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"Taking the Open Educational Resources (OER) beyond the OER Community: Policy and Capacity"

> Issues Paper <

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TAKING OER BEYOND THE OER COMMUNITY: POLICY AND CAPACITY

> Issues Paper prepared for a UNESCO Policy Forum <

1 December 2010

1. EXECUTIVE SUMMARY

 "*At the heart of the movement towards Open Educational Resources is the simple and powerful idea that the world's knowledge is a public good and that technology in general and the Worldwide Web in particular provide an opportunity for everyone to share, use, and reuse it.*"[i]

After sketching the background and providing some definitions of Open Educational Resources (OER), open licensing and open educational practices, this paper written for the UNESCO Policy Forum on "*Taking OER beyond the OER community: Policy and Capacity*" held in the framework of the UNESCO/Commonwealth of Learning (COL) OER project in higher education initiated in 2010, presents a brief overview of some of the issues that have arisen around the development and use of teaching and learning resources in higher education and how these might be resolved using OER.

The issues, identified in online discussions moderated by UNESCO that took place in 2008-2009 and more recently in a series of four capacity building workshops and three online discussions jointly arranged in 2010 by UNESCO, and the Commonwealth of Learning (COL) include *inter alia* the development and dissemination of quality teaching and learning resources, the massification of higher education, maximising the investment in education, and copyright and licensing. The issues are grouped into four categories, namely economic issues, licensing issues, social issues and technical issues.

Much progress has been and is being made but it has become increasingly clear that there is need for a more concerted effort on the part of governments and institutions of higher education to

- determine new policies to support the development and re-use of OER and by so doing to maximise investment in higher education;

- develop policy tools to support increased access to quality materials and the enhancement of capacity;

- develop capacity in OER; and

- support the improvement of national ICT infrastructures.

2. BACKGROUND

In a joint partnership UNESCO and the Commonwealth of Learning (COL) initiated a project in 2010 entitled "*Taking OER beyond the OER Community: Policy and Capacity*". The main objective of this initiative was to build on the considerable work that has already been done around the world by spreading awareness and understanding of OER beyond the community of practice that has already developed around them.

2.1 EARLY INITIATIVES

The need to collaborate in the development of quality teaching and learning resources is not something new, not something that was initiated in the 21st century but has its roots firmly embedded in history. For example, Socrates and other philosophers of his time collaborated with one another in the acquisition and dissemination of learning. In the recent past there has been a lot of activity around OER but this activity has largely been contained within a relatively closed community. There is, therefore, a distinct need to bring the OER activities and developments into the open so that more may know of and participate in its benefits.   The technological advances of the past decade have also provided the necessary impetus and technologies to facilitate broader collaboration and content sharing.

A number of important international events that have taken place in the past decade have yet again highlighted the need to collaborate to enable global transformation and facilitate knowledge sharing.

At a forum specially convened by UNESCO in July 2002 with the theme "*The Impact of Open Courseware for Higher Education in Developing Countries*"[ii], the then Deputy Assistant Director-General, Communication and Information Sector at UNESCO, Mr Claude Ondobo, noted that "*knowledge has become a principal force of global transformation*" but that "*access to knowledge (alone) will not be enough*".

The Second Global Forum on International Quality Assurance, Accreditation and the Recognition of Qualifications in June 2004 recommended "*widening access to quality open educational resources*"[iii] by raising awareness and the adaption of OER.

During the Tunis phase of the World Summit on the Information Society (WSIS) held in 2005 a web portal for OER for developing countries was launched[iv]. The portal aims to improve access to education and life chances for people in developing countries. It provides free web-based educational materials for educators, students and self-learners for teaching, learning and research purposes.

"*Between 2005 and 2007, a Community of Interest of more than 600 members from over half of the 193 Member States of UNESCO took part in online discussions on Open Educational Resources (OER) – open content for education*"[v]. In these discussions, , the international OER community highlighted six priority areas relating to OER. These were awareness raising, building communities and networks, developing capacity, quality assurance, sustainability and licensing issues.

The 2009 World Conference on Higher Education (WCHE) with the theme "*The New Dynamics of Higher Education and Research For Societal Change and Development*" (UNESCO, Paris, 5 – 8 July 2009) noted that "*ODL approaches and ICTs present opportunities to widen access to quality education, particularly when Open Educational Resources are readily shared by many countries and higher education institutions*"[vi].

At the 35th session of UNESCO's General Conference in October 2009 (Resolution 35 C/Dr.40) the USA proposed strengthening an action adopted at the WCHE earlier in the year (clause 13 of the Communiqué).   The amendment to the resolution noted that "*National capacities strengthened in higher education policy formulation and reform, promotion of research, quality assurance and ICT-enhanced learning content and materials such as open educational resources*"[vii] and so included OER.

