

Innovation for Human Development: Redesigning Higher Education



The India, China, America Institute, Education for Innovation in India, China and America, Atlanta, Georgia, 2 March 2007

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Synopsis

With 21 million students China has overtaken America to create the world's largest postsecondary education system. India still lags behind, but demography and democracy will propel its postsecondary enrolments past those of both America and China in the coming decades. 60% of India's people are under 25 and, as the world's largest democracy, it will be forced to respond to their desire for access to higher education.

This means that China, India and other large developing countries will dominate postsecondary education of the 21st century and their patterns of provision will effectively define its global profile. This will differ from the current profile for both economic and technological reasons. Even with economic growth of 8% or more, neither public nor private funds will be adequate to create conventional campuses at the rate required. Fortunately technology is making other alternatives available. The galloping increase in connectivity will connect people with information more easily and the burgeoning corpus of open educational resources will slash the cost of creating learning materials.

How will these opportunities be exploited? There will be steady increases in three types of provision. First, private, for-profit education will play a relatively larger role in China and India than it does in America, simply because the public sector will not be able to afford the necessary investments. Second, distance learning, conducted at scale, already accounts for a larger proportion of enrolments in China and India than in America. Third, high volume distance learning readily lends itself to conducting education across borders and India, because of its use of English, could become the predominant cross-border provider of postsecondary education within two decades.

The bigger question is whether eLearning will allow distance learning to achieve a second quantum shift in postsecondary education towards lower costs and higher access comparable to the revolution sparked a

generation ago by the Asian mega-universities: the Indira Gandhi National Open University and the state open universities in India and, in China, the TV and Radio Universities.

In *The Fortune at the Bottom of the Pyramid*, C.K.Prahalad shows how certain large corporations, by radically redesigning their business models for low margins and high volume, have brought new goods and services to the rural poor to the benefit of both the people and the companies. To achieve in India and China the 50% age participation rate that is now the norm in America we shall need a similar breakthrough in postsecondary education. Where is it likely to come from?

In America the for-profit sector (the Whitney International University System) is attempting to take distance learning to scale at low cost by making investments aimed at achieving the quantum shifts in price and volume necessary to serve those at the bottom of the economic pyramid. In China and India this has been the mission of the large public sector institutions. Will they be able to change their business models sufficiently to move to a lower price point at acceptable quality? Or will for-profit institutions take over this mission?

The paper explores how connectivity and open educational resources could be combined in conducting postsecondary education at scale with lower costs and consistent quality. It also asks how governments will regulate and assure the quality of these very large postsecondary systems in the interests of protecting their citizens as consumers.

Introduction

It is an honour to be asked to give the opening address to this conference on *Education for Innovation in China, India and America*. My task is to set the scene and my title is: *Innovation for Human Development: Redesigning Higher Education*. I shall draw heavily on a paper that I published last year in *Change Magazine* with my colleagues Asha Kanwar at the Commonwealth of Learning and Stamenka Uvalić-Trumbić at UNESCO (Daniel, Kanwar & Uvalić-Trumbić, 2006)

Academe has traditionally been rather impervious to attempts at redesign. Europeans lament that their universities are lagging behind those in the US; while Americans worry that their academic leadership is threatened by complacency. Both groups are all missing the tectonic shift that will transform the map of higher education worldwide; namely the growth of universities in the developing world.

Spreading connectivity, allied with the massive creation of educational resources based on open-source technology, may soon allow the radical reduction in costs necessary for higher education to serve the four billion people at the bottom of the world's economic pyramid.

For two decades, worldwide enrollment growth in higher education has exceeded the most optimistic forecasts. A milestone of 100 million enrollments was passed some years ago, and an earlier forecast of 120 million students by 2020 looks likely to be reached by 2010. There are already 130,000 million tertiary students if we count part-timers. Growth is, if anything, accelerating as more governments see the rapid expansion of higher education as a key factor in their transition from developing to developed country status.

This is the situation in China, where enrollments doubled between 2000 and 2003. With 16 million students, by 2005 China had overtaken the US as the world's largest higher education system. Since then China has slammed on the brakes of expansion for fear of unemployed graduates. Meanwhile higher education continues to expand briskly in India, which, as a democracy, cannot limit access by fiat. Its numbers too will overtake those of the USA within a decade.

Growth has been rapid in other developing countries as well - but usually from a very low base, which creates a massive disparity in the higher education participation rates of students in the 18-23 age group (known as Age Participation Rates, or APRs) across the world. APRs of around 50 percent are now the norm in developed countries, whereas in numerous countries in South Asia and Sub-Saharan Africa they languish below 10 percent.

