

The Open Educational Resources Movement: Current Status and Prospects

Gary W. Matkin, PhD
Dean, Continuing Education
University of California, Irvine
gmatkin@uci.edu

Abstract

The Open Educational Resources (OER) movement, which aims to provide high quality teaching and learning resources to teachers and learners everywhere for free, is growing rapidly supported by foundations and institutions across the world. Over 100 institutions have joined the OpenCourseWare (OCW) initiative started by MIT. As it grows, the OER movement has encountered both opportunities and barriers. Foremost among the opportunities is the sharing of high quality learning materials produced in developed countries with developing nations. The OER movement is systematically seeking to equalize access to OER, remove barriers, understand and stimulate use, and find models of sustainability. This paper describes those efforts and the immediate prospects for the continuation and expansion of them. It also describes the benefits to institutions, faculty, and students that are being derived from the OER movement and calls for the further involvement of APRU member institutions with OER.

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Over the past five years the William and Flora Hewlett Foundation has provided over \$45 million to investigate, develop, and advance the Open Educational Resources (OER) movement, the aim of which is to provide high quality teaching and learning resources to teachers and learners everywhere for free. Other foundations and agencies such as the Andrew Mellon Foundation and the World Bank have supported this movement inspired by the hope that rapid progress toward higher levels of educational achievement in the developing world will support and sustain rapid economic and social development. A growing number of higher education institutions and governmental bodies are joining the movement by both contributing to the inventory of open educational resources and by using them. This paper first defines OER and then describes how the movement has developed, what investments have been made, what has been achieved so far, and what are the obstacles and prospects for the movement. It will conclude with a description of how OER can benefit APRU institutions.

Why OER?

OER has been inspired not only by the belief that it will advance human knowledge, creativity and social welfare, but also by the growing success of open source software. OER is based on the notion that knowledge and education are common goods that must be supported by a defined community. Contrary to the common view, OER generally has a very low commercial value simply because there is no effective market for it, but it does often have a high social value. It is this social value that the patrons of the OER movement seek to unlock. OER can be distinguished from “open content” in its focus on very high quality, digitized materials, freely available on the web, focused on the teaching and learning process, and featuring tools for creating, using, reusing, and sharing.

Many institutions and other organizations such as foundations are facing a problem. They are spending a great deal of money on the creation of high quality educational resources but there is no place to deposit them so that they can be shared. In fact, there is a real question about even if they can be shared effectively, even among faculty within the same institution. As the notion of the commercial value of such resources recedes, and with it the concerns over the ownership of intellectual property, the emphasis on gaining some social “return on investment” intensifies.

OER Today

OER is supported by a number of open content initiatives, including projects that offer open courseware such as the MIT Open Courseware project, full courses such as University of California Irvine courses for science and math teachers, library collections such as those now available from Harvard and the University of California, subject area collections such as the Stanford Encyclopedia of Philosophy and History Matters, and general collections such as the Internet Archive and Connexions at Rice University.

The OER movement is clearly gaining strength. At this writing (October, 2006), over 100 institutions have established OER sites and more are in early development stages. These sites are in 14 countries and in at least 6 languages. National consortia of OER institutions have been formed in China (China Open Resources for Education, 22 members), Japan (Japan OCW Consortium, 10 members), France (Paris Tech, 11 members), Spain and Portugal (Universia OCW, 13 members) and Vietnam (Vietnam Open Courseware, 14 members). The MIT OpenCourseWare initiative now has 1,300 courses (it will have 1,800 by 2007) in 33 disciplines and has over 36,000 visits per month about half of which are from outside the US. The Open University of the United Kingdom has announced that it will launch its open content initiative in October 2006. OER is directly linked with the “open” idea for web resources and by any measure every element of openness is showing signs of rapid increase. The open source software movement is growing. Examples are the widespread use of the Linux operating system and, more relevant to OER, the Moodle course management system. The recent announcement of the collaboration between Google, the University of California, Harvard University, and other holders of large library collections for the digitization of vast numbers of books is another example of the movement toward easy access to intellectual material. Collections of material in defined subject areas are being developed such as the Stanford Encyclopedia of Philosophy, History Matters, and Science Commons. An open content repository, Wikipedia gets 1.4 billion hits per month and the number of Creative Commons licenses, the legal backbone of the open content movement, increased six fold between 2004 and 2005.

OER Barriers and Stimulating Use

Against this record of growing strength are some barriers and issues that are systematically being addressed by the OER community. In order to achieve its goal of equalizing access to knowledge by identifying and providing high quality OER, the Hewlett Foundation and other organizations are seeking to remove barriers to the creation of OER and, at the same time, to understand and stimulate the use of OER. The barriers can be categorized as those involving intellectual property issues, a lack of technological innovation and tools, and cultural and language barriers.

