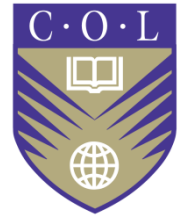


Towards Education for All: The Critical Role of Open and Distance Learning in National Development



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Introduction

Thank you for the opportunity to address this NOLNET conference. I congratulate NOLNET on the productive way in which it brings together all the ODL players in Namibia. Other countries in the region, where ODL is still fragmented, could learn from you.

Your conference theme *Towards Education for All: the Critical Role of Open and Distance Learning in National Development* resonates very strongly with me. During my three years at UNESCO, from 2001-04 leading the campaign for Education for All was at the centre of my work and brought me to Namibia early last year. It's good to be back wearing my new hat.

Mention of UNESCO leads me to say how sorry I am that my former colleague Claudia Harvey, the Director of the UNESCO Cluster Office here in Windhoek, is out of the country at the moment. She is a colleague that I esteem greatly.

Since I moved to the Commonwealth of Learning I continue to be preoccupied by the drive to achieve Education for All. However, given the special mission of COL my focus has broadened in one way and narrowed in another. It has broadened because COL, like many of its sister agencies, is directing much of its work towards the Millennium Development Goals. But it has narrowed because COL's mission focuses on the use of technology, especially the technologies and approaches of open and distance learning, rather than on the whole gamut of educational provision.

Against this background I shall take your conference theme as my title with one modification. I shall talk

about Learning for All: the critical Role of Open and Distance Learning in National Development

In this address I shall place COL's work in the context of national and world development. Let me begin by asking what development is. We use the word often without always stopping to ask what we mean by it. This will lead me to describe the framework in which the international community is trying to promote development, in particular the Millennium Development Goals agreed by the United Nations.

As we examine these goals, familiarly referred to as the MDGs, we shall find that they call for action on a variety of fronts. But what they all have in common is that their achievement will require a massive increase in human learning. This is self-evident in the case of the goals related to education, but it is equally true for the health goals, the poverty goals, the hunger goals and all the others. This is a major challenge, because conventional approaches to education, training, teaching and learning simply cannot cope with the scale of the challenge. So what can we do?

In nearly all other areas of human endeavour technology has revolutionised the way we do things over the last three centuries. It has done so at an accelerating pace, with the result that today ordinary people in the industrialised countries have access, at low cost, to an abundance of quality goods and services that previous generations could hardly have dreamt of. It is now time to spread the benefits of this revolution to education, which has historically resisted it. Indeed, in education an insidious link between quality and exclusivity has gained currency. Quality education is often defined by the numbers excluded from it.

In today's world this is nonsense. I shall argue that new approaches, based on technology, have created a revolution in education by making it possible to expand access, improve quality and cut costs - and all at the same time.

But even these early efforts are not enough. Our four billion fellow human beings at the bottom of the economic pyramid do not enjoy most of the comforts of modern life that a minority take for granted. They have been ignored by the multi-national corporations that produce and deliver many of the goods and services that richer people enjoy. They have also, if they live in rural areas, been largely ignored by government services and providers of higher education.

Can we change this bad situation? Can we bring the majority of our fellow inhabitants of the planet into the mainstream? I shall suggest tools for this purpose and show how the Commonwealth of Learning is making a modest contribution to this transformation.

What is Development?

So I start with the simple question: what is development? We use the word many times a day with various meanings.

The campaign to alleviate poverty is at the heart of this worldwide enterprise that we call 'development'. Its aims are summarised in the Millennium Development Goals that accompanied the Millennium Declaration made in 2000 by the largest assembly of heads of state and government ever held. First

among those goals is a call to reduce the proportion of people living on less than \$1 a day to half the 1990 level by 2015, that is to say from 28.3% of all people in low and middle-income economies to 14.2%.

