

# Open Educational Resources: Innovation in Higher Education?



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**Professor Asha Kanwar  
President & CEO, Commonwealth of Learning (COL)**

Vice Chancellor, Distinguished Colleagues, Ladies and Gentlemen

I am really pleased to be at the University of Ibadan, a premier institution in the Commonwealth and I thank the Vice Chancellor and the senior management, for the invitation. I am particularly grateful to Dr Bayo Okunade for all the efforts he made to ensure that arrangements were smooth and seamless!

Let me begin with a brief introduction to the Commonwealth of Learning or COL which is an intergovernmental organisation established by Commonwealth Heads of Government, when they met in Vancouver in 1987.

Our headquarters are in Metro Vancouver and we have a regional office the Commonwealth Educational Media Centre for Asia in New Delhi.

Our mission is to help Commonwealth member states and institutions to harness the potential of distance learning and technologies for expanding access to education and training.

Our mandate is to work in the fifty three Member States of the Commonwealth, which span all regions of the globe—from the Caribbean, to Europe, Africa, Asia and the Pacific.

Nigeria is a prominent member of the Commonwealth and provides both financial and intellectual contributions to COL. Thank you, Nigeria.

As a major donor, Nigeria has a seat on our Board of Governors. This is currently occupied by HE Ambassador Mariam Katagum, a great advocate of education and sustainable development. Her predecessor Prof Michael Omolewa, an eminent educationist and global statesman, is well known to many of you.

Recognised for his contributions to open and distance learning in Nigeria and around the Commonwealth, Prof Olu Jegede had the prestigious title of COL Fellow conferred on him.

COL has also had very eminent Nigerian nationals on our staff in the past. Alhaji Hafiz Wali and Dr Abdurrahman Umar both formerly from NTI Kaduna served COL at different periods of its development.

COL has enjoyed a close collaboration with several Nigerian institutions and particularly with the National Teachers Institute, Kaduna. COL supported initiatives in the capacity building of staff that gave

NTI a leadership role not just in Nigeria but also among teacher training institutions in Sierra Leone, The Gambia and Uganda.

NOUN is also host to RETRIDOL, the institute that develops ODL capacity not just in Nigeria but also in West Africa. This was established way back in 2003 when Prof Olu Jegede was VC. RETRIDOL organises several capacity building activities in Nigeria and the ECOWAS sub-region, such as this regional training workshop for women leaders organised in Ghana. SLIDE 14

COL has a Chairs programme in ODL and OER in several countries, and NOUN has a Chair on ODL.

More recently, COL has been working with various institutions for skills development—a training event organised at the Yaba Institute of Technology demonstrated how distance learning and technology can be harnessed to increase access and reduce the costs of quality skills training.

This gives you a flavor of COL's work in Nigeria. One of the highlights of our partnership was the 7<sup>th</sup> Pan Commonwealth Forum hosted by NOUN. This attracted over 600 participants from 50 countries who experienced the warmth and generosity of Nigerian hospitality.

My presentation today, 'Open Education Resources: an innovation in HE?' and I thank my colleagues Dr Bala, Dr Sanjaya Mishra, Mr Ricky Cheng and Helen Askounis for their valuable inputs. I will begin with a brief review of the Nigerian context. We will then look at three generations of open education which will lead into the discussion on whether OER are an innovation in Higher Education. This will be followed by a brief review of the global trends today and conclude with a way forward.

But first the context.

Nigeria is a young country with 46% of its population between the ages of 15-35. Half of these young people are women.

According to the UNESCO Institute for Statistics, the GER for tertiary education in Nigeria was just over 13 % in 2010. This is well below the OECD average of 40-50 %, required for sustainable development

The unemployment rate for young people in Nigeria in the 15-24 year age-group is around 14%. What levels of education do these young people have? It is significant that over 20% of the unemployed youth in Nigeria have gone through secondary education and 20% have had access to post-secondary education. Education is often seen as a way out of unemployment. What kind of education do we need to provide for livelihoods opportunities?

