

# *The Dynamics of Changing Societies and the Dynamic Role of ODL in Creating the Future*

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*Keynote Presentation*

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Distinguished Colleagues,

It is a pleasure and an honour to be here and I am very grateful to AAOU for the opportunity to speak to you. My topic today is ‘**The Dynamics of Changing Societies & the Future role of Open and Distance Learning (ODL)**’

In my presentation, I will first look at the dynamics of changing societies then trace the three generations of ‘open education’ and conclude with the implications that three developments have on the future role of ODL.

Let us first look at three key dynamics of changing societies and their impact on Higher Education.

The first dynamic is the restructuring of the world’s economic systems. The old centre-margin paradigm no longer applies. The world’s economic system has undergone a transition from the sole primacy of the West to the emergence of the newly industrialised nations such as Brazil, Russia, India and China or the BRICS. More recently, we see the unfolding phenomenon of the “breakout nations”, such as Turkey, Indonesia, South Africa, Nigeria with resultant changes in global power relations and new forms of dependencies. Just a decade ago, developing economies represented less than 20% of the global economy. As of 2011, emerging markets represent nearly 40 % of the global economy.<sup>[1]</sup> One centre can no longer hold—the volatility of changing economies is driving the change in emerging societies.

The second dynamic of changing societies is development. The international community had identified 8 Millennium Development Goals in 2000 and agreed to work together to achieve these by the year 2015. These goals relate to achieving universal primary education, gender equality health and poverty reduction.

What is the situation in the Commonwealth which has 54 Member States in the five regions of the globe?

As we approach the 2015 deadline, where are we in relation to achieving these goals? The Commonwealth has one third of the world's poor, two thirds being women; there are still 23 million children out of primary school and 460 million adult illiterates.

What has been the progress towards achieving the MDGs in the Commonwealth? If we look at MDG 1, poverty reduction, 19 Commonwealth countries are off track to achieve this by 2015. Similarly for MDG 2, which is Universal Primary Education, 15 countries are off track while for Goal 3, 11 countries are off track to achieve gender equality.

The third dynamic is the phenomenal growth of technologies. 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 10% in sub-Saharan Africa and 8 Commonwealth Member States in Asia, it is nearly 90% in Europe and North America.

This divide can be turned into a dividend because of the phenomenal growth of mobile devices, which are more affordable, accessible and available.

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 is nearly four times increase in the growth of mobiles in developing countries during this period.

In 2006, less than 1 per 100 persons had access to mobile broadband, whereas by 2011, this number has increased to over 8 per hundred. This is an eight-fold increase in the last five years. This is bound to keep increasing at this pace. What implications does this technology have for ODL?

The fourth dynamic changing our societies today is the exploding demand for higher education. In 2007, there were 150 million tertiary students globally, a 53% increase over 2000. In 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. In the last 4 years Age Participation Rates in higher education in India have increased by 65%.

Meanwhile, the gap between the demand and supply continues. In 2007, of the 80,000 applicants to the University of Dhaka, only 10,000 could be accommodated. The situation was similar for the public universities in Kenya. Last month the Indian Minister for human resource development announced that India would need an additional 800 universities if it was to absorb demand by 2020.

In spite of this huge expansion in Higher Education, the APRs in the developing world are far below those in the OECD countries. For example, in South Asia, the APRs remain at about 15% while in much of sub Saharan Africa, the figure falls below 10%.

How can this demand be met? Let us look at the rise of open and distance learning as a solution to address this challenge in a cost-effective manner. I will look at the three generations of ‘open and distance learning’

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 Commonwealth.

The founding chancellor of the Open University of the UK, Lord Crowther’s statement of openness in relation to people, places, methods and ideas forms the basis of the first generation of open education. Open education is a philosophic construct that advocates the removal of constraints and barriers to learning— Open education refers to policies and practices that allow entry to learning with no or minimum barriers with respect to age, gender, or time constraints. These policies need not be part of a distance education system, which refers to the separation of the teacher and learner.

Open universities were oriented towards the massification of higher education. 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.