That is the goal, and we are making progress towards it. If projected growth remains on track, global poverty rates will fall to 13% - which is less than half the 1990 level - and 360 million more people will avoid extreme poverty. Poverty would not be eradicated, but we would be much closer to the day when we can say that all the world's people have at least the bare minimum to eat and clothe themselves. However, eradicating hunger itself has been slow, with the situation worsening in some regions.

But is the term poverty alleviation is strong enough? Ought we not to talk about the eradication of poverty? Indeed, my former colleague Pierre Sané, UNESCO's Assistant Director-General for Social and Human Sciences, likes to talk about the abolition of poverty and makes an explicit analogy with the abolition of slavery. Calling for the abolition of something does not, of course, make it disappear. Some claim, for example, that today more people live in slavery than at any time in human history.

Nevertheless, getting international agreement on the need to abolish an evil creates a stronger moral pressure to match up to the ideal. No one now argues in public that slavery is a good thing. If the pioneers who led the campaign to abolish slavery in the 18th and 19th centuries had talked about the alleviation of slavery, rather than the abolition of slavery, I doubt that they would have succeeded in launching a campaign that became a turning point in our understanding of human rights.

Ought we not then, to aim for the abolition of poverty, not merely its alleviation? Is this possible? You can answer the question in two extreme ways and each presents a problem.

The first extreme answer is that the abolition of poverty is possible, because if the world's wealth were shared evenly then poverty would disappear. The problem with that answer, quite apart from the fact that people are unlikely to share their wealth evenly, is the built-in assumption that wealth is a zero-sum game. I mean the assumption that there is just so much wealth to go around and the challenge is to share it. But that is not true. Wealth is something that people create; they don't have to take it from someone else. Singapore is perhaps the most startling example of wealth creation in our lifetimes. Fifty years ago Singapore was a poor equatorial swamp. Today it is one of the world's richest countries.

The second answer is that the abolition of poverty is not possible. Jesus Christ said, 'the poor you will always have with you' and other prophets and thinkers have said the same. Poverty is part and parcel of human nature. But this need only refer to relative poverty. No matter how equal the opportunities before them, people will tend to become unequal. In all societies some people will be richer than others. This is not, however, what the first Millennium Goal means by poverty. It refers to the abject poverty that sees people dying from starvation in a world of abundance.

Abolishing that kind of poverty should be a realistic goal.

Development - what is it?

But does the word development have a deeper meaning than simply reducing poverty? The Nobel prizewinner Amartya Sen has given us a way of thinking about development that is simple, powerful and inspiring.

For him development is about freedom. The measure of development is the degree to which the freedom of people is enhanced. That means many kinds of freedom. First, it means freedom from hunger and freedom from abject poverty. It also means freedom of expression and religion. It means political freedom. On this definition of freedom, the achievement of the Millennium Development Goals becomes a by-product of something much more uplifting, the release and flowering of the human spirit.

And there is more. For Amartya Sen freedom is not only the measure of development but also the means of development. That is because the surest route to development is the free agency of people. It is people that develop families, communities, societies and nations. Free people, acting as free agents, do it better than people who are not free.

So development and freedom feed on each other. Development enhances the freedom of people and free people enhance development. It is a virtuous circle.

Development - how to achieve it?

The question then becomes: 'how do you start the process?' How do you get this virtuous wheel to start turning? I shall not surprise you if I claim that human learning is the most effective mechanism for development. I wonder if you recognise this statement:

Education also improves the quality of our lives by helping us develop our abilities. As we learn more about our environment and the threats to it, we become better able to protect and preserve it. As we become better at identifying and solving problems, we also become better at creating jobs and increasing our income. As we develop our own ideas and technologies, we become less dependent on imported innovations and the conditions that often accompany them. As it helps us become more successful in setting and pursuing our own goals, education is liberating, both individually and socially.

That comes from your own Namibian policy framework for education, *Toward Education for All-a Development Brief for Education, Culture and Training*.

Your statement implies that development, just like the life of humankind in society, is a complex process that depends on many factors. It is not one-dimensional.

