DEVELOPING
A COMMON WEALTH OF LEARNING

Selected speeches of Sir John Daniel and colleagues in India, Kenya, Malaysia, Mauritius and Singapore

September 2005 – February 2006
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Introduction

Part of the mission of the Commonwealth of Learning is to show intellectual leadership in the application of technology to learning. Although electronic communication is fast becoming a vehicle of choice for the discourse that sustains academic debate, the spoken and printed word retains a special role. The country visits that I undertake for COL include speaking engagements that allow me to explore a range of topics touching on learning for development. This booklet is a partial response to the requests that I receive for “hard copies” of these addresses and follows a similar publication in 2005 containing six speeches I gave in Africa.

Collaboration is the theme that unites these essays. The first and second explore the opportunities and threats of partnerships for cross-border education and the cooperation required to create a quality culture. Two speeches then examine the potential of a novel form of academic collaboration: the extension of the open source software movement to the cooperative development and sharing of courseware as open educational resources. The following two texts suggest solutions to the particular challenges facing the small states that constitute two-thirds of Commonwealth membership. Ministers of Education from these countries have developed a vision of a Virtual University for Small States of the Commonwealth that will allow them to provide collaboratively some of the learning opportunities that they are too small to create individually.

The focus on higher education in these speeches reflects the nature of the audiences rather than any narrowness in COL’s mandate, which covers learning for development at all levels. In this spirit the final speech examines the burgeoning domain of open schooling, which is going to assume great importance as countries achieve universal primary schooling and thereby increase demand for secondary education. Successful open schools create win-win partnerships between governments and NGOs with a mission to disadvantaged children.

The preparation of these speeches again demonstrates the spirit of external and internal collaboration that is integral to COL’s work. Collaboration between COL and UNESCO is especially strong in higher education and I have enjoyed working again with three of my most dynamic former colleagues at UNESCO: Susan D’Antoni, Stamenka Uvalić-Trumbić and Zeynep Varoğlu, on the topical issues of quality assurance, cross-border education, eLearning and the emergence of open educational resources. I also acknowledge with pleasure the contribution of my colleagues at COL: Asha Kanwar, Susan Phillips and Paul West have co-authored speeches on their special areas of expertise and the texts have been brought together into this booklet by Alex Hennig, Kathryn Romanow and Dave Wilson.

Sir John Daniel
April 2006
Mega-Universities = Mega Quality?

2nd WORLD SUMMIT OF MEGA-UNIVERSITIES
Cross Border Delivery: Experiences of Mega-Universities
New Delhi | 25 September 2005

By Sir John Daniel, Asha Kanwar (Commonwealth of Learning) & Stamenka Uvalić-Trumbić (UNESCO)

Introduction

It is a tremendous pleasure to be with you. Speakers always say that, but for me this event really is very special. I am honoured to give a keynote address at this Second World Summit of Mega-universities.

When I coined the word mega-university a decade ago I did not imagine that it would become part of the world’s educational vocabulary. I never dreamed that a decade later I would be attending the First World Summit of Mega-universities, that splendidly memorable event hosted by China at the Shanghai TVU. I am flattered that you have asked me to speak again at this Second World Summit of Mega-universities. You must not share the view of the session chair who once introduced me by saying, ‘anyone who has not heard John Daniel speak before will have been looking forward to this moment’.

At the Shanghai Summit my title was Mega-universities = Mega-impact on Access, Cost and Quality. For this Summit you have chosen a theme which is dear to me: Cross Border Delivery; Experiences of Mega-universities. To address this theme I shall ask simply Mega-universities = Mega quality? I have included a question mark that was not there in Shanghai.

To tackle this question as it relates to cross-border delivery I have invited two co-authors to help me. Professor Asha Kanwar, our higher education specialist at the Commonwealth of Learning, has recently done research on the impact of cross-border higher education on developing countries. My former UNESCO colleague, Stamenka Uvalić-Trumbić, leads the UNESCO-OECD process to develop quality guidelines for cross-border higher education.

Our first key question is simple. Can cross-border higher education help developing countries respond to the growing demand for higher education? Can cross-border HE satisfy the three ‘A’s: accessibility, availability and affordability?

We shall look at the reality of cross-border HE in three very different developing countries: India, Jamaica and Sierra Leone. These three cases show that today cross-border HE makes a negligible contribution to offering higher education that is accessible, available and affordable in developing countries. There may be enormous potential for the mega-universities to operate beyond their own borders, but today you are only scratching the surface.

But this could be a very important task for you. C.K. Prahalad’s book, The Fortune at the Bottom of the Pyramid, implicitly challenges cross-border education radically to change its cost structures and logistical capabilities in order to serve millions of people now deprived of higher education. The mega-universities are the only institutions with the potential to respond to this challenge.

How might you make such radical changes? The electronic delivery of services is changing business models dramatically. Electronic delivery could transform cross-border HE – provided that it exploits the breakthrough of open source software in the management of learning and the use of learning materials.

Assuming that the mega-universities can create cross-border operations at scale, governments will have to monitor you by creating quality assurance and accreditation frameworks to match that scale. Recent work by UNESCO and the OECD will help them do this.

We shall then talk about quality in the mega-universities. Always remember that open universities were set up to raise the quality of distance education and wash away bad memories of correspondence education. You cannot afford to let down your guard on quality. Finally, we shall speculate about the leadership styles that mega-universities require.

That is the plan. Now back to the beginning!

What is cross-border higher education?

What is cross-border higher education? UNESCO and the OECD, in their Guidelines for Quality Provision in Cross-Border Higher Education, state that: ‘Cross-border higher education includes higher education that takes place when students follow a course or programme of study that has been produced, and is continuing to be maintained, in a country different from the one in which they are residing. Cross-border higher education may include higher education by private and/or for-profit providers.’
Using the term ‘cross-border’ accepts national borders in higher education in a way that might have seemed strange to the academic nomads of medieval Europe and ancient Arabia. Accepting borders recognises the roles of national governments for overseeing the national HE system. The border is also a symbol for national political, social and cultural identity.

National sovereignty over higher education has been reinforced by the General Agreement on Trade in Services (GATS) of the World Trade Organisation. Seeing trade ministers offer to trade higher education services alongside bananas and cars has alarmed some academics and heightened the fear of cross-border HE as a nasty side effect of globalisation.

Cross-border higher education can originate from various sources, not just from conventional universities, open universities and mega-universities, but also from media companies, multinational companies, corporate universities, networks of universities, professional organizations, and IT companies.¹

The GATS, the General Agreement on Trade in Services, recognises four modes of trade. First there is consumption abroad, where students travel to another country to study, as all three co-authors of this paper once did. Second, there is the presence of natural persons, which in academic terms means visiting scholars or teachers.

Although people cross borders in both cases, neither of these traditional forms of academic exchange falls within the UNESCO/OECD definition. That focuses on the other two forms of trade, defined by the GATS as cross-border supply and commercial presence, but better known to us as distance education and the establishment of branch campuses. These are the forms of cross-border higher education that raise fears of cultural imperialism and loss of sovereignty. Some people fear the potential of your mega-universities for operating across borders. Are their fears justified?

Could we not argue that cross-border education could help developing countries to expand higher education? Today age participation rates in HE in the industrialised world approach 50% or more, yet APRs in many developing countries are still in single figures. Cross-border higher education could help to increase access and keep in the country some young people who might otherwise migrate abroad to study and then stay there.

What is the reality? First, what are the priorities of developing countries for higher education? Second, what does the evidence tell us about the contribution of cross-border HE to these priorities?

### Priorities for Higher Education in the Developing World

The most comprehensive statement about the priorities for HE in the developing world came from UNESCO’s 1998 World Conference which attracted 4,000 people – including 130 ministers – from 182 countries. The Conference adopted a World Declaration on Higher Education for the Twenty-first Century and a Framework for Priority Action for Change and Development in Higher Education. They proposed an international development agenda that stressed the core missions and values of higher education; notably equitable access, the advancement of knowledge through research, and the need for relevance and quality. The Conference concluded that higher education faced the most radical shake-up in its history.

For the developing world the challenge begins, as it often does, with demography. Forecasts indicate a population of 7 – 8 billion people in the developing countries in 2025 - more than half of them young people. We have already crossed the threshold of 100 million students worldwide, and numbers are forecast to grow to 125 million before 2020. But this forecast may be too modest. China has recently doubled enrolments in higher education in a short period. Today the five largest national systems of higher education (China, USA, India, Russia and Japan) account for 53.1 million students, which is more than half the world total.

The challenge of absolute numbers is heightened by the huge discrepancy between developing and developed countries in rates of access to higher education. 40-50% age participation rates are becoming the norm in developed countries, whereas in some developing countries, especially in sub-Saharan Africa, APRs remain below 5%.² Yet people in developing countries want higher education.

### Can Cross-Border HE help?

Which raises the key question: can cross-border higher education help meet the challenge of rising demand? Or will cross-border higher education, like the failed expectations of the dotcom frenzy, become a casualty of too much hype and too little performance?

History is instructive. In the 1980’s many lowly American universities established branch campuses in Japan, but because of lack of interest from the locals they gradually melted away. South Africa was an attractive destination for foreign providers in the mid 1990’s but only two of the 38 foreign providers that moved in have survived today’s strict accreditation procedures. Let us look at three other countries that are positioned at various points on the development spectrum: India, Jamaica and Sierra Leone.

Despite having the third largest HE system in the world,² India only provides access to 7% of the 18-23 age group. To catch up with its neighbours Thailand and Singapore, which have APRs of 20% and 34% respectively; India has to find cost-effective mechanisms for expanding access. Open and distance education is a good way to reach large numbers and today 23%
of all HE enrolments in India are in distance education; specifically in 11 open universities and 102 dual-mode institutions. The government’s target is that by 2010, 40% of all HE participation will be through distance education. The number of privately managed institutions is also increasing in India, especially in professional disciplines. However, on current trends the target of 14 million students, or a 10% APR by 2007/8, will elude India. Yet the additional market of 5 million students should be tempting for major providers. Could cross-border provision respond to this market?

The number of cross-border providers in India has increased from 27 in 2000 to 114 in 2004. But a third of these institutions are not recognised or accredited in their country of origin and the same proportion of their Indian collaborators are not part of the formal higher education system either. Even when the foreign providers are universities, they have poor reputations in their own countries. Neither branch campuses nor franchise agreements have had much success. The only exceptions are 61 twinning and articulation arrangements that allow students to go to the source country in the final year and stay on for employment purposes. With such figures cross border HE is clearly a non-issue in India. The enrolments it attracts are negligible in the Indian context.

In Jamaica the existing tertiary institutions cater to nearly 15% of the conventional age group. The average APR for the Caribbean region is 18%. Jamaica has announced plans to double access to tertiary education by 2010 in three ways: by increasing the provision of distance education; by expanding franchised qualifications from the University of the West Indies to local community colleges; and by collaboration with universities outside the Caribbean. Existing unmet demand opens the door for cross-border tertiary education and 31 providers are already in the country.

Sierra Leone, a country recently emerged from conflict, has one university (with four constituent colleges) and six teacher training colleges and polytechnics. As well as these public institutions there are private technical and vocational institutions. The total number of enrolments at the University of Sierra Leone was 5445 in 2002-3; with 5394 in the six other tertiary education institutions put together. The gross tertiary enrolment rates for Sierra Leone are 2.0 %. Comparing this with the 4% enrolment figure for Africa, the National Education Master Plan rightly envisages the need for the ‘reorganization and expansion of tertiary education by 2007’. The numbers are already rising sharply. Despite limited facilities and an infrastructure wrecked by eleven years of Civil war, Sierra Leone can be an attractive destination for cross-border providers. Some are already there. Providers from the UK, USA and Australia advertise distance learning courses at degree level in the local papers.

What common features emerge from these three country summaries? First, huge unsatisfied demand calls for expansion of access. Second, for-profit cross-border providers are active. Third, these providers are of low quality despite their high prices. They tend to cater to a rich market and have low enrolments.

Data regarding enrolments in cross-border provision are hard to find and are usually underestimates. The UK’s HE Statistics Agency, HESA, recorded 101,645 enrolments of UK transnational delivery (by franchise, branch campuses, and distance learning) in 191 countries across the world in 2002-3. Even if the absolute numbers have a margin of error, looking at their worldwide distribution probably gives a fair picture of where cross-border providers concentrate their efforts.

The highest numbers of cross-border students were living in well-developed countries: as measured by their rankings in UNDP’s Human Development Index. The largest UK numbers were found in Hong Kong SAR (26th place in the HDI) followed by Singapore (28th) and Malaysia (58th). These are also the main markets for Australian cross-border providers. By contrast, enrolments were 1203 in India, 777 in Jamaica and less than 100 in 30 African countries taken together (excluding South Africa). We conclude that cross-border enrolments in countries with low rankings on the Human Development Index are minimal. However, there is now significant and successful cross-border activity among developed countries. Yet cross-border provision from the developed to the developing world is insignificant.

So who is afraid of cross-border higher education? From this evidence no developing country should fear cross-border provision. Instead they might regret that a possible contributor to the expansion of their higher education systems is not delivering. How can cross-border HE become more relevant? Is this an opportunity – even a duty – for the mega-universities?

Can Cross-Border HE do better?

One encouraging sign is the growing exports from one developing country to another. The University of South Africa, UNISA, seems set to become a major provider across Africa and IGNOU, is already targeting niche markets of the Indian diaspora in the Middle East and elsewhere. Cross-border activities now show a north-south divide; but can they become a global phenomenon?

For cross border provision to help the developing world it must address the three ‘A’s’ of accessibility, affordability and availability.

Accessibility

Access to quality higher education remains a major challenge in the developing world. Decreasing public spending and increasing demand have set the stage for a diverse range of providers, including rogue providers. Countries like India with large and well-developed distance education systems is not delivering. How can cross-border HE become more relevant? Is this an opportunity – even a duty – for the mega-universities?

Affordability

Costs are a major deterrent. Conventional distance education is well developed in Asia and costs much less than traditional education. Foreign providers with higher costs cannot compete with local education provision. To succeed, cross-border providers must devise a business model that can take them beyond the rich to reach out to the masses.

The early history of the African Virtual University illustrates this point. At first it delivered programmes by satellite sourced from outside the continent at high cost. This proved non viable. Eventually the AVU had to establish itself
in Africa and create partnerships with local universities in order to expand its enrolment. The presence of a market does not ensure consumption, because products have to be designed so that needs are converted into sustainable demand.

India has transformed higher education from an elite system to a mass system for a vibrant democracy. Instead of bucking this trend, overseas providers should flow with the mainstream of national developments. We shall suggest how they might do this in a moment.

**Availability**

The subjects made available by cross-border providers are limited. Programmes are mostly in the areas of Business and Information Technology. Students from different cultures and linguistic backgrounds study the same courses as in the country of origin, with no recognition of social, cultural and ethnic diversity.

When asked to identify its needs in tertiary education, Samoa listed ‘agriculture, health and social development’. St Kitts and Nevis has priorities that include ‘courses built on culture, heritage, health care, teacher training, natural environment and industries’. Cross-border education provision will become relevant only when it endeavours to respond to such country priorities.

Responding effectively requires strong partnerships between the overseas provider and local institutions, not just in logistics, but more importantly in determining the content, its relevance and the methods of delivery. For example, the University of West Indies offers a programme in Tourism and Hotel Management, which is a priority area for the region. The cross-border providers do not.

Similarly, a national publicly-funded institution in Sierra Leone offers Peace Studies and Conflict Resolution, not the overseas providers. Unless providers take national priorities into account, they will always be vulnerable to the charge of ‘academic dumping’. Cross-border providers could identify niche areas – just as the Tamil Virtual University has done by offering Tamil language courses to the Tamil diaspora from Kuala Lumpur to California.

