Many others are happy just working through what interests them on OpenLearn with no intention of signing up for a formal course or programme.

## OER for Personal or Professional Development

Another significant change is the greater recognition of non-formal and informal learning achieved through OER that can replace or supplement the formal learning offered by existing HEIs. This is where individuals may operate a personalised portfolio approach to their post-secondary education, picking up formal bits of education from different providers and mixing it with non-formal learning experiences and expecting recognition of their achievements to come from trustworthy professional organisations (e.g., universities, professional associations and/or peer review by a trustworthy community of people working/active in the same field as they are). In other words, open education opens up not only who produces the “content” and the “context” in which the content is learned, but also who validates that learning so that it has currency in the labour and/or interest markets. This is beginning to be seen in recent developments in free courses (through, for instance, the Peer 2 Peer University [<http://p2pu.org/en/>]) and through novel recognition schemes such as Mozilla open badges (<http://openbadges.org/>).

McAndrew et al. (2009) also reported on how a proportion of OpenLearn users were interested in ways to gain credit for their informal learning, and on how groups could use it for professional development as noted in Case 1 below.

### *Case 1: Aidan Hobson, New Zealand Cricket Players Association*

“100 players each year participate in a leadership program focusing on skills that are linked to high performance sport such as communication, self-management/reflection, motivation and teamwork. One of the major challenges in designing the program is finding learning materials that are not too high brow but have a good level of QA, relevancy, structure, and fit our budget. Of the hundreds of websites I’ve looked at, OpenLearn was the only one that provided a good range of topics that would allow players to take up study in areas of personal interest or skills development. While there is a lot of free information on the web, it is lightweight. We also have a business mentoring program for players to learn about different career pathways and the workplace generally, supporting them for careers after sport. Given the diversity of players’ interests and learning styles and the fact most players are away from home seven months of the year on tour or in the UK playing in the off-season, we have explored other, more informal ways for them to build their knowledge. So OpenLearn fits a number of needs of informal, self-directed learning. It is structured and quality assured but very flexible. Because of their time commitments, the players cannot attend classes or keep up to date with the assessment requirements of formal online learning programs. Many of the players don’t have any positive academic learning experiences, so it is great for them to access knowledge without someone looking at their grades, without the pressure of them doing assignments.”

## **OER for Enriching More Formal Adult Learning**

It is not only professional groups that may organise their own learning. Most learning opportunities for later life learners are local, face-to-face and geared to interests rather than employment needs. It is believed that OER can provide more permanent learning events and enable distributed learning communities to happen, but it is also thought that access to ICTs, the accessibility of the OER and unfamiliarity with such technologies are major barriers for later-life learners, among others (Lane 2008). Case 2 below describes how one such group can benefit from OER available on OpenLearn.

### *Case 2: The University of the Third Age, United Kingdom*

“The University of the Third Age (U3A) is a worldwide movement encouraging older people in the third age of life (i.e., those no longer in full-time gainful employment) to take up or continue educational interests in friendly and informal local settings. The collaboration started as a result of joint interest in exploiting OpenLearn for U3A members and as a result of signing a memorandum of understanding with the Open University. The main goal of the collaboration has been to assist U3A to adopt OpenLearn units and social computing tools such as Learning Clubs for the benefit of all their members but especially those already taking online courses. The challenge is that they are a voluntary group and it takes time for the senior members to identify and progress their involvement with OpenLearn. It can take a long time to develop an active relationship with collaborators, especially where new technology is involved.”

