IIEP Forum:
Open Educational Resources and Open Content for Higher Education

Draft Summary of Session 2
Perspectives of the providers and issues related to provision
31 October - 11 November 2005

This is a summary of the second session of the forum organized by UNESCO's International Institute for Educational Planning (IIEP) on **Open Educational Resources and Open Content for Higher Education**. The number of participants continued to grow to more than 460 from 87 countries.

The objective of the second session was to support reflection on the provision of Open Educational Resources (OER) and some of the related issues by:

- presenting examples of (OER) in four different institutions;
- raising some of the key issues related to the development and expanded use of OER.

During the first week, four examples of institutional OER initiatives were presented by the following discussants:

- Anne Margulies, Executive Director, OpenCourseWare (OCW), Massachusettes Institute of Technology
- Richard Baraniuk, Director, Connexions, Rice University (RU)
- Candace Thille, Project Director, Open Learning Initiative (OLI), Carnegie Mellon University
- David Wiley, Director of the Center for Open and Sustainable Learning (COSL), Utah State University.

These institutions were selected to illustrate different lines of OER development in differing institutional settings and each was described in the Background Note for the session (including key issues, challenges and rationales). However, in order to broaden the discussion, forum participants were invited to identify and describe OER developments of which they were aware.

In the second week, the discussion moved to the consideration of key issues related to OER in higher education, and two of these – faculty experience and copyright – were raised by two discussants:

- Steven Lerman, Chair of the OCW Faculty Advisory Committee
- Lawrence Lessig, Chairman of Creative Commons.

It should be noted that this overview is not meant to be an exhaustive summary of Session 2 discussions, but rather a distillation of the key themes and some of the related issues. It is hard to do justice to the richness and variety of the almost 200 messages that were exchanged.

1.   Importance of OER and communicating its benefits

It was clear from the messages that OER is perceived as having great potential value – for individuals, institutions, and indeed higher education globally. As was emphasized in the first session of the forum, the benefit of OER for learners and global education is readily apparent. However, the possible benefit for institutions, and particularly faculty members, remains less clear. Although participants reported a growing awareness of OER, many emphasized the need to further promote awareness of the institutional

benefits that were outlined in the summary of Session 1, and to provide incentives for faculty to become actively involved.

2.   Benefits and Barriers within the Institution

Faculty experience and involvement

Faculty involvement is one of the major challenges confronted by institutions involved in OER development. Widespread concern was expressed over the level of participation among professors that would be needed to ensure broad subject area provision, up-to-date material and a comprehensive curriculum. The quality, relevance and amount of OER content is in large part a function of the time and effort devoted by the faculty member to the course.

What factors influence faculty involvement/commitment? It was suggested that very few institutions have implemented incentive programs for instructors to either produce or use OER, mainly due to institutional reticence and a deeply entrenched academic culture. This could be due in part to a growing need among universities to claim ownership of faculty research in order to generate profit and enhance institutional competitiveness. Concerns over intellectual property rights constitute another barrier.

Several recommendations were put forth to promote faculty involvement in OER development. It is important to enhance faculty awareness of the risks and benefits of OER development, as well as the practical aspects of this activity. For example, MIT's use of non-commercial licenses has facilitated faculty participation in the project (although this could be a potential barrier for OER initiatives like Connexions). Other recommendations included creating and adopting faculty recognition and rewards systems and developing new measures of peer recognition, such as annual OER awards. The model of COSL's EduCommons is neutral with respect to the degree of commitment that a faculty member invests in a course, and could encourage more participation in the future.

Forum participants emphasized the need to create a more efficient institutional model for faculty involvement in OER development, with respect to both time involvement and costs. The MIT-OCW published material is static, offering a 'snapshot' of course materials as used in a particular term by a particular instructor. This model tends to replace courses with newer 'snapshots' rather than updating courses, and does not require an ongoing time commitment from faculty members. Any changes to a published course are made with the faculty member's approval.

It was argued that it may be best that the author generate OER for his/her own (or institutional) needs first, and later expand and adapt it for other end users. This approach would enable faculty members to satisfy individual/institutional needs, as well as address issues such as the localization/relevance of content.

Intellectual Property Rights, Copyright and Creative Commons licenses

The assignment of Intellectual Property Rights (IPR) is a major source of concern among faculty members involved in OER development. Many participants claimed that there is a lingering perception among professors that their content will be used improperly or without appropriate credit or permissions.