This creates a major challenge of catch-up challenge for developing countries, where low APRs are compounded by demographic profiles with median ages in the low twenties or below. The scale of change in higher education in the coming decades can be shown simply by applying the modest target of a 35% APR to the four billion people in the world's poorest countries. This would yield 150 million additional students, far more than today's global total. Tens of millions of aspiring third-world young adults will be seeking postsecondary education in the coming years.

How can developing nations respond to this massive demand? Will the patterns of provision that have worked for industrialized countries suffice, or are new approaches needed? Since developing countries will soon account for the majority of enrollments in higher education worldwide, their answers to this question will effectively define the global profile of higher education in the 21st century. That profile seems likely to change in three ways. First, there will be a much greater role for private, for-profit institutions. Second, distance learning, in all its evolving forms, will account for a growing proportion of provision by both public and private providers. Third, seeing a massive market opening, we predict that the first-world institutions, both public and private will expand their cross-border provision of educational services. Establishing quality assurance mechanisms for such rapid expansion will be a major challenge for governments.

In these remarks, and in the spirit of the topic of this meeting, I shall focus particularly on India with some comments on China and the USA.

Public Good, Private Provision

Higher education is a private good, with direct benefits to those who participate, but also a public good. Having a fire brigade at hand if your house catches fire is a more obviously useful public service than having accessible higher education, but the proportion of people with higher education does correlate well with a society's state of economic and civic development.

By tradition, governments control public goods like emergency services and defense in order to extend their benefits to all citizens and give full accountability to the electorate. Private militias are a sure indicator of the breakdown of civic order. But how far should the principle of public control apply to education? Until recently many developing countries have assumed that if higher education is a public

good, then the state must be the sole or main provider. We contend that practice, principle, and pragmatism all argue against treating higher education as a public monopoly.

Past practice reveals that private bodies, notably churches and foundations, were providing higher education long before governments took an interest in doing so. The purpose of state involvement, when it came, was to make higher education truly a public good by widening access to it.

The challenge from principle concerns the right role of government and holds that apart from services like defense, government is most effective when it monitors and regulates the provision of public services by others, rather than controlling them directly.

Demography and demand present pragmatic challenges. We mentioned the burgeoning numbers of young adults in the developing world and argued that an increasing proportion of them will want education at all levels. But in this era of lifelong learning, there is no way that governments can provide, at no cost, all the education that people will need throughout life. Governments have to focus their contributions.

Some years ago the World Bank briefly promoted the idea of fee-paying private education at the primary level, but it now believes that the millennium development goal of universal primary education will only be achieved if education at that level is free and compulsory. No government has the resources to pay for basic education for all from the public purse and fund all of higher education as well. A choice must be made between inadequate provision of higher education by a public-sector monopoly or meeting the demand by a combination of public and private institutions. This is a political dilemma for many developing-country governments, which have relied solely on the first option but now realize that to do so is a serious drag on national development.

Comparisons are often made between pairs of countries such as South Korea/Ghana and Malaysia/Zambia that had similar levels of GNP forty years ago but have developed very differently since then. Part of the explanation is that the Asian pair promoted the rapid development of higher education sectors with strong private-sector participation, while the African countries relied only on the state sector and kept tuition free.

How can the governments of developing countries best take advantage of for-profit private-sector higher education? The answer boils down to achieving a balance between accessibility for students and quality of provision, along with returns for the investor.

The Price of Higher Education

The heart of the issue is fees. In the US, where all higher education students pay tuition and fees, it is hard to appreciate what a hot issue they are in the rest of the world - and not only in the developing world. In the UK the political scars that Tony Blair carries for raising university fees are as deep as those he earned by taking Britain into the Iraq war.

Fees are a special problem for those countries that made higher education free - i.e., totally subsidized by the state - in the days when only a tiny proportion of the population was expected to go to university. At that time entry to higher education was highly competitive, but many citizens believed - and still believe -

that the combination of competitive entry and free tuition would produce equitable participation in higher education from all socio-economic groups. Abundant research now shows that this is simply not true. The socio-economic profile of students in countries that charge fees while providing scholarships and loans for poorer students is more broadly based than in those that do not charge fees. This is a very important finding, and one that governments are only gradually finding the courage to act on.

In this respect China seems to be making the transition more easily than India, partly because it is not a democracy but also, because of the one-child policy, Chinese parents are eager to spend money to give their 'little emperors' a good start in life.

