

# *Open Education Resources: Innovation for Development*

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## Transcript

Distinguished Colleagues, It is a pleasure and an honour to be here and I am very grateful to the Professor Tom Sork and the organisers for the opportunity. My topic today is: **Open Education Resources: Innovation for Development?**

I will first look at the Commonwealth context and the issues of development that need to be addressed as a matter of urgency if the internationally agreed development goals are to be achieved by 2015. I will then look at the emergence of OER which are seen as an innovation that cut costs, improve quality and enhance access to education and training. This will lead to the question of whether the development and use of OER are addressing some of the development challenges in many countries of the global south. I will outline some of the strategies that we need to harness OER so that the development objectives can be achieved. Finally, I will share some examples of what my own organization, the Commonwealth of Learning had done to promote OER for development.

But first a word about the Commonwealth of Learning or COL which might well be one of the best kept secrets of beautiful British Columbia.

COL is an intergovernmental organisation, established by Commonwealth Heads of Government when they met in Vancouver in 1987. COL is the only Commonwealth intergovernmental organization to be located outside London. We are very grateful to the Government of Canada for hosting us and for its continued financial and intellectual support.

We believe that access to learning is the key to development. Our mission is to help Commonwealth Member States and institutions to harness the potential of distance education and Information and Communication Technologies for expanding access to education and training.

Canada is a member of the wider Commonwealth which is an association of 54 Member States, that cover all regions of the globe.

The Commonwealth accounts for 2 billion people, 60 % of whom are under the age of 25. In addition to a young population, the Commonwealth is also home to 1/3<sup>rd</sup> of the world's poor, the majority of these being women. Over 20 million children are still out of school and 460 million adults continue to be illiterate.

COL's work is located within the framework of the MDGs, particularly those related to poverty, education, gender equality and health.

COL also supports Members States in their efforts to achieve the Education For All Goals relating to access, quality, skills development and gender equality. As a Commonwealth organization, we promote the values of peace, equality, democracy and good governance

Countries in the global south continue to face the challenges of access to quality education, gender equality, health and poverty.

As we approach 2015, the deadline for achieving the international goals, we find that several Commonwealth countries are still off track to achieve at least one of the goals.

While many governments have succeeded in providing free primary education, they are unable to accommodate the surge that this has created for secondary schools. Today 400 million children have no access to secondary education.

Similarly millions of the 18-24 year olds will not have access to higher education in many developing countries. 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 are well below that in South Asia and Sub Saharan Africa.

An article in *The Economist* asks whether higher education is still worth it? The costs of higher education have risen far above inflation rates in the past three decades. A recent Ipsos Mori survey of 11-16 year old state school pupils in the UK found that 57% do not aspire to university education due to financial considerations. Can such costs contribute promote access to higher education?

Governments were looking for alternative means of providing access to quality education to their citizens. This led to the establishment of open universities, distance learning institutions that could absorb large enrolments at lower costs. In addition to this growth of open universities, there has also been a huge increase in online provision. With the rise of social media, there has been a global movement towards collaboration in the development and sharing of content.

The emergence of Open Education Resources is hailed as an innovation that can help governments to overcome many of the obstacles related to the availability of appropriate content.

For countries where six students share one textbook, the lack of content is a major issue that governments need to tackle urgently.

Let us look at one often-cited definition of OER. OER are educational materials which are free and freely available. 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. This definition looks at OER as content or product.

What are some of the advantages of using OER? They have the potential to cut costs, increase access and improve the quality of education.

OER penetration in the developing world has been slower than in countries of the 'north', with the exception of China, Vietnam, Brazil, to name a few.

Yet there are emergent examples which give an indication of how OER are being used in low-resource contexts. The Teacher Education in Sub Saharan Africa, a partnership between the Open University UK and institutions in 13 African countries has developed OER for teacher training in four languages: English, Kiswahili, Arabic and French. These were used by 320,000 teachers in one year, and the free materials as well as the sheer numbers of users have radically reduced the costs of providing quality teacher training to about \$ 10 per teacher.

Another way in which OER can cut costs is through the use of textbooks. Textbooks are a costly proposition. A study in Brazil found that for 75% of students studying at the University of Sao Paolo, the cost of acquiring textbooks was higher than a family's monthly income. In the USA, under the Utah Open Textbooks project, the cost of printed textbooks has come down to \$5, which becomes zero if accessed online. Likewise the government of South Africa has decided that they will opt for OER textbooks.