**Cross-border Education at the Bottom of the Pyramid**

Cross-border education should learn from the thinking of C.K. Prahalad and colleagues about ‘The Fortune at the Bottom of the Pyramid’. Addressing themselves to multi-national corporations, they point to the four billion poor people in the world who aspire to better lives. They urge multi-nationals to view their 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’ (P&H, p1).

Looking at these four billion people through the lens of tertiary education, you might note that if they achieved an APR of 35% there would be 150 million additional students to serve. This is far more than total current enrolments worldwide and the equivalent of one hundred new IGNOUs. Mega-universities would, however, face the same challenges as business in serving these people. 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’.

Business requires multiple partners to operate successfully in this environment. Likewise mega-universities would need partnerships with local government authorities, communities, NGOs and financial institutions.

Fortunately one development is helping both business and education to serve the poor. The growing availability of telephone and Internet connections is uniting the world’s rich and poor and transforming the digital divide into a digital dividend. Communication links are changing the way that poor villages in the developing world function. There is a huge opportunity for mega-universities, both at home and as cross-border providers, to develop new business models and bring education to millions.

By establishing economies of scope they would be able to reach out to the Bottom of the Pyramid and achieve economies of scale. As Prahalad says ‘We have proved to the world that if you build a market for the rich, the poor wouldn’t participate. If you build a market for the poor, the rich would participate’. Just as cheap shampoo sachets and brand names can appeal to the poor constituencies, low-cost, high quality and need-based education can reach out to the millions that live below the poverty line but still aspire to education and training for a better future. Costs are critical in developing economies and cross-border providers must address that challenge.

**New Technologies for Cross-Border Education**

Fortunately, a series of developments in the ways that technology is used could help to make the dramatic reduction in educational costs that is required. These developments combine steadily widening access to information and communications technology, which we call connectivity, with new ways of using connectivity in education. We refer not simply to eLearning, but to the blossoming of the Free Open Source Software movement and its application to eLearning. Institutions offering eLearning can choose from a range of open source Learning Management Systems, which is the term for software platforms that support eLearning. Even more importantly, teachers and institutions around the world are creating and sharing learning materials and courses for use on these platforms, which are known generically as ‘reusable learning objects’.

This combination of expanding connectivity and the growing reservoir of open education resources is a revolution and you can learn more about it on the COL website. (See, for example, http://www.col.org/lor/index.htm).

This combination could open up higher education to the billions of people at the bottom of the pyramid. Much of this work will, rightly, be done by local providers. However, such a huge market will most likely spark a massive expansion in cross-border provision. Mega-universities could be active on
The Tertiary Education Council in Sierra Leone has the mandate to ensure standards. It hopes to evolve into a Quality Assurance Agency which could possibly regulate the entry of foreign providers.

These examples show that the developing world still needs to develop regulatory mechanisms for protecting both systems and students. In particular, existing regulations have difficulty coping with the multiple manifestations of distance education.

How can national bodies deal effectively with this increasingly complex phenomenon? What is the role of international bodies in maintaining quality provision? What should be the coordination mechanisms between national and international bodies? How will information be generated and shared?

To address these challenges in the context of cross-border provision UNESCO is mapping needs and current initiatives for capacity building in the related domains of quality assurance, accreditation and the recognition of new types of qualifications for the labour market. This mapping reveals major regional variations. All regions have an emerging concern for quality assurance, but it is not matched by adequate human, institutional and financial resources. Moreover, the terms quality assurance, accreditation, registration, licensure, and qualifications recognition are often confused.

Nonetheless, developing countries feel that it is urgent to develop a common understanding of terms and to gain better insights into the different models, criteria and procedures for quality assurance. This will enable them to develop policies for inclusion in national reforms and legislation.

The UNESCO review identified some key preconditions for efficient capacity building in quality assurance. Support from government is essential, as is involving the principal stakeholders at the national level, notably higher education institutions, academic staff and students. The process must also embrace new types of provision of higher education, such as private institutions, distance education, and cross-border operations. Above all, capacity-building must have a long-term perspective.

A trend to greater regionalisation, accompanied by the ineluctable thrust towards global interconnectedness, is clearly reflected in all reviews. Thus Asia and the Pacific see the need for a nodal point for research and development, as well as a registry for regional expertise. Sub-Saharan Africa has a regional capacity-building strategy employing South-South co-operation so that more sophisticated systems can coach their less advanced neighbours. An overriding requirement is to change mentalities by promoting a ‘quality culture’ that can overcome the traditional resistance to change from the academic community. The continuous involvement of key players and consistent government support are essential for this.

The big challenge for UNESCO and other international organisations is to develop a global response to such diverse requirements, knowing that the interests of local, regional and global educational communities converge on some topics and diverge on others. The changing role of the nation-state,
multiple identities, new dimensions of multiculturalism and international education all make fresh demands on international organisations to redress inequalities and shape new ‘supranational policy’, through regulation and redistribution. Cross-border higher education must be placed in the larger context of policy formulation within the ‘complex web of relationships that extend beyond the nation-state’ and embrace other emerging terms and concepts such as ‘supranational policy’ and ‘cosmopolitan democracy’.\(^{19}\)

This demanding environment is the backdrop to the joint work of UNESCO and the OECD on Guidelines for Quality Provision in Cross-Border Higher Education. It arose from UNESCO’s on-going work of reviewing the regional conventions on the recognition of traditional qualifications in order to adapt them to new realities.

The Guidelines recognise the importance of national authority and the diversity of higher education systems. They present higher education as a vital means for expressing a country’s linguistic and cultural diversity, nurturing its economic development and strengthening social cohesion. In addressing six major stakeholders in higher education, namely governments, institutions, QA bodies, credentialing agencies, student groups and professional bodies, the guidelines provide examples of good practice that stakeholders can examine and adapt to their own regional and national realities.

The effectiveness of the Guidelines largely depends on strengthening the capacity of national systems to assure the quality of higher education. Further support to capacity building in quality assurance carried out by UNESCO, by other multilateral organisations and by bilateral donors will sustain and complement the Guidelines. Exchanging information among a wide range of stakeholders is a good foundation for capacity-building. It also empowers learners and promotes quality ‘literacy’ when it is shared with students, employers and parents. Data-bases, publications, knowledge repositories for decision-makers on policy issues in higher education, and electronic forums to promote communities of interest in QA and QR are all part of the process.

The policy debates they generate encourage the dialogue across borders that is a prerequisite for the solid international frameworks of quality assurance that can be catalysts of change.

Quality in Mega-universities

What are the implications of all this for the mega-universities? What quality criteria should mega-universities use to assess their work and does eLearning, which will be a significant element of cross-border teaching, require new criteria?

A recent UNESCO survey showed that most mega-universities have not developed a separate QA system for e-learning but use the same criteria as for their conventional distance education offerings.\(^{20}\) However, the Korean National Open University (KNOU), which offers 60 eLearning courses, uses three quality assurance measures: a) the appropriateness of eLearning objectives and content accuracy and structure; b) the pedagogical strategies, multimedia components, user interface, and course management functions; and c) two formal evaluation sessions during the development process.

AIOU has adopted a QA process in developing multimedia contents for its courses. Other mega-universities – such as the UKOU and China’s RTVU system, are incorporating eLearning into their programmes but have no special QA measures for eLearning. Anadolu University offers an eLearning MBA programme and is working on details for a QA for eLearning.

Our general view is that while there must be quality assurance of eLearning, mega-universities have much to gain by using quality criteria which are recognisably similar to those used across the rest of higher education. I came to this view when I was Vice-Chancellor of the UKOU, when a major reform merged UK higher education into a single system. Partly because of the strong arguments made by the UKOU, all institutions, whether contact or distance, were placed within a single framework for purposes of funding and quality assessment.

The UKOU was subject to the same processes as other universities for quality audit, for the assessment of research, and for the assessment of teaching quality. All three processes were extremely beneficial, particularly the teaching quality assessment. Every year the UK’s Quality Assurance Agency for Higher Education picked a number of subjects and sent teams into each university to assess how well they taught them. The team had to allocate up to four points in each of six areas:

- Curriculum Design, Content and Organisation
- Teaching, Learning and Assessment
- Student Progression and Achievement
- Student Support and Guidance
- Learning Resources
- Quality Management and Enhancement

That meant that you could score up to 24 points in each subject and the UK press decided that 22/24 or better indicated excellent teaching of that subject. The newspapers then rated universities according to the proportion of subjects that had been ranked as excellent.

Here is the table for 2004. You can see that after the system had been running for some years the UKOU had risen to fifth place in the rankings of some one hundred universities, being placed just above Oxford, where I did my undergraduate degree.

You got some interesting results when you combine these quality assessments with student numbers. When they assessed General Engineering eight universities received excellent rankings, with the OU at the top. The seven others together had 4,687 full-time equivalent students enrolled in this subject. The OU had 4,331. This meant that 48% of all students studying excellent-rated General Engineering courses in the UK were at the Open University. There were similar results in other disciplines. In Music the OU accounted for 65% of all excellently taught students, in Geology 62%, in Social Policy 54%, in Chemistry 42% and in Business 32%.

I also bring you some very fresh news which gives me enormous pleasure. Four days ago the UK published a survey of student satisfaction conducted
amongst 170,000 students across the whole university system. Top of the class is the Open University with a score of 4.5 out of a maximum possible 5. Here I’m afraid I can’t make comparisons to my alma mater, Oxford, because Oxford and Cambridge tried to organise a boycott of the survey and the response rates from those universities are too low to be statistically significant. In their editorial commentary the following day the press told Oxbridge to grow up!

I draw three conclusions from all this. The first is that mega-universities should not fear being assessed on the same quality criteria as other universities. The second is that these six criteria capture the key aspects of quality in teaching and learning. The third is that students can be more satisfied with the service they get from well-organised mega-universities than from contact institutions.

Mega-universities should progress beyond formal quality assurance processes towards a culture of quality that unites all members of the institution. How can we do this? How can we inspire faculty and staff to adopt a sustainable culture of quality?

The recent AAOU conference heard of the quality audit that Universitas Terbuka had undergone with the International Council for Open and Distance Learning, ICDE, which is a non-governmental membership organisation. It will take time for quality audits done by an NGO like ICDE to establish the same credibility as those done with government involvement. Nevertheless, the outcomes of this ICDE process reflect well on the staff and leadership of UT.

Quality depends on leadership. Mega-university leaders must have a long-term vision of giving students access to success. Through unimpeachable integrity the leader must inspire confidence as a role model for colleagues. We want a cadre of future leaders; not just one good leader, so we must invest in leadership. This means empowering faculty and staff to become leaders in their own right by delegating responsibilities to them, including responsibilities for quality.

Is a separate kind of leadership required for mega-universities? Are they different from other institutions? Because they offer higher education to the masses they are part of the global march towards democracy, so elitist models of leadership that rely on hierarchy are not appropriate. More democratic and consensual leadership is called for.

Moreover, because of their popular nature, mega-universities – and distance education generally – attract a higher proportion of women as both students and leaders than contact institutions. Of the eleven open universities in India, three are led by women, as is the UKOU. Do mega-universities require leadership with more womanly attributes? In reflecting on their leadership traits two women leaders, Professors Brenda Gourley of the UKOU and Surabhi Banerjee of Netaji Subhas Open University, both identify resilience as part of their styles. Is this trait a female speciality or is it shared by men and women?

Rather than speak of male or female leadership styles, we should perhaps speak of the androgynous leader—or a leader with both male and female traits. Eastern cultures believe in the complementary concepts of the ying and yang, and there is the Hindu concept of the androgynous – the Ardhanarishvara – or a complete whole embodying both the male and female principles. The androgynous leader would combine the best of leadership qualities, combining moral authority, empathy, decisiveness, creativity, caring and compassion.

I realise that I have only scratched the surface of the huge topic of leadership, but I hope that your researchers might explore further the leadership requirements of mega-universities. Mega-universities play a crucial role in their societies and current thinking places more and more emphasis on leadership as the key to institutional strength and success – so we need to get leadership right.

It is time to conclude. I hope that I have demystified the topic of cross border education and shown that mega-universities have an important role to play in its development. To play this role effectively they will need to combine a vision of openness with an ability to cut costs while maintaining high quality.

I have suggested that combining expanding connectivity with open education resources could help them, with good leadership, to do just that. It has been a pleasure to talk to the mega-university community and I wish you well in your important work.

References


3. 330 university-level institutions, over 15,000 colleges and 9.2 million students.

4. Of the 977 engineering and technology colleges in India, 764 are private. Likewise 1028 out of the 1349 medical and health science institutions are private, in Powar, K.B., Implications of WTO/GATS on HE in India, (unpublished), 2004.


6. There are three universities: University of Technology, University of West Indies (Mona Campus) and Northern Caribbean University, a private institution established in 2001 and 38 Tertiary level institutions. Both UWI and University of Technology offer distance education courses. Middlehurst, Robin and Woodfield, Steve, The Role of Transnational, Private and For-Profit Provision in meeting Global demand for Tertiary Education: Mapping, Regulation and Impact, COL-UNESCO Report, 2003.

9 COL commissioned Environmental Scan on Education in Sierra Leone, p. 48, 2005.


12 (UK Education flourishes most in high HDI countries (65,139) followed by medium HDI countries (33,534) and finally low HDI countries (2662). Jamaica is ranked 78, India 127 and Sierra Leone 175 in the Human Development Report 2003.


17 Initiated by the 2nd Global Forum on International Quality Assurance, Accreditation and the Recognition of Qualifications, a review of capacity needs and current initiatives for satisfying them covered Africa, the Arab States, Asia and the Pacific, Latin America, the Caribbean, the Mediterranean countries, and South-East Europe.

18 One of which is the notion that students go abroad not only to get an education but also to get a “global imagination”; in Globalization and Education: Critical perspectives, Nicholas C. Burbules, Nicholas C. and Carlos Alberto Torres, Carlos Alberto, (editors), Routledge, 2000.

19 Ibid.

Collaboration in the Time of Competition

International Conference on Open and Distance Education
International Council for Open and Distance Education (ICDE).
Theme: Open & Distance Education in the Global Environment: Opportunities for Collaboration
New Delhi, India | 19-23 November 2005

By Sir John Daniel, Asha Kanwar (Commonwealth of Learning), Stamenka Uvalić-Trumbić and Zeynep Varoglu (UNESCO)

Introduction

As we celebrate the 20th anniversary of the Indira Gandhi National Open University it is an honour and a privilege to give this keynote address on the 88th anniversary of the birth of Indira Gandhi herself. She was born on the 19th of November 1917 and I pay homage to her memory today. The Indira Gandhi National Open University was named in her honour soon after her untimely death.

I believe that she would have been proud of the way that the Indira Gandhi National Open University has developed over two decades. It has become both a national treasure and an international icon as the largest unitary university in the world. Through its scale, scope and its use of technology it is an inspiration to educators everywhere.

Please allow me also to pay a personal tribute to IGNOU’s founding Vice-Chancellor, Professor G. Ram Reddy. One of the outstanding group of vice-chancellors who founded today’s mega-universities, he was a towering figure in Indian education as well as a personal friend. A decade ago, at the Birmingham ICDE Conference, I had the signal honour of receiving, with Professor Reddy, the Award for Individual Excellence of the ICDE and the Commonwealth of Learning. Sadly, Professor Reddy died only days after receiving that award. He too would be proud to see what IGNOU has become today.

The theme of this conference is Open and Distance Education in the Global Environment: Opportunities for Collaboration. How very appropriate to hold a conference on this theme in India! This country is making a remarkable contribution to the development of higher education in the developing world.

Visiting Africa last year to address the Pan-African Parliament, the President of India announced the special initiatives that India was taking to support the New Partnership for African Development, NEPAD. He spoke in his inspiring way of the contribution of electronic and knowledge connectivity to the economic development of Africa. Satellite and fibre-optic links could connect all 53 nations of the African Union and support tele-medicine, eLearning, eGovernance, eCommerce, infotainment, resource mapping and meteorological services. The pact between India and the African Union was signed three weeks ago. IGNOU’s programmes could be made available throughout the African Union through this Pan-African Satellite Network.

