

# CURRENT STATUS OF OPEN EDUCATIONAL RESOURCES IN JAPAN

Kumiko Aoki

*Center of ICT and Distance Education, The Open University of Japan, 6-11 Wakaba, Mihama-ku, Chiba, 261-8586, Japan*

Keywords: Open educational resources, Japan, Practices, Challenges.

Abstract: It has been almost a decade since MIT announced the OpenCourseWare (OCW) project in the spring of 2001. Several institutions in Japan also followed and on May 13, 2005, six prestigious universities in Japan formed the Japan Opencourseware Consortium (JOCW). Since then, 36 organizations in Japan have joined JOCW, but its public recognition remains still low. Though JOCW has made a bold initiative and a significant contribution to the dialog of open educational resources in Japan, still there are a number of issues remain for long-term sustainability of OER activities in Japan. This paper discusses the issues of open educational resources in Japan.

## 1 INTRODUCTION

The “Open Educational Resources (OER)” was defined by the participants at the UNESCO-hosted Forum on the Impact of Open Courseware for Higher Education in Developing Countries in 2002 as:

The open provision of educational resources enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes. (UNESCO, 2002).

Since then, OER has been a hot topic among educators, researchers and educational policy makers though the reality has not caught up with its ideal as many issues still need to be resolved before it has been widely adopted by institutions and people around the globe.

According to Hylén (2007), there are two important aspects of “openness” in thinking of open educational resources: free availability on the Internet and few restrictions on the use of the resource. They mean no technical barriers, no price barriers and few legal barriers for the end-user. These are in line with the definition of knowledge by The Open Knowledge Foundation that knowledge should be legally, socially and technologically open.

Though OER is usually considered to refer to learning content, Hylén (2007) said OER would include: 1) learning content, such as courseware,

content modules, and learning objects; 2) tools, such as software applications to support the development, use, re-use of learning content; and 3) implementation resources, such as intellectual property licenses to promote open publishing of learning content, design requirements for best practices, and localization of content.

## 2 MIT OPENCOURSEWARE

It can be said that the movement of OER has been started by MIT when it announced its OpenCourseWare (OCW) project in the spring of 2001. Its website said that MIT had started the OCW project to advance knowledge and educate students. According to Kirkpatrick (2006), it was envisioned as “a way to narrow the digital divide, to help educators in developing countries to ramp up their curricula, and to assist students and self-learners who could not afford to attend or meet the entrance requirements for an MIT education. (p.53)” MIT published its first OCW site in September 2002, containing 32 courses initially. In October 2003, it officially launched the OCW site with 500 courses. In 2004, MIT OCW received almost 120 million hits from visitors in over 210 countries, and adapted Creative Commons licensing to make the intellectual property licensing terms clear.

When MIT announced its intention to make course materials publicly available online, many

faculty members at various universities in the U.S. voiced their fear that if the university made its course materials freely available, few would want to become the actual students of the university by paying fees. In response to that argument, MIT clearly states that: OCW is not an education; OCW does not grant degrees or certificates; OCW does not provide access to the faculty members; and materials may not reflect entire content of the course. In other words, MIT made it clear that distribution of the content is only a small part of the entire educational processes and making the content freely available would not jeopardize the need of formal higher education.

As many other universities and organizations have followed the MIT OCW and created their own OCW, the consortium of OCW was formed in 2005 to advance OCW further and to share issues and practices. It has become the community of over 250 universities and organizations in the world.

### 3 OCW MOVEMENTS IN ASIA

The above mentioned OCW movements are also active in Asian countries. In Asia, many national governments have supported OCW at top universities so that teachers and students at other universities can learn from the materials made public by the top universities. On the other hand, there have been many grassroots initiatives in those countries as well.

China is most active in such efforts as seen in CORE (China Open Resource for Education Website). It was originally run by the Chinese Ministry of Education as a non-profit organization. It translated hundreds of MIT OCW into Simplified Chinese and made them available publicly. In addition, the government funds teams of teachers to make their courses available online for free for five years. Over 1,000 national level courses and 10,000 provincial level courses have been made available through this funding.

