

# Democratising Higher Education through OER - What are the Possibilities?

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*Democratising Higher Education through OER: What  
are the Possibilities?*

*by Professor Asha Kanwar  
Commonwealth of Learning*

## Transcript

Distinguished Colleagues, It is a pleasure and an honour to be here and I am very grateful to the President Maureen Manchouk and NIHERST for the opportunity. My topic today is **‘Democratising Higher Education through Open Education Resources: what are the possibilities?’**

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 harnessed to increase access, improve quality and cut the costs of education. I will then reflect on the recent phenomenon of Massive Open Online Courses or MOOCs and consider whether these might democratise higher education. I will finally look at how the imaginative use of OER could help us address the challenges of higher education today and advance us towards democratising education.

Let us first review the context of higher education.

The dynamics of emerging economies, the need to accelerate development for all and the phenomenal growth of technologies have resulted in an unprecedented demand for higher education. In 2007, there were 150 million tertiary students globally, a 53% increase over 2000. We find that the number has increased to 165 million in 2012 with an estimate that this is expected to rise to 263 million in 2025.

Within Latin America and the Caribbean, tertiary enrolment has increased from 14 to 22 million in a space of 8 years and this trend is expected to continue.

The University of West Indies has doubled its enrolments in the last 8 years. Meanwhile, the gap between the demand and supply continues. India would need an additional 800 universities if it is to absorb

demand by 2020. In 2007, of the 40,000 applicants in Kenya, only 9,000 could be accommodated in the public university system.

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 the Caribbean and other regions of the Commonwealth.

As demand increases, we have seen a phenomenal growth in private provision, which is the fastest growing sector of HE with the global average at 46%

Many crossborder private providers offer distance education and online programmes. Belize and Antigua and Barbuda, have over 70% private provision while in Jamaica the average of 40% is still substantial. Could this be an option for democratizing HE?

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 and are now at 1200 %. 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 to equity and the equality of opportunity in HE?

Governments were looking for alternative means of providing access to quality education to their citizens. This led to the establishment of open universities or what are often called the people's universities. Today there are 28 open universities in the Commonwealth, which on an average cost one third of what it would cost to go to a campus institution. The University of West Indies has its own Open Campus.

In addition to this growth of open universities, there has also been a huge increase in online provision. In 2010, 6.1 million students were taking at least one online course accounting for 31% of all US Higher Education students. This Slide gives you an idea of this increasing trend. As technologies become more accessible both developing and developed countries will move towards more online and distance provision.

Asia has a high percentage of online enrolments at 17.3 % with Vietnam leading at 44%. Online learning is growing steadily in Latin America with Brazil and Colombia in the lead.

Yet there is a clear digital divide across the Commonwealth, if you look at the proportion of households with access to computers and the internet. With less than 40% in the Caribbean, it is over 80% in Europe and North America.

As you can see from this chart, the growth of mobiles in developing countries has far exceeded the development of mobiles in developed countries. In the last five years, there has been a four-fold increase in the growth of mobiles in developing countries.

In Latin America and the Caribbean, there are 107 mobile subscriptions per 100 inhabitants, while the landlines continue to remain stable at a mere 20%.

This growth of mobile devices, which are more affordable, accessible and available, opens up the opportunity to turn the divide into a dividend.

With the rise of social media, there has been a global movement towards collaboration in the development and sharing of content. Can the rise of OER lead to the democratization of education?

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.

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.

The Open Education Resource movement is based on the idea that knowledge is our common wealth and that technology could help share, use and reuse it. MIT's OpenCourseware initiative; Rice University's Connexions, the OpenLearn, of the Open University of the UK, among others initiated this movement.

OER penetration in the developing world has been slower than in industrialized countries, with the exception of China India Japan Vietnam and Indonesia. Yet there are emergent examples which give an indication of how OER are being used in low-resource contexts. 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 non-Commonwealth 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. Both teachers and students are using the free IIT resources to improve the quality of their teaching and learning.

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.

If OER can open up access to quality HE, why is the take-up so slow? 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.

How can we address these challenges to increase the take up of OER and promote the democratization of education? How can we reach learners in far-flung and marginalized communities? OER can help improve quality: availability of OER can release faculty time for more research; diversify provision from full services to services that the learner can choose, increasing flexibility; cut costs through the use of free materials and textbooks.