I refer also to India’s participation in the renaissance of the universities of Africa, where your model of the Indian Institutes of Science and of Technology is being adopted as one way of repairing decades of neglect.

Facilitating south-south collaboration between India and Africa is an important function for both COL and UNESCO. COL has more activity in India than in any other country. We assist India directly and we help India to help other Commonwealth countries. That’s another reason why I am proud to be here.

This conference is about collaboration. To practice what I preach I have made this address an opportunity for collaboration by calling on the wisdom of three co-authors.

Professor Asha Kanwar is a former Pro-Vice-Chancellor of IGNOU and leads our work in higher education at the Commonwealth of Learning. Stamenka Uvalić-Trumbić heads the Section on Reform, Innovation and Quality in Higher Education at UNESCO. She has a special attachment to New Delhi, having lived part of her youth here when her father was the distinguished Ambassador of Yugoslavia to India in the 1980s. He became a close friend of Indira Gandhi in these important years for the Non-Aligned Movement when India was a pillar of this early expression of south-south collaboration. Zeynep Varoglu is also from UNESCO and has recently coordinated a significant product of the close collaboration between UNESCO and COL: the joint publication Perspectives in Distance Education: Lifelong Learning and Distance Higher Education. Finally, let me simply note that Indira Gandhi and I both studied at Oxford University and I am proud to be an honorary graduate of IGNOU.

Our title is Collaboration in the Time of Competition. This paraphrases the title of a novel by the Columbian Nobel laureate Gabriel Garcia Marquez, Love in the Time of Cholera. In that remarkable book he juxtaposes love, the most sublime human emotion, with cholera, a dreaded and often mortal disease. Without aspiring to Marquez’ literary brilliance we shall juxtapose the seemingly contradictory concepts of collaboration and competition. Is harnessing them together a paradox or a possibility? Is it rhetoric or reality?

Marquez draws parallels between the symptoms of love and those of cholera. At the end of the novel a quarantine of cholera makes eternal love possible. Less ambitiously, we shall try to demonstrate the symbiosis
between collaboration and competition. We shall examine their roles in the recent history of distance education and look at collaboration today. A variety of successful international examples shows that collaboration is an essential underpinning to the healthy competition that can bring learning opportunities to millions. We shall end with comments on what makes collaboration successful.

From national to international: the evolving scope of distance education

Early history

The emergence of modern multi-media distance education in the last decades of the 20th century had several causes. Governments wanted to expand access to higher education. They assumed this would require the use of new technologies and methods, because an essential aim was for students to learn wherever they were, without having to assemble in classrooms. Teaching and learning would occur at distance.

Distance learning was not new. At the time, in the 1960s and 1970s, it was already widespread; it was called correspondence education and it was highly competitive. In some countries commercial companies competed for correspondence students, in others, as here in India, the competitors were the correspondence branches of public universities.

Everywhere competition was brisk and largely unconstrained by state regulation. This meant that maximising student success often took second place to maximising institutional income. Commercial correspondence schools collected their fees up front and relied on early students drop-out to boost profits. The university correspondence branches were more eager to plough money back into the campus than to help correspondence students complete their studies.

This bad situation provoked two responses: regulation and new competition. In 1970 Jessica Mitford published an article in Atlantic Monthly, ‘Let us now appraise famous authors’, that was a devastating exposé of the racket then masquerading as one of the best-known US correspondence schools. She later described entertainingly, in her 1979 book Poison Penmanship: the Gentle Art of Muckraking, how that article caused a flurry of regulation of correspondence teaching. UNESCO helped to establish guidelines for good practice.

New competition came from the open universities that numerous governments set up following the pioneering example of the United Kingdom. In order to widen access to higher education these institutions innovated in various ways. One was to extend the media of distance learning beyond print. Another was to focus on student success rather than institutional profit. Collaboration was the means to both these ends.

To extend their media open universities collaborated with other organisations. The UK Open University has worked with the BBC for three decades and co-publishes materials. IGNOU has a developing relationship with the Indian Space Research Organisation for the use of satellite links. There are many other examples.

To serve students better the open universities have created student support networks that rely on collaboration with other institutions for study centres and tutors. Through such collaboration the open universities grew deep roots in their national post-secondary systems that partly explain their rapid acceptance by the academic world.

Institutional collaboration was accompanied by collaboration at the national level. India set up the Distance Education Council as a collective mechanism for quality assurance and the regulation of distance teaching in both open and conventional universities. In the UK the Council for National Academic Awards was an outstanding example of a collective approach to ensuring the quality of the awards made through the numerous polytechnics.

Our brief account of the early history of modern distance education suggests that collaboration and competition are two sides of a spinning coin. After a period of competitive free for all, correspondence education began to face both regulation and competition from new state providers that used collaboration as a basis for improving their teaching.

Recent developments

What about more recent developments? Over the last ten years the leitmotiv of distance education, as for higher education generally, has been internationalisation, which is not the same as globalism and globalisation.

Higher learning and scholarship has been international for a millennium. Centuries before Erasmus came to symbolise the academic nomads of medieval Europe, Arab scholars travelled frequently between Baghdad and the great centres of learning of the Middle East. The University of Nalanda in ancient India attracted students from China, Nepal, Tibet and Korea.

Although cross-border traffic in learning materials and courses is now growing rapidly, it is wrong to associate the internationalisation of distance education directly with the World Trade Organisation and its General Agreement on Trade in Services (GATS). The GATS is an effect, rather than a cause, of the accelerated internationalisation of higher education caused by more rapid and effective communication links.

Improved communications have given particular impetus to distance education. We refer not only to information and communications technology but also to the removal of barriers to the movement of people as the Berlin Wall came down apartheid ended. The dotcom boom, coming soon after these political upheavals, created an effervescence of competitive projects for delivering learning online to an international audience.

The competitive eLearning frenzy spawned by the dotcom boom mirrored the free-wheeling era of correspondence education half a century earlier. But there are also parallels between the collaborative nature of contemporary international developments in distance education and the evolution of national systems a generation earlier. Organisations now collaborate internationally in order to enrich academic environments and programmes for students. The Open Educational Resources movement has become a vital new area for individual and institutional collaboration. At the same time countries are working together to create quality assurance frameworks. Let us examine these phenomena in turn.

Institutional Collaboration in Cross-Border Education

The UNESCO Chairs and UNITWIN programmes express the ancient tradition of international academic collaboration in contemporary form. The many examples include the Global University Network for Innovation; the ORBICOM network of UNESCO Chairs in Communications; and the UNESCO-Cousteau Ecotechnie Network for interdisciplinary work in sustainable development. There are also some twenty UNESCO Chairs and four UNITWIN Networks in Distance Education.
Institutional Collaboration

**Principles**

+ Pragmatism

= Partnership

International Collaboration for Quality Assurance

Some of the collaborative ventures that we have just described could, at least in principle, have been organised by the institutions themselves without the help of international agencies. In quality assurance, however, the role of an international intergovernmental agency, particularly UNESCO, is more necessary. Making policy for higher education systems is an expression of national sovereignty and even those governments that do not manage quality assurance directly, monitor it closely in their own jurisdictions. Having UNESCO promote quality assurance in cross-border distance education, through collaborative negotiations involving multiple stakeholders, allows governments to influence processes and frameworks.

UNESCO stepped up its engagement in this area in 2002 by creating the Global Forum on International Quality Assurance, Accreditation and the Recognition of Qualifications as a platform for international dialogue about these matters. In June 2004, at its second meeting, the Global Forum
paid particular attention to distance education. A discussion chaired by the Vice-Chancellor of Pakistan’s Allama Iqbal Open University, Dr Altaf Hussein, concluded that developing countries will create the greatest demand for higher education in the coming years.

Traditional face-to-face education will not be able to cope with this demand so expanding distance education will be essential. The challenge, however, is that despite its potential for good, distance education also lends itself to unethical competition in which degree mills proliferate. To counter this possibility the Forum called for inter-governmental cooperation in cross-border higher education to collect and share information and to address issues of quality assurance. An important recent outcome of this cooperation is the UNESCO/OECD Guidelines on Quality Provision in Cross-Border Higher Education.13

Numerous countries collaborated in developing these Guidelines, which promote mutual trust and international cooperation in quality assurance and the recognition of qualifications, especially those provided across borders. They emphasise the shared responsibility of providers and receivers for ensuring the quality of higher education and aim thereby to protect students through a joint effort of the six key stakeholder groups.14 Dialogue and sharing, access, transparency and reliability of information are key principles. Last month the UNESCO General Conference backed these Guidelines as a timely and useful response to the challenges that cross-border higher education poses to both developed and developing countries. The Guidelines stress that cross-border provision, including eLearning, should mirror local priorities as expressed in national higher education policy. They will be a basis for building capacity and helping national decision makers to develop robust quality assurance systems.

Whilst the guidelines are an important point of reference, effective quality assurance requires action by many players. Training those players and building institutional capacity for quality assurance are vital functions in which collaboration is also crucial. To this end UNESCO and COL have developed a model programme for a capacity-building workshop for quality assurance in distance education. It will be tested in Kolkata next week in a conference on The Quality Culture at the Netaji Subhas Open University. The purpose there is to expand QA capacity in the Indian open universities as well as institutions in Bangladesh, Bhutan, Nepal and Sri Lanka.

A similar workshop will be held later this month in the Caribbean at the conference of CANDATE, the Caribbean Area Network for Quality Assurance in Tertiary Education. Both workshops draw on the expertise of international bodies such as the Association of Commonwealth Universities (ACU), the International Network of Quality Assurance Agencies for Higher Education, and the Caribbean Community and Common Market, CARICOM. These collaborative events help competing institutions to improve the quality and consistency their programmes, not least by sharing information on their practices.

To help share information UNESCO is developing a Higher Education Open and Distance Learning Knowledge Base that will make available regional databases higher distance education in Africa, the Asia-Pacific and the CIS and Baltic States15. These databases are linked to a search tool on the main UNESCO site through the COL Knowledge Finder using the common taxonomy of the World Bank GDENet. In addition, a decision-support tool poses key questions related to quality assurance in distance education.

The key challenge in this project was to combine expertise in technology with expertise in education. This required a new form of collaboration between competing partners speaking different languages. To increase efficiency technical development was separated from content development. The former was done by the South African Institute for Distance Education; the latter by Indonesia’s Universitas Terbuka through electronic consultation with experts. Dialogue and understanding between the education and informatics specialists was critical in maintaining the focus on educational issues that will ensure the project’s success.

- Institutions are asking whether eLearning requires new approaches to QA. A survey on quality assurance in the mega-universities16 carried out for UNESCO showed that most institutions had not developed distinct QA systems for eLearning but used the same criteria as in their other distance education offerings.17 However, the Korean National Open University, which offers 60 online courses, uses three special quality assurance measures for them. AIOU has adopted a more general QA process for developing multimedia content.

- In eLearning, quality assurance is closely related to standards for the interoperability and reusability of computer-based educational materials.18 Several bodies are collaborating worldwide to define, develop, categorise, and expand the use of standards and specifications. Such standards address metadata, content, administrative systems, learner information, and learning management systems. The CETIS site lists international bodies engaged in these matters.19 These standards are particularly important for the collaborative development of Open Educational Resources.

These examples show that extensive collaboration is necessary in the provision and quality assurance of cross-border higher education if competing institutions are to serve students effectively. But what makes collaboration work? In our concluding remarks on this age-old challenge we shall first address inter-institutional cooperation in cross-border provision before looking at multilateral collaboration.

What makes for successful collaboration?

Inter-institutional cooperation

Searching for the ingredients of successful inter-institutional cooperation in distance education is not a new activity. Twenty years ago the Commonwealth Secretariat commissioned a rambling survey that identified many models of collaboration and concluded: ‘Cooperation is now a necessity, not an Option’.20 More recently Sally Johnstone and others have assembled case studies of contemporary collaborative endeavours.21 What principles emerge from this work?

What makes collaboration successful?

Inter-institutional collaboration

- Clarity of purpose
- Small group
- All contribute
- Committed people
- Adequate funding
First, there must be clarity of purpose. As the Commonwealth study puts it: ‘High-sounding rhetoric is a waste of time, as is a vague desire to collaborate’. All partners must know what they want to achieve and believe that it can best be achieved through cooperation. Second, the smaller the group of partners, the better are the chances of success. Third, everyone must contribute – preferably financially – and everyone must gain. Fourth, there must be people committed to the collaborative venture in each partner institution. Whilst each partner must show commitment from the top, institutional heads are not the best people to put in the governance structure of the partnership. This is partly because they are too busy but also because chief executives often find it difficult to make compromises with institutional self-interest for the good of the partnership. Finally, echoing the principle of clarity, the collaborative enterprise must be adequately funded at the start and must have a credible strategy to generate sustained funding.

There is nothing surprising or complicated about these principles. Sadly, the chequered history of collaborative ventures in distance education suggests that they are honoured more often in the breach than in the observance. However, the Open Educational Resources movement may give collaboration a new lease on life because electronic communication makes it easier and the payoff, namely the worldwide sharing of learning objects, is potentially greater.

What of the much broader collaboration needed to reach multilateral agreements about quality assurance in cross-border education?

Multilateral collaboration

Today multilateralism is under threat. A recent presentation at the Commonwealth Secretariat had the title “Can We Rescue Multilateralism” and it is fashionable to depreciate the work of the United Nations. But recall what Winston Churchill said just after he had lost an election: “democracy is the worst form of government, except for all those other forms that have been tried from time”. In a complex world of many nations there has to be multilateral collaboration. What lessons can we draw from developing the Guidelines on Cross-Border Higher Education about achieving multilateral agreements? Four principles emerge.

A first requirement is clarity about the status of the document being negotiated. An international treaty that has subsequently to be enacted into national legislation is one thing. Quite another are advisory guidelines that must rely for their impact on the commitment that their inherent moral and intellectual quality evokes from governments and institutions.

Second, the early drafts of the document should be developed through an iterative process drawing on experts from a variety of backgrounds. Electronic communication makes collaborative drafting and consultation much easier and, by giving a voice to other stakeholders such as students associations, gives a wider sense of ownership than involving only governments. Although it made the process more complex, having UNESCO and the OECD work in partnership broadened the constituency for the Guidelines by bringing together industrialised and developing countries.

Third, once a sound draft document emerges, information dissemination and consultation must be widespread and genuine, since the moral authority of the Guidelines reflects the breadth of the consensus that they attract. In this case, thanks to such consultation, a potential split with an important part of the higher education community was avoided. A statement by the International Association of Universities and others complements the Guidelines.22

Fourth and finally, there must be a commitment on the part of governments and institutions to use the Guidelines once they have been agreed.

Conclusion

Let us conclude. We have argued that in the evolution of distance education initial periods of unbridled competition were followed by greater collaboration. This occurred in both the national and international phases of development. We have given examples of international collaboration in cross-border higher education: both for programme provision and for quality assurance. Finally, we have identified some of the principles of successful collaboration.

We now return to our initial question: is combining competition and collaboration paradox or possibility; is it rhetoric or reality? Some argue that a freely competitive marketplace is the most genuine form of collaboration. However, global cross-border education is not a freely competitive marketplace and has no prospect of becoming one. Collaboration is a means of ensuring that each country can pursue and protect its national interests during the steady internationalisation of higher education.

But are collaborative arrangements innocent or are they inherently complicit with wider national and international power relationships? Do those with most money attract and dominate the best partnerships? Do the politically weaker nations get pushed around by the regional Big Brothers? Given their...
funding structures, can international agencies be genuinely multilateral or must they always bend to powerful members having less interest in global public goods? These are difficult questions that we have not addressed directly. They are also questions that take us well beyond our focus on cross-border distance education into some fundamental dilemmas of the human condition.

