

# *Bridging the Technology Gap: The Case of the Missing Content*

---



*Ministerial Roundtable  
18th Conference of Commonwealth Education Ministers  
(18CCEM)*

*Mauritius  
30 August 2012*

*By Professor Asha Kanwar  
Commonwealth of Learning*

Ministers, Excellencies, Distinguished Participants. In this session we bring you some perspectives on how the technology gap can be bridged to increase access, improve quality and cut the costs of education.

As you introduce computers and tablets in schools and colleges, new learning materials are needed. Do we have the content relevant for education in the twenty-first century? As the UN Millennium report points out ‘...what is missing is not devices but the lack of content development.’ An ITU report also confirms that ‘...the lack of content ...[is] the major barrier[s] that governments need to tackle....’

With the rise of social media, there has been a global movement towards collaboration in the development and sharing of content. We have seen the emergence of a global commons powered by the collective intelligence of the masses. At a meeting in 2002 at UNESCO, Paris, the term Open Education Resources or OER was coined to promote the development and use of free materials for education.

What are OER? OER are educational materials that are free and freely available, suitable for all levels of education: primary secondary and tertiary, are reusable without having to seek the permission of the original author and available in multiple formats including print, though the reuse is easier in digital format. Let me share some examples which give an indication of how OER can increase access, improve quality and lower costs.

First, the issue of access. 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, a nice instance of south-south collaboration.

These materials can be made available 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.

The Commonwealth of Learning through a six-country partnership has developed 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. It also shows the great need for developing content at the primary and secondary levels and not just higher education.

Second, the question of quality. The premier Indian Institutes of Technology or IITs, in partnership with the government, have made their engineering and technology courses available as OER. These are being used in over 500 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.

Third, the issue of costs. The Teacher Education in Sub Saharan Africa, a partnership between the Open University UK, the Commonwealth of Learning 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 in 2010 alone, and the free materials as well as the sheer numbers of users have radically reduced the costs of providing quality teacher training to about \$ dollars per teacher.

Over 15 universities including the Otago Polytechnic, New Zealand, The University of Southern Queensland, Australia and Athabasca University, Canada, have come together to develop a model for an OER University.

The participating universities will 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 on the lines of Doctors without Borders, who will 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.

There is an increasing movement around the world to develop and share free content or OER. More recently, the World OER Congress was held at the UNESCO HQs during June this year and the global community adopted the Paris OER Declaration, which makes 10 recommendations of which three are of direct relevance to you.

1. Facilitate enabling environments for use of ICTs;
2. Reinforce the development of policies on OER;
3. Encourage the open licensing of educational materials produced with public funds

What implications does this have for pedagogy? Professor Bob Bernard of the Educational Technology group at Concordia University, Montreal, and his colleagues carried out a meta-analysis of hundreds of studies in which distance education students were treated in different ways. They distinguished three types of interaction: student – content; student – student; and student – teacher. They then analysed all the

studies to find which type of interaction made the greatest difference to student performance when it was increased. The results were very clear. Increasing student – content interaction had much the greatest effect; with student – student interaction coming next and student – teacher interaction last. This highlights the importance of content.

OER can provide the missing content. But is that enough to bridge the technology gap? Where do the gaps still remain? The gaps do not necessarily lie in the technology alone. The gaps are in the environment in which the technology is deployed. This is where the innovation comes in. For example, can OER thrive in closed educational settings? Innovations in institutional governance and decentralization will be critical.

The second gap relates to the curriculum. This needs to change to become relevant to the requirements of the 21st century. What do employers really need? Within the context of a knowledge and service-related economy, there is a great deal of emphasis on non-cognitive skills such as leadership, communication, honesty/ethics, teamwork and flexibility. How can we integrate these skills into the curriculum?

The third gap is the wider involvement of stakeholders. Innovative approaches are needed to include various stakeholders in the development, renewal and use of content so that passive consumers can become active producers of content.

It is only then that we can harness the wealth of tacit knowledge across the globe to address the great development challenges of our time.

Thank you for your kind attention.