Furthermore, the capabilities of Web 2.0 technologies mean that this lifelong learning can also be truly international or global in scope and not just locally organised, with the content and services coming from different countries as well as the peer group an individual may be studying with. This has been seen recently with the development of the idea and practice of open courses. In some cases, an open course is developed in the open by some teachers but with the input of students. In this way, students can learn by co-creating the course and the educational resources are open for all to see. In other cases, a course may include OER as the educational resources, but the course is delivered in the open with a mix of formal, registered students studying for credit and informal course-followers studying for interest. These Massive Open Online Courses (MOOCs), such as the course on Connectivism and Connective Knowledge from Athabasca University (Fini 2009), blur yet further the assumed roles of teachers and students and the context in which studying takes place, opening up HEIs in new ways. Openness does not just exist in formally accredited HEIs, though, and there are some emerging community-based operations on the Web such as the Peer 2 Peer University (Thierstein et al. 2009). However, there are still many issues around whether many people may be excluded from any such opportunities (Lane 2008).

## **OER for Workforce Training**

So, if communities can organise their own learning, what kind of community is needed in order to build, leverage and take advantage of OER and for what purposes?

I have already touched on this earlier, but communities basically need to be self-organising and -sustaining without continued third-party involvement à la Wikipedia, eBay and Flickr. That does not mean there is not some type of organising body, but it is one that manages the environment in which the many communities can collaborate. Communities for open education could be of individuals, institutions and voluntary groups. A successful community will most likely be a community of interest around a topic, discipline or issue, but some may be construed as communities of practice where it involves professional or semi-professional practitioners, such as that shown in Case 3. Some professional or semi-professional input is often 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.

*Case 3: Meriel Lee, Assistant Director, Open University in the South West of England*

“The South West Higher Level Skills Pathfinder Project has funded a project focusing on development of a learning organization within Plymouth City Council’s Children’s Services. The project aims to form a model for adoption by other Councils. To date, OpenLearn has been used to generate interest in higher education and foster development of e-learning skills. Four OpenLearn workshops have now taken place and been evaluated. It has become apparent that for some employees, use of IT presents a real challenge, as does regular access to a computer for learning. However, the workshops have raised confidence and motivation for e-learning and some employees are now accessing OpenLearn units for self-development. Some staff indicated that they have no current interest in engaging with more formalised courses, but find OpenLearn very useful for learning. Foster carers, who work from home, find the units useful because they can study from home at a time that suits them. Relevant OpenLearn units have been identified as the first step of qualifications escalators (currently for Children’s Services, Youth Services and Management, with potential for Foster Care and other social care workers). Nine students have progressed from the OpenLearn workshops to registration on four of the OU’s Openings Program courses, with a further cohort being identified for the June Openings start.”

## **How Will Lifelong Learners Know About the Quality and Reliability of the OER They Use?**

I have already noted the difficulties of self-organising informal or non-formal study and how key organisers are often needed. The same is true for the selection of appropriate resources to learn from. Currently, the quality of any particular OER is most often defined by the provider, and institutions like MIT and the Open University are the guarantors through their normal quality assurance processes. In other cases, it is for users to judge the academic or educational quality for themselves and whether it fits their need. While this may be difficult for a lay individual to do, the judgements of specialist people (as in Case 4 below) or the views of large numbers of people using rating



schemes like that on the Amazon website for books could provide such a service for target groups.

*Case 4: Tony Coughlan, Resources for Charity Trustees*

“I began this Open University led project by working on resources for charity trustees, a priority of the sector skills body Skills-Third Sector ([www.skills-thirdsector.org.uk](http://www.skills-thirdsector.org.uk)). Ten OpenLearn study units were adapted leaders and managers of small charities, voluntary and community organizations, mapped against Elements of the National Occupational Standards (NOS) and released through a small dedicated area on OpenLearn’s LabSpace at <http://labspace.open.ac.uk/mod/resource/view.php?id=449912&direct=1>. As OpenLearn’s LabSpace is not really designed for non-academics, a small dedicated CharityWise website was also created to act as a landing page for trustees, and the adapted study units can also be accessed from there: [www.open.ac.uk/blogs/CharityWise](http://www.open.ac.uk/blogs/CharityWise). The CharityWise website includes video case studies about trustees of three small and medium sized voluntary organizations in the South West of England who each describe the approaches they are taking to improving their organization’s effectiveness.