In Taiwan, Opensource Opencourseware Prototype System (OOPS), a volunteer-based organization, has translated MIT OCW courses into Traditional Chinese. OOPS was born under the strong leadership of Lucifer Chu, who has been a well-known entrepreneur in fantasy arts (Lee, Lin and Bonk, 2007). OOPS also transcribe OCW audio and video courses in English so that learners who don't have enough listening skills of English (as many Asian students tend to be) can also learn from OCW videos in English.

In India, OER has been seen as a solution to improve the quality of higher education. Originally, the OCW movement in India was more of the grassroots level instead of a top-down governmental initiative as seen in the National Program on Technology Enhanced Learning (NPTEL), which has been carried out by several institutions funded by the Human Resource Ministry for improving engineering education in India (NKC, 2007). Another notable project on OER/OCW is the Ekalavya project by IIT, which has been mainly funded by private industries. In 2007, the government-commissioned National Knowledge Commission (NKC, 2007) recommended its government to launch a national e-content and curriculum initiative in facilitating the creation, adaptation, and utilization of OER in India (Kumar, 2009).

In Korea, Korea Open CourseWare (KOCW) has been developed and run by KERIS (Korea Education and Research Information Service), a governmental agency under the Korean Ministry of Education, Science and Technology, since 2007. As of October 2010, there are over 57,000 learning materials offered through KOCW, including 1290 courses offered by Korean universities and 646 courses offered by overseas universities such as MIT and Harvard. In June 2010, they started offering 70 courses on iPhones as well.

### 4 JAPAN OPENCOURSEWARE CONSORTIUM (JOCW)

Among all the countries in the world, Japan is one of the early adopters of the OpenCourseWare concept. In May 13, 2005, six top universities in Japan (Osaka University, Kyoto University, Keio University, Tokyo Institute of Technology, the University of Tokyo, and Waseda University) formed the Japan OCW Collaboration Alliance. Later it changed the name to Japan OpenCourseWare Consortium (JOCW) to make it a more open consortium rather than a closed forum (Fukuhara, 2008).

Since then, 37 organizations in Japan have joined JOCW, among which 23 organizations are university members. A regular member has to make at least 10 courses publicly available. However, when the author checked all the websites of the member institutions in February 2011, six out of 23 institutions did not have any courses made public available online. In terms of the number of courses that are made available through JOCW, there are

currently over 16,000 courses, among which about 260 courses are in English. Seventeen member universities have their own OCW websites where syllabi and lecture notes of some of the courses each institution offers are made publicly available. Some course materials include video clips of professors introducing the courses and relevant materials. However, the vast majority of the courses only offer their syllabi online.

The Center of ICT and Distance Education (CODE), the Open University of Japan, has provided the system of searching courses that are available through JOCW by using keywords. The Open University of Japan (OUJ) also joined JOCW in October 2010 and the university has made 17 courses available online to the general public as part of the JOCW membership requirement. The 17 courses consist of four television lecture series, eight radio lectures series and five special radio programs. In the case of OUJ, a lecture series consists of 15 45-minute video or audio lecture programs; therefore, it is a significant addition to the JOCW repository of course materials. Though only 17 courses are made available online to the general public out of the total of 341 courses offered by OUJ, all the broadcast programs are in a sense open to general public within Japan as all those programs are broadcast over the air and anybody who has the mean to receive the signal can listen/view the programs.

As Japan is the number three country following U.S. and Spain in terms of its membership number in the international OCW consortium, if JOCW can sustain its operation and its member universities continue to make efforts to make the contents publicly available on the Web, the Japan's presence in the OCW movement can be quite high. However, in considering the most of the contents made available are only in Japanese, actual impact in the international community can be relatively small. In addition, JOCW still seems the gathering place for researchers of information technology. It needs to open up its discussion on not only the matters concerning technology, but also organizational, political, and educational matters.

## 5 OTHER OER ACTIVITIES IN JAPAN

Though JOCW dominates the discussion of open educational resources in Japan, another notable initiative regarding open educational resources was launched in 2005 by the then National Institute of Multimedia Education (NIME). It is called "NIME-

glad," a web portal and a search engine for learning resources in higher education institutions in Japan. Unfortunately, a governmental decision in 2008 closed the institution altogether though main functions have been succeeded by the Center of ICT and Distance Education (CODE), the Open University of Japan. NIME-glad, therefore, also has gone in a quandary despite the huge investment being made over the years to build the database of learning object metadata and the search engine.