Several institutional models designed to address IPR were put forward for consideration. One simple solution would be to systematically insert the name of the author, institution where first published and

type of license on every single page of material. A significant number of participants had adopted Creative Commons licenses. Creative Commons licenses allow users to modify, distribute or "make commercial use of the work" as long as the original author is credited. Individuals who make changes to modules are not attributed in the Creative Commons license, nor is the place of publication stated.

- Institutions need to promote a greater understanding of IPR among faculty members and articulate the specific terms of the licensing agreement, addressing questions such as:
- Does the published material remain the property of the faculty member who produced it?
- Can faculty request material to be removed from the user site?
- Can material be updated or amended only upon faculty approval?
- Can content be exclusively used by non-profit educational organizations, or can for-profit institutions have access?

Several participants announced plans to implement an 'information campaign' to explain the terms of institutional OER licensing agreements to faculty members.

Costs and funding

Cost reduction was identified as an ongoing challenge for institutions involved in OER development. The costs associated with OER production rise with the development of more cognitively informed and interactive courses. Developing web-based lessons that are as good as or better than traditional face-to-face pedagogical methods requires substantial resources. Costs include the time of the team that designs, tests, and iteratively improves the courses, as well as development costs for effective simulation and feedback systems. The key to cost-effectiveness might reside in improving the scalability and transferability of the development process. Several participants pointed to external funding sources, such as the William and Flora Hewlett Foundation, but long-term economic sustainability models need to be explored.

Student support and experience

There is a paucity of data and research on the student experience with OER. Forum participants emphasised the need to implement systematic data collection mechanisms to track student expectations against experience. It would be helpful to have information on:

- which student support systems are in place and what is their level of effectiveness;
- what are the levels of student/teacher and student/student interaction in online courses;
- which online tools might best hone the learner's practical skills to enhance future employability.

Examples of OER student support systems were discussed. Several institutions offer students the possibility of asking questions or requesting clarification from the course instructor or other students through e-mail or discussion forums. The need for a moderator to ensure the relevance and accuracy of information disseminated through online interactive forums was raised. One institutional OER support system reported enables instructors to directly target areas of student need and maximize the effectiveness of student/teacher interaction time by anticipating learner problems or questions. As students work in the interactive digital environment, their actions are logged and the information fed to the instructor. The rationale is to gain insight into learning methods and identify areas where additional student support might be required. Several participants indicated plans to undertake further studies on the student experience in OER, and experiment with new support mechanisms, such as virtual cohorts of learners.

3.   Benefits and Barriers for global education

Accessibility and institutional reticence

It is important to widen access to OER, particularly to previously underserved sectors of society, such as rural areas, women and disabled users. A range of practical suggestions was proposed, from technological improvements related to the delivery of materials to funding mechanisms for OER. The main challenge in widening OER access will be to address the issues of institutional reticence and the prevailing academic culture.

The impact of the 'growing commercialisation' of higher education as opposed to the 'openness' of OER generated considerable debate. There appears to be a growing tension between the 'ethical push' to promote open access to knowledge and the need for university managers to "maximise income from their key assets." How can OER fit into the increasingly commercial, financially and intellectually competitive framework for higher education, or "are we actually talking about two entirely different higher education models"?

The issue of both institutional and faculty 'openness' to OER needs to be addressed. The institutional benefits of making OER content freely available include promoting institutional recognition, as well as potential collaborative learning environments to enhance quality of provision. It was emphasised by several participants that 'openness' and production of OER should be incorporated into scholarly training and practice for both university faculty and managers.

Local relevance, adaptation and translation

The issues of local relevance and translation of OER materials were a central theme of the discussion. Local relevance is important with respect to OER content and to the learning process. Not only does the English language currently dominate OER provision, but courses tend to be based on Western learning theory. This limits both the relevance and accessibility of OER materials in other settings.

An obvious option to facilitate the localisation and translation of OER content is to develop partnerships with local faculty and institutions. Some forum participants had experience in collaborating with local translation services to overcome language barriers, although the issue of quality control in relation to translation was noted.

It was suggested that content development using a modular approach could facilitate local adaptability and reusability, although several participants noted that this may be too 'unstructured' for some users. The translation of materials was generally reported to take place at the individual modular level, as this enables the ongoing modification of material to be incorporated as the translation is being prepared.