To address the intellectual property problems, foundations have supported the previously mentioned Creative Commons license scheme and the Stanford Copyright Determination program.

To provide technological innovation and tools, several foundations and institutions are supporting the development of Sakai, an open source course and content authoring and management software program, EtudesNG, a sharing software, the Internet Archive, and EduTools, a software template for organizing open content.

A key component in stimulating use is the understanding of the nature of demand for free and accessible high quality academic content. Early efforts to gain this understanding are a study conducted by OECD (Paris), the African Virtual University Gap Analysis Project, and the Berkeley Digital Resources Study. Current projects have also focused on the development of OER portals, web sites that aggregate OER materials from multiple web sites and also take into account the needs and use practices of members of the intended audiences for the material rather than being based on the collector's understanding of how the material should be organized. Examples of the development of such portals are the World Bank's Development Gateway website and the OER Exchange Project.

Once the OER can be easily discovered the objective is that it be used. Research to date has discovered the importance of creating an active community of users who interact with each other and the managers of the collection in a continuous feedback loop. Of particular importance is user evaluation of the posted content. Another area of high interest is the capturing of user experience in the actual use of the materials in the practice of teaching and learning.

Finally, to stimulate use across cultural differences, and particularly in the developing world, mechanisms must be put in place for the language translation and the "localization" of OER. An example: the China Open Resource Exchange (CORE) has translated over 100 OER courses into Chinese from other languages.

OER Goals

The goals for the OER movement have been developed over the past year as patterns and possibilities emerged. For 2006 the emphasis will be on building out key collections, particularly those offering full and complete courses in strategically selected target areas; expanding the use and usefulness of OER by supporting the development of portals, distribution channels, translation and localization efforts, and research; and continuing to build capacity by offering intellectual property options and creating community tools.

However, along with these many efforts and with the significant investment which has already occurred, there comes a dilemma: sustainability. How will the return on the tremendous investment in OER and open content be sustained? Each funded project faces this challenge and there are few clear answers. Over the next two years sustainability will be crucial in the assessment of the success of OER.

OER and APRU

This growing body of knowledge and experience is now increasingly available and useful to both institutions and other organizations such as APRU. The goals of OER clearly overlap

with those of APRU and its member institutions; indeed many APRU institutions are already involved in the movement. How can the OER movement be of benefit to APRU institutions? Based on the experience at MIT and other participants in the OER movement, the institutional benefits of joining the OER movement are clear. They include:

1. providing institutions with a logical collecting place to put learning objects they produce where they can be shared with others.
2. providing access to a large store of high quality free learning materials. This allows for a more cost effective the generation of courses and learning experiences.
3. advancing the intellectual and service missions through the traditional values of openness and sharing of intellectual property.
4. showcasing outstanding courses and faculty.
5. fostering collaboration and innovation among faculty.
6. providing matriculated students with supplementary learning materials.
7. improving coordination and communication among campuses of the same system or off-campus sites.
8. connecting with non-matriculated lifelong learners including alumni.
9. enhancing faculty and student recruitment.
10. accelerating the adoption of digitized teaching materials.
11. co-marketing with leading academic institutions and gaining world-wide visibility as an academic leader.
12. improving course quality by providing visibility and comparisons for particular courses.

From a faculty member's perspective, there are also benefits in the OER movement. Faculty members can

1. increase their reputations as leaders in their fields.
2. showcase excellent work to a world-wide audience.
3. leave an academic legacy that others can build upon.
4. embrace the values of innovation, collaboration, and openness.
5. benefit learners without unduly impacting workload.
6. become an active member of a dynamic intellectual community dedicated to excellence in teaching.

Of course, students are the big winners in the OER movement. OER can

1. increase educational opportunities for those who can't be in the classroom.
2. provide access to supplemental learning materials.
3. allow students to see course materials before enrolling in a class. (At MIT the number of first-day-of-class "shoppers" dropped dramatically with the MIT OCW program, thereby reducing confusion and the number of course "drop and adds" at the beginning of the term.)
4. provide students the ability to assess full academic programs at a detailed level before deciding to enroll.
5. help students maintain intellectual ties to their institution after graduation.

OER is here. The APRU is already involved through a significant number of its member institutions. How can/should APRU as an organization become involved with this important

movement? In what ways are the goals of APRU and the OC W movement consistent? How can it increase its involvement? These questions are open, but the answers are emerging.

Web References

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