We took our title, Collaboration in the Time of Competition, from a Columbian Nobel prize winner. Since we are in India, we end with some words from your own distinguished Nobel laureate, Amartya Sen, on this theme. He writes:

‘Exactly how does a problem of interactive relations involve both cooperation and conflict? Both the parties have a strong interest in having some cooperative solution rather than none, and yet they rank the different cooperative solutions in quite dissimilar ways—indeed, typically in opposite directions… There is therefore the simultaneous presence of cooperation as well as conflict in relations of this kind.’

That sums it up nicely!

References and notes

eLearning and Free Open Source Software: the Key to Global Mass Higher Education?

Introduction

It is a pleasure to be with you on my first visit to Malaysia since joining the Commonwealth of Learning. But I have been to Malaysia many times in my previous jobs, notably when I was Vice-Chancellor of the UK Open University. As you know, I had the great privilege of taking over the job of President of COL from a very distinguished Malaysian, Professor Raj Dhanarajan, who left me an institution in excellent shape.

I also greet you on behalf of my co-authors, Susan D’Antoni of UNESCO’s International Institute for Educational Planning, Stamenka Uvalić-Trumbić of the UNESCO Secretariat, and my colleague Paul West of the Commonwealth of Learning. As you can see, this paper is a product of collaboration between COL and UNESCO and each of the authors brings a different perspective to the subject of this address, which is eLearning and Free Open Source Software: The Key to Global Mass Higher Education? Our aim is to address a major challenge of the 21st century. Can we give billions of poor people access to post-secondary education? Can we connect technology to teaching and learning for their benefit? We shall explore eLearning in a global context through a wide-angle international lens.

Growing Demand for Post-Secondary Education

The major global trend in post-secondary education is growth in demand. UNESCO’s 1998 World Conference on Higher Education (WCHE) brought four thousand participants from 182 countries together for a comprehensive policy debate. That and a follow-up conference five years later revealed that post-secondary education faces the most radical shake-up in its history. Can we give billions of poor people access to post-secondary education? Can we connect technology to teaching and learning for their benefit? We shall explore eLearning in a global context through a wide-angle international lens.

Today there is a huge discrepancy between the proportions of people in developing and developed countries who have access to higher education. 40-50% age participation rates (APR) are becoming the norm in developed countries, whereas they remain below 5% in some sub-Saharan African countries. Yet all indications support the statement that “…at no time in human history did the welfare (or poverty) of nations depend in such a direct manner on the quality and outreach of higher education systems and institutions” (UNESCO, 2003). The citizens of developing countries want post-secondary education, and their governments see it as essential for closing the gap with the rich world by tackling the challenges of globalisation. Malaysia is a remarkable example of a country that has acted on that conviction.

New providers of post-secondary education are proliferating. They include new campuses of existing institutions, IT companies delivering courses and certificates, for-profit providers and corporate universities. Some of these operate across national borders, sometimes by eLearning. However, in a recent study we found that cross-border post-secondary education is, for the moment at least, a negligible phenomenon in developing countries (Daniel, Kanwar and Uvalić-Trumbić, 2005).

This means that developing countries must rely mainly on home-grown solutions to expand post-secondary education. Can eLearning provide the radical reconfiguration of the key variables of capacity, quality and cost that is needed? That is the key question. Can digital divide become digital dividend – and, if so, how?

We link this to the wider challenge of improving the quality of life of the world’s poorest people. Post-secondary education can learn from the findings of C.K. Prahalad and his colleagues about serving those at the bottom of the world economic pyramid (Prahalad, 2004). They draw
attention to the four billion poor people in the world who aspire to better lives. They urge commercial corporations to look at their 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’ (Prahalad & Hart, 2002).

What would be the implications of expanding post-secondary education amongst these four billion people? An APR of 35% within this group would yield 150 million additional post-secondary students, far more than total current enrolments worldwide. Post-secondary education, however, would, however, face the same challenges as business 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’ (Prahalad & Hart, 2002).

**Is eLearning the solution?**

Can eLearning respond to the challenge, or is it just another over-hyped but underperforming attempt to connect technology to teaching and learning?

In their study of the experience of eLearning in American post-secondary education Zemsky and Massy (2004a, 2004b) urged the eLearning community to talk less and do more, in particular to effect the fundamental changes in pedagogy without which eLearning will not achieve its potential.

The potential of the technology, most especially the growing availability of Internet connections, is clear. Such communication links are changing the way that poor villages in the developing world function. The question is whether we can organise ourselves effectively to take advantage of this technological opportunity. Here the most promising innovation is the concept – and the developing reality – of open educational resources (OERs). The term refers to open course content, open source software and tools.

Essentially OERs apply to teaching and learning the basic principle of sharing that underpins academic research. Distance educators have talked for years about sharing courseware. The reality has not lived up to the expectations. One reason is the ‘not-invented-here’ syndrome that reinforces the immune systems of academic institutions. Other reasons limiting courseware exchange have been copyright and the sheer difficulty of sharing and adapting learning materials that are not in digital formats.

Open educational resources could overcome that difficulty and also reduce concerns that the course was ‘not invented here’. OERs make possible the sharing and adaptation of courseware on a more equal basis. Re-usable learning objects are the equivalent of the published articles on which subsequent researchers can build. If providers of post-secondary education can successfully combine connectivity and shared courseware into a new business model of sharing on an equal basis they could massively increase access.

**eLearning: the four ‘A’s**

What is required for this to happen? Potential learners ask four questions about the usefulness of eLearning (D’Antoni, 2002).

**Is it accessible?**

First, is it accessible? For eLearning to have any impact it must be accessible to the learner. In extending eLearning to developing countries the first priority is to provide ready Internet connectivity.

The second imperative is to make OERs more accessible and to expand their numbers. The Commonwealth of Learning has tackled the problem of accessing multiple learning object repositories (LORs) when connectivity is poor and surfing from one LOR to another is time-consuming.

The software is a combination of eRIB, a product of Canada’s Canarie eLearning project, and pakXchange, an open source product from the private sector. The outcome is free open source software with database and security features that enable the creation of multiple libraries of learning content, multiple contributing institutions and multi-level security. This can be downloaded the COL website at www.col.org/lor.

**Is it appropriate?**

Once eLearning is accessible, is what it offers appropriate? Does the content fit learners’ needs and does it respect their cultural context? Few subjects and delivery methods are universally appropriate. However, OERs allow learning materials to be made appropriate by local adaptation.

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**THE MOST PROMISING INNOVATION**

Open Educational Resources (OERs) = open course content, open source software and tools

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**www.col.org/lor**

Software = eRIB (Canarie) + pakXchange
Is it accredited?

The third question is accreditation. In cross-border eLearning accreditation is a key concern. Accreditation in the country of origin is one indicator of quality and provides some consumer protection. However, learners’ own countries must recognise the credential for it to be useful. What impact, if any, will OERs have on quality and accreditation? By creating a unified approach to accreditation through the new Malaysian Qualifications Authority Malaysia will be able to tackle this question in a coherent way.

What can we do at the international level to promote trust and confidence in post-secondary eLearning? How can we develop the skills of quality assurance amongst providers and regulators and empower learners to assess the quality of eLearning, particularly for cross-border provision?

The UNESCO-OECD Guidelines on Quality Provision in Cross-Border Higher Education are an encouraging response to these questions because they promote mutual trust and international cooperation in quality assurance and the recognition of qualifications.

They reinforce the key principle that providers and receivers of post-secondary education share the responsibility for its quality. To protect students, the guidelines call for partnership between six stakeholders: governments, institutions and their staff, quality assurance agencies, student associations, professional groups, and qualification-recognition bodies (www.unesco.org/education/amq/guidelines).

Is it affordable?

Finally, to come to the fourth ‘A’, is eLearning affordable to the many? If the opportunities eLearning offers are not affordable in local contexts, we shall not see digital dividend replace digital divide. Can OERs make the difference? Because of their digital formats they certainly have the potential to do so. It all depends on whether the current enthusiasm for OERs is sustained amongst both providers and users – and on whether the two groups quickly merge into an OER community of mutual give and take.

The signs are that expanding higher education through ICTs and on-line provision is a global trend (Uvalić-Trumbić & Varoglu, 2003). Developing countries like Tanzania, Kenya, Nigeria and Iran see it as a way to meet growing demand while reducing the brain drain. Others follow South Korea in viewing the Internet as an economic motor. Some governments and international organisations link eLearning to the development agenda, as in the cyber universities in South Korea, the Nigerian University Network and other virtual university initiatives such as the Virtual University for Small States of the Commonwealth (see: www.col.org/virtualu_invite.htm).

What are the interests of governments’ interests?

What are the interests of governments in eLearning and their role in advancing it? What are the interests and roles of institutions?

Governments are attracted to eLearning, as to other applications of technology in post-secondary education, by the hope that it can increase access by promoting the three ‘E’s of efficiency, effectiveness and economy. In recent decades, for example, developed and developing countries alike have greatly increased participation in post-secondary education through the creation of open universities.

These institutions, like eLearning, combine technology with new forms of organisation (Daniel, 1999). ELearning could extend this revolution further because digital materials are much cheaper to copy, distribute, adapt and share than other formats. Even more importantly, well-designed eLearning can make the interactive aspects of teaching and learning, which are essential to the success of most students, more cost effective.

ELearning can support campus teaching as well as distance learning. This is important for developing countries because, although access to the Internet may be limited on campus, off campus it is often non-existent. Academics can put study material online for learners to access and, since institutions usually provide computer labs, students need not have their own computers.

As one African academic said, “I did not have time to teach this in class, so I put it online and told the students to access it there. After they had studied it online we discussed it in class and saved time”.

Institutions can also improve learner support by creating online discussions to give more time for debate and study. Moving some activities online and out of the classroom reduces demands on buildings, creating efficiencies in the use of plant that governments like to see.

Satisfying the requirements

Governments and institutions clearly have an in encouraging eLearning. A moment ago I identified the four ‘A’s that are the requirements for eLearning to flourish. How do we satisfy them? Action is required from both governments and institutions.

What should governments do and not do to further their interest in eLearning? Failed projects like the UK’s e-Universities venture suggest that governments and their agencies should not operate eLearning programmes except for governmental functions like offering instruction about the Highway Code.

Governments’ role is to create the context in which eLearning can flourish. This is a crucial task in developing countries, where the context for eLearning is usually unfavourable. Malaysia is a shining exception to this rule, although more and more countries are realising that imposing high costs on connectivity is counter productive.

What are the barriers to eLearning that governments and institutions could surmount? We see five. First, bandwidth is limited because of telecommunications legislation and telecom company monopolies. Second, institutions do not usually buy bandwidth jointly in bulk. Third, institutions use bandwidth inefficiently through lack of policy and poor management. Fourth, the lack of affordable Internet terminals off campus calls for accessible kiosks and study centres. Fifth, institutions may be unduly ‘copyright-shy’ through ignorance about copyright laws, their countries’ copyright exemptions and ways of using copyrighted materials legally.

Access to Bandwidth

The issue of access to telecommunications handicaps developing countries. Their institutions can pay over 100 times more for Internet access than in the industrialised world. An individual in an OECD country may have a 500-kilobit home Internet connection, whereas in a developing country a 500-kilobit line is all that an institution can afford for sharing by hundreds
Making good Internet bandwidth affordable to institutions is an absolute necessity for any country aspiring to quality post-secondary education. Governments should ensure that their telecoms suppliers provide it. Expensive connectivity handicaps institutions and countries.

Maximising the benefits of bandwidth

Institutions can tackle some issues themselves. When they club together to buy bandwidth in bulk the price drops. In South Africa, for example, a small non-profit entity buys bandwidth for nearly 50 institutions at once. To gain this kind of negotiating power institutional leaders and IT departments must cooperate.

There is never enough bandwidth and solving the problems that we just listed will take time. Meanwhile, institutional managers should have policies for using bandwidth sensibly by defining acceptable use. These cover the kinds of data that may be transferred to and from the institution and the types of websites that may be visited. Such policies are an essential stepping stone to technical strategies that maximise the benefits of bandwidth day and night. To guarantee bandwidth during the day for research and study, management must focus on those functions and avoid usage for which there are alternatives. Demand for bandwidth is usually very low at night so it can be used other tasks.

If daily information use follows a pattern, information from particular websites can be "pre-cached" to local servers for use the next day. The more the information requirements can be predicted, the more the load on Internet lines during the day can be reduced, releasing bandwidth for those tasks such as Internet searches that cannot be cached.

Learners in developing countries do not usually have computers and Internet links at home. They go instead to Internet kiosks or cafés where access is very expensive in terms of local salaries. Students are unlikely to connect for long enough, at the low Internet speeds available, to gain much information. Governments could subsidise kiosk prices and institutions should provide Internet access on campus over extended hours from early morning until late at night.

Institutions also face important non-technical issues in developing eLearning. In 2003 UNESCO’s International Institute for Educational Planning (IIEP) conducted a series of case studies on the creation of virtual universities on six continents (www.unesco.org/iiep/virtualuniversity).

They highlighted four issues that become particularly sensitive as institutions develop policies on open educational resources.

Institutional development and organisation

Face-to-face teaching institutions may find it difficult to develop general policy on eLearning because their existing policies and procedures were conceived for a different learning environment. However, although distance-teaching institutions may already have a general policy framework that is appropriate for eLearning, they may find developing policy on OERs a serious challenge.

By putting the lecture notes of its faculty on the web with the aid of external funding MIT did not create a threat to its core business – provided that MIT's academic reputation could survive worldwide scrutiny of the material.

However, for a large, high-quality distance-teaching institution like the UK Open University to make its self-instructional materials freely available could create a clear threat to its core business. Could the UKOU make OERs available to developing countries without giving competitors in the industrialised world the opportunity to compete against it with its own materials?

This is a tough question for institutional leaders. Only experience can really provide an answer. Whilst there is some evidence that making the texts of books freely available on the Web increases sales of the printed versions, we need more research on this issue for eLearning.

Academic issues

There are various academic issues, beginning with the choice of the right programmes. A feasibility study may help to identify subjects that are in demand and for which eLearning is appropriate. Whatever the subjects chosen, developing, supporting and rewarding the staff involved is crucial if the eLearning curriculum is to be more than a congeries of the favourite courses of faculty enthusiasts.

E Learning is often touted as student centred. To make this true requires careful planning of student services and student aid. Some services will need to be available continuously (24/7) and developing countries will need study centres.

National and international environment

Expanding eLearning also has national and international implications. The high cost of developing eLearning argues for national and international partnerships and cooperation in its production and provision. This is what motivated the ministers of education of the small states of the Commonwealth to call for the creation of a virtual university as a framework in which they could work together to create courses and programmes, thus avoiding total dependence on larger states.

Management

Finally, there are plenty of challenges for management that straddle the distinction between technical and non-technical. We shall concentrate on just one hot issue: proprietary or open source? This is a strategic matter which is at the heart of management’s core function of getting the best results with the available resources. The recent announcement by Australia’s Northern Territory Government that it had been able to put 1,000 more terminals in schools by saving $1 million through a move to open source software shows that significant sums are at stake. Institutions in developing countries do not have money to burn!

Managers must overcome their reluctance to challenge their technical specialists and engage with the issue in a systematic way. Prescribing choices between open source and proprietary software is not appropriate and each institutional situation must be reviewed on its merits.
**SEVEN ISSUES FOR MANAGEMENT:**

1. Standard decision-making procedures
2. Long-term perspective
3. Know OS costs and functions
4. Cross-training of IT staff
5. Start in Server Room
6. Variety and specialisation
7. Students write code

We make seven points:

First, IT departments should have standard procedures in place for making decisions about acquiring hardware and software. Senior management’s task is to ensure that these procedures avoid sub-optimal choices by taking the bigger institutional picture into account. For example, COL has developed a decision making aid for acquiring a Learning Management System. (www.col.org/Consultancies/04LMSEvaluation.htm).

Determining which learning management system an institution should choose is not COL’s role, but this tool can be used by a management team to work through the decision in a systematic way.

Second, decisions must be taken with a long-term perspective, looking beyond the present window of a particular offer for a special licence-fee.