The change of fees policy is important, because what the public sector does in relation to fees clearly constrains the private sector. Having a free public sector alongside an expensive private sector does not create an effective higher education system. As countries gradually introduce fees in the public sector, either because of a conviction that it is more socially equitable or because there is no financial alternative, the private sector finds itself on a more level playing field.

This in turn makes it easier for the private sector to build arrangements for need-based scholarships and loans into their fees regimes. Obviously it takes time to build up enough scholarship funds for admissions policies to be truly blind to student or parental wealth, but if private institutions are to play a major role in the expansion of higher education, they must be able to attract a diversity of people. Only then can they truly claim that private investment in higher education is making its contribution to widening access and that it is thus contributing to the public good.

In widening access, private institutions also foster good relations with governments and the public higher education sector, thereby gradually reducing the skepticism of many governments about expanding the private sector. The net result will be that within a decade or two, private, for-profit provision, already estimated at \$350 billion worldwide, is likely to account for a larger proportion of higher education in the developing countries than it now does in the industrialized world.

How will the first-world private sector provide higher education to the developing nations? Much of it will likely follow traditional patterns of classroom teaching on locally owned campuses, but two other related forms of provision will have a much higher profile: cross-border offerings and distance learning.

Cross-Border Higher Education

UNESCO and the OECD, in their Guidelines for Quality Provision in Cross-Border Higher Education, describe cross-border higher education as

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.

Those providers include not just conventional or open universities but also media companies, multinational companies, corporate universities, networks of universities, professional organizations, and

IT companies. Nearly all cross-border higher education is effectively for-profit in the receiving country. Even when the originating institution is a public institution in its home country, it must make "excess revenue" - or profit - on its operations in other countries in order to sustain those operations. Few governments want to subsidize another nation's students when they are having trouble meeting the educational needs of their own citizens.

In the West we often think of Erasmus as the pioneer of international student mobility, but academic exchanges between China and India thrived in the middle of the first millennium, notably around Nalanda University, a centre of Buddhist scholarship in what is now the state of Bihar, India. Today's term 'cross-border' implies an acceptance of national borders that might have seemed strange to those Chinese scholars in ancient India or the academic nomads of medieval Europe. The border is a symbol for the special political, social, and cultural identity found within the national space. Accepting borders implies recognition of the roles and responsibilities of national governments within their jurisdictions, not simply for deciding whom to let into their country but also for overseeing the national higher education system.

National sovereignty over higher education has been reinforced by the General Agreement on Trade in Services (GATS) of the World Trade Organization (COL/UNESCO, 2006). The GATS recognizes four modes of supply. First there is *consumption abroad*, where students travel to another country to study. Second, there is the *presence of natural persons*, which in academic terms means visiting scholars or teachers. Here we are more interested in the other two forms of supply, defined by the GATS as *cross-border supply* and *commercial presence*, but better known as distance education and the establishment of branch campuses. These are the forms of cross-border higher education of most interest to private providers.

Distance Learning

Open and distance education is a good way of reaching out to large numbers. The example of India, which accounts for a quarter of the population of the developing world and with the third largest higher education system in the world, is illustrative.

Today India's higher education system provides access to less than 10% of the 18-23 age cohort despite massive growth in distance education. Note that in India increasing the age participation rate by just one percentage point means adding one million more students. Therefore moving from a 10% to, say, a 35% APR will add 25 million more students. It is against this background that two months ago India's Knowledge Commission, alongside various recommendations for a systematic reform of higher education, called for the number of Indian universities to grow from 350 today to 1500 by 2015 - and that is only to cope with a doubling of the current participation rate from 7% to 14%.

Distance learning is already a significant component of Indian higher education. Today 24 percent of all enrolments - well over two million students - are in distance education - specifically in 13 national and state open universities and 106 institutions, mostly public, which teach both on campus and by correspondence. The government's target is that by 2010, 40 percent of all higher education participation will occur through distance education.

The Indira Gandhi National Open University now has 1.5 million students and India's state open universities are growing very fast. For example, the Netaji Subhas Open University in West Bengal had fewer than ten thousand students in 2000 but will likely achieve 100,000 students - and mega-university status - sometime this year. The Tamil Nadu Open University was only created in 2003 and already has 60,000 students.

Last month I met Professor Rajan Velukar, Vice-Chancellor of the Yashwantrao Chavan Maharashtra Open University, which has 200,000 students. He told me that he was confident of taking it to 400,000 in the next three or four years. Some of the other state open universities, such as Rajasthan's Vardhaman Mahaveer Open University, Kota, and the open universities in the large states of Bihar and Uttar Pradesh have not yet taken off into serious numbers but the potential is there for them to do so as pressure of demand continues to increase.

