

**Organisation for Economic Co-operation and Development**  
Centre for Educational Research and Innovation  
Expert Meeting on Open Educational Resources  
David Wiley, Utah State University Center for Open and Sustainable Learning

To fully understand the latest developments and trends in the field of open educational resources (OER), a brief presentation of the history of the idea seems prudent. While the idea of freely available, adaptable, digital educational resources may be as old as the network itself, I will highlight five events in the history of OER.

*A Brief History of OER*

In 1994 Wayne Hodgins coined the term “learning object,” and this term quickly entered the vernacular of educators and instructional designers. One role of learning objects in the history of OER is its popularization of the idea that digital materials can be designed and produced in such a manner as to be reused easily in a variety of pedagogical situations. Along with its emphasis on reuse, the learning object movement spawned several standards efforts aimed at detailing metadata, content exchange, and other standards necessary for users to find and reuse digital educational content (ARIADNE, IMS, IEEE LTSC / LOM, SCORM, &c.).

In 1998 David Wiley coined the term “open content,” and while targeted at the educational community (and learning object creators specifically), the term quickly entered the vernacular of internet users. One role of open content in the history of OER is its popularization of the idea that the principles of the open source / free software movements can be productively applied to content, and the creation of the first widely adopted open license for content (the Open Publication License).

In 2001 Larry Lessig and others founded the Creative Commons and released a flexible set of licenses that were both a vast improvement on the Open Publication License’s confusing license option structure and significantly stronger legal documents. One role of Creative Commons in the history of OER is the increase in credibility and confidence their legally superior, much easier to use licenses brought to the open content community.

Also in 2001 MIT announced its OpenCourseWare initiative to publish nearly every university course for free public access for noncommercial use. MIT OpenCourseWare has played many roles in the history of OER, including being an example of commitment at an

institutional level, working actively to encourage similar projects, and lending the MIT brand to the movement.

Finally, in 2002 UNESCO held a Forum comprised of some of the many people who “wish [ed] to develop together a universal educational resource available for the whole of humanity.” They chose the term “open educational resource” to describe their efforts:

Open Educational Resources are defined as “technology-enabled, open provision of educational resources for consultation, use and adaptation by a community of users for non-commercial purposes.” They are typically made freely available over the Web or the Internet. Their principal use is by teachers and educational institutions support course development, but they can also be used directly by students. Open Educational Resources include learning objects such as lecture material, references and readings, simulations, experiments and demonstrations, as well as syllabi, curricula and teachers' guides.

### *The Current State of OER*

There are active OER initiatives at colleges and universities around the world:

- Over 150 universities in China participate in the China Open Resources for Education initiative, with over 450 courses online. [http://www.core.org.cn/cn/jpkc/index\\_en.html](http://www.core.org.cn/cn/jpkc/index_en.html)
- Eleven universities in France have formed the ParisTech OCW project, which currently offers over 130 courses. <http://graduateschool.paristech.org/>
- Seven universities in Japan have formed the Japanese OCW Alliance that offers over 140 courses. <http://www.jocw.jp/>
- Seven universities in the United States with OER projects (MIT, Rice, Johns Hopkins, Tufts, Carnegie Mellon, and Utah State University) offer over 1400 courses. <http://ocw.mit.edu/>, <http://cnx.rice.edu/>, <http://ocw.jhsph.edu/>, <http://ocw.tufts.edu/>, <http://www.cmu.edu/oli/>, <http://ocw.usu.edu/>

Altogether there are over 2000 freely available university courses currently online. And more OER projects are emerging at universities in Australia, Brazil, Canada, Hungary, India, Iran, Ireland, the Netherlands, Portugal, Russia, South Africa, Spain, Thailand, the UK, the US, and Vietnam.

There are also several translation efforts underway to broaden the impact of OER

initiatives. These include Universia's Spanish and Portuguese translations (<http://mit.ocw.universia.net/> and <http://www.universiabrasil.net/mit/index.jsp>), CORE's simplified Chinese translations (<http://www.core.org.cn/OcwWeb/Global/all-courses.htm>), and OOPS' traditional Chinese translations (<http://www.cocw.net/>). Universities in South Korea and Thailand are also considering launching additional translation projects.

The number of non-course OERs available is exploding as well. Rice's Connexions project currently hosts over 2,700 open learning objects (<http://cnx.rice.edu/>) available for mixing and matching into study units or full courses. Textbook Revolution (<http://textbookrevolution.org/>) contains links to hundreds of freely available, copyright-clean textbooks. Freely accessible encyclopedias like Wikipedia (<http://wikipedia.org/>) and Math World (<http://mathworld.wolfram.com/>) grow in size and quality.

The momentum behind OER is clearly building.

### *Trends in OER Development and Use*

The following trends in the development of OER are worth note:

- Many OER projects at universities and colleges are beginning at the “bottom,” being driven by faculty rather than administration. There is even an example of a project being driven by the students within a university (<http://ocw.hampshire.edu/>).
- Most OER projects are using Creative Commons licenses (<http://creativecommons.org/>) or the GNU Freed Documentation License (<http://www.gnu.org/licenses/fdl.html>) to license their content. Among Creative Commons users, the Attribution-NonCommerical-ShareAlike option is the most popular.
- Projects like eGranary (<http://www.widernet.org/digitalLibrary/>) are making it easier than ever to mirror open educational resources for use in settings where connections to the Internet are slow, expensive, and / or unreliable. (eGranary currently mirrors OERs for approximately 40 partner sites in Bangladesh, Gambia, Ghana, Guinea, Indonesia, Kenya, Mozambique, Niger, Nigeria, Tanzania, Uganda, and Zambia.)
- Projects like the open source eduCommons software (<http://educommons.sourceforge.net/>) are making it easier than ever to do OpenCourseWare projects. (eduCommons is a content management system customized specifically for OCW users with specialized workflow, copyright

tracking, etc.)

- Podcasting, screencasting, and videocasting are becoming increasingly popular as inexpensive ways to capture and distribute course content (e.g., see <http://boileercast.itap.purdue.edu:1013/Boileercast/> or <http://itunes.stanford.edu/>).
- Syndication formats like RSS and ATOM are becoming increasingly popular ways to distribute metadata and provide access to content (e.g., see <http://www.mcli.dist.maricopa.edu/show/merlot03/>). RSS aggregators are looking and behaving more and more like learning object assembly tools (e.g., <http://opencontent.org/tagging-as-authoring/>).
- Folksonomic approaches to creating metadata and indexing (“free tagging”) OERs are gaining in popularity with end users (e.g., see <http://del.icio.us/> or <http://flickr.com/>).

There is little quality data and analysis of OER use. The following trends are summarized from MIT OCW’s 2005 Evaluation Report:

- People who are neither teachers nor students in formal programs access OERs primarily to enhance their personal knowledge.
- Students who access OERs do so mostly to complement a course they are taking, to enhance personal knowledge, and to plan their course of study.
- Teachers who access OERs do so mostly to plan or prepare a course, enhance their personal knowledge, or learn about topics related to their research.