Third, the IT people must be able to assess what functions can be performed with open source software and be aware that not all open source software is free open source software. However, the term open source does mean that the code is available to institutions, which can usually make contributions and improvements to it.

Fourth, institutions need to balance the merits of specialisation with cross-training so that IT staff can work competently in both Linux and Windows environments. There are quite a few competent trainers in Africa and COL can help match needs to people. Having cross-trained IT staff is the best way of ensuring that an institution gets the best out of both proprietary and open source solutions.

Fifth, remember that including Linux in an organisation does not mean having to change everyone’s computer. The server room is likely to be the first place for FOSS applications to appear. Money saved by using a free product can be applied to applications where a free product is not an alternative.

Sixth, teaching institutions should aim for variety and specialisation in setting up computer labs. Teaching a particular application (e.g. Lotus) requires the systems for that task, but teaching generic concepts and skills, such as word processing, spreadsheets and presentations can use free systems like Linux and Open Office, saving thousands of dollars in licence fees.

Seventh it is particularly important to encourage students in developing countries to write code for open source software so that they can join the worldwide community of code writers. COL would be very pleased to hear from universities who are willing to have students contribute to the program code of our Learning Object Repository, COL-LOR (eRIB) by creating features which everyone can benefit from. This open source LOR, which can link a network of LOR’s together, was made possible by Canada’s Canarie programme of support to eLearning.

**Mechanisms for Collaboration**

Underlying much of what we have said is the need for collaboration. The reality of greater connectivity makes greater collaboration possible and the ideal of open educational resources requires it. How can we enhance collaboration? Collaboration needs enabling mechanisms. We identify five.

First, it is invaluable to link the leading institutions and figures in eLearning through virtual forums, such as those organised by the International Institute for Educational Planning. These forums should become a regular series. Face to face meetings among practitioners are also useful. I invite you cordially to attend the Fourth Pan-Commonwealth Forum on Open Learning that will be held in Jamaica at the end of October. eLearning and Open Educational Resources will be a major theme of the meeting.

Second, some collaborative ventures require external funding. Here we pay a sincere tribute to the Hewlett Foundation, which has funded initiatives in eLearning and open educational resources in an effective and disinterested way, thereby helping to create an international eLearning community.

Third, collaboration in linking together learning object repositories is a natural extension of the vision of open educational resources. The aim, if I may re-order the title of my own institution, is to make learning the common wealth of the whole world.

Fourth, training in both policy and practice for eLearning is a continuing need and a critical factor in its expansion. There is already evidence that eLearning is liberating for trained faculty in developing countries because what they can create is limited only by their imagination and knowledge, not by their institution’s ability to afford imported materials or software licences.

Fifth and finally, as we have already noted, international collaboration is a necessary foundation for quality assurance through such mechanisms as the UNESCO/OECD guidelines on cross-border education and the regional conventions on the recognition of qualifications.

**Conclusion**

It is time to conclude. We encourage you all to harness your energies to the challenges of transforming the digital divide into a digital dividend for the developing world. eLearning, drawing heavily on Free Open Source Software and Open Educational Resources, give us the chance to do that. There is enormous pent-up intellectual creativity among the billions of poor people in the world. Sadly, most existing means of learning and training have been too expensive and too inflexible to respond to their needs. Surely our aim must be to combine connectivity with learning resources so as to create a

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Surely our aim must be to combine connectivity with learning resources so as to create a global intellectual commons accessible to the whole of humankind?
global intellectual commons accessible to the whole of humankind? Malaysia could play an important role in this process. This country had recently committed to a major expansion of higher education and you have invested for years, through the super-corridor and other initiatives, in taking advantage of online technologies and eLearning. Finally, the Government is determined to increase the international role of Malaysian higher education. Here is an important project for you. I wish you success and I thank you for inviting me to address you this morning.

References
Introduction

It is an honour to be a sponsor of IDLELO2 and to bring you greetings from the Commonwealth of Learning, which supports FOSSFA enthusiastically for reasons that I shall explain. I first point out the parallel between the word IDLELO, which means a common grazing ground and the name of my organisation, the Commonwealth of Learning; COL. COL starts from the belief that learning is the common wealth of humankind.

FOSSFA’s aim is to contribute to a global commons of powerful software. COL’s aim is to take advantage of that global software commons by combining connectivity and learning resources to create a global intellectual commons accessible to the whole of humankind.

Throughout history the challenge of common grazing grounds has been the tragedy of the commons. Overgrazing occurs as individuals take more than their fair share and everyone loses. But the kind of commons we are creating is revolutionary. Our kind of commons cannot end in tragedy. Knowledge, learning and software are infinitely reproducible. My consumption at the commons does not reduce yours. Indeed, my consumption can enrich what is available to you, if I contribute to the commons the new knowledge or the new software that I have been able to create by grazing on the commons.

Our title is Open Source for Open Learning. COL is interested in the role of open source products in education, training and learning generally. We shall focus on the role that open source can play in open and distance learning or ODL.

ODL is the umbrella professional term for applying technology to learning. Other names are used, such as eLearning, virtual learning, blended learning and distributed learning. We shall use ODL to designate all forms of technology-mediated learning because it evokes purpose as well as process. Open learning means education without barriers, just as open source means programming without barriers. Distance learning evokes ready access, flexibility and scale.

Why is ODL potentially a killer application of open source and why is the open source movement a revolutionary development for ODL?

Learning for Development

We answer the first question by pointing out that only by opening up new opportunities for learning to massive numbers of people will the world achieve the Millennium Development Goals.

Every one of the MDGs, not only the education and gender goals, represents a massive challenge of learning. To eliminate poverty and hunger, millions of farmers and smallholders need to learn new ways of doing things. To achieve the health goals people all over the world must learn how to keep themselves and their families well and free from disease. Conventional methods of teaching and learning cannot rise to the scale and scope of the development challenge.

Only open and distance learning can supply the massive increase of learning opportunities needed. If the open source movement can help to extend ODL it will create untold benefits for humankind.

How will open source help open learning?

In two ways: by cutting costs and empowering people. I start with the costs.

Throughout history education has been constrained by the iron triangle made up of the vectors of access, quality and cost or, if you prefer, quantity, quality and equity. The dilemma with conventional teaching methods is that you cannot improve things on one side of the triangle without worsening them on the others. Putting more people in a classroom increases access or quantity but is perceived to decrease quality. Supplying better learning materials increases costs, and so on.

In other areas of human endeavour technology allows us to mass produce quality goods and services at low cost. Only in recent decades have we begun to apply this technological revolution to education. However, the use of ODL in open universities and other large learning systems has made it possible to increase access, improve quality and cut costs – all at the same time. We have burst open and reconfigured the iron triangle. It is a genuine revolution. But it is not enough.

Only by opening up new opportunities for learning to massive numbers of people will the world achieve the Millennium Development Goals.
Another triangle haunts us at the beginning of this new century: the world economic pyramid. C.K. Prahalad has drawn attention to the imperative and the challenge of serving the four billion people at the bottom of this pyramid, many of whom live in Africa.

Prahalad’s concern is to encourage business to serve these people, although he warns that serving them will require ‘radical innovations in technology and business models’, aspiring to ‘an ideal of highly distributed small scale operations married to world-scale capabilities’.

My question is whether we can bring education, particularly tertiary and continuing education, to the bottom of the pyramid. Open and distance learning would have to be the basis of the approach, but ODL would need dramatically to cut its costs and, equally dramatically, to increase its local adaptability. The answer may lie partly in the use of open source systems.

The Economic Structure of ODL

I must take a minute to explain in simple terms the economic structure of open and distance learning, because this is the easiest way of demonstrating where open source solutions could make a difference.

The current generation of large ODL systems, such as the open universities, have two key assets. First they benefit from economies of scale because the marginal cost of serving an additional student is low. Second, they benefit from qualities of scale because large numbers both justify investment in quality materials and create local concentrations of students that facilitate face-to-face events.

We can represent the economies of scale by plotting the total cost of the teaching-learning system against total student numbers.

The plot for ODL gives rather a flat curve, although it starts quite high on the vertical axis. I’ll come back to that, but note that the reason for the flat cost curve is basically that the learning materials used in ODL cost little to reproduce in bulk once you have made the first copy. Furthermore, this advantage increases with each new medium. DVD’s cost less to reproduce than books. Downloading materials from the web, or listening to a TV or radio programme, costs almost nothing once reasonable bandwidth has become available.

Contrast this to the cost curve for face-to-face teaching. More students require more teachers so the curve rises more steeply. However, the investment cost for getting started is low. You can start with one teacher and one class. You can see there is a crossover point at which the unit costs of the two approaches are the same.

If we want to make a dramatic difference to the unit costs of ODL, so that it can be conducted economically at small scale, we must both lower the curve on the vertical axis and also make it even flatter. Open source solutions can help us meet both challenges.

The investment requirement that causes today’s ODL curves to start well up the vertical axis pays for building or buying data-processing systems to manage large numbers of students and for preparing learning materials. Open source can reduce the costs of both.

Systems

In the case of the systems we are now seeing hybrids of closed and open source systems, at least for institutions of significant scope and scale. For example, the UK Open University, with 200,000 students has opted for Moodle as its eLearning management system and will invest significant funds in adapting it for this complex institution. I expect that for the foreseeable future Moodle will run alongside the web-based Windows student record systems, CIRCE and OUTIS in which the University invested over $20 million during my time as vice-chancellor.

Two weeks ago I came across an example of a new hybrid system, the Automated Section for Students’ Evaluation and Support Services (ASSESS) of the Netaji Subhas Open University in Calcutta, a rapidly growing institution with 75,000 students. The University is also using the open source Brihaspati eLearning platform developed by the Indian Institute of Technology Kanpur. The impact of such systems is to flatten the cost curve by automating more and more operations. Using open source systems may also reduce the initial investment.

In putting together such systems institutions must be pragmatic, not dogmatic. Managers must overcome their reluctance to challenge their technical specialists and should engage with software decisions themselves in a systematic way. Prescribing choices between open source and proprietary software is not appropriate because each institutional situation must be reviewed on its merits.

We make seven points about blending open and closed source systems:

First, IT departments should have standard procedures for making decisions about acquiring hardware and software. Senior management’s must ensure that these procedures avoid sub-optimal choices by taking the bigger institutional picture into account. COL has developed a decision making aid for acquiring a Learning Management System to assist with this (http://www.col.org/Consultancies/04LMSEvaluation.htm).

Determining which learning management system an institution should choose is not COL’s role, but a management team can use this tool to work through the decision in a systematic way.

Second, decisions must be taken with a long-term perspective, looking beyond the present opportunity of a particular offer for a special licence-fee.

Third, the IT people must be able to assess what functions can be performed with open source software and be aware that not all open source software is free open source software. However, with open source the code is available, so the institution can usually make contributions and improvements to it.

Fourth, institutions need to balance the merits of specialisation with cross-training so that IT staff can work competently in both Linux and Windows environments. Having cross-trained IT staff is the best way of ensuring that an institution gets the best out of both closed and open source solutions.

Fifth, remember that including Linux in an organisation does not mean having to change everyone’s computer. The server room is likely to be the first place for FOSS applications to appear. Money saved by using a free product can be applied to applications where a free product is not an alternative.

Sixth, teaching institutions should aim for variety and specialisation in setting up computer labs. Teaching a particular application (e.g. Lotus) requires the systems for that task, but teaching generic concepts and skills, such as word processing, spreadsheets and presentations can use free systems like Linux and Open Office, saving thousands of dollars in licence fees.
Seventh, it is particularly important to encourage students in developing countries to write code for open source software so that they can join the worldwide community of code writers. I am delighted to see the emergence of AVOIR, the network of code programmers animated by Derek Keats across Africa. This is very empowering. COL would be very pleased to hear from universities who are willing to have students contribute to the programme code of our Learning Object Repository, by creating features which everyone can benefit from. This is an open source LOR that can link a network of LORs together.

Materials
We turn now to the creation of materials. Quality materials are both a major strength and a major investment for good ODL systems. In principle the investment required could be substantially reduced by the sharing and adapting of existing materials but the reality has been disappointing so far.

COL is proud to have helped the four open universities in Bangladesh, India, Pakistan and Sri Lanka to develop Executive MBA and MPA programmes which are now being adopted in Malaysia and Nigeria. Similarly a diploma programme for teachers of Technical and Vocational Education in the Caribbean countries developed with COL’s help by Jamaica’s University of Technology is now being adopted in Ghana and Pakistan.

Sadly, such examples are the exception that proves the rule. Why has course sharing been so limited? One answer is the ‘not-invented-here’ syndrome that has a special hold on university teachers even though it is becoming less strong. The greater obstacles are the sheer difficulty of sharing and adapting materials that are not in digital format and ensuring respect of copyright.

This is where the open source movement could create a revolution by extending its philosophy to the creation of Open Educational Resources, which are open course content, open source software, and tools. We now have the possibility not only to share and adapt readily the materials held in Learning Object Repositories, but also the means to develop learning materials collaboratively across the globe. Communities creating Open Educational Resources are analogous to the communities that develop open source software.

COL is involved in one such initiative, a network called the Virtual University for Small States of the Commonwealth, which illustrates the opportunity well. Back in 2000, when the Commonwealth ministers of education met amid all the hype of the dotcom frenzy, ministers from the small states – the 33 Commonwealth countries with populations of less than 4 million – worried about how they would achieve the critical mass of expertise and equipment to join the e-world.

They decided that the answer lay in collaboration and COL is now helping them implement a collaborative network through which teachers in groups of small states will work together electronically to develop open educational resources on topics of common priority such as tourism, professional development for teacher and nurses, and vocational subjects. Open source will be the name of the game and each state and institution will make the local adaptations necessary for its own special context.

Note that developing courses as OERs by electronic collaboration does not mean that they can only be delivered by eLearning. Many of the Commonwealth’s small states do not yet have extensive connectivity so a variety of distance learning methods will be used to bring them to students, both inside and outside institutions. This does not reduce the advantages of developing the courses as OERs.

The Virtual University for Small States of the Commonwealth, is a very good test for the potential of open source to take open and distance learning to the next stage of low cost, long reach and high flexibility. The Commonwealth-wide community that will work on these open educational resources is inspired by the same principles as the communities that work together to develop open source software.

We are not planning to standardise on a single open source Learning Management System because several are already in use and interoperability between them is getting rapidly better. It is also good to see the emergence of Learning Management Systems in Africa, such as KEWL NextGen, which is well adapted to situations of low bandwidth and will allow the mirroring of content and discussions between multiple instances of the system, possibly installed in multiple countries. From COL’s side, a key player in this will be South Africa’s Dr Wayne Mackintosh, who joins us in May, after being centrally involved in the development of the open source eXe system in New Zealand which enables educators to create digital learning content for online learning without having to have HTML skills.

I am pleased to say that of the 22 states participating in the network, seven are Commonwealth small states in Africa, that is to say Botswana, The Gambia, Lesotho, Mauritius, Namibia, Seychelles and Swaziland. There is nothing exclusive about this network. These countries got together because they wanted to avoid simply being tributary to developments in larger states. However, once they feel they have acquired the know-how to hold their own in the e-world they will be delighted to review and adapt materials from larger states. Learning content developed in the next phase of these developments will be made freely available via the COL Learning Object Repository.

These are small beginnings but COL believes that this network, the Virtual University for Small States of the Commonwealth, is a very good test for the potential of open source to take open and distance learning to the next stage of low cost, long reach and high flexibility. The Commonwealth-wide community that will work on these open educational resources is inspired by the same principles as the communities that work together to develop open source software.

We hope to show that open source and open learning are two sides of the same coin and that open educational resources are the key to the dramatic changes in cost and flexibility necessary to extend learning opportunities to all people.
Introduction

It is a very special pleasure to be back in Mauritius and I thank you for the invitation to give this public lecture. This is a unique occasion for me because I first came to Mauritius as a consultant for the Commonwealth of Learning back in 1989, just after COL had been set up. My task then was to advise the Government of Mauritius about how it might use distance education and I wrote a report entitled Distance Education for Human Resource Development in Mauritius: The Way Forward. I retain excellent memories of that mission and it has been a pleasure, in recent days, to visit again some of the Mauritian institutions who helped me with that report.