Yet sadly, the story of international development over the last thirty years has often been a search for one-dimensional formulas: a quest for short cuts to the creation of prosperous societies with minimum effort.

Usually those formulas were economic, such as industrial expansion, import substitution, infrastructure development and, of course, the late and unlamented nostrum of structural adjustment. Some of these formulas worked, some of the time. But the lesson we learned was that there is no short cut to

development; no magic bullet that can be fired at the problem of poverty. Developing countries need to get many things right at the same time. Furthermore, the basis of contemporary economies is moving, at different paces in different places, from land to capital and then from capital to knowledge.

I am not advocating human learning as a one-dimensional solution either. A look around the world shows that education alone is not enough. You can all think of countries, or states within countries, that have - or once had - very good and comprehensive education systems that do not - or did not - translate into obvious prosperity. The reasons for this are - and were - diverse. Their economies may be organised in a perverse fashion. Their politics may be a mess. Neighbouring countries may be applying sanctions. The terms of trade may be stacked against the country's products. Development requires addressing these weaknesses too.

Learning to Achieve the MDGs

However, learning remains fundamental. Let me take three of the Millennium Development Goals as examples and make two points. The first is the necessity of expanding learning. The second is that conventional approaches cannot cope with the scale of the challenge.

Hunger and Poverty

The first MDG, as I just noted, calls for halving by 2015 the proportion of people living on less than a dollar a day and those who suffer from hunger. Most of those people live in rural areas.

They are the millions of farmers and smallholders who are the basis of the village economy. We used to call them subsistence farmers, but the fact is that almost none of them can subsist on what they grow themselves. They have to trade.

All over the world there are institutions and experts who have good information, based on careful research, which could improve the lives of these farmers. It may be information about better ways of growing traditional crops; about ways of growing new crops; or about better ways for farmers to link to markets. There are lots farmers who could benefit by learning from this information and plenty for them to learn about. The problem is putting the two together.

There are public servants, usually called agricultural extension officers, whose job is to bridge this gap and inform farmers of these possibilities. Sadly, however, there are too few of them. I was in Jamaica recently, where each extension officer is responsible for many hundreds of farmers scattered over wide areas of difficult terrain. The system is not working.

Primary Education

The second MDG calls for all boys and girls to complete primary school by 2015. Today over 100 million children never go to school and as many again leave school without learning any useful basics. Countries

in South Asia and sub-Saharan Africa need both to expand and to improve their school systems. For a poor family there is an economic cost of sending a child to school, even when school is nominally free. Parents will not pay this economic cost unless they believe that schooling will help their offspring.

Kids need teachers. There are 20 million teachers in the Commonwealth. Many of them need further training to be effective and achieve quality learning in the classroom. Millions of new teachers must also be trained as countries seek to expand education with a teaching force that is shrinking through retirement, migration and HIV/AIDS. Training and retraining of teachers is the major bottleneck to the achievement of universal primary education but conventional teacher training methods cannot expand to meet the challenge.

Most developing countries will struggle hard to meet the MDG target for primary education and many will miss it. Yet even partial success will stimulate a demand for secondary education which the poorer countries simply will not be able to satisfy in conventional ways. New ways of expanding secondary education are needed.

Health

Health has three Millennium Development Goals. One aims to reduce by two-thirds the mortality rate for children under five by 2015. A second calls for reducing by three-quarters the number of women dying in childbirth by the same date. The third targets the arrest and reversal of the spread of HIV/AIDS, malaria and other diseases. It would be silly to say that the health goals can be achieved without improving health services. Reducing maternal mortality, for instance, means training and deploying many more birth attendants.

However, there is much that people can learn to do for themselves. If everyone learned to wash their hands five times a day the health of the world would be transformed. It is much harder to become infected with HIV than to catch a cold, so people can learn to avoid it. Once again, however, conventional teaching and learning systems are not up to the challenge.