Can technology help? If we review the growth of ICTs in sub Saharan Africa, we find that there are about 20 internet users per hundred. According to the ITU Statistics, the situation is better in Nigeria with over 40 % access to the internet and 83 persons per 100 with mobile devices. Most people access the internet through their mobile devices rather than computers.

Last year, the global community adopted 17 Sustainable Development Goals or SDGs that we must collectively achieve in the next fifteen years. SDG Goal 4, which deals with education, aims to ensure inclusive and equitable quality education and lifelong learning for all by 2030.

How do we plan to achieve this? One of the recommendations in the UNESCO Framework for Action for achieving Goal 4 by 2030 is to 'develop policies and programmes for the provision of quality distance learning in tertiary education, with appropriate ...use of technology, including the Internet, massive open online courses and other modalities that meet accepted quality standards to improve access'. If the targets

are to be achieved, it cannot be business as usual. Alternative approaches and innovations are needed for human resource development.

Let us look at three generations of open education.

When the Open University UK was established in 1969, the notion of ‘openness’ was a significant innovation. Lord Crowther, the founding chancellor of the Open University defined openness in relation to people, to places, to methods and to ideas. This formed the basis of throwing open the ivory towers of higher education. Open education is a philosophic construct that refers to policies and practices that allow entry to learning with no or minimum barriers with respect to age, gender, or time constraints. In short, openness is about open entry, learning anywhere, anytime, and the freedom to choose courses. Educational institutions provide flexibility so that if the learners cannot come to the university, the university goes to the learner.

As governments and policy makers sought to expand access to education, reduce costs and improve standards, they realized that traditional brick and mortar solutions would not be enough. The success of the Open University UK captured the imagination of policy makers around the world but particularly in developing countries, where dedicated open universities were established. The five Open Universities in Commonwealth Africa, will soon be joined by open universities in Botswana and Kenya.

Distance education is not new in Nigeria and dates back to 1887, when several people enrolled as External Students for the University of London matriculation examination. The University of Lagos established the Correspondence and Open Studies Unit in 1973, which is now the Distance Learning Institute. This was subsequently followed by other initiatives largely for teacher education, and the National Teacher’s Institute was established in 1976 as the dedicated distance education institution for teacher training. NOUN was established in 1983 and then revived again in 2002.

Of the 152 federal, state and private universities in Nigeria, only 8 offer distance education programmes. Considering the large number of students seeking admission to higher education, the potential for offering distance education is high and worth serious consideration.

Open Universities around the Commonwealth are known to have enhanced access, reduced the costs and improved the quality of higher education. NOUN alone caters to a student population of 180,000. The rise of open and distance learning marks the first generation of opening up education.

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.

The eLearning Africa report 2015 asked respondents about the benefits of ICT in education. The top three uses identified were: one, to enhance learning; two, to equip students with digital skills to prepare them for the workforce and three, to access information.

NOUN offered the first MOOC in West Africa last year, and MOOCs are a form of distance online learning, with support for the technology platform from COL and the IIT-K, a fine example of south-south collaboration.

The third generation of open education may be seen to commence 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, among others initiated this movement. While the US has played a leadership role globally, many developing countries are beginning to adopt open licence policies, with China, India and Nigeria contributing substantially to free and open content.

Globally over 19 countries have developed OER policies. The two African countries with national level policies are Mauritius and South Africa.

Given the importance of ICT in education, eight countries in Commonwealth Africa have ICT in Education policies developed over the last decade. You will note that seven African institutions have OER policies.

As an OER pioneer in Africa, NOUN recently received the organisational leadership award for open education 2016 from the Global Open Education Consortium.

To sum up, 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 five years and can lead to major changes in the ways we teach and learn.

