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Open Educational Resources:
Deliberations of a Community of Interest

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Introduction

I am delighted to be able to take part in this 10th anniversary meeting of the ICDE SCOP and to continue the discussion of Open Source and Open Content.

This morning I am going to speak about the formation of an international Community of Interest on Open Educational Resources and its deliberations. The topic is one of interest to both UNESCO and its International Institute for Educational Planning (IIEP).

First, to set the work in context, I propose to give some brief background information on the mission and work of UNESCO and IIEP, the IIEP study of the virtual university and the subsequent forum series to discuss key issues. I would then like to speak specifically about our work in creating an international Community of Interest on Open Educational Resources. Finally, I will share with you the main issues that have been raised in the discussion, and focus specifically on what they mean for the institution.

1.   Setting the scene: UNESCO, the IIEP and the Virtual University study

The United Nations Educational, Scientific and Cultural Organization (UNESCO) was created with the overarching mission of fostering a culture of peace:

> For, if peace is to exist, it must first of all be desired by the women and the men of the whole world. But before that idea takes shape in the minds of each one of us, a long road remains to be travelled.

If this statement was true when UNESCO was created, it remains a challenge in 2006.

To carry out its mission, UNESCO works in the fields of education, social and natural sciences, culture, communication and information. The Organization functions as a laboratory of ideas and a clearinghouse, a standard setter, a capacity builder in Member States and a catalyst for international cooperation.

UNESCO works to improve education worldwide through technical advice, standard setting, innovative projects, capacity building and networking.

UNESCO's IIEP was established in 1967 with the mandate to help strengthen the capacity of countries to plan and manage their education systems. It does this through four main functions: observation, research, training and publications.

The observation function is intended to focus on new developments and trends in education that will have an impact on planning and management. In this context, I undertook a study of the Virtual University as an example of a significant use of ICTs in higher education. The study was based upon ten case studies from different geographic regions and representing four different institutional models:

- a newly created institution operating as a virtual university;
- an evolution of an existing institution, with a unit or arm offering virtual education;
- a consortium of partners constituted to develop and/or offer virtual education;
- a commercial enterprise offering online education.

In 2003, the study was released in a web publication in an effort to disseminate the information broadly and to be able to support interaction and reflection on the issues raised[1].

Bearing in mind the function of UNESCO as a capacity builder in Member States and a catalyst for international cooperation, IIEP established a series of Internet discussion forums to promote reflection on several key issues at the international level. The first forum took place in early 2004. Based directly on the web publication, it considered policy issues for virtual universities. Two subsequent forums have focused on the related issues of Free and Open Source Software (FOSS) for e-learning (June 2004) and Open Educational Resources (OER): open content for higher education (October/November 2005). The groups discussing FOSS and OER have both evolved into ongoing Communities of Interest.

2.   Open Educational Resources

The term coined by UNESCO in 2002, Open Educational Resources (OER), refers to web-based materials offered freely and openly for re-use in teaching, learning and research. Specifically, it includes:

- content – materials for learning or reference;
- tools – software for development and delivery of resources;
- standards – shared conventions for digital publishing of open resources.

The concept of open content can be seen as a natural extension of the Open Source Software paradigm. And in fact, higher education and the Open Source Software movement share similar values with open review and exchange among peers.

UNESCO's interest in OER

OER and, specifically, open content, constitute an important resource, which has the potential to facilitate the expansion of the offer of higher education. OER can be of use to individual learners, and to teachers and institutions that can adapt and use them in their curricula.

In 2002, UNESCO convened a meeting in Paris with support from the William and Flora Hewlett Foundation on *The Impact of Open Courseware for Higher Education in Developing Countries*. In the final declaration, the participants of the session expressed their:

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[1]   http://www.unesco.org/iiep/virtualuniversity/

> "...wish to develop together a universal educational resource available for the whole of humanity, to be referred to henceforth as Open Educational Resources. Following the example of the World Heritage of Humanity, preserved by UNESCO, they hope that this open resource for the future mobilizes the whole of the worldwide community of educators."