Though NIME-glad has become virtually defunct, another initiative called UPO-NET was started by CODE. UPO-NET was originally started as the platform to share remedial learning materials among those universities who are interested in using those materials in their freshmen seminars. One of the major pet peeves of many universities in Japan is that the academic ability of freshmen has been lessened due to the lenient admission policies and the lack of competition among students to enter universities. In order for entering students to acquire university-level academic abilities, they have to study high school level materials again. To provide learning materials for those students who need to catch up with skills of math and English, for example, to take college-level courses, UPO-NET was established in 2008. Currently it offers 16 courses ranging from basic mathematics and physics to the test-taking skills for company recruitment exams for a fee, and 7 courses mostly on programming skills for free.

The University of Tokyo, the top-ranking national university in Japan, is also a notable player in providing OERs in Japan. So far, the university has made 87 courses available as OCW. Though the number of the courses is not very high, but more than half of the courses indicate that the lecture videos are provided. However, when I followed the links to the video clips, many of them indicate "upcoming" or are broken causing the error. Only a handful of them actually provide video clips of their lectures as indicated. This shows the quality of the overall courses made available through JOCW.

The University of Tokyo is also one of the few universities which make the podcasting video/audio available through iTunes U started in August 2010. Most of the lectures made available through iTunes U are those special lecture programs that were held open to public instead of regular classes. The university also makes those special lecture videos available through its Todai TV. While the university makes their regular lecture programs available through JOCW, it makes those special video programs available through Todai TV.

Another notable university worth being mentioned here is Keio University, a top-ranking private university in Japan. The university is a founding member of JOCW and currently the secretariat of JOCW is located in the university. The university has made 104 courses available through JOCW. But, recently its activity seems to have slowed down and only two new courses were made available last year.

As described above, it seems that initially several well-known universities jumped on the bandwagon of JOCW, but the majority of them are currently facing severe difficulties in sustaining their activities in making the course contents available online publicly.

## 6 CURRENT PRACTICES OF SHARING AND REUSING OF EDUCATIONAL RESOURCES IN JAPAN

Besides the JOCW initiatives discussed above, how many institutions in Japan are practicing sharing and reusing existing free digital materials? The Center of ICT and Distance Education (CODE), the Open University of Japan, conducted a nationwide survey targeting higher education institutions in Japan, including four-year and two-year institutions as well as the colleges of technology, in December, 2009. The main purpose of the study was to find out the current status of ICT usage in higher education institutions in Japan and the study was funded by the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

The total of 5,075 requests is sent, among which 762 went to university central administrative offices, 3,852 went to departments and schools, and 454 went to junior colleges and colleges of technology. We got the highest response rate from the university central administrative offices, being 83.2% (i.e., 634 responses); the second highest from the junior colleges and colleges of technology, being 82.6% (i.e., 375 responses); and the lowest response rate from the departments and schools, being 48.7% (i.e., 1,879 responses).

One of the questions asked to departments and schools, junior colleges, and colleges of technology was: "Does your institution share learning materials with other universities?" Among departments and schools in four-year universities, 9.9 percent of the respondents said "yes," while 2.7 percent of the respondents among junior colleges and 41.8 percent

of the respondents among colleges of technology said "yes." (See Figure 1).

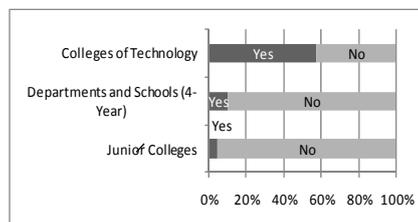


Figure 1: Does your institution share learning materials with other universities?

Colleges of technology have the highest percentage of institutions sharing learning materials with other universities. This is because those institutions have started a project for systematic sharing of e-learning materials called "eHELP" in 2004 with the leadership of Nagaoka University of Technology. The aim of the project is to promote e-learning through collaboration among colleges of technology by making credit-earnable e-learning courses available to other member institutions. As of October 2010, 23 institutions are the members and 40 courses were made available online in the academic year of 2009 and 86 courses will be made available online in the academic year of 2010. Most of those courses consist of video-recorded lectures by professors with PowerPoint slides to accompany the lectures. Each course consists of a series of 15 lectures and students view those videos online, submit assignments and take exams to earn credits.