Let us now look at OER as an innovation in the higher education landscape. We have seen a global movement towards collaboration in the development and sharing of content. The emergence of a global commons powered by the collective intelligence of the masses led to the global community coining the term Open Education Resources or OER at a UNESCO meeting in 2002

We have seen that there has been a phenomenal growth of OER in the last ten years. As we know, OER are educational materials which are free and freely available. 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.

David Wiley has summed up the different dimensions of openness as the 5 R's. This means that the user has the right to retain the content by downloading it and duplicating it. The user can also reuse the material in a class or on a website. The user also enjoys the freedom to revise the original material by translating it into another language or by adapting it to local contexts. The user can remix which means open content from different sources can be combined to create something new. The user would also have the right to redistribute this adapted revised content to others. Academics have traditionally reserved all rights to their intellectual property—so opening up their content in the global commons for sharing and collaborative development is certainly an innovation in higher education.

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

One way in which OER can cut costs is through the use of textbooks. As we know textbooks are a costly proposition in the developed world. In the USA, according to David Wiley, 31% students don't register for a course because of textbook costs. But initiatives such as the Utah Textbooks project have demonstrated that it is possible to use OER to get a zero cost online textbook or a \$5 printed copy.

The province of British Columbia, has a Textbook Zero Program—which means that students don't pay for the OER based textbooks. What lessons can we draw from this project? One, that if you wish to implement OER textbooks, you would need systemic change within the institution. Two, senior level champions are essential to make this happen. Three, faculty would require some capacity building support and four, the staff must take ownership.

The University of Swaziland has discovered the value of OER and developed an institutional policy. Staff capacity has been built to develop courses using high quality open content from around the world and localise it to the local context. Their BSc Nursing, otherwise a costly programme is now able to reduce costs substantially by using OER.

OER penetration in the developing world has been slower than in industrialized countries, 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, discovered this textbook and has adopted it, another 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.

The Open University of Tanzania has also adopted a policy on OER and is beginning to develop OER-based courses. Using ICTs and OER, access can be increased to wider constituencies, especially people with disabilities.

OER can cut costs and increase access, what about quality? As you know, the Indian Institutes of Technology or IITs are premier institutes with some of the best teachers and resources. In partnership with the government, the IITs have made their engineering and technology courses available as OER. These are being used in over 700 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.

What implications do OER have for open universities? Open universities have traditionally built their reputations on the quality of their content. By access to free quality content, ODL institutions can focus on learner support as this is an area where more needs to be done. Open universities can develop OER policies and build the capacity of their staff to harness the potential of OER.

The rise of OER signals three shifts for ODL institutions. Traditionally open universities had an industrial model—the ODL institutions of the future will be a connected model. There are course development teams within open universities responsible for creating content. Now the teams will be dispersed around the globe and will adopt/adapt existing OER. The rise of OER will encourage the student to be a producer rather than simply the consumer of content.

Bernard et al from Concordia University, Montreal, and his colleagues carried out a meta-analysis of hundreds of studies to determine what contributes to the success of distance education students. They identified 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. The results were interesting. Increasing *student – content* interaction had much the greatest

effect on student performance; with *student – student* interaction coming next and *student – teacher* interaction last. This highlights the importance of content, especially in contexts when teachers are scarce.

What implications does this have for pedagogy? In a recent paper Terry Anderson identifies the 3 generations of distance education pedagogy: the teacher student interaction in the first generation relied on behaviorist pedagogy; student-student interaction resulted in constructivist learning and the student-content relationship with the focus on networks and collaborative content development led to the term ‘connectivism’. Is connected learning the wave of the future?

So what implications do these developments have for learners? The ‘new learner’ was an expression that became popular in the 1980s to refer to the adult learner who looked for new education, or skills for personal development, or enhanced job requirements. More recently, Marc Prensky’s phrase ‘digital natives’ has become popular to describe the technology savvy learners. We can foresee the emergence of a still *newer* learner that displays the features of both the ‘new learner’ of the 80’s and the ‘digital native’ of the 21<sup>st</sup> century – the ‘*ubiquitous learner*’ who has the mindset and motivation to learn in diverse circumstances and environments. Can OER help this learner to become not just the consumer but also the producer of content? Can we already see a trend towards self-directed learning?