The William and Flora Hewlett Foundation's interest in OER

The William and Flora Hewlett Foundation supports a number of large OER projects. Two of the largest are MIT's Open CourseWare initiative (in fact, the Foundation's first OER grant) and the UK Open University's recently announced Open Content Initiative.

Marshall Smith, Director of the Education Program, states:

> "There is a lot of educational material available on the web, but it is rarely organized in a way that can actually help increase the quality of instruction. Open courseware projects allow a professor anywhere in the world to see exactly how his or her colleagues present a specific body of knowledge to students. This growing set of resources has the potential to increase the quality of teaching worldwide."

The Foundation describes its programme as having the goal to equalize access to knowledge. Its "change strategy" is based upon removing barriers to access to high quality open content, and understanding and stimulating use.

IIEP's interest in OER

The concept of Open Educational Resources is associated with the need for increasing access to higher education among UNESCO's Member States.

It is clear that Open Educational Resources, whether full course materials or course elements, constitute an important resource to higher education institutions, faculty and learners. However, if there is little or no awareness of their availability, the resources cannot be exploited.

With support from the William and Flora Hewlett Foundation, IIEP has initiated a two-year initiative with the objectives of increasing awareness of the concept of OER and current initiatives, and supporting capacity building and informed decision-making on the part of current and potential providers and users. The initiative has been designed in three stages and with three specific aims:

- to foster an international dialogue and exchange of information;
- to link people who might not otherwise meet, either in person or virtually, particularly those who constitute the main constituency of UNESCO – developing countries – to come together and participate in a debate, and
- to create an international Community of Practice on OER.

Stage 1: An initial forum

The first stage was designed to raise awareness and facilitate discussion through quite a tightly structured Internet forum during a six-week period in late 2005. The main objectives of the forum were to share information about some of the institutions currently providing and using OER, and to raise and reflect upon some of the main issues.

The forum was organized in four sessions. The first session, moderated by Sally Johnstone, Executive Director of the Western Cooperative for Educational Telecommunications, was an initial general reflection, during which participants were introduced to the concepts OER and open content.

Session Two addressed the perspectives of the providers and issues related to provision. During the first week, participants were introduced to four institutional initiatives, in each case by the project directors:

- Anne Margulies, Executive Director, OpenCourseWare, Massachusetts Institute of Technology;
- Richard Baraniuk, Director, Connexions, Rice University;
- Candace Thille, Project Director, Open Learning Initiative, Carnegie Mellon University;
- David Wiley, Director, Open Sustainable Learning Opportunity Research Group, Utah State University.

The cases were introduced in a background note and introductory message, with the participants then having the chance to interact with each of the "experts". In the second week participants explored two key issues associated with provision of OER in an institutional setting:

- the experience of faculty members, with Steve Lerman, Chair, MIT OCW Faculty Advisory Committee;
- Intellectual Property Rights, with Lawrence Lessig, Stanford University Law School, and Founder and Chairperson, Creative Commons.

Session Three, on perspectives of the users and issues related to use, followed a similar pattern. In the first week, representatives from four organizations adapting and using OER in new contexts presented their cases:

- Mohamed-Nabil Sabry, Director, University Centre for Research, Development and International Cooperation, Université Française d'Egypte;
- Peter Bateman, Manager of Instructional Technology and Design, African Virtual University;
- Pedro Aranzadi, Director of Projects, Universia;
- Derrick Tate, Assistant to Chairman, China Open Resources for Education (CORE).

Specific concerns related to using existing OER were considered in the second week, particularly:

- Learning Object Repositories and other tools for finding and retrieving OER, with Gerry Hanley, Executive Director, MERLOT (Multimedia Educational Resource for Learning and Online Teaching);
- cultural and language concerns, with Mamadou Ndoye, Executive Secretary, Association for the Development of Education in Africa (ADEA).

During the final session, participants were asked to look back at previous weeks and identify and rank the most important three issues to address in order to enable and promote OER. Their responses informed the planning for Stage 2.

Stage 2: Ongoing discussion in a Community of Interest

In 2006, the group is continuing as a Community of Interest, discussing a number of important concerns and proposing developments. The first topic was to determine the priorities for a research agenda for OER. The group generated 110 questions, which they categorised and then refined to 25 priority research questions.