What impact are OER having on universities? Let me take the example of the OERU, a consortium of 23 institutions which includes the University of Southern Queensland, Otago Polytechnic and Athabasca, among others. The consortium is using OER to open up education to anyone anywhere in the world.

The participating universities are putting a percentage of their courses on their websites as OER so students anywhere in the world can access them. They then recruit retired teachers and volunteers on the lines of Doctors without Borders, who 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.

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.

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, German and other languages.

Many of you are familiar with 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 over 600 institutions, most of them in remote locations with very limited resources.

We have seen some examples of how OER are being used by different Commonwealth countries. But can OER be seen as an innovation that addresses development challenges adequately?

One flaw seems to be to view OER entirely from a cost and finance perspective. What of the social dimension? After all, OER emerged as a social process of sharing and collaboration using ICTs

If you look at the proportion of households with access to computers and the internet you find the wide divide across the different regions of the Commonwealth. With less than 10% in South Asia and Africa, it is over 80% in Europe and North America.

While the growth of mobiles in developing countries has far exceeded the development of mobiles in developed countries, lack of adequate access to the internet is a major barrier to the development and use of OER.

In his analysis of the networked society, Castells (2009) has elaborated the *network-making power* which operates on the basis of two mechanisms: the ability to constitute, program and reprogram networks and the ability to connect and ensure cooperation. Many important stakeholders of education may be far beyond this network-making power due to regional, gender, class and ethnic factors. It is obvious that Africa, South Asia and Latin America may have limited potential in network-making power. These types of power play a major role in the inclusion-exclusion of various stakeholders.

The regional, class, gender and ethnic divides in the digital world have been well documented. The access to educational technology in terms of gender has been a well-reviewed subject and many studies have found that the gender differential exists even in developed countries in terms of accessing and resourcing ICT infrastructure (Sanders, 2006). Similarly, the digital divide has also a geographical and racial dimension. As these dimensions of the digital divide get reflected in the OER, is it possible that OER can become an effective resource for development?

According to a World Bank study, the rural girls from the scheduled castes ( who have been traditionally marginalized in India) have the lowest school attainment. This is followed by rural girls from other groups. Thus gender, region and ethnicity influence access and success in education. How can these girls be expected to participate in the OER movement and contribute to development?

Can OER address issues of equity and inequality?

Justin Reich argues that OER by itself will not address equity issues.

Institutions and groups with better access to resources and infrastructure will make more use of the educational technology innovations such as free and open resources rather than marginalized groups.

Similarly teachers in low-resource contexts cannot participate in this movement to the extent that their more privileged counterparts can.

In fact it is these teachers that need OER most. As teachers are the primary stakeholders, can the OER movement flourish without their participation?

How effective can a hungry teacher be? Let us look at this slide based on a DFID study. It shows that teachers have a heavy workload and are hungry when they come to class. Would it be realistic to expect them to become proactive stakeholders in OER?

A PhD study in Nepal, shows that there are ethnic, regional and physical barriers that affect women teachers' entry into the teaching profession. Such a gender bias will also affect their participation in OER.

Most of the institutions in Commonwealth countries are based on centralised systems with limited academic freedom where teachers have a limited or no voice at all.

A study developed a Freedoms of Education Composite Index for Non-Governmental Schools (NGSs) all over the world. The index is based on criteria related to the freedom to establish schools; financial management; parents' freedom of choice and pedagogical autonomy. 44% of the countries surveyed, most of them from the Commonwealth, have low levels of freedom.

OER are based on the principles of freedom and openness. Can they thrive in closed education contexts surrounded by poverty, hunger, social exclusion and poor infrastructure?

What strategies do we need if we are to harness OER for development?

For OER to contribute to development, we would need to focus on social and economic issues as well.

We believe that we need to look at OER not simply as a product but as a process. Breck (2007:3) raises the following questions: "Is Open Educational Resources (OERs) just another pedagogical theory for learning experts to debate? Or another techie thing to come along for educators to play with?" She contends that "Opening educational resources is an action that will cause education to move to a new place".(Breck, 2007:3).

The action which Breck (2003) talks about is social action involving various stakeholders. By shifting the discussion to the social and ethical domain from a purely technology angle, the base of those who can participate in the OER initiatives is being broadened.