The UNESCO/COL initiative, '*Taking OER beyond the OER Community: Policy and Capacity*, launched in 2010 is a response to the above international events

2.2 OPEN EDUCATION RESOURCES – WHAT ARE THEY?

Various arguments have been presented to the effect that OER have the "*potential to restore (the) core values of building and sharing knowledge that underpin good education and systematically encourage us to work with and learn from each other*"[viii] (Butcher 2010); can maximise investment in education in general and higher education in particular; and will advance the Millennium Development Goals (MDGs), particularly those associated with Education for All (EFA).

But what are Open Educational Resources? The concept of OER was first mooted during the UNESCO Forum on Open Courseware held in 2002. Over a period of time the original definition has been further developed and is now differently defined, used and understood. Put simply OER are "*teaching, learning and research resources that reside in the public domain or have been released under an intellectual property licence that permits their free use or re-purposing by others*" (William and Flora Hewlett Foundation). Said differently OER are "*educational resources that are freely available for use by educators and learners, without an accompanying need to pay royalties or licence fees*" (Butcher 2010).

Strongly linked to OER is the development of broad frameworks that govern how OER are licensed for use. These frameworks were developed out of the successes of the licensing approaches used for free and open-source software (FOSS). The most developed of these frameworks for non-software resources is the Creative Commons licences that provide "*legal tools to mark creative work with the freedom the creator wants it to carry, so others can share, remix, use commercially, or any combination thereof*"[ix] (Creative Commons). The other more formalised framework sometimes used in the OER community is the GNU FDL (Free Documentation Licence)[x] but relative to the CC licence this framework is quite complex.

OER should not be seen in isolation as they are part of a process of open learning. Recent trends have included "*open technologies that facilitate collaborative, flexible learning and the open sharing of teaching practices that empower educators to benefit from the best ideas of their colleagues. It may also grow to include new approaches to assessment, accreditation and collaborative learning*"[xi]. Ehlers (2010) talks of the big shift from open educational resources to open educational practices. Research that he and others have done has shown that the use of OER has implications for teachers, students, leaders of educational organisations and policy makers if educational practices in an organisation are to be opened.

2.3 CURRENT INITIATIVES

The current joint UNESCO/COL initiative "*Taking OER beyond the OER community: Policy and Capacity*" aims to expand the understanding of OER by educational decision makers and quality assurance experts in order to promote their wider use. The main objectives of the initiative, focusing primarily on Africa, Asia and the Pacific region, are to:

1. ensure greater support for the use of OER created and used both in developing and developed countries by educational decision makers (governmental and institutional); and

2. enhance capacity of educational practitioners in developing countries to create and use OER.

As part of the initiative a dossier[xii] was developed that was used as the basis for a series of capacity building workshops, online discussion forums and this policy forum. Four capacity building workshops were held in Cape Town, South Africa (28 April 2010); Windhoek, Namibia (3

May 2010); Bamako, Mali (4 October 2010); and Kochi, India (23 November 2010). The objectives of these workshops were to:

- improve the understanding of OER and acknowledge them as a legitimate and promising option for Higher Education;

- discuss how OER can influence the development of an institution of Higher Education;

- better understand how OER affects the quality within Higher Education Institutions;

- examine how the quality assurance agencies may include OER in their approaches to quality assurance and accreditation;

- examine how OER can incorporate both local and global contributions, and produce graduates with the skills, knowledge and competences that our times require;

- contribute to the policy debate relating to the use of OER in Higher Education; and

- discuss quality assurance issues related to OER.

The online discussion forums each lasted a week and used an electronic mailing list to which all participants could post e-mail messages using their existing e-mail program. The themes of the three online discussion forums were:

- Forum 1 (23 - 29 September 2010): Taking OER beyond the OER Community: Policy and Capacity

- Forum 2 (20 - 26 October 2010): What works, what does not and under what conditions?

- Forum 3 (15 - 19 November 2010): Copyright and the development and re-use of OER

Each of the discussion forums was initiated by an expert who posted a short discussion paper[xiii]. The discussants were Mr Neil Butcher(South Africa) Ms Catherine Ngugi (Kenya), Dr Ulf-Daniel Ehlers (Germany), Dr Venkataraman Balaji (Commonwealth of Learning) Dr Tobias Schonwetter (South Africa) and Ms Barbara Chow (Hewlett Foundation).

The forum platform is ongoing and now provides a space for information sharing amongst more than 340 participants from around the world.

