

Democratising Education Through Open Education Resources (OER): The Commonwealth Experience



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*Democratising Education Through Open Education
Resources (OER): The Commonwealth Experience*

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It is an honour to be invited to the ICeL 2011 Conference on 'Optimizing and Empowering Online Education'. I am very grateful to the organizers for giving me this opportunity to bring to you some perspectives on how Open Education Resources (OER) can be harnessed to democratize education by increasing access, improving quality, cutting costs and reaching the unreached.

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I represent the Commonwealth of Learning, an intergovernmental body, established by Commonwealth Heads of Government and located in Vancouver, Canada with an office in Delhi. Our motto is 'learning for development'.

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We work in 54 Commonwealth Member States in all the regions of the globe as you can see from this map, and most of my examples will be from these countries.

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Our mission is to support Commonwealth Member States and institutions to harness the potential of distance education and Information and Communication Technologies for expanding access to education and training.

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My topic today is ‘Democratizing Education through Open Education Resources (OER): the Commonwealth Experience’.

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I will first look at the context of higher education and some of the initiatives that have been taken to democratise education. I will then bring you some examples of how OER are being used in Commonwealth countries. I will then reflect on some of the key challenges that prevent the take up of OER and will conclude with some initiatives that could help us address these challenges and advance us towards democratising education through the use of OER.

SLIDE 7 CONTEXT

The Commonwealth has a population of 2 billion people and of these 60% are under the age of 25. They are in need of education and training but lack of resources in many countries present a major barrier to human resource development.

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According to the World Bank, for countries to achieve sustainable economic development, the Age Participation Rates, that is the participation of the 18-24 year olds in Higher Education, must be in the region of 40-50%, which is the OECD average. But Age Participation Rates in South Asia are below 15 % and in SSA below 10%.

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Globally, age participation rates have grown from 19% in 2000 to 26% in 2007. In 2007, there were 150 million tertiary students globally, a 53% increase over 2000. In Asia there were 28.6 million tertiary enrolments in 1970. This number grew to 152.7 million in 2007, reflecting an annual growth of 4.6 %.

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In spite of this continued growth the Gross Enrolment Ratios in many Asian countries are below 20%. Governments are looking for alternative means of providing access to quality education to their citizens. Opening up education in various ways was one such option. It is true that massification has opened up

access to newer constituencies but has it democratized education? Democratisation implies not just the multiplication of numbers: it involves equalization of opportunities, opening of access, freedom of choice and a fair chance of success.

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Forty years ago, the Open University, UK was launched to open up education to large numbers of people. That was when the term ‘open education’ became popular and the model captured the imagination of policy makers around the world. The success of the British Open University led to a huge expansion in open universities, particularly in the developing world.

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Lord Crowther, the founding chancellor of the Open University of the UK’s statement of openness in relation to people, places, methods and ideas lays the foundations for the democratization of education.

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Many open universities do not insist on entry qualifications, allow learners to accumulate credits at their own pace and convenience and are flexible enough to allow learners to choose the courses they wish to study towards their qualification.

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The second generation of open education was shaped by the emergence and use of the internet and the world wide web. The first electronic course was launched in 1984 and the use of web-based programmes allowed learners the choice to study on campus or at a distance.

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Interactivity was a key aspect of the second generation with a higher level of personalisation through the use of ICTs. This led to more flexible and blended approaches. Many campus based institutions began to offer both face to face and distance learning programmes, thereby opening up access to newer constituencies. In this phase we see a convergence of face to face and distance education provision.

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Let us look at the growth of open universities which cover these two generations. In 1988, when COL began its operations, there were only 10 open universities in the Commonwealth—3 in Canada and only one in Africa

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Twenty years later, that is in 2008, the number of open universities in the Commonwealth increased to 27. You can see that only one remained in Canada, the other two having merged with campus universities to become dual-mode, marking the second generation of open education.

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Asia alone has over 70 open universities and the numbers continue to grow. India has 14 open universities which cater to 23 % of all higher education enrolments.

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At the turn of this century, we saw the beginnings of the Open Education Resource movement which is based on the idea that knowledge is our common wealth and that technology can help us share, use and reuse it. This seeks to open up education beyond what the open universities had originally intended. MIT's OpenCourseware initiative; Rice University's Connexions, the OpenLearn, of the Open University of the UK, among others initiated this movement.

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Let us briefly review what we mean by Open Education Resources. This phrase Open Education Resources was first coined at a UNESCO workshop in 2002. There have been several definitions since but here is one which captures the essence of OER. *OER are **teaching, learning and research materials in any medium** that reside in the **public domain** or have been released under **an open license** that permits their **free use** and in some instances, **re-purposing** by others*

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In short OER are educational materials which are free and freely available, are suitable not just for higher education but for all levels including primary and secondary education. OER can be reused and repurposed to suit different needs and could be available in any medium, print, audio, video, digital. One key difference between OER and other educational resources is that OER have an open license, which allows adaptation and reuse without having to request the copyright holder.