Now here I am back again, sixteen years later, as President of the Commonwealth of Learning, to speak to you on the topic Open and Distance Learning in Small States: Which Models? You could say that history is repeating itself!

Before I start there are two other consequences of that first visit to Mauritius that I should mention. When I came here in 1989 as a COL consultant I was the President of Laurentian University, a dual-mode university serving North-Eastern Ontario, Canada. I am very proud that one of the legacies of my visit was a close link between Laurentian and the University of Mauritius that spawned numerous exchanges to facilitate the creation of the J. Baguant Centre for Distance Learning at the University of Mauritius, which has done such a good job since its creation.

The second consequence, more a coincidence, was that your Minister of Education of Mauritius in 1989 was Armoogum Parsuramen. I think he was the youngest person ever to hold that post. A decade later Mr. Parsuramen and I were colleagues when, in 2001, I became Assistant Director-General for Education at UNESCO and he was the Director of BREDA, UNESCO’s Bureau régional pour l’éducation en Afrique, in Dakar, Senegal. He moved to the UNESCO Headquarters in Paris just as I moved to Vancouver to my post at the Commonwealth of Learning, but we did some productive work together. Indeed, we worked together during my most recent visit to Mauritius, which the meeting of the Association for the Development of Education in Africa, ADEA, held at Grand Baie in December 2003.

So I’m delighted to be here again. Through my prior reading and by conversations in the last few days I find that my 1989 report made a difference. That pleases me because one of early passages in the report read as follows:

“This report is about distance education – sometimes called open learning. What, it may fairly be asked, can either do for Mauritius? The country is a 2000 sq. km island with no distances. Its examination-oriented education system is tightly closed.”

Since I wrote that report, maybe partly as a consequence of it, Mauritius has embraced distance education with determination and success. I should therefore apologise for the doubts implicit in another passage of the report which said:

“We admire the patient manner in which Mauritians let external consultants take up their time, first to respond to questions in an interview and then to put out any fires that the consultant’s report may light. As one more in a long line of consultants to education in Mauritius we could not help thinking that the country may be making excessive use of this mechanism. A succession of consultants’ reports creates at least uncertainty, if not confusion. Furthermore, waiting for the next consultant’s report can become a substitute for local decision making and action.”

Clearly there has been local action and I congratulate you on that. Decisions were made and, in general, you have followed the evolutionary path that I recommended, expanding and coordinating the work of existing institutions rather than creating new ones – at least for distance education.

However, I’m not going to launch into an analysis of the last 16 years in Mauritius and compare it to what I recommended in 1989. That would be both foolish – because there is a lot I don’t know about the present situation – and arrogant because my 1989 report was the result of a short visit, even if it did reflect consultations with a large number of Mauritians, some of whom are in this room now.

What I shall do is to look at the field of distance education generally and ask what has changed and what has not changed since 1989. This will lead me to comment directly on my subject, namely the appropriate models for open and distance learning in small states. I shall conclude with an account of the Virtual University for Small States of the Commonwealth, in which both Mauritius and COL are involved, and then finally risk a few comments about what you should do next.
The Changing ODL scene: 
What’s in a Name?

My first question is how is open and distance learning changing in response to the changing world around us?

The most obvious change is a profusion of new vocabulary. It seems that practitioners in this field are particularly prone to terminological flatulence. This, of course, is a tradition. Before the term open and distance learning came into general use we used to talk of external studies or correspondence education. When we changed the name of the International Council for Correspondence Education to the International Council for Distance Education in 1982 you could feel the earth move. Since then the trickle of terms has turned into a flood. We now have blended learning, flexible learning, virtual learning, eLearning, technology-enhanced learning, web-based learning, mLearning, iLearning and so on.

I suppose that this effervescence of nomenclature denotes a lively field of endeavour, but it also confuses people. My own observation, which may annoy some of you, is that although each new term may begin by denoting something new and different, pretty soon that something evolves into a method of teaching and learning that can fit comfortably under the wide umbrella of open and distance learning: ODL.

Take eLearning, for instance. Six years ago, when the dotcom frenzy was at its height, some were so transfixed by the possibilities of learning through connected computers that they launched new institutions devoted solely to teaching in this way. Most of them either folded for lack of interest or evolved into a multi-media approach that included some human contact and the odd book. I do not find this surprising. That is because what has not changed is the way that people learn. Very simply, we learn in two ways. We can learn independently, which you are doing now as you listen to me – if you are listening – or which you do when you read a book, watch television, listen to your iPod, or work at a computer. Most of our learning is independent learning, the more so as we get older.

But learning can often be enhanced by interactive learning, where another human being reacts to what we do by answering a question, challenging our point of view or commenting on the essay we have written. Effective learning requires a blend of both independent and interactive learning, with the proportions changing with the circumstances.

How to get the right blend?

The fundamental challenge for distance educators is to blend independent and interactive learning activities in ways that are pedagogically effective and economically viable. Economic viability is obviously important and it cannot be taken for granted because independent activities and interactive activities have different cost structures when you plot total cost against student numbers.

The independent activities can yield great economies of scale because the materials on which they depend are cheap to reproduce once you have made the first copy. Creating the infrastructure needed to make the first copy requires an upfront investment, which is why the curve starts well up the vertical axis.

But interactive activities depend on people. The initial cost of one tutor is low, but as student numbers grow the total cost of hiring tutors to facilitate interactive learning will grow faster than the total cost of independent activities. You can see that, in principle, by blending independent and interactive activities in different ways you can get the cost curve you want. This, of course, is the key to the success of the large open universities.

The conundrum facing education throughout history has been to break out of what I call the iron triangle. This is made up of the three vectors that all ministers of education want to pursue: wide access, high quality and low cost. For systems based only on classroom teaching this triangle is a massive constraint. Attempts to increase access by putting more students in each class will attract accusations of lowering quality. Raising quality by providing better learning materials and training teachers more intensively will raise costs, and so on.

But when practised intelligently distance education is revolutionary because it allows us to reshape this triangle. Thanks to the cost curves that I just showed, you can increase access, improve quality and cut costs – all at the same time.

This is a revolution because it allows us to break, once and for all, the insidious link between quality and exclusiveness that has been the bugbear of education throughout history. I mean the idea that you could only provide quality education if you exclude most people from it. That principle, of course, has been applied in Mauritius, as it has around the world, for most of your history.

But, of course, this brings us to the Small State problem. The reason that the UK Open University now ranks at fifth place amongst the hundred or so British universities for the quality of its teaching programmes – just above Oxford, my own alma mater – is that with nearly 200,000 students it enjoys great economies of scale and can make large investments in quality.

And there, of course, is the challenge for small states. It was this question of scale – reaching the critical mass to take advantage of open and distance learning – that led the education ministers of the Commonwealth’s small states to propose a Virtual University for Small States of the Commonwealth in 2000.

Changing Technology

I shall come back to that in a moment. But first I want to highlight a very important set of changes that have taken place since 1989 and which put the small states in a much more favourable position. I refer to the evolution of technology. You all live with evolving technology so my description can be brief and telegraphic. What has changed? Here is a partial list in no particular order.

First, connectivity – a word no one used back in 1989. We can connect ourselves to computer and communications systems easily and increasingly cheaply. I accept that the connectivity nirvana has not yet arrived for many of your neighbours in Africa, but it is coming.
Second, computers are being demystified and the gatekeeping power of software vendors – no pun intended – is diminishing as the notion of free open source software becomes a present reality.

Third, data storage has become dramatically easier. DVDs are splendid things and I myself am particularly enamoured of the flash disk, or data stick and hardly ever leave home without one.

Fourth, and this is a very partial list, I mention mobile telephones. If this talk bores you, you can discreetly phone someone more interesting and chat to them. You couldn’t have done that in 1989.

What does this evolving technology enable us to do? More particularly, what does it enable you to do in small states that you couldn’t do before? Again, here is a partial list in no particular order.

The consequences of changing technology

First, you can find information and knowledge much more easily – call this the Google phenomenon, which just keeps getting better. You can access more contemporary knowledge electronically from your home or your Internet café than you can physically at the University of Mauritius library. Information access is becoming a level playing field.

Second, you can communicate rapidly. Electronic submission and marking of assignments is a huge step forward for distance learning, where the importance of rapid feedback on students’ work is well known. Of course, the tutors must be organised to take advantage of it, but the potential is there.

Third, reproducing and distributing documents and pictures have become much cheaper. Of particular importance for you is the development of open educational resources, which means open course content, open source software and tools. These will be a crucial asset to the Virtual University for Small States of the Commonwealth.

Fourth, mobile phones are wonderful for keeping in touch with students through SMS communications about administrative matters – if not for studying the whole course. The book is still a brilliant mobile communication device.

Fifth, through both telephony and the Web it is easy to get small groups of students together in a virtual manner, either synchronously or asynchronously.

I see two consequences of these changes, one of special interest to you, the other more general. Of special interest to you is the impact of these changes on the feasibility of the Virtual University for Small States of the Commonwealth and on the viability of distance education with smaller groups of students.

My more general – and also more tentative – conclusion is that through these developments open and distance learning may actually define the new university of the 21st century, rather than being viewed by many in the academy as a peripheral approach that has to be tolerated because it takes some of the pressure off conventional universities to increase access.

Earlier I talked about the terminology of distance education. The key concept in the new role that I perceive is open learning rather than distance education. Technology-mediated open learning is more in tune with the behaviour of 21st century students than the offerings of campus institutions. Today’s students want to take control of their learning environment, to be constantly interacting and in contact with each other, they attack multiple tasks in a short space of time and they are ill at ease with the linear narrative style of traditional academic discourse.

This new world of open content and mobile interactivity, which enable them to construct their own learning, fits their style well. Because it is not constrained by an investment in buildings and timetables, modern open learning can create the collaborative intellectual spaces – virtual and real – that may define the University of the 21st century. Evolutionary changes usually begin on the fringes of ecosystems and current open and distance learning programmes may provide the places, on the margins of the conventional system, where evolutionary change can occur.

Furthermore, because of their commitment to technology, open and distance learning institutions are more likely to make the investments in developing sophisticated uses of technologies – such as gaming – that students will find exciting and engaging. These are the sorts of developments now taking place in the Lifelong Learning Cluster at the University of Mauritius.

All this is speculative, but it may well be that in encouraging the development of open and distance learning you are not only solving the old problems of access, quality and cost, but also creating the type of university that will be congenial to 21st century students. I urge you to reflect on this as you define the mission of the proposed third university of Mauritius. The function and the functioning of an open university need to be different in the 21st century.

The Virtual University for Small States of the Commonwealth

After that speculation, let me come down to earth and talk about a practical example of what technology now makes possible, the Virtual University for Small States of the Commonwealth.

You are aware that small states make up two-thirds of the 53 countries in membership of the Commonwealth. They include small islands with small populations located in the Caribbean, in the Pacific and in the Indian Ocean as well landlocked states with small populations such as Lesotho, Swaziland and Botswana – although Botswana is not small geographically.

There are also coastal states with small populations such as The Gambia...
First, the year 2000 saw a strong focus on development. The largest ever meeting of Heads of Government at the United Nations approved the Millennium Declaration with its eight Millennium Development Goals. That same year the World Forum on Education for All met in Dakar and set six targets for achieving this longstanding but elusive objective.

Second, and in sharp contrast to this concern for improving the lot of the world’s poorer people, the rich world got carried away by the dotcom frenzy. The Internet began transforming communication between people and creating new methods of doing business. Online communication also seemed to have the potential to transform education, so both prophets and vendors did not hesitate to claim that older educational methods would soon be swept into the dustbin of history. Henceforward all true learning would take place in front of the computer screen.

These developments created a charged atmosphere for the Conference of Commonwealth Education Ministers in Halifax at the end of 2000. On the one hand the Dakar Goals and the Millennium Declaration had increased the ministers’ determination to increase access to education at all levels. But on the other hand new information and communication technology held both the promise of helping to expand education and the threat of making traditional approaches to teaching and learning obsolete.

At that Conference the ministers from the small states shared their anxiety that their countries did not have the critical mass, either of expertise or of equipment, to engage with online learning in an autonomous fashion. They feared becoming tributary, as so often in the past, to the technologies, systems and materials developed by the larger states.

However, they thought that by working together they might be able to nurture an autonomous capacity for online learning that would enable them to harness these new developments for the benefit of their peoples. The mechanism would be a Virtual University for Small States of the Commonwealth. They asked COL to flesh out a formal proposal.

COL did so, bringing some of the ministers together for a meeting in Seychelles in 2003. They sent forward a plan for the Virtual University for Small States of the Commonwealth that was approved at the next Conference of Commonwealth Education Ministers, which was held in Edinburgh at the end of that year. The plan was waiting on my desk when I took office as president of COL in 2004 and after reviewing it and making enquiries I reached two conclusions. First, the atmosphere of urgency – not to say panic – generated by the dotcom frenzy of 2000 now seems ephemeral. When new phenomena appear we often overestimate their short-term impact whilst underestimating their long-term consequences. By 2004 it was clear that online learning was not going to consign previous educational methods to the dustbin of history. Impartial observers are finding many of the early applications of online learning somewhat disappointing but note, nevertheless, that it is seeping gradually into all forms and levels of education.

Second, the initiative of the Conference of Education Ministers appeared to call for the creation and funding of a new international Commonwealth body, a Virtual University for Small States of the Commonwealth with its own headquarters and organisational structure. My enquiries revealed that the usual donors were not interested in funding any new international structure, although they were keen to facilitate initiatives in education and training that might result from the Virtual University, especially if they were linked to agreed development objectives.

We therefore decided to flip the Virtual University over and build it from the bottom up rather than from the top down. At the end of 2004 I wrote to the Minister of Education of each small state asking three questions. First, do you still want to be part of the Virtual University for Small States of the Commonwealth? Second, if so, what are the educational and training objectives that you want to achieve for your country through this mechanism? Third, who is the contact person that you empower to work with COL on this initiative?

About two-thirds of the small states, including Mauritius, said that they wanted to participate and we received some very useful statements of priorities. COL is delighted that Mauritius is part of the network because the involvement of the larger and more technologically sophisticated of the small states, like Mauritius, is very important for this initiative. You have a number of vibrant institutions which could contribute greatly to the network and gain in return.

I emphasise that the Virtual University for Small States of the Commonwealth is an initiative of ministers of education with the aim of assisting the development of education and training – and learning in the widest sense – in small states. This is your project. Our job at COL is to facilitate and guide the process.

**What will the Virtual University for Small States of the Commonwealth be?**

Nevertheless, let me give you some perspectives from the Commonwealth of Learning about how the project might develop.

First, what form will it take? In the spirit of the 21st century it will be a network rather than an institution – a network with multiple nodes of activity. We are not trying to create a new institution with its own brand name but to find ways to reinforce the institutions and the developments that are already taking place in each country. A common theme of the responses of ministers to my request for their priorities was their ambition of strengthening their existing post-secondary institutions.

The notion of network partially answers my next question - where will the Virtual University be located? It will be located wherever groups of countries
and institutions are working together to develop courses or learning materials. COL is content to act as the central node of the network for the time being but we see the real activity taking place in the regions.

How will the Virtual University work? It is a mechanism to help small states work together to produce, share, adapt and use courses and learning materials that would be difficult for one state to produce alone.

What will be the subjects? When we collated the responses from ministers of education we found numerous common topics and programme areas in the submissions from different countries.

These include professional development in the education and health sectors; training related to tourism, small business management and entrepreneurship; skills development for youth and, of course, training in how to do eLearning. We are in the process of creating coalitions to develop materials in the most salient areas of common interest.