Such numbers put the contribution of cross-border provision of distance education into perspective. In a paper two years ago we showed that the current numerical contribution of cross-border higher education in developing countries is negligible (Daniel, Kanwar & Uvalić-Trumbić, 2005). Cross-border providers tend to focus on countries at a relatively high level of development as measured by the UNDP's Human Development Index.

The most active cross-border providers in developing countries are from other developing countries. The Indira Gandhi National Open University, which must be the world's largest unitary university, is already active in 26 other countries. The University of South Africa (UNISA), a distance-teaching university created back in the 1940s that now has a quarter of a million students, has long had students all over Africa. Nelson Mandela and Robert Mugabe are both graduates, having studied in prison. Today, as well as recruiting students individually, it is setting up institutional agreements to augment provision in countries like Ethiopia.

However, private cross-border provision must be part of the answer in future. Privately managed institutions, mostly locally owned, already account for over 75 percent of professional education in India. Meanwhile, the number of cross-border providers in India increased from 27 in 2000 to 114 in 2004. But in light of India's potential student numbers, their role is still negligible. Moreover, their quality is problematic: a third of the institutions are not recognized or accredited in their country of origin, and an equal proportion of their Indian collaborators are not part of the formal higher education system either. Even when the foreign providers are universities, they are not in the premier league and have mediocre reputations in their own countries. Neither branch campuses nor franchise agreements have had much success, with the exceptions of 61 twinning and articulation arrangements that allow students to go to the source country in the final year and stay on for employment purposes.

But an additional market of tens of millions of students should be tempting for major and serious providers of distance education. But will students want what they have to offer? To make distance learning attractive they must address the five A's of affordability, accessibility, appropriateness, accreditation and acceptability.

Affordability, Accessibility, Appropriateness and Accreditation

Affordability is a major challenge. India, like many developing countries, is trying to transform higher education from an elite to a mass system aimed at the needs of a vibrant democracy. To succeed, providers of distance learning must devise a business model that can take them beyond the elite to reach out to the masses, in order to realize the cost efficiencies associated with large numbers of students and to address the nation's educational goals.

A series of developments in the ways that technology is used could stimulate the dramatic reduction in educational costs that is required for a radical widening of access.

New methods of education have always attracted private providers. When Britain introduced the penny post in 1840, Isaac Pitman almost immediately started offering a correspondence course in shorthand, and private providers subsequently dominated the correspondence education industry. The next wave of distance education, led by the large multi-media open universities, was dominated by the public sector. In addition to widening access dramatically in some countries, these institutions also showed that distance learning can be of higher quality, as well as less expensive, than conventional higher education because it has to be developed and delivered in a much more systematic way.

The current wave of distance learning, often called eLearning because of its extensive online components, seems once again to have a special appeal to the private sector. It has a cost structure in which a higher upfront investment is rewarded by lower marginal costs when volume is achieved. The for-profit institutions' access to capital markets allow them to make those investments.

Moreover, providers wishing to use eLearning now have available a rapidly growing body of open educational resources; freely available learning materials that can be adapted to particular local needs. I shall return to this crucial development. The combination of expanding connectivity and the swelling reservoir of open educational resources is potentially revolutionary, not least for its capacity to cut costs.

Accessibility is not just a matter of cost. Higher education also requires access to the technology and allied infrastructure through which education is delivered. Internet connectivity is particularly important, yet the proportion of people online is only 4% in India, 1% in Africa (half of them in South Africa) and 0.1% in Bangladesh. But in contemplating the limited use of the Internet in sub-Saharan Africa and South Asia, remember that twenty years ago the online technology that now permeates the West hardly existed. Communication links are already beginning to alter the way that poor villages in the developing world function. As bandwidth costs go down increased Internet connectivity will accelerate that trend.

Cross-border providers often fail the test of appropriateness. Their subject offerings are limited, and liberal education often loses out to more market-driven programs such as business and information technology. Students from a variety of cultures and linguistic backgrounds have to follow the curriculum of the country of origin, baseball analogies and all, with no recognition of social, cultural, and ethnic differences.

Cross-border provision will become fully relevant only when it responds to country priorities, which is best done through strong partnerships between the overseas provider and local institutions to develop curricula and methods of delivery and student support.

The next 'A' is accreditation. In reality students' requirements go beyond formal accreditation to a more informal notion, the fifth 'A' of acceptability. Students like the convenience and flexibility of distance learning. Furthermore, those students who thought that they might miss the human contact associated with face-to-face instruction often find that, when distance learning has an effective student support system, contact is both more personal and more effective than in conventional systems.