During the discussion, several important ideas bubbled up. First, the idea of creating a "Do-It-Yourself/Do-It-Together" portal was raised. Second, the group thought it would be interesting to know what lessons the FOSS movement would have for the OER movement.

The group is currently considering the idea of the DIY/DIT portal. The discussion is structured around four basic questions, to determine who the portal should be for, what it should have in it, how the information should be organized and, finally, what technological infrastructure would be best. This discussion should result in an initial elaboration of what people want and need in a portal or resource to become providers or users of OER.

In September the FOSS Community will be invited to identify FOSS for OER and to reflect upon the lessons that could be shared with the relatively new OER community.

Stage 3: A second forum

The final stage of the project, as originally conceived, is a second forum, to be held in late 2006. The forum will focus on the draft report of a study of OER in tertiary education that is being undertaken by the OECD Centre for Educational Research and Innovation (CERI). The purpose of this study is to map the scale and scope of current OER initiatives, and address four important questions concerning the development of OER initiatives, the development of sustainable cost/benefit models, intellectual property rights and, finally, improving access to and the usefulness of OER.

Taken together, the three stages of the IIEP initiative is generating a number of resources. By the end of the second forum, these will include background documents and reports from both forums, OER research questions, an outline of a DIY/DIT portal, lessons learned from the FOSS movement, suggestions of suitable FOSS for OER and, finally, an analysis of the main issues for the OER movement and "way forward" document.

3.   Messages from the forum OER: Open Content for higher education

A targeted mailing of invitations generated interest from almost 500 participants in 90 countries (of which 60 were developing countries). Over the six-week period participants exchanged about 700 messages. Indeed they were so active that they had to pause for breath half way through the third session! Participants contributed to the discussion in two ways: firstly, through their comments and questions throughout the discussions, and secondly, through the polling to determine the most important issues to enable and promote OER.

The polling

Fifty-eight participants responded to the final polling on the most important issues to address to enable and promote OER. In analysing the responses, we found that developed country respondents identified four issues as equally important: research questions, the promotion of OER, retrieval tools and sustainability. Developing country respondents, on the other hand,

ranked capacity building highest, followed by promotion of OER, collaborative development and technical access.

The discussions

During the discussion a number of general issues emerged. Firstly, the important role that faculty must play and the need for incentives for content creation and sharing – especially in developing countries. Intellectual Property Rights are a major concern to academics, who fear that material will be used without proper credit or permission. Creative Commons licenses have done a great deal to simplify and facilitate IP decisions, but copyright and intellectual property are nevertheless one of the most potentially confusing issues for any institution or individual deciding to make content available. OER development costs were another important issue for content creators. At present most large-scale OER initiatives have benefited from substantial donor support – most especially from the Hewlett Foundation. The challenge for these projects is now to identify long-term economic sustainability models.

Language and cultural concerns were probably the most important issues from the user perspective, most especially for users in developing countries. Most OER initiatives originated in developed countries – particularly the USA – so as well as practical linguistic and cultural questions relating to the adaptation of materials, OER use also raises more fundamental questions. For example, is this something that institutions in developing countries will adapt and use? And will externally created resources really act as a catalyst for intellectual and academic development, as the developed country creators hope?

Participants identified the need for research to better understand the development and use of OER. Areas requiring research and documentation include best practices, gaps in knowledge, and a methodology for introducing OER into institutions. Finally, participants recognised the need for quality assurance mechanisms. This is an issue that can only grow in importance as the OER movement becomes more established, and as the volume of content and number and range of users increases.

Participants also identified barriers. These included a general lack of information on, and understanding of, OER. At the moment, individual and institutional capacity for the development and use of OER is, in most places, limited. And an institutional and academic reticence to openness further limits the desire for and capacity to change. OER is a way of making knowledge openly and freely available – which runs counter to the increasingly commercial and financially competitive environment of higher education today.

Despite these issues and barriers, however, there was no dispute among the participants about the importance of OER in global education.

Issues related to the institution

OER has been seen to benefit the institution through changing the context by which education is provided, and promoting internal cooperation and quality control. However, it should be noted that while the benefits to learners appeared to be clear to participants, they were not so obvious for academics or institutions. It was suggested during the discussions that institutions appear to prefer to offer distance education, so that there is revenue generated for the institution.

