

Developments in Distance and Online Learning: Can They Address Development Challenges?



*Dennis Irvine Lecture
University Council of Jamaica (UCJ), Jamaica
10 March 2014*

*Presented by
Professor Asha Kanwar
(co-written with Dr. K. Balasubramanian)
Commonwealth of Learning*

It is a privilege to speak to such a distinguished audience and I'm very grateful to Ambassador Burchell Whiteman, distinguished Chair of the COL Board of Governors and Chair of the University Council of Jamaica and Dr Yvonne Marshall, Executive Director, for inviting me to deliver the Dennis Irvine Lecture.

As you know, the Commonwealth of Learning, is an intergovernmental organisation established by the Commonwealth Heads of Government, over twenty five years ago. We are based in Vancouver, Canada and funded by voluntary contributions from Commonwealth Member States. You will be pleased to know that Jamaica has been a regular and consistent provider of both financial and intellectual support.

Interestingly, it is Commonwealth Day today and celebrations are being held in the 53 Member States during this week. Every year a theme is identified and this year's theme is 'Team Commonwealth'. It celebrates the spirit of friendship and the unity in our vast diversity. It is meant to remind us that together we can create just and peaceful societies, promote inclusive and sustainable development and advance economic growth and prosperity for all.

What does COL do? We help Commonwealth Member States and institutions to harness the potential of educational technologies for expanding access to education and training.

Our slogan is 'learning for development'.

Significantly, Dr Dennis Irvine was no stranger to the Commonwealth of Learning, which he served with great distinction as the Director of Caribbean Programmes and Material Acquisitions and Development

from July 1989 to July 1994. Dennis Irvine continued to serve COL as a Coordinator of its programmes in the Caribbean from 1994-96 and then as a Regional Advisor to COL's President. COL in turn recognised his outstanding contributions by conferring an honorary fellowship on him in 2002

The Dennis Irvine lecture series was instituted to honour this distinguished son of the Caribbean and a highly respected citizen of the Commonwealth. The then President of COL, Tan Sri Gajaraj Dhanarajan delivered the inaugural lecture in his honour in 2001.

My distinguished predecessor, Sir John Daniel spoke on 'How can learning contribute to development' in 2006, a theme of great significance to the life and work of Dr Dennis Irvine.

As Vice President of COL, I had the honour of delivering the Dennis Irvine lecture organised by the University of Guyana in 2010. I addressed the theme of ICTs in Higher Education: who stands to gain?

My topic today is 'Developments in Distance Education and elearning: can they address emerging challenges?', which I have prepared jointly with my colleague Dr K Balasubramanian. I will first look at the context of higher education globally and in the Caribbean region. I will then review the response to these needs-- developments in distance education and elearning, which include the emergence of OER and MOOCs. In conclusion, I will raise questions relating to whether the developments in distance education and elearning are addressing emerging challenges.

But first the context of Higher Education.

In the previous decade we have seen 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.

What does this mean in real terms? Experts estimate that if we are to accommodate the children who will reach enrolment age between now and 2025, we will need to build four new universities with a capacity of 30,000 students every single week

There has been a substantial increase in tertiary enrolments in the Commonwealth countries of the Caribbean.

Jamaica has seen a similar trend of growth in the last decade.

If you look at the percentage of enrolments in secondary education in Jamaica—which is 93% and compare it with the transition to tertiary education, you will note the figure drops to 26%, which is lower than the regional average. What are the reasons for this?

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 the Caribbean the APRs remain at about 25% while in South Asia and sub Saharan Africa the percentage drops to below 15.

In addition, the costs of HE have risen exponentially. An article in The Economist asks whether higher education is still worth it? The costs of higher education have risen way above inflation rates in the past

three decades, making HE increasingly unaffordable. This may be the American situation but quality HE is still beyond the reach of many in the developing world.

Government funding for HE has increased globally. In the US, federal funding for HE has grown from \$56 billion in 2000 to \$153 billion in 2010, a threefold increase when the number of students grew by only 33%. This is prompting policy makers to seek more accountability and value for money in the US.

Has this increased investment resulted in better quality higher education? A 2011 study found that 36% of college graduates in the US did not show any significant cognitive gains over four years and that half the employers surveyed said they had trouble finding suitable graduates to hire.

At the Time Summit on Higher Education, the US Secretary of Education, Arne Duncan called for more accountability through the development of a university ratings system—one factor of which would be the earning power of an institution's graduates. So we note that as both the demand and costs increase, there will be an increased need for quality and relevance in higher education. Do we know how much our graduates earn?