How can technology help?

I am pleased to say that the Commonwealth of Learning is helping to expand and improve learning in each of the areas I mentioned. Two months ago I was in Jamaica, where we are helping farmers to learn how to improve their livelihoods. In January I was in The Gambia, where the government believes that we have helped to reverse the spread of HIV/AIDS.

How do we do it? We do it by using technology to expand the scope and scale of human learning. Let me say what we mean by technology before getting specific. We define technology as the application of scientific and other organized knowledge to practical tasks by organizations consisting of people and machines. I emphasise two parts of this definition.

First, we are not engaged in a futile search for the perfect method of learning. We are applying 'scientific

and other organised knowledge'. That can mean tacit knowledge, crafts and organisational experience, not to mention a good dose of common sense. Second, we are living in a world of people and machines. Good use of technology always involves people and their social systems.

A simple and useful way to think about how to combine people and technology in education emerges when we reflect that learning involves two types of activity.

Independent and Interactive Learning

First, there are activities that you as a learner conduct independently, such as reading a book, viewing a TV programme, listening to me speaking now, writing an essay, doing mathematical calculations and working with a computer. Such activities are a major part of learning, and become more important as you progress from kindergarten to a doctoral programme.

Harnessing technology to such activities was the key to the success of the first great wave of increasing access to higher education. Reorganising these independent activities allowed a new type of university, usually called an open university, to use technology to increase access, improve quality and cut costs.

That was because the basic tools of independent learning such as print, audio material, TV programmes, CD-ROMs and computer software cost relatively little to reproduce in volume once you've invested in the first copy. Volume helps to increase access and cut costs. It also allows you to improve quality, because when you produce materials at scale you can afford to make them excellent.

Independent learning is essential and pervasive; but the evidence shows that most learners do not succeed through independent learning alone. Technology must involve people and their social systems. You also need interactive learning activities.

The word 'interactive' is a slippery and widely-abused term. I use it to mean a situation when a student evokes from another human being, be it a teacher, a tutor, or another classmate, a response that is specifically tailored to that particular student.

As you listen to me you are each involved in independent learning. But if you take me aside afterwards to tell me that I don't know what I am talking about, that will be an interactive event for both of us. Other interactive activities might be face-to-face sessions with other students, having your assignment commented on by a teacher, asking questions over the phone, getting a response to a query by e-mail, and so on.

These kinds of activities are vital in helping most people learn. However, they are more expensive to organise because they do not show the economies of scale of independent activities. To make twenty extra copies of a CD-ROM costs almost nothing whereas adding interactive activities require more people.

The Cost of Technology

The best way to express this graphically is to show the total cost of a learning system as a function of the number of students involved.

Note two things about independent activities. First, because of the economies of scale, the total cost increases only slowly with increasing student numbers. Second, because the preparation of good materials requires people and equipment, there is a significant initial investment and the curve starts well up on the vertical axis.

Costs show a different pattern for interactive activities. The initial cost is low - a tutor can simply call a group of people together under a tree. But adding more tutors is more expensive than burning more CD-ROMs, so the curve rises more steeply.

I have said that good teaching and learning should be a blend of both types of activity. You can see that by combining independent and interactive activities in different ways you can get different overall cost structures.

This explains the amazing success of the world's open universities, which have achieved high volume with good quality and low costs. The Indira Gandhi National Open University (IGNOU) now has 1.5 million students, accounting for 10% of all university students in India. The UK Open University has only 200,000 students but it is now at fifth place in the UK's national rankings of teaching quality, just above Oxford. Both these institutions operate with significantly lower costs than conventional universities.

Making it Real

What I have just described sounds rather theoretical. How relevant is the success of the open universities to the basic needs addressed by the MDGs? Let me now root this in reality and illustrate for you how COL blends independent and interactive learning. First, I shall look at the present reality of the Commonwealth of Learning's work on three of the MDGs. Second, I shall look a little further ahead and suggest how we can serve our fellow human beings at the bottom of the pyramid.