The principal technologies in this phase were print, radio and TV. Telephone and teleconferencing were being introduced as more emphasis was given to tutorial support. In many developing countries such as India, many open universities continue to follow this model.

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

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.

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, that is UNISA.

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. Mauritius is the most recent addition to the list of Commonwealth open universities.

Asia alone has 70 open universities that cater to the largest number of adult learners in the world.

The third generation of open education came at the turn of the century with the Open Education Resource movement which was based on the idea that knowledge was a public good 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.

More recently, many Asian countries are investing in OER. Some of these initiatives are the Japan Open Courseware Consortium, the China Open Resources for Education, NPTEL, the Indian Government's OER project, and the Vietnam Foundation.

What are OER? As we know, 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.

Course authoring can take up to 80% of an academic's time.

Collaboration can help academics save both course-authoring time and money

As you can see, the first generation takes us over 2 decades from 1969 to 1990 and we can see a gradual growth. The second generation, again started in 1984 and reached its high point in 2005. The third generation has taken off in the last ten years and can lead to major changes in the ways we teach and learn.

We have seen the evolution of ODL over the last forty years. What is the future role of ODL within the context of changing societies? What are the implications of the recent development of OER and Massive Open Online Courses or MOOCs for ODL? Can ODL help us address the global development challenges?

Let us take OER first. OER are beginning to capture the imagination of governments and policy makers around the world, just as the advent of first generation ODL did forty years ago. In June this year, COL and UNESCO with substantial support from the William and Flora Hewlett Foundation, organized the 2012 World OER Congress in Paris to mark the tenth anniversary of when the term OER was first coined at a UNESCO meeting in Paris in 2002.

The global community adopted the Paris OER Declaration, which makes 10 recommendations.

Let me just refer to four that may be of interest to you:

- Foster awareness and use of OER
- Foster strategic alliances for OER
- Encourage the development and adaptation of OER in a variety of languages and cultural contexts
- Encourage research on OER

This is an important development as governments tend to take such internationally-agreed documents led by UNESCO seriously and the Paris Declaration could have a major role in enlarging the circle to include policy makers.

Last month, the Commonwealth Education Ministers met in Mauritius for their triennial conference. Here again OER are reflected in the Communique. This is an influential document that is taken seriously by policy makers across the 54 Commonwealth Member States. Ministers recommend that *'a common platform for OER materials be set up for ease of access'* and *'the development and use of OER in providing quality teaching and learning for all'* be promoted.

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.

Second, 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 \$ 10 dollars per teacher.

So what impact are OER having on costs in universities? Let me first take the example of the OERU, a consortium of 18 universities 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 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.

Third, 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 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.

If we want to harness the tremendous potential of OER, the first question is, can OER thrive in closed educational settings? 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 and decentralised institutional models. Will the centralised structures allow a decentralised approach? Innovations in institutional governance and decentralization will be critical.

The second question relates to the curriculum. OER can allow us to harvest the best content to diversify our course offerings. What is relevant to the requirements of the 21<sup>st</sup> 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? Can access to quality OER support this transformation?

The third opportunity that OER offers 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 knowledge. What incentives can be provided to involve faculty to participate in this movement?

Access to OER can help us diversify access to quality course content

Now that high quality content is available as part of the global OER movement, the emphasis can shift to providing quality support services. This will be the key differentiator between the best and the rest

Open up our business models from providing 'full' services to services that the learner can choose from, reducing costs and increasing flexibility

Let us now come to the second major development emerging out of the use of free content or OER. This is the phenomenon of the Massive Open Online Courses or MOOCs. Started at the University of Manitoba in 2008, this has spread like wild fire to the ivy league institutions in the United States. So 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*

A recent Observatory of Higher Education report sums up that 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.

Stanford University offered a free course in artificial intelligence last year 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 May this year 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'

What is the business model if the institutions do not charge fees? You can see that the three MOOC companies that have recently developed, the costs are being shifted from the student to the institution, to future employers, or generated through exam fees. Even when fees are charged for exams, they are minimal.