It is also interesting to note that among those departments and schools in four-year universities who reported that they were sharing learning materials with other universities, 60.6 percent uses learning materials developed in other universities in Japan; 58.5 percent provides learning materials developed by them to other universities in Japan; 17.4 percent uses learning materials developed in other universities in other countries; and 24.1 percent actually provides learning materials to other universities in other countries. (See Figure 2).

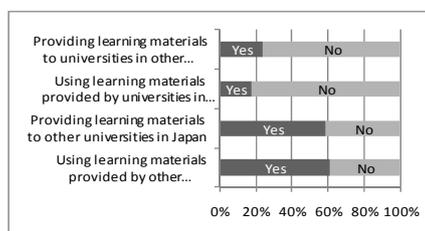


Figure 2: Sharing of learning materials with other universities among departments and schools in four-year universities.

## 7 LICENSING POLICIES OF OER IN JAPAN

The ccLearn report (2008) discusses the issues of intellectual property rights surrounding OER in many institutions around the globe. The report states that: 1) The copyright licenses for some OERs are difficult to find or to understand; 2) The majority of OER projects have adopted Creative Commons copyright licenses to define the terms of openness, but some have chosen to craft their own license; and 3) The usefulness of OERs is limited by incompatible license conditions.

To research how licensing terms of JOCW sites were displayed, the websites of all the 17 university members of JOCW were checked. (As mentioned previously, six out of the 23 member universities do not offer any courses publicly available.)

The Table 1 below shows licensing terms of the universities OCW materials.

Table 1: OER providing universities and their licensing terms.

University	License
Doshisha University	customized
Hokkaido University	customized
Kagawa Nutrition University	CC BY-NC-SA
Kansai University	customized
Keio University	CC BY-NC-SA
Kyoto University	customized
Kyoto Seika University	CC BY-NC-SA
Kyushu University	customized
Nagoya University	customized
Osaka University	CC BY-NC-SA
Ritsumeikan University	customized
Sophia University	CC BY-NC-SA
The Open University of Japan	none
Tokyo Tech	CC BY-NC-SA
University of Tokyo	customized
University of Tsukuba	customized
Waseda University	customized

As shown, 10 out of 17 universities have chosen to use their own customized licensing terms, which range from one paragraph statement to the one spanning a couple of pages. Only six institutions out of 17 use the standardized Creative Commons licensing terms that have been adopted by the MIT Open CourseWare.

## 8 ISSUES IN PROMOTING OER IN JAPAN

Major issue in OER activities in Japan is the funding. Of course, it is the issue everywhere in the world, but especially in Japan where there is no deep pocket private foundations like the Hewlett Foundation that have funded many OER projects in the U.S. and the U.K. exist. Governmental research funding and general institutional budget are the major sources of funding for any organization in Japan to sustain its OCW or OER activities. The two disadvantages of governmental research funding are that: 1) it tends to go to individual researchers instead of the institution as a whole; and 2) the project tends to become defunct after the grant money runs out. General institutional budget has its problem as it is not well provided unless the project is well positioned within the organizational strategic goals. It can also be significantly affected by its internal politics.

Lack of support services in universities is another major issue. In Japanese colleges and universities, usually there are primarily only two groups of people; faculty members and administrative staff. In general, faculty members are in charge of teaching and doing research. The other type of group, the administrative staff, in Japanese universities is those who are hired as non-specialists. It's very rare in Japan that administrative staff is hired as specialists. In addition, usually the administrative staff is rotated among departments and sections every few years throughout their careers. In sum, it is very difficult for a university in Japan to hire a specialist or a professional, say an instructional designer or e-learning specialist; moreover, it is difficult to educate or train them to become one at the institution. As a result, faculty members tend to have to do everything from scratch to plan, create, deliver, and share educational materials if they wish to.

Language barrier is another issue. In many countries where English is the mother tongue or those other languages which are spoken in other countries, institutions and individuals have incentives to share their resources as they have the potential to attract international attention. On the other hand, Japanese is only spoken in Japan except a small number of Japanese who live abroad or another small number of people who study Japanese. Unless the resources are made available in English, the user base tends to be too small to justify the cost and effort of sharing the materials.

As mentioned in the previous section, intellectual property right issues are also a big hindrance. Due to the confusion and the difficulty of understanding the licensing terms of digital materials and other psychological factors, people tend to be hesitant to share the resources they have created by adapting and re-using the materials on the Internet for fear that they may be prosecuted of the copyright violation. Unless the organization has the system of clearing copy right of each material created, the faculty members are not willing to take the risk of making things available on the Web.