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In other words, OER can help address the issue of access to learning resources in a significant way. But, does free access to content guarantee learning and its outcome? Before proceeding to answer this question, let us see how OER has penetrated the education systems of the developing world. If anything, OER penetration in the developing world has been slower than in the industrialized countries. Yet there are emergent examples which give an indication of how OER are being used in low-resource contexts.

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The students of Bunda College of Agriculture, Malawi, had no text book on Communications Skills and were entirely dependent on lecturers. Now they have a textbook, 75 % of which is based on OER harvested from the web and supplemented with locally relevant activities, examples and assignments. A lecturer at the University of Jos, Nigeria discovered this textbook and has adopted it, an instance of south-south collaboration.

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Access can be opened up to new constituencies through translations. China Open Resources for Education (CORE) has translated MIT OCW materials into Chinese. COL's Instructional Design template, an OER, has been translated and adapted by the Open University of China. Materials from COL's website have been translated into Ukrainian.

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Many of you may have heard of the Indian Institutes of Technology or IITs. These premier institutes, in partnership with the government, have made their engineering and technology courses available as OER. These are being used in 509 institutions, most of them in remote locations with very limited resources. Both teachers and students are using the free IIT resources to improve the quality of their teaching and learning.

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The Teacher Education in Sub Saharan Africa, a partnership between the Open University UK and 18 institutions in 12 African countries has developed OER for teacher training in four languages: English, Kiswahili, Arabic and French. These were used by 320,000 teachers last year alone, and the free materials as well as the sheer numbers of users can radically reduce the costs of providing quality teacher training.

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My organisation the Commonwealth of Learning has initiated a six-country partnership to develop 20 sets of course materials in print and online formats, based on the secondary curricula of Botswana, Lesotho, Namibia, Seychelles, Trinidad & Tobago and Zambia. This has not only established communities of practice but has helped teachers and institutions save time and money by collaborating on the content development.

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The Virtual University for Small States of the Commonwealth (VUSSC) is a consortium of 32 small states which have come together to develop capacity in online course development. This is a university of,

for and by the small states of the Commonwealth. Several need-based courses on “Disaster Management”, “Tourism” ‘Entrepreneurship’ ‘Fisheries’ etc have been completed and are available on COL’s website. Teachers who had never developed a single page of online material are now training other colleagues.

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We have usually seen a one-way flow of knowledge from the developed to the developing world. OER can provide for a global exchange of knowledge. A lecturer at the University of Ghana, Medical College developed a simple procedure for a Caesarian section and video-taped it. It is now being used in the Netherlands. Similarly a lecturer at the Kwame Nkrumah University of Science and Technology, Ghana, who also happens to be a world authority on the buruli ulcer has developed an OER module which is being used by the World Health Organisation and the University of Michigan.

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Three Universities, the Otago Polytechnic, New Zealand, The University of Southern Queensland, Australia and Athabasca University, Canada, came together in February this year to develop the model for an OER University.

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The participating universities plan to put a percentage of their courses on their websites as OER so students anywhere in the world can access them. They will then recruit retired teachers and volunteers who will then provide free tutorial support to the students. Students pay only if they wish to take exams towards a qualification. This will cost students only 20-25% of what they would normally pay thus making higher education more affordable and accessible to anyone in the world. This could democratise education by providing opportunities to earn qualifications by anyone anywhere in the world

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While we can see benefits emerge in different contexts, these still seem to be isolated pockets. What are some of the key barriers that prevent mass take-up of OER? One major barrier is awareness. If you ask teachers in remote schools in India if they’ve heard of OER, the answer is no.

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The digital divide across the world is still alive and well. While in North America, there are over 80 computer and internet users per 100 persons, in Africa, the number of computer and internet users is less than 10 per 100 persons. So if we look at OER as ‘technology’ we certainly start with a very major disadvantage. The present debates in OER are *too focused on technology* and there is rarely any discussion on issues such as stakeholder engagement and the politics of power.

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As Manuel Castells (2009:50) put it:

....there is a fundamental form of exercising power that is common to all networks; exclusion from the network....However, because the key, strategic networks are global, there is one form of exclusion—thus, of power—that is pervasive....: to include everything valuable in the global while excluding the devalued local.

Castells (2009) explains that the *network-making power* operates on the basis of two mechanisms: i) the ability to constitute, program and reprogram networks and ii) the ability to connect and ensure cooperation. Many important stakeholders of education in Africa, South Asia and Latin America may be far beyond this network-making power due to regional, gender, class and ethnic factors. They are therefore excluded from these networks. Is it perhaps because of these inequalities that institutions and individuals from the resource-poor communities have had a limited role in the OER movement?

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What is the situation at the institutional level? Many educational institutions have traditional governance structures and teacher-centred pedagogic models. The OER initiative requires a learner-centred and decentralised approach. There is then a basic contradiction between the centralised institutional and decentralised OER approach. Will OER thrive in closed educational settings? What structural changes would be required to reap the full benefits that OER offer?

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A recent survey of how OER are being used in 13 Asian countries, sum up the key challenges that different constituencies face.