3. MAIN ISSUES

The capacity building workshops and online discussion forums that formed part of the "*Taking OER beyond the OER community: Policy and Capacity*" initiative identified a number of very important issues that need to be addressed in more detail in order to effectively harness the potential of OER in higher education. These issues, that form the basis of the Policy Forum, can loosely be grouped into four categories, namely economic, licensing, social and technical.

3.1 ECONOMIC ISSUES – Affordability, Sustainability and Collaboration

(a) Maximising investment in higher education

It is critically important that investment in education is maximised as it not only impacts on the social benefits that this brings to people's lives but it also contributes to financial benefits for the population and for governments.

It is a widely acknowledged trend that the costs of higher education are increasing and that one of the cost drivers contributing to this increase is the cost of teaching and learning materials. Various organisations (including higher education institutions) and governments across the globe have considered ways of reversing the trend by giving serious consideration to using OER to reduce costs. Recent examples include

- the California Community Colleges where an act has ensured the integration of OER into their core curriculum as well as a dramatic reduction in the cost of textbooks[xiv];

- Rice Universities Connexions project[xv];

- Open Universities OpenLearn project[xvi]

These cost reductions mean that funds that would normally be used for procuring teaching and learning materials can now be used elsewhere in the system, for example for teacher training, equipment procurement, infrastructure development, etc. In the words of Prof. Andy Lane (former Director of the OpenLearn initiative at the Open University in the UK) "*the benefits of sharing should be to improve the range of resources available so as to allow teachers more time to interact with their students*"[xvii].

(b) Need to re-assess how academics are evaluated for tenure

Higher education institutions need to invest in quality teaching and learning resources. This can either be done by continuing current practices of prescribing resources (more often than not written by someone not at their own institution) or they can revisit the value to be obtained in collaboratively developing quality teaching and learning materials.

In most institutions of higher education across the globe academics are evaluated for promotion and tenure based primarily on their research output. The consequence of this is that the academics spend the majority of their time doing research and very little of their time developing teaching and learning materials. Consideration needs to be given to balancing the research and the materials development aspects of an academic's work.

Furthermore, *the criteria in which academics are evaluated has evolved.. towards a more holistic conception of their work*" (Daniel, 2010)[xviii]. This change in thinking is bringing about an increasing willingness on the part of academic staff to become more involved in the collaborative development of quality teaching and learning resources that are helping to reduce overall costs.

(c) Financial sustainability

Reduction in the cost of resources is often cited as a potential benefit of OER. There is, however, currently very little empirical evidence to support this assertion. A recent analysis of open content and the costs of online learning conducted by Tony Bates[xix] showed that roughly 13% of the total cost could be attributed to resource development. The major cost (36%) is attributed to the delivery of the resources and every effort needs to be made to reduce this cost.

In a paper[xx] presented by Cheryl Hodgkinson-Williams at the Cape Town and Windhoek capacity building workshops she suggested that indirectly the use of OER could

- lead to increasing numbers of registrations at higher education institutions thereby increasing the available funds;

- lower marketing costs;

- enable a new business model through offering a diverse range of services around OER; and

- allow for the development of alternative funding streams.

Each of the above could potentially unlock existing funds within the budgets of higher education institutions that could then be used in the development of quality teaching and learning resources.

(d) Collaborative development of materials drives down costs

With assistance from a number of international partners the Virtual University of the Small States of the Commonwealth has jointly developed OER and has made them available for use and re-purposing by all. Collaborative development reduces costs at any single point and so drives costs down at that point.

3.2 LICENSING ISSUES

(a) Licensing

It has been argued that the form of copyright that normally prevails in published works ("*All Rights Reserved*") is restricting access to knowledge, particularly in developing countries where the cost of books is often prohibitively expensive leading to instances where textbooks are often not available or have to be shared amongst large numbers of students. In a study[xxi] in 8 African countries Schonwetter et al found that copyright regulations are knowingly infringed in order to access knowledge.

In addition access to new research articles and journals (frequently online) can be difficult as it is often restricted. With the rapidly increasing numbers of students there is going to be an exponential demand for access to resources and an increasing inability to meet the growing demand in many developing countries.

Access to knowledge is critical for expanding education in particular addressing the many issues around Education for All. By amending the licensing environment it is possible to increase accessibility to information and knowledge thereby allowing countries to achieve their Millennium Development Goals.

Rapid advances in technology have created a situation where current Licensing agreements and conventions need to be reviewed. Digitisation of resources, developments in handheld devices (e.g. Smartphones and e-book readers) and widening access to networking technologies (e.g. the Internet) now make reproducing and disseminating resources very easy. In the words of Hofman & West "*copyright is now having to come to terms with new technology that is changing how copyright works are made and distributed*"[xxii].