Several participants appealed for a shift away from the 'top-down' approach to OER content creation. Rather than attempting to create OER that can function in every context, the emphasis should be on developing material that solves "specific instructional problems, and makes sure that a given solution at least works for someone." The idea is to enable other institutions to adapt these materials to meet their specific institutional and local needs. Providing sufficient contextual information about the content (the target audience, explaining why an author included/excluded the information) might facilitate local adoption and adaptation. In addition, user institutions could take responsibility for adapting or situating courses in the local context in order to enhance the local relevance of content and meet market demands.

Quality assessment and pedagogical approach

Ensuring the quality of educational content is high on the list of policy issues in higher education. Should OER be subject to the formal accreditation processes prevalent in traditional higher education settings? And if so, how could this be achieved? Would accreditation constrain OER development, particularly the adaptation and localization of content?

One option for an institution to rank its own content is to put in place user feedback mechanisms. However, different users have differing conceptions of what constitutes 'high quality.' Another approach would be to enable user institutions to conduct their own quality assessment of OER content. For example, an organisation could limit user access to those nodes or courses that meets its institutional self-determined quality standards through a "lens" or portal to the source OER content site. The idea of an international accreditation body was put forward, although several participants suggested that a more feasible option might be a university consortium-led body with the power and authority to establish and maintain quality standards at the national or regional levels.

Pedagogical approaches and technological requirements constitute other important barriers to widening access to OER. There is a need to collaborate to make highly interactive virtual environments more accessible to underserved groups such as disabled users, and to developing countries. In certain countries, a federal set of web accessibility guidelines exist (e.g. Section 508 guidelines in the United States), but some participants noted that their OER models do not generally comply with these frameworks.

OER in developing countries

David Wiley commented that "When educational materials can be electronically copied and transferred around the world at almost no cost, we have a greater ethical obligation than ever before to increase the reach of opportunity." Developing Open Educational Resources in lower-income countries where poor connectivity and inadequate infrastructure remain important barriers to access was cited as an important challenge.

"There seems to be a tension between the desire to provide rich digital learning materials – which usually demand more complex technologies – and the desire to make learning materials as widely available as possible – which often demands much simpler technologies." A balance should be achieved between offering high-quality, efficient virtual learning environments and delivering OER courses to areas in which Internet access is low and/or very expensive. Creative solutions are needed - one option might be to explore the creation of local servers that can be updated remotely.

Scanning OER material would pose a problem to many universities due to lack of time and resources. This constraint points to the advantage of working with a partner organization/institution in a developing region to produce a list of Open Educational Resources that might be most useful for universities of the specific region. It would be advantageous to track successfully utilized OER in universities of Africa or other developing regions.

A major challenge is to build instructional design capacity in the developing world. The support of instructional designers would allow authors to become more active in OER production and to adapt content to meet their specific individual/institutional/local needs. On a related note, partnerships between countries could promote capacity-building and training of local staff in OER production and use.

Institutional collaboration and interaction of different OER models

Much interest was expressed in promoting institutional and regional collaboration in OER development. According to a number of forum participants, a consortium-based approach would address several key issues, such as, the contextualization of materials for local delivery, cost-sharing between multiple actors/countries and increasing student access to university programs that are heavily over-subscribed. However, it was widely acknowledged that the management and governance of this process raises a multitude of complex issues, including IPR, quality assurance and cross-institution curriculum mapping.

The approach of institutional course-based material was contrasted with the Learning Object Repository model. It could be easier to use course-based materials than Learning Object-based materials because the course-based model better corresponds to 'traditional' educational approach and values. It provides exemplar courses that will be particularly useful for those academics seeking to construct a new course or revise an old one, and it can also help to improve and stimulate new ideas and techniques for course delivery. However, forum participants cited advantages and disadvantages to both approaches and acknowledged that they often serve different needs. While course-based materials generally provide a more 'natural context' around the materials, they also tend to be more static than those materials in Learning Object Repositories.

Nobel Laureate Herb Simon's words resonated with the widespread interest expressed by forum participants in building shared communities of content provision and promoting knowledge-sharing among institutions involved in OER production: "Improvement in post-secondary education will require converting teaching from a 'solo sport' to a community-based research activity."

The objective of the IIEP forum is to increase awareness of current developments and the future potential of Open Educational Resources. The forum appears to be appreciated by the participants as an information sharing exercise, but it also appears that it is beginning to act as a catalyst for future institutional collaboration.