What media will be used? COL knows well that the media and ICT environment is still underdeveloped in many small states, especially outside the main towns. We therefore suggested to ministers that the Virtual University would be a multi-media operation, using whatever medium was appropriate for the purpose, whether print, audio, video, DVD and so on. However, it was clear from their replies that most countries see the Virtual University as a special opportunity to develop expertise in online learning or eLearning.

One of the aims of the Virtual University will be to help ministers to fulfil that ambition. In the five years since the ministers of education conceived the idea of the Virtual University, important and helpful developments have occurred in two areas.

First, connectivity is increasing and improving fairly rapidly in all countries. It makes sense to prepare now for a time when connectivity will be much more widespread in small states than it is today. Second, the trend to open educational resources is gaining momentum.

Open educational resources, which refer to open course content, open source software and tools are, in COL’s view, a key building block for the Virtual University. You could say that open educational resources are the vehicle that can translate into reality the vision that the ministers had in 2000.

A final point about OERs is that even if, for reasons of connectivity and equipment availability, certain courses are made available to the learners in traditional formats such as print, preparing them by online collaboration between individuals and institutions can greatly speed the processes of development and adaptation.

Another question that I asked earlier was who will take part in the Virtual University. The answer to that is now apparent. Participation will be open to all who are ready to work collaboratively and to share the results of their work.

When will we see results? In the proposal that I made to ministers last year, is to identify common aims and resources. I am confident that as we identify good collaborative projects we can secure financial support for them. The third stage, which comes now, is to develop content and systems.

Finally of course, you will implement elements of the Virtual University with learners. Obviously the timing of that last step will depend on how fast each coalition works. We imagine that the learning materials that emerge from the Virtual University network will be used in countries as and when they are ready. We do not foresee a great ceremonial launch, rather the gradual introduction of new materials and new methods across the small states of the Commonwealth in an organic manner.

That brings me to a final and very important point. So far my remarks have stressed the creation of learning materials. They are indeed the core of the value that we hope to add to existing institutions through the Virtual University.

Let us realise, however, that the successful use of these materials, and their transfer from country to country, will depend crucially on the arrangements that are in place – or can be put in place – for credit transfer, accreditation, the recognition of qualifications from elsewhere, flexibility in residence requirements and so on. Many promising collaborative ventures fall at these hurdles. Part of our task is to remove them from the track. Progress is being made in credit transfer and recognition in all regions of the Commonwealth, but it will need to speed up if the Virtual University network is to fulfill its potential. This is an area where COL is working hand in glove with UNESCO.

It is a crucial element in the success of the Virtual University network, which will fail if it is seen simply as a vehicle for the collaborative preparation of courses and materials. It must be seen as a network that unites and strengthens the institutions in smaller states by enabling them to operate on a larger canvas. That has implications for the way that they work together regionally.

What next for Mauritius?

I said that I would end these remarks with comments about what you should do next in Mauritius. It is time to answer the question in my title: Open and Distance Learning in Small States: Which Models?

At the risk of having you think that I am simply trying to flatter you, I must tell you that I shall be telling other small states to look closely at the Mauritius model. What do I mean by that?

First, you have embraced the concepts and practice of distance learning and I am delighted if my 1989 report contributed to today’s reality where, for example, a significant proportion of the enrolments at the University of Mauritius are in distance education.

Second, you have learned to collaborate. When I was here in 1989 I sensed a considerable resistance to collaboration between institutions. Turf was guarded jealousy. Indeed, that and later experiences were leading me to formulate Daniel’s paradox, which is that inter-institutional collaboration seems to be more difficult to achieve in small states than in large ones.

But my observations this week have made me revise that view. I see good collaboration between the two universities and I admire that way in which,
at the University of Mauritius, the J. Baguant Centre for Professional and Lifelong Learning, the Centre for Information Technologies and Systems and the Virtual Centre for Innovative Learning Technologies have come together within the Lifelong Learning Cluster in a way that is making the whole greater than the sum of the parts.

Third, I am impressed with the actions of the Government of Mauritius. I refer, for example to the articulation of the visions of the Cyber Island and the Knowledge Hub and the steps being taken to implement them. I refer to the consultative way in which the Human Resource Development Plan has been developed and the ongoing reflection on the possible missions and methods of a third university. I also believe that the Government’s role in encouraging and creating incentives for the kinds of inter-institutional collaboration that I mentioned earlier is vital.

Fourth, you are open to the future. You have a proposal for an Open University of Mauritius on the drawing board. From what I have heard over the last few days you still have a way to go to develop a clear concept of the purpose and methods of this institution. I hope you will develop that clarity before proceeding. I suggested earlier that you should view the term ‘open’ in a 21st century rather than a 20th century way. Furthermore I suspect that you need this institution to be skills supermarket rather than a prospectus of degree programmes. Whatever it is, discuss it until you are clear about what you want.

Fifth, all this is leading Mauritius to project itself internationally, most especially in Africa, as a country that is developing successfully and is ready to share its experience and expertise. I am proud that two Canadian institutions that I used to work for, Laurentian University in Ontario and the Télé-université in Québec, helped to set the University of Mauritius on the road to successful distance learning. I am equally delighted that the University of Mauritius and your other institutions are now helping other African countries in the same way. I hope that some of that help will be carried out in the context of the collaborative network that ministers named the Virtual University for Small States of the Commonwealth.

In summary then, I believe that you are finding your way towards a model for open and distance learning that works for Mauritius and is likely to be applicable in other small states. I wish you every success as you take it further.

In the light of what I said earlier about the way that student attitudes are changing, your model for open and distance learning may well transform your institutions in ways that position Mauritius well for the new learning environment of the 21st century.
Virtual University, Flexible Learning: Why a Virtual University for Small States of the Commonwealth?

Orientation and Planning Meeting for Government Representatives of Small States of the Commonwealth
National Institute of Education, Singapore | 12 September 2005

By Sir John Daniel, President and CEO, Commonwealth of Learning

Introduction: the special context of small states

It is my pleasure to welcome you all to this unique meeting. You have come from all parts of the Commonwealth. I hope you have travelled comfortably to this extraordinary city state of Singapore.

You all come from the small states that make up two-thirds of the 53 countries in membership of the Commonwealth. Small, in this context, refers either to population or to geographical size – or to both. Most of the small states of the Commonwealth are small islands with small populations located in the Caribbean, in the Pacific and in the Indian Ocean. But there are also landlocked states with small populations such as Lesotho, Swaziland and Botswana – although Botswana is not small geographically. There are also coastal states with small populations such as The Gambia and Belize, which are geographically small, and Guyana and Namibia, which are rather large.

Despite their diversity small states face common challenges. Commonwealth small states, as well as constituting two-thirds of Commonwealth membership, account for three-quarters of all the world’s small states. This means that the Commonwealth intergovernmental organisations, that is to say the Commonwealth of Learning, the Commonwealth Foundation and the Commonwealth Secretariat, must lead the international community by the special attention that they give to these states in their work.

What can we say about the general needs of small states? You all come from small states and know much more about the opportunities and the threats that they face than I do. Seen in a world perspective through the lens of the Millennium Development Goals small states do face special challenges.

The first is simply being small. A small territory means that natural resources are limited in quantity and variety. A small population makes it difficult for a country to have skilled and qualified people in all the many occupations and trades that underpin a modern economy. Then there is the tyranny of transport. Small landlocked states face difficulty and expense in getting their traded goods to and from ports in neighbouring countries. Island states face the challenges of distance from markets and the cost of sea and air links.

Lately we have become more sensitive to the special environmental challenges that affect small states. The horror we felt at the terrible impact of Hurricane Katrina on the US mainland should make us recall the hurricane in Grenada, the tsunami in the Maldives and the floods in Guyana and remember that small states are both particularly prone to natural calamities and especially vulnerable to their effects.

Huge countries like India and the USA have the resources and people to help the very small proportion of their total populations that suffered from last year’s tsunami and this year’s Hurricane Katrina. But although fewer people lost their lives in the Maldives because of the tsunami, and in Grenada because of Hurricane Ivan, the effect on the two societies and their economies was relatively much greater.

Small states have become increasingly conscious of their common needs and are asking international bodies to formulate programmes to address them. Such a request has brought us together here in Singapore. My task, in this opening session, is to answer the question: Why a Virtual University for Small States of the Commonwealth?

In responding to that question I shall describe the origins of the programme and try to answer some other obvious questions: What form will the Virtual University for Small States of the Commonwealth take? Where will it be located? How will it work? Who will take part? When will we see results? Let me address these questions briefly as well.

WHAT?
A network of collaboration
NOT
a new institution and brand

WHERE?
Wherever countries collaborate in the development of learning objects.

HOW?
To develop collaboratively what might be difficult for any one state to do by itself

Topics of Common Interest:
• Professional development: Education & Health
• Tourism
• Business management, entrepreneurship
• Skills for Youth
• How to do eLearning
Origins of the Virtual University for Small States of the Commonwealth

The origins of the VUSSC go back to the triennial meeting of Commonwealth Ministers of Education that was held in Halifax, Nova Scotia, Canada in 2000. To understand the genesis of the idea of the Virtual University for Small States of the Commonwealth it is important to recall the special context of that Millennium Year – two features in particular.

First, the year 2000 saw a strong focus on development. The largest ever meeting of Heads of Government at the United Nations approved the Millennium Declaration with its eight Millennium Development Goals. Earlier that year the World Forum on Education for All met in Dakar and set six targets for achieving this longstanding but elusive objective.

These developments created a highly charged atmosphere for the Conference of Commonwealth Education Ministers in Halifax at the end of 2000. On the one hand the Dakar Goals and the Millennium Declaration had increased the ministers’ determination to increase access to education at all levels. But on the other, new information and communication technology held both the promise of helping to expand education and the threat of making traditional approaches to teaching and learning obsolete.

At that Conference the ministers from the small states shared their anxiety that their countries did not have the critical mass, either of expertise or of equipment, to engage with online learning in an autonomous fashion. They feared becoming tributary, as so often in the past, to the technologies, systems and materials developed by the larger states.

However, they thought that by working together they might be able to nurture an autonomous capacity for online learning that would enable them to harness these new developments for the benefit of their peoples. The mechanism would be a Virtual University for Small States of the Commonwealth. They asked COL to flesh out a formal proposal.

Second, and in sharp contrast to this concern for improving the lot of the world’s poorer people, the rich world got carried away by the dotcom frenzy. The Internet began transforming communication between people and creating new methods of doing business. Online communication also seemed to have the potential to transform education, so both prophets and vendors did not hesitate to claim that older educational methods would soon be swept into the dustbin of history. Henceforward all true learning would take place in front of the computer screen.

By 2004 it was clear that online learning was not going to consign previous educational methods to the dustbin of history. Impartial observers are finding the early applications of online learning somewhat disappointing but note, nevertheless, that it is seeping gradually into all forms and levels of education.

Second, the plan from the Conference of Education Ministers appeared to call for the creation and funding of a new international Commonwealth body, a Virtual University for Small States of the Commonwealth with its own headquarters and organisational structure. My enquiries quickly revealed that the usual donors were not interested in funding any new international organisation, although they were keen to facilitate initiatives in education and training that might result from the VUSSC, especially if they were linked to agreed development objectives.

We therefore decided to flip the VUSSC over and build it from the bottom up rather than from the top down. At the end of 2004 I wrote to the Minister of Education of each small state asking three questions. First, do you still want to be part of the VUSSC? Second, if so, what are the educational and training objectives that you want to achieve for your country through this mechanism? Third, who is the contact person that you empower to work with COL on this initiative?

About two-thirds of the small states said that they still wanted to participate and we received some very useful statements of priorities. You are the contact people that the ministers named and here we are at our first planning meeting.

Let me emphasise that the VUSSC is an initiative of your ministers of education whose purpose is to assist the development of education and training in small states. This is your project and this meeting is your opportunity to steer it in the directions that your countries want. We at COL are here to facilitate the process and the Government of Singapore, in hosting the meeting, has given you the opportunity to be inspired by the impressive development of the online world that is taking place here.

In the Commonwealth we do not usually list Singapore as a small state because it is now a fully developed country – probably the world’s most successful example of development in our lifetimes. However, Singapore is small in both area and population. What has been done in Singapore can be done elsewhere. COL is most grateful to Singapore for giving you a model to emulate.

What will the VUSSC be?

The Virtual University for Small States of the Commonwealth is an initiative of your countries. Nevertheless, let me seed the discussions that we shall have here by giving some perspectives from the Commonwealth of Learning on how the project might develop. I put these ideas forward simply as a basis for discussion.

First then, what form will the VUSSC take? In the spirit of the 21st century I suggest that it will be a network rather than an institution – a network with multiple nodes of activity. We are not trying to create a new institution with
its own brand name but to find ways to reinforce the institutions and the developments that are already taking place in your countries. A common theme of the responses of ministers to my request to tell me about their priorities was the ambition of strengthening their existing post-secondary institutions.

The notion of network partially answers my next question - where will the VUSSC be located? I suggest that it will be located wherever groups of countries and institutions are working together to develop courses or learning materials. COL is content to act as the central node of the network for the time being but we see the real activity taking place in the regions.

How will the VUSSC work? It is a mechanism to help small states work together to produce, adapt and use courses and learning materials that would be difficult for one state to produce alone.

What will be the subjects? That is for you and your authorities to determine. When we collated the responses from ministers of education we found numerous common topics and programme areas in the submissions from different countries. A first task will be to review these and create coalitions to develop materials in the most salient areas of common interest.

What media will be used? COL knows well that the media and ICT environment is still underdeveloped in many small states, especially outside the main towns. We therefore made it clear to ministers that we saw the VUSSC as a multi-media operation, using whatever medium was appropriate for the purpose, whether print, audio, video, DVD and so on.

However, it was clear from the replies we received that most countries see the VUSSC as a special opportunity to develop expertise in online learning or eLearning.

One of the aims of the VUSSC will be to help ministers to fulfil that ambition. That is another reason why it is particularly appropriate for this meeting to be taking place in Singapore. During the course of this week we shall give each of you real experience in eLearning so that you can take back some new expertise and be better placed to make judgements about it.

This is an appropriate moment for me to point out that in the five years since the ministers of education conceived the idea of the VUSSC, important and helpful developments have occurred in two areas. First, connectivity is increasing and improving fairly rapidly in all countries. It makes sense to prepare now for a time when connectivity will be much more widespread in small states than it is today.

Second, the trend to open educational resources is gaining momentum. Open educational resources, which refer to open course content, open source software and tools are, in COL’s view, a key building block for the VUSSC. You could say that open educational resources are the vehicle that can translate into reality the vision that your ministers had in 2000. You will hear much more about OERs at this meeting.

A final point about OERs is that even if, for reasons of connectivity and equipment availability, certain courses are made available to the learners in traditional formats such as print, preparing them by online collaboration between individuals and institutions can greatly speed the processes of development and adaptation.

Another question that I asked earlier was who will take part in the VUSSC. The answer to that is now apparent. Participation will be open to all who are ready to work collaboratively and to share the results of their work.

When will we see results? In the proposal that I made to ministers last year I suggested that the VUSSC would develop in four stages. The first, which is done, is to identify participants and objectives. The second, which will be progressed at this meeting, is to identify common aims and resources. I am confident that if we identify good collaborative projects we can secure financial support for them. The third stage, which comes next, is to develop content and systems. Finally of course, you will implement elements of the VUSSC with learners.

Obviously the timing of that last step will depend on how fast each coalition works. We imagine that the learning materials that emerge from the VUSSC network will be used in countries as and when they are ready. We do not imagine a great ceremonial launch, rather the gradual introduction of new materials and new methods across the small states of the Commonwealth in an organic manner.

That brings me to a final and very important point. So far my remarks have stressed the creation of learning materials. They are indeed the core of the value that we hope to add to existing institutions through the VUSSC. Let us realise, however, that the successful use of these materials, and their transfer from country to country, will depend crucially on the arrangements that are in place – or can be put in place – for credit transfer, accreditation, the recognition of qualifications from elsewhere, flexibility in residence requirements and so on. Many promising collaborative ventures fall at these hurdles. Part of our task is to remove them from the track.