Various international agreements and conventions govern copyright: these include the Berne Convention, the agreement on trade-related aspects of intellectually property rights (TRIPs) and various national policies and Acts. In 2001 Lawrence Lessig and others developed the Creative Commons (CC)[xxiii] licences that have now become the most frequently used open licences for non-software resources.

CC licences distinguish between four rights of copyright holders, namely attribution, share alike, non-commercial and no derivative works. Used singly or in combinations 11 different types of open licence become available of which only 6 are used.

The diagram on the next page shows the "spectrum of rights"[xxiv] from most restrictive on the left through the Creative Commons forms of licensing to the least restrictive, being resources placed in the public domain. The reader will note that an author (or group of authors) can, therefore, publish their work in accordance with a number of different licence options.
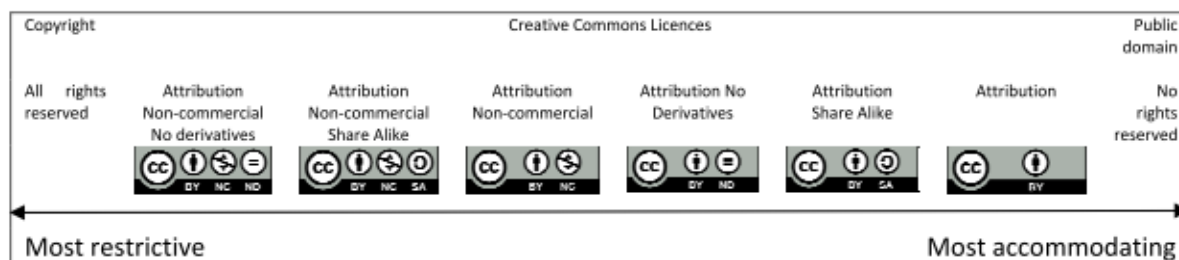
During the capacity building workshops and online discussion forums organised within the joint UNESCO /COL initiative participants repeatedly recommended that where public or donor funding has been used in the development of resources, these resources should be published under one of the Creative Commons licences so that the materials can be more accessible.

3.3 SOCIAL ISSUES

(a)   Raising Awareness and Building Understanding

In the UNESCO publication "*Open Educational Resources: Conversations in Cyberspace*" (2009)[xxv] Susan D'Antoni and Catriona Savage recommended that "*awareness raising at the international level among UNESCO Member States will continue. However, this action must also be complemented by awareness raising actions at other levels. A strategy is needed, as well as useful resources for activities such as workshops*". This statement echoed the findings of the series of international events listed in Section 2.1 of this paper.

UNESCO, in partnerships with COL raised this discussion to a higher policy level through their OER Initiative, 'Taking OER Beyond the OER Community: Policy and Capacity'. The UNESCO/COL initiative highlighted the need for continuing awareness raising activities particularly at regional, national and grassroots (institutional) levels.

Participants at all of the capacity building workshops, held in the framework of the above UNESO/COL initiative highlighted the need for UNESCO and COL to produce policy guidelines, case studies of best practice, support documents for quality assurance agencies, and the provision of ongoing support to governments, institutions, academics and other stakeholders for the effective integration of OER in quality higher education processes.

(b)   Quality assurance

There is an implicit requirement for OER to be and to be seen to be of high quality. OER, therefore, needs to be quality assured at both institutional level, as well as at an external level. Peer review has had a central place in research for decades and this process should naturally be extended to the development of learning resources in the OER arena. Other processes have also been adopted to ensure quality – these include editorial boards, independent reviewers and community reviews.

Institutions that publish their learning materials as OER materials (e.g. MIT, the UK's Open University and the African Virtual University) obviously also put their integrity on the line. For them it is essential that the OER are of a high quality as it impacts directly on their reputation. Many have consequently strengthened their internal institutional quality controls so as to ensure high quality materials.

Workshop participants highlighted the need for quality assurance agencies to include additional requirements in respect of OER, for an institutional approach to the development and use of OER through adapted processes and policies, and for internal and external quality assurance mechanisms to work closely together to develop mechanisms to ensure quality.

(c)   OER leads to collaboration between institutions and across countries

At the WCHE, Professor Barney Pityana (then Vice-Chancellor of the University of South Africa), raised the concern that OER would promote a form of intellectual neo-colonialism whereby the North develops and the South consumes. This was initially the case. Nonetheless, are now many examples, such as TESSA and AgShare (both African OER initiatives), where the developing countries are taking the lead. These initiatives along with many others are expanding access, raising quality and cutting costs of higher education, thereby maximising the investment in education.