“The ten adapted OpenLearn study units are those thought to be most likely to be of interest to the target audience, but they cannot hope to address the wide training needs of trustees, so the project team have assessed all of the 600+ study units in OpenLearn for their relevance to the voluntary sector. We then tagged 63 study units that might be useful to trustees with a Trustee\_Development tag (<http://openlearn.open.ac.uk/tag/index.php?id=16439>) and tagged 130 study units that might be of more general use to the voluntary sector with a CharityWise tag (<http://openlearn.open.ac.uk/tag/index.php?id=16432>). In both cases, the intention is to aid discovery by making relevant study units easier to find, and our two terms now appear quite prominently in the OpenLearn tag cloud.”

Many people involved in the OER movement are looking at the different ways in which quality could be determined for users, especially resources developed by individuals or groups of people who are not part of an institutional initiative. Two examples of this are the non-institution-based MERLOT and Connexions collections of OER. In the former case, they are using a traditional peer review mechanism often *before* publication of the resource (<http://taste.merlot.org/peerreviewprocess.html>), supplemented by user comments and ratings post-publication (although actual reviews can be few and far between). In the latter case, they have set up different “lenses” for the resources to be judged *after* publication on the site (<http://cnx.org/news/LensesIntroduced>). They have endorsement lenses for material reviewed by an authoritative body, affiliation lenses where someone from an institution has created content but not necessarily had it reviewed; and members list lenses where registered users can give their views. In addition, developments such as the OER university (OERu) mean that OER that is useful for preparing you for accreditation comes yet again with the authority of the HEI that developed them, while open badges may start a whole system of user rating and review that bypasses HEIs.

Another aspect of quality is cultural or contextual relevance. This issue of resources being localised or contextualised to the needs of the user is a common discussion point because societies and cultures do differ in what is expected. I have already noted that learners, unlike teachers, are not going to want to put the effort into contextualising a resource for just themselves. Learners who directly study an OER may have to accept that it has been developed for a different setting to the one they are in, and get what they can from it as supplementary study for their formal studies or as a non-formal learning opportunity, as I discussed earlier.

## Conclusions

There is little doubt that many people around the world are accessing or downloading online educational resources. The Open University alone has had over 50 million downloads from its iTunesU website in just over three years and over 20 million unique visitors to OpenLearn over five years. These online resources are not always openly licensed, but for learners that often will make little difference to whether they can use them for learning. Paradoxically, this very openness makes it very difficult to track informal use of OER.

Most HEIs do not readily have mechanisms to gather informative data on the impacts of OER on higher education study, either on informal learners or registered students. Web analytics can show many visitors to an OER but not indicate whether they learned from it in any meaningful way. (For instance, while the OpenLearn website has had over 20 million unique visitors over five years, only a little over 200,000 have registered on the site and can be seen as being potentially active learners. Many of the others might be as well, but we don't know who they are because they can simply access the OER through a Web browser.)

We can track referrals from an OER to a student's registering, but not whether that registration would have happened anyway. Experience with OpenLearn is that up to 1,000 people per month go direct from it to register on a formal taught module, but the broad characteristics of those people are no different from those coming from other recorded marketing or informational channels, with two-thirds being existing students anyway.

Measuring such impacts of OER is very challenging and the subject of much debate and activity because engagement by learners with them is so open and difficult to track, and most evidence is anecdotal or from small qualitative studies (Masterton and Wild 2011).

Whether lifelong learners are self-organised or within community or professional groups, it seems that good quality educational resources from HEIs are offering those learners new learning opportunities, and that many more innovative ways of using these resources are emerging, driven by the needs and ideas of those lifelong learners. Supporting lifelong learning is often a stated goal and ambition of many local, regional and national governments, although often there are relatively small amounts of public monies directed at informal adult education unless it provides direct vocational benefits. As most OER do not cost the lifelong learner anything beyond Internet access costs, these resources may help make that limited public funding go further and contribute to the underlying philosophy of open education unlocking knowledge for all and empowering more people to access educational opportunities that were not previously available or accessible.

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