The institution must provide leadership and support to encourage development of OER. The introduction of OER implies institutional change across a range of areas, from faculty rights and responsibilities to publishing. The institution must therefore ensure that academics are aware of the benefits and risks, and put in place policies to support and reward OER development. IPR is an institutional policy issue – and one that necessitates serious reflection. Quality control is another important issue as the materials produced may be seen by all. Finally, institutions must decide if they can really afford to give away their materials at no charge. Any institution adopting an OER policy must have an efficient model for sustainable OER development. There are several models, but all are largely supported by donor funding.

Concerning OER use, institutions must ensure that the content is appropriate. This raises the issues of culture and language. For example, a concern was expressed that academics might adopt content from around the world without adapting it to the local situation. OER needs to be translated, both culturally and linguistically, and "localized" – made accessible to the learner in his or her setting. Collaborative development was proposed as one solution to translation and localization issues.

Serving learners

OER is viewed as having the potential to provide greatly enhanced opportunities for independent learning. This is clearly important in countries where the higher education system cannot meet the demand. The high rate of change and development of new knowledge also means that adults cannot rely on their initial education to fit them for life. They will need to learn new skills. OER provides significant opportunities for lifelong learning. Indeed access to OER may be a very important contribution to promoting informal learning, when a credential is not necessary.

Supporting faculty

Academics play the most important role – they may be producers of OER, users, or both.

As producers, they must recognise the importance of creating materials for the purpose of their own institution first and foremost. Materials that first are valued and work in at least one learning context are more likely to be of ultimate value and use in others. Intellectual Property Rights are an acknowledged challenge – not all academics may agree to give them away. The flipside of this is that few academics own the rights to all of their teaching materials – many incorporate third party sources. OER production is therefore best taken into consideration at the beginning of the production of any set of materials, so that rights may be acquired or alternative sources found. Finally, academics expressed concern about how their material would be used.

As users of OER, academics need to know how to find content, how to decide what is good, and how to best use it. Nearly all OER will need some degree of adaptation if it is to work effectively in a new teaching context; adaptation that takes skill, time and resources. Finally, the prevailing institutional culture may result in a reticence to using material developed by another academic. Academics that that put their skill and time into adapting someone else's materials may not find their work acknowledged or valued by colleagues.

Leadership

Finally, it is clear that planning for the development or use of OER demands leadership from the head of the institution if it is to be more than experimental and project based. Policies, procedures and strategies will therefore be needed.

Charles Vest, the President of MIT at the time of the creation of the OpenCourseWare initiative underlined in a recent article four issues to be addressed. They were Intellectual Property Rights, quality control, cost and bandwidth. The first three relate to institutional efforts to release OER materials. The fourth issue, however, points to a barrier in developing countries that contributes rather than alleviates the digital divide.

Despite these challenges, Charles Vest is hopeful for the future. Sir John Daniel introduced the term "mega-university"; Charles Vest introduces the concept of the meta-university.

> "...My view is that in the open access movement, we are seeing the early emergence of a meta-university – a transcendent, accessible, empowering, dynamic, communally constructed framework of open materials and platforms on which much of higher education worldwide can be constructed or enhanced.
>
> ...If this view is correct, the meta-university will enable, not replace, residential campuses, especially in wealthier regions. It will bring cost-efficiencies to institutions through the shared development of educational materials. It will be adaptive, not prescriptive.
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> ...The emerging meta-university, built on the power and ubiquity of the Web and launched by the open courseware movement, will give teachers and learners everywhere the ability to access and share teaching materials, scholarly publications, scientific works...thereby achieving economic efficiencies and raising the quality of education through a grand and noble endeavour."

ICDE leadership

The distance teaching institutions of the world have much to contribute to the debate and advancement of the OER movement. Most of the material you produce is in electronic form, which means that it has the potential to add to the stock of OER worldwide. And, more than most, as heads of distance teaching institutions you understand and have addressed many of the policy and implementation issues facing institutions wishing to develop and use Open Educational Resources.