(d)   OER leads to Open Learning

In his blog Prof. Andy Lane reports that OER has opened access to materials and learning that were not previously available. He cites examples of where students at one university are

consulting OER resources at another university to support their own understanding of their field of study thereby building a greater depth of knowledge. In some instances students are, in fact, broadening their knowledge base by accessing OER materials outside of their specific field of study.

3.4 TECHNICAL ISSUES

(a)   Infrastructure

The WCHE 2009 Communiqué (clause 14) highlights that "*the application of ICTs to teaching and learning has great potential to increase access, quality and success. In order to ensure that the introduction of ICTs adds value, institutions and governments should work together to pool experience, develop policies and strengthen infrastructure, especially bandwidth*".

One of the major challenges facing many developing countries is the lack of appropriate infrastructure, especially Internet access. Many of the successful OER projects that have been undertaken in developing countries have taken these infrastructure challenges into account and make OER available as print materials, on CD/DVD or via an institution's local area network.

The cost of the latest technologies is also rapidly decreasing. Many hand-held devices previously out of reach of many in developing countries are now becoming more readily available and could significantly aid in the dissemination of digital teaching and learning resources.

(b)   Access to the Internet

Access to the Internet is not essential but will most certainly facilitate not only dissemination of resources but also the collaborative development of teaching and learning materials and the management of the learning process. Fortunately "*more and more governments across the globe have recognised the revolutionary power of ICT as a driver of sustainable economic growth and an enabler of better living conditions for their citizens. They have increasingly put ICT in a prominent position in their general competitiveness strategies and national agendas*" (Global Information Technology Report 2009-2010, WEF). The unfortunate aspect is that the digital divide continues to exist with developing countries still relatively low on the international Network Readiness Index[xxvi] table. Concerted efforts, however, are being made by many governments and major multi-national consortia to not only improve access to the Internet for the education system at all levels but also to significantly reduce costs.

4.   CONCLUSIONS

Many of the participants of the "*Taking OER beyond the OER Community: Policy and Capacity*" workshops highlighted that OER processes have the potential to increase accountability and to improve transparency that will ultimately lead to open learning and ready access to knowledge. Some suggested that OER could revolutionise higher education by providing access to better quality content, that access to a broad range of resources that include not only their teachers and the standard textbooks but also OER would increase self-directed learning amongst students.

What is clear is that OER will broaden access to higher education, will improve quality not only of the resources being used but also of teaching practices, and could potentially lower overall costs. OER can facilitate intellectual exchanges that are genuinely multi-directional and multi-national, and, in the words of Sir John Daniel, CEO of COL, Open Educational Resources are coming "*ready or not*" so higher education institutions need to adapt their policies and practices to take account of the OER revolution and governments need to provide opportunities within a broad policy framework for this to happen.

5. GLOSSARY

AGSHARE	*A project to create a scalable and sustainable collaboration of existing organizations for African publishing, localizing and sharing of teaching and learning materials that fill critical resource gaps in an African MSc agriculture curriculum and that can be modified for other downstream uses.*
CC	Creative Commons
CIS	Commonwealth of Independent States. *Former Soviet Republics created during the breakup of the Soviet Union.*
COL	Commonwealth of Learning
EFA	Education for All
FDL	Free Documentation Licence
FOSS	Free and Open Source Software *Software that is licensed in such a way that users are granted the right to use, change and improve the design.*
GNU	*A free software and mass collaboration project announced in 1983. Wikipedia was originally published under this licence.*
IITE	Institute for Information Technology in Education
MDG	Millennium Development Goals
MIT	Massachusetts Institute of Technology
ODL	Open and Distance Learning
OEP	Open Educational Practices "*A set of activities and support around the creation, use and re-purposing of OER, including the context within which these practices occur*" (Stephen Downes)
OER	Open Educational Resources
OpenAccess	*Unrestricted online access to articles published in peer-reviewed journals.*
OpenCourseWare	*Teaching and learning materials collaboratively created by universities and freely shared with users around the world who are linked to the Internet.*
Public Domain	*Resources not covered by any intellectual property rights, where the intellectual property rights have expired or where the intellectual property rights have been forfeited.*
TESSA	Teacher Education in Sub-Saharan Africa *TESSA brings together teachers and teacher educators from across Africa. It offers a range of materials (Open Educational Resources) in four languages to support school based teacher education and training.*
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WEF	World Economic Forum
WCHE	World Conference on Higher Education
WSIS	World Summit on the Information Society

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