Poverty and Hunger

I start with the MDG for poverty and hunger. The challenge is to enable smallholders and farmers to learn their way to better livelihoods. This cannot be a top-down process. It is not just a matter of packaging information in an attractive way, say through a radio soap opera, and pushing it at the farmers.

Communication must operate in two directions, so the first step is to help farmers and smallholders define their own needs. It is vital to work with the farmers so that they identify areas for improvement or change and ask for the information they need. The process must be interactive.

COL is working with institutions in Tamil Nadu, India to put these ideas into practice. After mobilising

the farmers we have created a consortium of the local agricultural, veterinary, engineering and open universities to work together to supply the knowledge required in a way that is rooted in the local circumstances of the villages.

Two of the technological links between the farmers and the consortium are community radio and the commercial ICT kiosks that are spreading rapidly in rural India. Commercial involvement is important. Farmers are ready to pay for useful things. Part of the programme involves expanding the presence of the big banks in the villages so as to expand rural credit and use the banks' muscle to improve access to markets.

In Jamaica COL has a different approach. There we are multiplying the impact of the agricultural extension officers by equipping them with video cameras, editing equipment and projectors. We call this media empowerment.

The extension service makes videos, right in the local setting, to show good practice and new techniques. These are then sent out to the farmers and shown on national television. Quite apart from reaching many more farmers than the extension officers could meet in person, these videos, featuring people the farmers know, are more effective than bringing them together for lectures in local centres. They also help to interest young people in agriculture, which is a problem in the Caribbean.

What about Africa in this context? A study that the University of Kwazulu Natal did with COL's help showed that radio plays a major role in education and extension activities in Africa. Discussions with African partners at a meeting we organised with the Forum for Agricultural Research in Africa (FARA) in Uganda identified critical needs for improving the livelihoods of farming communities.

One priority is to raise the awareness about the potential of ICT for community development. A second is to develop participation through new partnerships. A third is to train people to develop digitised and localised content that can fit into any type of technology whether it be radio, broadband Internet or print.

The partnerships for enabling learning for farming communities should extend beyond conventional educational and research institutions to include all stakeholders: grassroots communities, civil society, the private sector, financial institutions and international organisations such as NEPAD, FARA, and the Consortium Group on International Agricultural Research (CGIAR). We are now discussing such a model in Africa, with appropriate adaptations, in South Africa.

In India nearly all the work in designing and launching this model was done by Indians. Here in Africa we are looking to teams of Africans to make it a reality.

Primary Education

COL's contribution to the expansion of primary education is through teacher training. For example, we are helping a Consortium of Teacher Education Colleges, led by Nigeria, to offer distance learning courses in the Commonwealth Western Africa countries.

In Southern Africa, in Lesotho, COL helped build capacity in the Lesotho College of Education for an in-service Distance Teacher Education Programme for training a large number of untrained teachers in the primary schools of Lesotho. This was essential for the implementation of the government's Free and Compulsory Primary Education policy.

Teaching materials are also very important. We helped to produce 46 modules in Science, Mathematics, Technology and General Education for eight southern African countries (Botswana, Malawi, Mozambique, Namibia, South Africa, Tanzania, Zambia and Zimbabwe). The Ministries of Education of all 19 Commonwealth countries in the Sub-Saharan Africa now have these materials.

Heading 1

Normal

Health

COL is also using media empowerment as a tool for achieving the health goals. To avoid disease people need access to information that they can understand: not just because it is presented in their own language, but because it is rooted in their culture - even if it challenges some of the habits of that culture. The best way to reflect local modes of thought is to equip and train people to produce the health messages themselves.

That is what the Commonwealth of Learning is doing through its partnership with the World Health Organisation. We train local WHO representatives to expand their impact by using distance education in their work with NGOs. We equipped and trained an NGO in Kwazulu Natal Province of South Africa to use video to reach far greater numbers with health information and training, notably about the problem of HIV/AIDS stigma. Similarly, mobile units with projectors and generators use radio and television to deliver information about malaria to the villages of Sri Lanka.