As governments and policy makers seek to expand the coverage of higher education, reduce costs and improve standards, it is clear that alternative approaches are needed. In the current economic climate, traditional brick and mortar solutions will not be possible. Let us look at four trends that have emerged as a response to the growing demand for affordable quality education.

This rising demand for HE has given rise to a range of new types of providers—private, cross-border, online and distance education institutions. The success of the Open University UK captured the imagination of policy makers around the world but particularly in developing countries.

Let us look at the growth of open universities in the Commonwealth. 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 five years later, that is in 2012, the number of open universities in the Commonwealth increased to 28. You can see that only one remained in Canada, the other two having merged with campus universities to become dual-mode.

On the other hand, the growth has been phenomenal in developing countries as governments struggle to increase access to higher education. Nigeria, Tanzania and Zambia all established open universities during this time. The Open University of Mauritius is the most recently established institution with others in the final stages in Kenya and Botswana. Asia has over 70 dedicated open universities. The next wave of open universities will be in Africa. As we have seen, developing countries continue to invest in open universities while in the developed world, we have seen open universities merge with campus based institutions.

Why are open universities so popular? One reason is lower costs. The annual cost per student at the Korean National Open University is \$ 186 as compared to nearly \$3000 for a campus student. Similarly the costs for STOU students are \$ 226 compared to \$ 876 in a campus university.

Dual mode provision similarly has lower costs. The University of Nairobi BEd programme costs three times as much as a distance learning programme. Studies show that dual mode provision costs 15% of campus institutions

A study by the National Knowledge Commission, India, shows that mega-universities, which achieve economies of scale cost substantially less than campus institutions. Pakistan's AIOU costs 22%; China 40%; India's IGNOU 35% and the OUUK, 50% as compared to campus universities.

What of quality? In 2012, the The Open University of the UK ranked first in student satisfaction. In addition the UKOU ranked fifth among the 100 universities surveyed by the Quality Assurance Agency (QAA) in the UK and was one rank higher than Oxford University.

With more access to technologies, there is an increasing trend towards online learning, especially in the developed countries. In 2010, 6.1 million students were taking at least one online course accounting for 31% of all US Higher Education students.

While the aggregate growth rate is 7.6% globally, interestingly, Asia has the highest growth rate at 17.3% with Vietnam and Malaysia leading the continent in elearning. Latin America is not far behind at nearly 15 per cent with Brazil and Colombia registering the highest growth.

Yet there is a digital divide between the different regions of the Commonwealth. Compare the internet access of over 80 % in Europe and North America with the 30% in the Caribbean with even lower figures for Asia and Africa

However, mobile devices are proving to be a game-changer. While broadband access remained stable in the Caribbean over the past decade, the number of internet users has increased, thanks to the phenomenal growth of mobile telephony.

You will note a similar pattern here in Jamaica. The number of internet users has touched over 40% because of the growth in mobile subscriptions. As technologies become more accessible both developing and developed countries will move towards more online and distance provision.

Let us look at the third trend. With the rise of social media, there has been a global movement towards collaboration in the development and sharing of content and we have seen the rise of Open Education Resources or OER. The fundamental principle is that any materials developed with public funds should be made available free to others.

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 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. These OER can be adopted and adapted by teacher education institutions here in Jamaica.

Another way in which OER are democratising education 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, textbooks cost four times the rates of inflation and in Washington State, Community Colleges are developing OER textbooks. Likewise the government of South Africa has decided that they will opt for OER textbooks.

So what impact are OER having on universities? Let me take the example of the OERu, a consortium of over 20 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 are putting 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.

What 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.

Let us now come to the fourth major trend emerging partially out of the use of free content or OER. This is the Massive Open Online Courses or MOOCs, a form of distance and online learning.

Started at the University of Manitoba in 2008, MOOCs gained traction in the ivy league institutions of the United States and have resulted in major consortia of the top universities on both sides of the Atlantic: Coursera, EdX and Udacity in the US with FutureLearn led by the OUUK and many others around the world.

The MOOC effect is unexpected in some sense. 270, 000 people signed up for the Computer Science (CS) course offered by Udacity which is much larger than the total number of learners who aspire to do CS courses in nearly 3000 degree granting institutions in the USA. So the potential to reach the unreached is certainly there.

In a more recent article in Nature, it is interesting to note that of the learners signing up for the big three MOOC's, while the US leads in terms of numbers, developing countries such as India and Brazil contribute about 14 percent of the sign ups. While MOOC's may not yet have caught up in Africa, their viability for emerging economies is becoming clearer. It is significant to note that China is not yet present in a significant way, possibly because of the language barrier, ie English.