What about the pedagogic model? Are MOOCs going to transform pedagogy? So far, according to Tony Bates the courses 'are based on a very old and out-dated behaviourist pedagogy, relying primarily on information transmission, computer-marked assignments and peer assessment'. For research institutions like MIT and Stanford to place their MOOCs in the public domain, open to global academic scrutiny,

helps draw attention to the importance of teaching and Sir John Daniel calls this the ‘real revolution of MOOCs’.

If ODL institutions were to offer MOOCs, what would be the advantages?

Would offering MOOCs attract potential learners to join? Or would this make the institution a global player in certain niche areas? Students who have completed a MOOC may wish to translate the certificate of completion into a qualification. Would ODL institutions have the flexible frameworks for credit transfers, and recognition of qualifications within this scenario?

First from our perspective, MOOC, is an important platform; it is 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 ODL institutions may be extensively test the viability and usefulness of select MOOC technologies for learner profile and data management and basic delivery and assessment techniques. edX course software will be open source for anyone to use and develop further. MOOCs can become a viable option as connectivity increases and open source platforms are adapted and deployed. 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 excellent data for developing world institutions to review their teaching learning practices for better quality and outcomes.

Let me come to the third important implication for ODL. *When Open and Distance Learning first caught the imagination of policy makers, the main objective was to increase access to higher education. In the past decade, however, we see ODL methodologies being used to cover both formal and non-formal learning for development. The Commonwealth of Learning has been promoting the use of ODL to help Member States achieve the MDGs and EFA goals.*

During the past decade the main focus has been on the goal of achieving Universal Primary Education (MDG 2). Good progress is being made. Compared to 1999, globally 40 million more children are now in primary schools. That is a great success but what happens when students graduate from elementary schools? Can the existing schools absorb the additional large numbers? When Kenya introduced free primary education in 2003, 1.5 million out-of-school children entered the 18,000 schools already bursting at the seams. Open schooling cannot only reach large numbers but can also provide cost-effective education of quality with high retention rates of up to 90%. Many countries have developed open schools which can cost much less than formal secondary schools. A study commissioned by COL shows that the National Institute of Open Schooling, India costs one tenth of what the government secondary schools cost per student.

The second challenge is to achieve universal primary education in all countries. This requires many more teachers. Africa alone needs 2.1 million additional teachers by 2015 to reach that goal (UNESCO Institute for Statistics). Once again the conventional approaches cannot cope with these huge numbers. Existing teacher training institutions do not have the capacity to address these shortfalls, so it is critical to expand the use of ODL to teacher training. Nigeria has a national institute that trains teachers entirely through open and distance learning.

COL helps ministries and institutions use technology-mediated approaches to increase access to skills development, another priority area for changing societies. Face-to-face skills training can cost up to 14 times more than distance learning approaches. We use video programmes to demonstrate practicals but as technology costs come down, haptic devices or interactive ICT applications will provide a real option for quality skills training.

More than 500 million members of the rural workforce in agriculture have limited access to training opportunities. COL's Lifelong Learning for Farmers initiative has increased the rural prosperity of farmers across the Commonwealth. Farmers learn from experts using basic mobile phones in their own language. The participants feel that conventional face-to-face training involves huge opportunity costs for them, where as through mobile phones and community radios, they are able to learn without sacrificing their farm and household chores. Thus ODL has the vast scope of reaching the unreached.

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.

Developing countries need to provide lifelong learning opportunities for all its citizens. ODL will have an even more important role as we go forward. There are many exciting developments, as we have seen—OER, MOOCs and ODL for development. How will ODL transform these developments and be transformed in the process?

ODL institutions have always been known for their flexibility, openness, modular approach and curricular offerings linked. Recent developments demonstrate that ODL institutions will need to revisit the principles of openness and to reclaim their pioneering spirit. It is only then that we will be able to harness emergent opportunities to meet the needs of rapidly changing societies.

Thank you for your kind attention

## References

[1] Sharma, Ruchir, "Breakout Nations: In pursuit of the next economic miracles" W W Norton & Co, New York, 2011, pp. 14