In The Gambia we have extended an excellent programme initiated by the Nova Scotia Gambia Association. They have helped to train 30 peer health educators, 15 boys and 15 girls, in each of the 135 secondary schools in the country. By equipping this NGO with video equipment and training local people to use it, we have created a system of 'village cinema'.

The young people produce skits about HIV/AIDS and malaria which are recorded on video. In each village a sheet is hung between two trees and a video projector is powered by a diesel generator on the back of a pick-up truck. 35% of the population has seen these videos and the government says that they have led to healthier behaviour and a decline in infection rates.

Latest Developments

The applications I have described use old and well-tried technologies, and there is nothing wrong with them. The really good news is that the latest technologies make the cost curves even more favourable for access and quality. I refer to two developments in particular.

The first is what we now call connectivity: the linking of people around the globe through the Internet. In terms of my cost curves this does two things. First, because it is so cheap and easy to distribute materials via the Internet, the curve for independent activities becomes even flatter. Second, because it makes written communication between people so much easier, faster and more efficient, it also flattens the cost curve for interactive activities.

The second new technology we call Open Educational Resources. You know about the free open source software movement, FOSS, through which people work collaboratively on developing software for all sorts of applications and then make it freely available for adaptation - provided the adaptor puts their new version back into the pool. As an example COL provides a web-based guide for people looking for open source learning management systems, the platforms for eLearning. We are also using a FOSS package to organise our next Pan-Commonwealth Forum on Open Learning in Jamaica next year.

The parallel revolution, which is gaining momentum, applies the same principle to the development of materials for eLearning or web-based learning. People and institutions around the world can develop courses, or smaller units of teaching, and make them available as 're-usable learning objects'. The term is clumsy but the reality is very exciting indeed. It means that teachers around the world can readily access excellent electronic materials and adapt them to their own teaching needs.

Open Educational Resources have one very important impact on the cost curves. They have the potential to bring down sharply the initial investment cost of technology-mediated learning. This is revolutionary because it means you can offer appropriate eLearning to low numbers and make it locally relevant. You no longer have to recoup a large initial investment through the high enrolments that are a feature of the open universities.

Serving the Bottom of the Pyramid

This ties up well with the important writings of C.K. Prahalad and his colleagues about 'The Fortune at the Bottom of the Pyramid'. Addressing themselves to multi-national corporations, they focus on the four billion poor people in the world who aspire to better lives. They urge corporations to look at globalisation strategies through a new lens of inclusive capitalism since, 'for companies with the resources and persistence to compete at the bottom of the world economic pyramid, the prospective rewards include growth, profits and incalculable contributions to humankind'.

Look at these four billion people through the lens of education, and note that if 35% of the relevant age group were to access higher education there would be 150 million additional students, far more than total current enrolments worldwide. Higher education would, however, face the same challenge as businesses

in serving this clientele. It would require 'radical innovations in technology and business models'; changing from the ideal of "bigger is better" to 'an ideal of highly distributed small scale operations married to world-scale capabilities'; and 'helping people improve their lives by producing and distributing products and services in culturally sensitive, environmentally sustainable and economically profitable ways'.

However, as I noted earlier, improving connectivity is uniting the world's rich and poor and transforming the digital divide into a digital dividend. Communication links are altering dramatically the way that poor villages in the developing world function. The growing reservoir of re-usable learning objects means that local teachers do not have to re-invent every wheel. There is a huge new opportunity bring education to millions.

But we prepare for tomorrow today. That is the essence of COL's work, to help countries like Namibia to put technology to the service of education and training. Over the years we have helped many countries to develop policies, systems and applications for the greater use of technology in education, notably the technology of open and distance learning which has demonstrated its success in so many places. We are at your service.