A more up-to-date examination of subject matter of MOOC courses (July 2013) shows that about 28 percent belong to arts and humanities. Predominance of STEM and Business topics is along the expected

lines and the presence of a significant number of arts and humanities courses is worth noting. This shows that there are no subject-related barriers to MOOC offerings.

MOOCs have so far been offered in HE. What about MOOCs in Learning for Development (L4D), which is COL's core business? To explore this, COL in partnership with IIT-Kanpur offered a MOOC on mobiles-for-development, covering technology as well as agriculture, mobile learning, inclusive finance and banking. This interdisciplinary open course attracted 2282 registrants from 116 countries, 62% of whom were active participants. The six-week course was completed by over 400 participants.

Can MOOCs cut the costs of higher education? Georgia Tech is offering its prestigious Masters in Computer Science course as a MOOC—because of which its existing cost of \$40,000 is being reduced to \$7000, affordable even in many developing countries.

What of quality? Stanford University's free course in artificial intelligence attracted 160,000 students from nearly all countries of the world, of which 23,000 completed the course. Students are particularly drawn by the brand names of the institutions and the professors, who could be Nobel laureates.

As we have seen, distance and online learning have opened up access to millions across the Commonwealth and is a viable option for addressing issues of access, costs, equity and quality.

Distance and online learning have been seen as effective means of contributing to human development. One major challenge of our times is widespread unemployment.

There are more young people on the planet than ever before. The population aged 15-24 exceeded 1.2 billion in 2010, which means that youth make up 17% of the world's population and 40% of the world's unemployed. In 2012, 75 million youth were unemployed globally. Youth unemployment is a major challenge for governments across the Commonwealth, but especially so in SSA which is the youngest continent in the world.

The global pattern of youth unemployment is reflected in Jamaica and is higher than the regional average. 38% young women are likely to be unemployed compared to the 24 % of young males. However, the rate of unemployed persons with tertiary education falls to 4%, which is well below the regional average of 19%

It is interesting to note that nearly 85% of the tertiary educated population of Jamaica emigrates to OECD countries, which is far higher than the 10.8 % recorded for the Latin American and Caribbean region.

This results in remittances of nearly \$2 billion dollars annually and accounted for 15% of the Jamaican GDP.

Jamaica is also a country where it is possible to start a business in 7 days as opposed to the 64 required on an average in the region. With such a fertile environment, is entrepreneurship thriving?

The key jobs in Jamaica relate to science, technology, energy, mining, vocations, tourism, finance. Does the youth have skills in these sectors?

According to the Hon Minister of Labour and Social Security, ‘tertiary students...are not pursuing courses which would prepare them for the demands of the labour market’

What is the reason for this disconnect? A McKinsey report points out that ‘employers, education providers and youth live in parallel universes’ and very often these worlds do not meet. Over 50% of the youth surveyed did not believe that their secondary education would lead to employment. Similarly about 50% of the employers did not think that the new graduates had the skills to be hired even at the entry level. There seems to be a mismatch between what we teach in our schools and universities and what is required by the job market. Are ODL institutions responding to these issues?

What kinds of skills are needed? The Global Monitoring Report (GMR) identifies three categories: foundation skills dealing with literacy and numeracy; transferable skills relating to problem solving and the ability to adapt and use knowledge and skills in various contexts and technical and vocational skills associated with specific occupations.

What is it that employers want? As the Results for Development Institute’s report points out that employers are concerned about non-cognitive skills just as they are about cognitive and technical skills. These relate to communications, teamwork, leadership, entrepreneurship etc. What are we doing about incorporating the training relating to the non-cognitive skills in our curriculum?

Four key strategies have been identified to get Europe’s youth into work. One is to invest in innovations so that education becomes more affordable and accessible. This has been the fundamental premise underlying distance and online provision. Two, bring together young people, employers and education providers, something that educational providers need to focus on. Three build enabling structures and four share the practices that work. Context is always important and the models that we adopt must be ‘fit for purpose’.

How can ODL institutions address the challenge of skills development, gainful employment and livelihoods? One, by transforming the curriculum to integrate cognitive and non-cognitive skills. Two, harness appropriate technologies to address the needs of youth. The rise of low cost mobile devices is making this a real option in the developing world. Three to ensure there is a convergence between the needs of the labour market and the education provided to youth. How can we empower young people for jobs and entrepreneurship and help transform their lives?

As a young Ethiopian woman said ‘if someone can give me the skills and the opportunity to work, I know I can achieve my goals’

Dr Dennis Irvine was very optimistic about the role of distance learning in imparting employable skills to young citizens of the Caribbean, as he wrote in an article for the Jamaican Association for Distance and Open Learning journal in 2000. Our discussion today would have resonated well with him, who I’m sure, has been with us in spirit today.

Thank you for your kind attention.