OER require a process-oriented approach in which stakeholders and citizens come together and articulate their views and influence institutional change. What is a process-oriented approach for OER? Silverstone, Hirsch and Morley's (1992) domestication process is helpful here. They argue that technology defines as well as is defined by communities that adopt or challenge it. How can OER be domesticated?

Appropriation refers to the ability of every stakeholder to have access to technology tools and infrastructure irrespective of class gender ethnicity

Localisation refers to the importance of embedding OER in the values of the community

Incorporation takes us to the next step when OER are used to strengthen the educational goals of the community

Conversion is the stage when the stakeholder develops a sense of agency and is empowered to not only connect with and influence developments in the global community.

This domestication process is critical in getting stakeholders involved so that OER becomes a mass movement.

It is important that the content has to be localized to suit specific needs. In addition to involving locals and understanding local contexts, the principles of localization include creating communities of practice and using formats for content development that the community prefers such as bulletin boards, local radio broadcasts and so on.

Many educational institutions have traditional governance structures and teacher-centred pedagogic models. The OER initiative requires a learner-centred and decentralised approach. Innovations in institutional governance will be critical to the success of OER

In short, OER can become an effective innovation for development if we use a participatory approach, encourage decentralised institutional structures and learner-centricity. Thus “*open*” in OER must be perceived not merely from a technological perspective but also from a governance standpoint. The “*open*” should reflect the institutionalisation process which facilitates all types of stakeholders to participate on equal terms.

It is in this context that we define OER as follows:

*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.*

How can we turn the divide into dividend? One, by placing an emphasis on the people rather than the technology; two, by viewing knowledge as a social product and three, by seeing learning as a process in which the consumers become the producers of knowledge.

Finally how does the Commonwealth of Learning implement these ideas?

COL in collaboration with UNESCO and with support from the William and Flora Hewlett Foundation organized the World OER Congress in Paris last June.

The global community agreed on the Paris OER Declaration which makes 10 recommendations. Based on these COL will continue its partnership with UNESCO to focus on four areas: one, advocacy and awareness generation regarding the benefits and availability of OER; two, policy development on OER at the national and institutional levels; three, capacity building so that more governments, institutions and individuals are able to effectively harness the potential of OER and four, promote research through its publications on OER and its Chairs programme.

Let me briefly give you some examples of COL’s OER projects that use appropriate technologies to help countries achieve development goals. The first is the development of OER for secondary schools. This is a collaboration of six countries to develop OER in 20 subjects based on the secondary school curricula of

these countries. This is done in print, audio, video, CDROM and online formats to cater to a diversity of users with access to different technologies.

As countries in the Commonwealth struggle to achieve universal primary education countries, many more teachers are required. COL is worked with nomadic teachers in Nigeria to develop audio content for Interactive Radio Instruction.

Let us look at the third COL OER initiative, the Virtual University for Small States of the Commonwealth (VUSSC). This is a consortium of 32 small states of the Commonwealth which have come together to first develop capacity in online course development, develop courses that are need-based and freely available. What makes VUSSC important is that it is demand driven and focuses not only on content creation but also on capacity building, and on developing strategies for institutionalisation, which include a strong multi-stakeholder governance structure.

COL helps ministries and institutions use technology-enhanced learning to increase access to skills development. Here is the picture of a young African woman who wants to be a builder like her father. We use video programmes to demonstrate practicals but as technology costs come down, haptic devices will provide a real option for quality skills training.

The Lifelong Learning for Farmers initiative has increased the rural prosperity of farmers not just in India and Sri Lanka but also in Kenya, Uganda and is now extending to Jamaica and Papua New Guinea. Experts develop OER in local languages and farmers learn using basic mobile phones. COL has developed a computer-mobile interface with UBC called LIVES to scale up the learning.

COL uses community media, to improve the health of communities through effective health messages and distance learning programmes. One such activity for Mother and Child Health has been implemented in Malawi and resulted in a change in health-seeking behaviours among the community.

From these few examples, you can see that the COL approach encourages a wider group of stakeholders to participate, promotes the use of available and appropriate technologies and is holistic, contextual and process-oriented.

In conclusion let me raise three questions. How can technology enhanced learning

1. Reach the digitally deprived and socially excluded?
2. Transform closed educational systems?
3. Accelerate progress towards achieving development goals?

With that, let me thank you for your kind attention.