In which ways have OER supported learning? The OUUK Research Hub conducted a survey to assess the use of OER by formal learners in India, the small states of the Commonwealth and the Open Learn UK. Students in developing countries showed high levels of satisfaction with OER in terms of increased interest, better collaboration with peers and improved grades.

Recent research shows that OER can reduce costs and improve performance. Students who took open courses as opposed to commercial courses were 6% more likely to succeed and had grade C or higher grades.

Because of these successes, there is an increased interest in both developed and developing countries in harnessing the potential of OER

2017 has been declared the year of the open. Fifteen years ago, the term OER was coined at a UNESCO meeting in Paris. Ten years ago the Capetown Declaration identified some of the key principles of openness such as sharing and collaboration for the common good. Five years ago, COL in collaboration with UNESCO and with support from Hewlett Foundation, organized the World OER Congress, which resulted in the OER Paris Declaration urging governments to release all educational materials developed with public funds with an open license, and to make all such resources available free to others.

In September this year the second World OER Congress will be organized by the government of Slovenia and UNESCO in partnership with COL.

In the lead up to this World Congress, six regional consultations are being organized. COL is organizing these in partnership with UNESCO and Slovenia and the African Regional Consultation in Mauritius is scheduled for 2-3 March.

What are the key differences between the first World Congress 2012 and now? At that time the focus was on seeking the buy in of governments. Now the circle has been enlarged to include various stakeholders who will take the movement forward. Five years ago, there was an emphasis on policies, which now includes strategies for implementing the policies. The time is also ripe for moving from commitment to action.

To identify the status of OER use, COL and UNESCO have sent out two sets of surveys to governments and stakeholders around the globe.

The responses are still coming in but early inputs indicate certain trends. OER are being used mostly at the tertiary level and have supported the professional development of teachers. Countries are adopting OER as they believe that OER provide access to free quality materials which will lead to lower costs for students. This would also address issues of equity by reaching unreached constituencies. OER also provide dynamic content and more flexible learning opportunities.

Some common barriers to the effective use of OER also emerged. These were lack of capacity, lack of funding or incentives and lack of appropriate policies. The key skill gaps identified were—lack of ICT skills, how and where to find OER and then evaluate whether these were of high quality and understanding how open licenses work.

What then is the way forward?

What can governments do? If we go back to the Paris Declaration 2012, we find clear recommendations for governments. One, governments can frame policies that enable the development and use of OER. Two, invest in ICT infrastructure for better connectivity; and three, ensure that all materials developed with public funds are made available under open licenses as OER. By doing so, we can promote inclusive and equitable lifelong learning for all by 2030.

What institutional mechanisms and processes are needed for mainstreaming OER? Some of the initiatives need to include:

- i. developing an ICT policy within the institution
- ii. elaborating a policy on copyright
- iii. providing incentives for faculty members such as increments and recognition of OER towards promotions
- iv. making OER development and use a requirement at the time of recruitment, especially in ODL institutions.

COL has some of the most relevant resources in OER and you are most welcome to access these as you begin to adopt and mainstream OER into your teaching-learning processes.

COL has also developed a Directory which contains full OER courses from Commonwealth institutions. COL can provide further capacity-development support.

OER emerged as a technology driven solution to address issues of costs and quality. But the lesson we have learned is not to view OER as a product but as a process that involves and empowers stakeholders into becoming active producers rather than simple consumers of content.

The innovation in this case is that the emphasis is on the people rather than the technology and learning is seen as a process of knowledge creation.

In conclusion, let us all agree to be champions and promote OER among our colleagues; let us collaborate so that we don't duplicate efforts and let us also encourage our learners to be active producers of OER and to share them with their peers. Our final goal is the same: achieve quality education and lifelong learning for all for the sustainable development of our countries.

Thank you for your kind attention.