Let us now come to a major development emerging out of the use of free content or OER. This is the phenomenon of the Massive Open Online Courses or MOOCs.

What is a MOOC? According to the evolving definition on Wikipedia ... *a MOOC is a type of online course aimed at large scale participation ... MOOCs are a recent development in the area of distance education, and a progression of the kind of open education ideals suggested by OER*

In short, MOOCs are usually free of charge; designed for large numbers; designed to encourage peer to peer learning and meant to award completion certificates rather than course credits. As MOOCs are still an evolving phenomenon, these features will change as we go forward.

In 2011, Stanford University offered a free course in artificial intelligence which registered 160,000 students from nearly all countries of the world, of which 23,000 completed the course.

MITx offered its first course on Circuits and Electronic in 2012 at which 155,000 students from 160 countries registered, of which 7157 passed the course. Even though the pass percentage is well below 10%, the edX president Prof Anant Agarwal says 'if you look at the number in absolute terms, its as many students as might take the course in 40 years in MIT'

Can MOOCs democratize education? Would MOOCs improve the quality of teaching? First, MOOC, is simply a platform to organize an event. When a course is offered on this platform, it is still an event where participation is free and open. The core interest for institutions may be to extensively test the viability and usefulness of select MOOC technologies for scaling up access. Second, developing world institutions can modify the MOOC model to offer more blended approaches and better learner support services towards degrees and diplomas. Third, the research results from the pioneers in MOOCs will provide data for developing world institutions to review their teaching learning practices for better quality and outcomes.

From the instances that I have mentioned, 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 access, quality and costs. To make that happen, the higher education systems in those countries need to look at their structures and processes, and reinvent themselves. What are the possibilities?

One possibility can be in the area of national policy. COL and UNESCO carried out a worldwide survey on the use of OER. Responses were received from nearly a 100 countries. The report shows that ‘there appears to be a great interest in OER across all regions of the world with several countries embarking on notable OER initiatives’. The report also signals the need for continued advocacy, as there is still a great deal of confusion regarding the ‘concept and potential of OER’. In addition to the survey, policy forums were convened in the six regions of the world. The first forum was held in the Caribbean. Most Caribbean countries are introducing computers in schools and new learning materials are needed. Participants believed that OER could support the development and adoption of quality learning materials.

National governments in developing countries can seek to promote and *sustain an enabling environment* in which the OER movement can flourish. To do this, they could :

- develop an ICT in Education policy
- propose a vision and strategy for not just developing OERs but also for using them
- develop a policy on copyright

All the 12 Commonwealth countries in the Caribbean are members of the COL-led Virtual University for Small States of the Commonwealth. This is a consortium of 32 small states which have come together to develop capacity in online course development and delivery. 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. Various institutions in T&T such as ROYTEC and TT Hospitality and Tourism Institute are actively involved in re-purposing OER for delivery.

COL has developed a directory of full open courses in higher education. Who are the major players offering free courses in the Commonwealth? The UK Open University, the National Open University of Nigeria and the Indira Gandhi National Open University.

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.

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 Paulo, 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.

The Georgia Institute of Technology has announced a partnership with Udacity, a key MOOC company to offer its prestigious online Masters Degree in Computer Science at \$7000/, a fraction of the existing cost of \$40,000. By opening this programme at an affordable cost, the numbers of learners are expected to go up to 10,000 over the next three years. Such initiatives can drive down the inflated costs of HE.

Are developing countries offering MOOCs? IIT, Kanpur in India offered a six-week MOOC on software architecture and cloud computing to a thousand students early this year. The course was offered at three levels: one, it was open for anyone to browse; two, learners would need to register to attempt the assignments; and three, the learners would need to pay a registration fee of INR 900 (USD18) to get a certificate. The course started with just under a 1000 registrants, 470 of whom opted to pay the certification fee. Subsequently, 370 received certificates, a 37% success rate. This smaller MOOC demonstrated a much higher success rate than the bigger MOOCs which typically show completion rates of under10%.

These various initiatives can radically change the landscape of teaching-learning in the twenty-first century by opening up education. We have seen 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. 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.

Thank you for your kind attention.