**Conclusion**

Progress is being made in credit transfer and recognition in all regions of the Commonwealth, but it will need to speed up if the VUSSC is to fulfil its potential. Fortunately this is an area where COL has useful experience, and also an area where we are working hand in glove with UNESCO. It is a crucial element in the success of the VUSSC.

You are all senior people who appreciate its importance, so I ask you to ensure, when you get back home, that you communicate its importance to your colleagues. The VUSSC will fail if it is seen simply as a vehicle for

**USEFUL RECENT DEVELOPMENTS:**
- Better connectivity
- Open Educational Resources

**The VUSSC will fail if it is seen simply as a vehicle for the collaborative preparation of courses and materials. It must be seen as a network that unites and strengthens the institutions in your countries by enabling them to operate on a larger canvas.**
the collaborative preparation of courses and materials. It must be seen as a network that unites and strengthens the institutions in your countries by enabling them to operate on a larger canvas. That has implications for the way that they work together regionally.

I shall stop there. Once again I thank you for coming and I thank the Government of Singapore and the National Institute of Education for hosting this event with COL. COL and the NIE have already worked together very successfully on improving teacher education in Africa and we are delighted to team up again.

All of us here will work hard this week but I am confident that something important will emerge from our labours. Back in 2000 the ministers of education of the small states of the Commonwealth were alarmed by the hype surrounding eLearning but sensed that they could benefit by engaging with this new phenomenon. The VUSSC is the vehicle they have selected and you are the people they have chosen to drive it.

I wish you well. You have the possibility, through this new network of transforming education and training in your countries and putting small states in the forefront of the development of open educational resources.
Introduction

Thank you for your warm welcome. It is a pleasure to be back in Kerala, again less than a year since I was here last, and to be the Chief Guest at this important event. The Commonwealth of Learning is very proud of its close and lasting relationship with the National Institute for Open Schooling and delighted to collaborate in the organisation of this conference. Thank you also for the invitation to address you. These remarks have been prepared with my COL colleague Susan Phillips, who has done such a splendid job developing and nurturing the productive relationship between COL and NIOS.

Following the remarkable success of the world’s open universities, which have simultaneously increased access to higher education dramatically, cut costs substantially and created benchmarks for quality, the attention of educators around the globe is now turning to open schools.

In fact, as we shall note shortly, open schools have been around much longer than open universities. However, the interest in open schooling, especially open schooling at scale, has been rekindled by the worldwide drive to achieve education for all.

At the heart of the campaign for education for all is the Millennium Development Goal of achieving Universal Primary Education by 2015. Many countries will struggle to achieve that goal, but whatever success they do achieve will create additional demand for secondary education that most of them will not be able to satisfy by building schools.

The six goals of Education for All that were set by the world community in Dakar in 2000 go beyond Universal Primary Education. One of the Dakar goals is to ensure that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills programmes. That refers in part to technical and vocational education and training.

These two goals define the focus of this conference. We are interested in open schooling generally for its contribution to universal basic education, but we have a particular interest in its application to vocational education and training, three long words that spell two short words: WORK and JOBS.

In these remarks we shall start with some reflections on the history of open schooling and on its nature. We shall also recall COL’s involvement with NIOS and the open schooling movement. Finally, we shall look specifically at the challenges – but also the opportunities – that vocational education and training presents to open schooling.

A Little History

Let us begin with a little history. Open schools predate open universities. More than fifty years ago, Canada, Australia and New Zealand all had government-run educational programmes which offered courses from kindergarten to Grade 12 through what we would now call distance education. Australia’s School of the Air, which used radio to reach children on the remote farms in the Outback, captured the imagination of the world. These programmes were designed for particular groups such as the children living on scattered sheep farms or in families responsible for lighthouses. They also served students in small towns whose schools could not offer specialised courses for want of qualified teachers.

These open schools also served in times of crisis. When New Zealand had to shut down its whole school system because of an epidemic of measles all the children in the country studied for a period of weeks through the Correspondence School. The largest open school outside the Commonwealth, France’s Centre National d’Enseignement à Distance (CNED) was created to serve the thousands of French children who were evacuated from the cities at the outbreak of World War II.

These early open schools were successful. At the primary school level, pupils were tutored by their parents using high quality learning materials. At the secondary level, students were usually highly motivated learners taking the courses to satisfy requirements needed for admission to specific programmes of advanced study.

In the 1960s there were attempts to establish correspondence schools in the developing countries such as Malawi, Zambia and Zimbabwe. With
funding from richer countries some of these institutions, such as the Malawi College of Distance Education and the National Correspondence College, Zambia, were initially successful. Sadly, as development regressed, they were not sustainable. The models used followed too closely those in the industrialised world with too little reference to local context. For example, pupils in developing countries seldom had educated parents to tutor them. The courses were often imported from richer countries with content that made little sense to the children living in a completely different environment. Moreover, even when courses were adapted to local contexts, issues such as printing costs, the price of paper, tutor availability and communications infrastructure were not taken into account in the planning process. As a result, many of these institutions failed in their mandates to successfully deliver school level education through non-conventional means.

Despite these failures, COL decided soon after its creation that the concept of open schooling was too important to be abandoned. The challenge was to implement the concept effectively. There was a hill to climb because of a legacy of distrust of schooling systems that are not based on classrooms staffed with teachers.

COL began its work in Open Schooling with the publication in 1994 of a number of case studies entitled Open Schooling: Selected Experiences. One of the first publications in the area of open schooling, it is still cited in research on non-conventional school level education a decade later and remains a significant contribution to the literature.

As many of you know, the publication included a study on the National Open School, whose Chairman, Professor Marmar Mukhopadhyay, was a joint editor. As well as marking COL’s debut in open schooling, this was the start of a long and productive partnership with the National Open School. I am delighted that so many of the key figures in the history of the National Open School are here today, including Father Kunnakal, its founder.

The Importance of the National Institute for Open Schooling

The National Open School is a success story in the world of open and distance learning. It began as a pilot project in 1979. By 1989 demand for its services was so high that an autonomous institution, the National Open School, was established by the Government of India. Its scope and function was further expanded in 2002 when its name was changed to the National Institute of Open Schooling. Since then the success of the NIOS coupled with the demonstrable success of open universities, has begun to erode the resistance to alternative methods of schooling in developing countries.

NIOS has become a model of successful strategies. It has pushed back the boundaries and done what many claimed was impossible: making school education available through non-conventional means to hundreds of thousands of pupils. The old open schools in Africa are beginning to reinvent themselves and new ones are springing up. They are taking the NIOS as their inspiration. COL is proud to have been part of this process.

One potentially exciting development in open schooling is the possible creation of the International Baccalaureate International Open College. The International Baccalaureate is the world’s most admired international school-leaving diploma. The International Baccalaureate Organisation (IBO) is exploring how it might use open schooling to bring this international curriculum to a much wider international audience. It is also looking at putting greater emphasis on vocational education and training in the curriculum. We understand that the IBO intends to pilot these developments in India and we hope that a link can be built between the IBO, the NIOS and COL for this purpose.

There is already an extensive list of joint activities between NIOS, COL and CEMCA, COL’s Commonwealth Educational Media Centre for Asia. They cover advocacy for open schooling; increasing access for the hard-to-reach learner; supporting the establishment of state open schools; improving the quality of the learning materials; and building NIOS’ own capacity.

Our first joint event was designed to build awareness about the potential of open schooling to increase access to basic education for those who are difficult to reach, meaning marginalised groups like girls, women, the rural poor and people with disabilities. This first event was followed by more meetings organised on similar themes. As we raised awareness of the challenge, one pleasing outcome was a significant increase in the number of NGOs that applied to become Accredited Institutes of NIOS. This gave these NGOs the right to deliver and accredit NIOS courses and, as Accredited Institutes, they have increased access through their extensive network of centres throughout India. They have brought education to the learners’ doorstep instead of requiring them to come to educational institutions.

The beauty of this arrangement is that it has increased access for the disadvantaged in rural and urban parts of India at little additional cost to either the national or state governments.

The Nature of Open Schooling

In our remarks so far we have bracketed open schools with open universities and used the general term ‘open and distance learning’ to describe what they do. But we must look more closely at the way we use these terms.

We can define open schooling as a combination of physical separation of the learner from the teacher and the use of unconventional teaching methodologies, including information and communications technologies, to bridge the gap and support the students’ learning. This sounds much like the definition that we might use for an open university.

However, we do not call open schooling ‘open/distance schooling’ and there is a good reason for that. Open schooling follows a variety of unconventional methods (inc. ICTs)
patterns, but the most common scenario is that the learners study specially designed open learning materials on their own — at home, in their workplace, wherever it is convenient for them — and then meet a facilitator on a pretty regular basis.

In open schooling the word ‘open’ refers to the openness of the system. Usually there are no rules that regulate students’ ages; that lay down prerequisites; that impose the course content to be taken or that specify the number of courses in which students must enrol. This means that youth who missed out on schooling in their childhood can enrol in courses that will give them the equivalence of secondary education without having the embarrassment of sitting in classrooms with much younger children. Young mothers can take secondary level education through studying at home — attending tutorials only when necessary and their responsibilities permit. Working adults can enrol in one or two courses at a time, and study whenever their personal and work commitments permit. Young adults can acquire skill training coupled with academic subjects while self-employed or working as non-skilled labour.

The purpose of the sessions with the facilitator is mainly to clarify any difficulties that the students may experience when working through the learning materials. These sessions are seldom mandatory — it does not affect a student if he or she has to “drop out” for a period of time — they can pick up their studies once again, when it is convenient for them to do so. The learners are not taught by the facilitator — in fact, the facilitator may not know much about the subject-area at all — the role of the facilitator is to guide the learners, and assist them to understand how to study the content in the material.

In addition to the facilitator, there is usually a subject matter expert available — possibly through telephone or e-mail contact — who will respond to questions relating to the subject content. Having experts available is crucial. They may only be called upon once in a while, but the facilitators know that someone is there to answer any content questions that might arise.

The sessions with facilitators are often held in learning centres located in libraries, churches, NGOs, schools or other semi-public places. They may be held at fixed times during a week, or may be held at the students’ and facilitators’ convenience. Having the learning centres located in local neighbourhoods increases access to education, especially for girls and women who are often not permitted to travel any distance to a public school. Sometimes, the tutorial sessions may be virtual — organised through teleconferencing, interactive radio or television broadcasts or e-mail listservs.

The facilitators or experts mark the students’ exercises and assignments, and provide feedback designed to assist the students in understanding content when their answers indicate this is required. Sensitive, careful marking is necessary, as it encourages and supports the learners at the same time as helping them to understand their mistakes.

Vocational Education and Training

The question we shall grapple with at this meeting is how can open schooling best be applied to vocational education and training?

We are seeing a resurgence of interest in vocational education and training — let’s call it VET — worldwide. In the developed countries, like Canada where COL is headquartered, there is a new focus on training young people for employment rather than assuming that they should simply go on to higher education. One Canadian youngster in ten now drops out of high school. The main reason they give for dropping out is that they don’t find their education in school relevant to their lives.

They find that their education does not lead to employment or help them get better jobs, so they ask why they should finish high-school if it will only lead to an unskilled labouring job that they can get as a drop-out. However, these youngsters agreed that if they were given technical/vocational training, continuing in school would be more attractive, relevant and interesting.

In the developing world the situation is even more critical. The first Millennium Development Goal is to eliminate poverty and hunger and the best way to do that is for people to have reasonably secure livelihoods: work that pays, either through a job or through self employment. We notice that development agencies are beginning to focus directly on the question of work creation rather than assuming that education will lead naturally to it.

Education and training for work are of fundamental importance because it is at work that our roles as competent human beings and responsible citizens come together most intensely. For many of us our work is the principal source of individual fulfilment in our lives. It is also usually the place where we create the widest network of acquaintances and where we adapt to people from many different backgrounds in order to work productively with them.

That is why people who have no work or who become unemployed lose much more than income. They lose a place in society, a network of colleagues, and the satisfaction of using their talents. That is why it is so important that education and training give people the wide range of intellectual, technical and social skills that will enable them to work effectively and enjoyably.

It means, for example, not just literacy, but functional literacy. Literacy that really makes a difference to the way a woman — or a man — can make choices and influence their community. It means not just learning, but lifelong learning. The world of work changes constantly as does the context of citizenship. People must learn continually not just to adapt to those changes but to help shape those changes as citizens.

There are some learning and life skills that have global relevance. Computing and communication are the most obvious. But the real challenge for technical and vocational education and training is local, not global. It is, for example, to provide appropriate learning and life skills to rural people so that they can enrich their own environment rather than migrate to misery.

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**VOCATIONAL EDUCATION & TRAINING**

The challenge is:
- To be local
- To engage the private sector
- To be up to date
- To be open to the world
in the cities. It means bringing opportunities for learning life skills to girls and to others who have had not had these opportunities in the past. It means getting the private sector, large and small, north and south to support the training of its staff, both on and off the job.

We are here to explore ways to increase access to training cost effectively, most particularly how to do this with non-conventional delivery methods. One challenge is that vocational training needs to be more up-to-date than academic content. Mathematics changes only slowly, but the equipment in use in industry and consumer items like cell phones are in a state of rapid evolution. Training must be matched to the work environment and we must avoid fiascos like investing in carpentry courses in countries where there is little wood.

This means that educational institutions — in our case open schools — must continually interact with the private sector so that they are training their students in the skills that are required. We are pleased to see that NIOS recognises this — one of the themes of this conference focuses on the importance of private-public relationships and the acknowledgment and recognition of accreditation frameworks. We hope that one outcome of this conference will be a close relationship between NIOS and private companies across India aimed at expanding NIOS' course offerings and tailoring its technical and vocational courses to the skills needed by employers.

COL is delighted to be helping NIOS to give its students training that will equip them to apply for positions requiring higher skills. With our local regional office, CEMCA, we made it possible for two senior NIOS staff to visit The Open Polytechnic of New Zealand (TOPNZ). TOPNZ has an international reputation for delivering high quality skills-related education to learners throughout New Zealand and our NIOS colleagues wanted to see how TOPNZ handled vocational training. As a result of the visit we expect that NIOS will expand its offerings to include more technical/vocational trades training. I might note that COL itself has worked with TOPNZ to produce open learning courses on 'Working with Concrete’ and ‘Working with Timber’ for the Pacific Islands.

In closing, we suggest that in expanding its work in vocational education and training NIOS may have an advantage over conventional institutions. We talked a moment ago about the most special feature of an open school, namely its openness. As well as offering vocational courses designed to meet the demands of employers, NIOS should also be alert to the needs of the self employed — which is the status of many of its students. Some self-employed people may take vocational training in order to work for someone else. But it is equally possible to improve livelihoods and reduce poverty by increasing the quality of self employment.

What we are proposing is that NIOS, as an Open School, should find out what forms of self employment are most common amongst its students and design vocational education and training that will increase their productivity and skills in that self-employment. This is an important thrust of a new COL programme called Learning and Livelihoods. The idea is to help to create and improve livelihoods, not simply to train people in an abstract way in the hope that employment will open up. This, of course, relates back to the fundamental skills of employability. We admire the way that NIOS continues to push the frontiers of open schooling. It recently received an award for providing basic education through non-conventional means. This is an area of immense importance for development. Thus far alternative ways of providing basic education on a large scale have not usually proved viable. However, through innovative thinking and experimentation, NIOS has demonstrated once again that the mould can be broken and that basic education can be delivered in new ways.

For all these reasons we are pleased that COL continues to help NIOS become an exemplary institution internationally. We have brought ministers, officials and educators from various Commonwealth countries to NIOS to see how it operates. We believe that supporting these study visits is increasing awareness of open schooling and contributing to its global expansion and developing quality. We hope that, partly as a result of this conference, open schooling will make an increasing impact on vocational education and training in the years ahead.