Teachers felt they did not have either the time or the capacity to locate, adapt, and re-purpose OER material relevant to their work.

Learners felt that OER should be fully open, half-open didn't help and materials should be accessible on alternative technologies such as mobile devices.

Technical support personnel said there were no standard practices in the packaging and re-use of OER.

Management was concerned about the challenges relating to intellectual property and copyright issues. Concerns regarding competition and revenues were also raised.

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How can we address these challenges to increase the take up of OER and promote real democratization of education? How can we promote the use of OER at the level of governments? How can we reach teachers

in farflung and marginalized communities? It is these communities that need most help to improve the quality of education. How can we make them partners in this movement?

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In order to raise awareness, COL has developed a 'Basic Guide to OER' developed jointly with UNESCO.

This month, UNESCO and COL also launched the International Guidelines for the use of OER. These are meant for five constituencies: governments, institutions, teachers, students and quality assurance bodies. These two documents are available as OER at our respective websites.

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Another strategy if effective localisation of content. Localisation is at the heart of the OER process. A PhD thesis submitted this year examines how OER are being used in 12 Community Technology Centres in remote regions in Nepal for providing non-formal education. The study concludes that the successful adoption of OER depends on effective localization and proposes 4 principles:

First, it is important to involve the locals and cast the OER into the language of the select constituency-- for example, a housewife speaks differently from a shopkeeper. Second, a community of practice is essential as it bolsters localisation . The community interacts through group conversations, or through social media and learn from each other. Third, the localization must be done in appropriate formats, which could be audio, text, video, wall newspaper etc. The fourth principle is that effective localization is proportional to the understanding of local contexts. While these principles have emerged from a non-formal educational project, how can we adapt them to the formal education sector to address the issue of effective use?

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Policy makers are concerned about the financial viability of using OER. Let me highlight three different models that could be sustainable:

TESSA: This was initially funded by donors such as Hewlett, among others but by involving the stakeholders at every stage of the process, the partners have now taken on the responsibility of committing their own financial resources to develop, duplicate and distribute the resources to their staff and students.

CONNEXIONS: Funded by donors initially, it is now a consortium of 20 for-profit and non-profit entities. For example QOOP shares revenues from books printed using Connexions materials.

NPTEL is a state funded initiative and is sustainable for that reason.

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From the instances that I have mentioned above, it is clear that the OER experiment so far has been largely confined to the development and use of materials. There have not been any major instances of OER entering the structured higher education systems in the developing countries and making an impact on their quality. To make that happen, the higher education systems in those countries need to look at their structures and processes, and reinvent themselves. To use Manuel Castells' dictum, the institutional systems in the developing countries need to develop their ability to constitute, program and reprogramme their strategies and approaches to programme structures, course combinations, entry requirements and student progress.

True democratization will depend on the ability of the stakeholders in developing countries to domesticate OER. As Silverstone, Hirsch and Morley (1992) argue that technology defines as well as is defined by communities that adopt or challenge it.

The domestication theory propounded by Silverstone, Hirsch and Morley (1992) could be extended to the community, national and international levels for OER to be truly an open resource in which every type of stakeholder could participate. This table visualizes such a process:

	Phases	Characteristics
1	<i>Appropriation</i>	Teachers, students in many developing nations have problems not only in terms of physical access, but also in terms of social, political and cultural values which restrict their access.
2	<i>Localization</i>	the term localization refers to how OERs can be adapted to social, political and cultural values.
3	<i>Incorporation</i>	Every stakeholder should have the ability to interact with OER and use them for strengthening the educational goals of the community.
4	<i>Conversion</i>	In this phase, the stakeholder is encouraged to look beyond the community and enter into a relationship with the global community. In addition, the stakeholder is also influencing the structure and functions of OER.

Domestication is crucial for various stakeholders to get involved, influence and be influenced by OER. It is only then that this can become a mass movement.

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The general trend in the developing world is to use OER to address certain core needs. One, there is a tremendous demand for qualifications at all levels, secondary as well as post-secondary. OER are not simply seen as a value-add to existing educational provision but also as a route to earning credentials. The

only way to reach the unreached constituencies in remote and distant locations is through the use of appropriate technologies rather than computers alone. In many developing countries such as India China Vietnam, it is primarily the state rather than philanthropic organizations which has come forward to support OER initiatives

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Keeping these developments in mind, my colleagues Dr Bala and Dr Abdurrahman and I attempted to redefine OER, in a paper published in the American Journal of Distance Education. We placed the emphasis on the stakeholder rather than on technology and on process rather than product.

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The phenomenon of OER is an empowerment process, facilitated by technology in which various types of stakeholders are able to interact, collaborate, create and use materials and processes, that are freely available, for enhancing access, reducing costs and improving the quality of education at all levels.

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The emphasis is on empowerment. The OER movement can help the process of democratising education by:

1. Involving all kinds of stakeholders to participate, collaborate, create and share;
2. Encouraging consumers to become the producers of knowledge;
3. Enabling us to harness the wealth of tacit knowledge across the globe to address the great development challenges of our time.