Lastly, there is the cultural issue. Traditionally in ivory towers where professors have tended to do what they want to do in their classrooms that are closed to only students. It requires extra effort to make the materials online under public scrutiny. At the same time, professors tend to be unwilling to use the materials created by other professors.

As indicated by Conole (in press), OER has not been realized to transform educational practice yet in Japan, either. In addition, the issue of global connections has not been properly addressed in Japan. However, there have been some fertile attempts made, that are discussed below.

## 9 INTERNATIONAL NETWORKING FOR SHARING AND REUSING OF EDUCATIONAL RESOURCES

There have been several international initiatives trying to establish sustainable networks among institutions and individuals across national borders to expand the institutional, regional and national efforts to share and reuse open educational resources. Some are led by international organizations such as UNESCO, ICDE (International Council for Open and Distance Education), and Commonwealth of Learning (COL). Others are organized at more grassroots levels with universities in different countries working together in establishing networks.

Although Japan is far from being very active in establishing such international networks partly due to the fact that a majority of open resources made available by universities in Japan are in Japanese. In addition, there has not been a major effort in translating open resources in other languages to its own language (in this case, Japanese) as seen in the cases of China and Taiwan.

There has been an attempt made by the former National Institute of Multimedia (NIME) (now it is

the Center of ICT and Distance Education, the Open University of Japan) called GLOBE (Global Learning Objects Brokered Exchange), which has developed federated search engines combining learning objects repositories in several countries including Ariadne Foundation and European Schoolnet in Belgium, KERIS in Korea, Merlot in U.S.A.

It has been a challenge even domestically to have a coordinated effort in creating, maintaining, sharing and reusing of educational resources among educational institutions without a government support. Unlike countries in Europe where the common European Higher Education Area has been established and sharing and reusing of educational resources makes more sense, countries like Japan have been having difficulties in realizing the real benefits of open educational resources at present.

It is partly a force of globalisation that is prompting the OER movement in different parts of the world. If Japan does not ride on its waves, it may be left behind on the shores of a solitary island in the distant ocean.

## REFERENCES

- ccLearn. 2008. What status for “open”? An examination of the licensing policies of open educational organizations and projects. DOI= [http://learn.creativecommons.org/wp-content/uploads/2009/01/license-mapping-report-15\\_dec\\_-2008-color-v2.pdf](http://learn.creativecommons.org/wp-content/uploads/2009/01/license-mapping-report-15_dec_-2008-color-v2.pdf)
- Conole, G., (in press) Designing for learning in an open world. In M. Spector and S.P. Lejoie (Eds.). *Explorations in the Learning Sciences, Instructional Systems and Performance Technologies*,. Springer: New York.
- Fukuhara, Y. 2008. Current status of OCW in Japan. *Distance Learning and the Internet Conference 2008*. DOI= <http://www.waseda.jp/DLI2008/program/proceedings/pdf/session8-4.pdf>
- Hylen, J. 2007. Open educational resources: Opportunities and challenges. Paper commissioned by the OECD’s Centre for Educational Research and Innovation (CERI) for the project on Open Educational Resources. DOI= <http://www.oecd.org/dataoecd/5/47/37351085.pdf>
- Kirkpatrick, K.K. 2006. OpenCourseWare: An “MIT Thing”? SEARCHER: The Magazine for Database Professionals. 14(6). pp 53-58.
- Kumar, M.S. V. 2009. Open Educational Resources in India’s national development. *Open Learning*, 24(1), 77-84.
- Lee, M. M., Lin, M.G., & Bonk, C.J. 2007. OOPS, turning MIT Opencourseware into Chinese: An analysis of a community of practice of global translators. *International Review of Research in Open and*

*Distance Learning*, 8(3), DOI=<http://www.irrodl.org/index.php/irrodl/article/view/463/982>

National Knowledge Commission (NKC). 2007. Report of the Working Group on Open Access and Open Educational Resources. DOI=[http://www.knowledgecommission.gov.in/downloads/documents/wg\\_open\\_course.pdf](http://www.knowledgecommission.gov.in/downloads/documents/wg_open_course.pdf)



SciTeP Press  
Science and Technology Publications