Students want the academic titles that they earn to be not only recognized, but also endowed with a good reputation. The reputation that the public accords to institutions changes slowly: rightly in my view. It takes time to build up an institutional reputation and, barring egregious mistakes, it also takes time to lose one.

Even the oldest of India's open universities is barely twenty years old; so they have barely had time to acquire a reputation for quality, even where they might deserve it. Furthermore, the open universities have had to contend with the poor reputation created for distance education by the correspondence courses offered by India's conventional universities. These longstanding operations, which enrol hundreds of thousands of students were, and mostly still are, poor quality operations with shoddy learning materials and minimal student support. The universities use them as cash cows to subsidise their campus operations.

The irony is that although the courses are mostly rubbish, they have the advantage of being associated with prestigious institutions such as the University of Delhi and the University of Madras. Students looking for distance learning have a choice between crummy courses, with no support, that carry the name of a well-known university, and better courses from an open university that has yet to acquire its reputation.

Cross-border providers should be inspired by the findings of C.K. Prahalad in his book *The Fortune at the Bottom of the Pyramid* (Prahalad, 2004; Prahalad & Hart, 2002). Addressing himself to multi-national corporations, he points out that there are four billion poor people in the world who aspire to better lives. By making radical innovations in technology and business models and creating highly distributed, small-scale operations married to world-scale capabilities, some companies are beginning to serve this huge market profitably. In doing so they are "helping people improve their lives by producing and distributing products and services in culturally sensitive, environmentally sustainable and economically profitable ways."

With one exception, I see few signs of this happening. In the industrialized world the only example I know is American. Best Associates, a merchant bank based in Texas, is attempting to re-write the script for private, for-profit education. Its Whitney International University System is expanding rapidly, both by acquiring universities in other countries or creating joint ventures with existing universities. Having begun its expansion in South America it is now launching ventures in Morocco, Jordan, Saudi Arabia, India and Indonesia.

The mode of delivery is distance learning that blends the remote-classroom and asynchronous approaches. Lectures from senior professors are carried to remote classrooms by satellite and these are underpinned by supporting professors who interact individually with relatively small groups of students online. The

lectures give the symbolic and psychological impression of a 'normal' university, whereas the close individual support keeps students on task and progressing.

Unlike conventional remote-classroom teaching this model is scalable because of the network of supporting professors; an essential feature for achieving a low price point.

What about quality?

We have argued that within two decades the global higher education enterprise could have more than doubled in size, be predominantly based in what today we call developing countries, and present a greater diversity of both providers and provision.

How will the world ensure the quality of such a vast enterprise? Specifically, how are governments to protect their citizens from fraudulent providers and bogus qualifications, especially when they emanate from another country? ELearning is even more attractive to unscrupulous operators than correspondence education because they can close down a website even more quickly than a post-office box. Cross-border higher education makes students particularly vulnerable to scams. How can we create an international ethic of integrity and quality assurance?

As higher education expands, governments' role will increasingly be to monitor and regulate it, rather than to provide it. Many developing countries currently lack quality-assurance mechanisms, and where they do exist, as in India, they are not always properly equipped to cope with diversifying types of provision. However, countries realize that, even if it happens slowly, the GATS has created an inexorable trend to increasing cross-border education supply. Governments will best respond to this trend by building strong frameworks for regulation, quality assurance, and accreditation that cover all higher education provision within their borders.

The challenge for UNESCO, the Commonwealth of Learning and other intergovernmental organizations is to support national and regional and developments effectively. This is the context of recent UNESCO/OECD collaboration on Guidelines for Quality Provision in Cross-Border Higher Education (UNESCO/OECD, 2006). It arose from UNESCO's on-going work of reviewing the regional conventions on the recognition of traditional qualifications to adapt them to new realities.

The guidelines recognize 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. Their effectiveness largely depends on strengthening the capacity of national systems to assure the quality of higher education.

Conclusion

It is time to conclude. We usually overestimate the short-term impact of major changes while underestimating their long-term effects. In the coming decades, most higher education provision will gradually shift to the countries of the global south where the large majority of people under 25 live. American colleges and universities, public and private, non-profit and for-profit, that wish to be part of

this trend must get down their costs by partnering with institutions in the developing world to develop scalable models of provision.

Such partnerships will be forged in the context of a growing trend towards south-south collaboration. Sustaining north-south cross-border higher education will require a competitive edge. Costs will be critical. Only by targeting the massive numbers of people at bottom of the pyramid, not just the elites, will economies of scale be achieved.

Third, making open educational resources available to the developing world, as MIT has done, will accelerate capacity development and create links with local institutions to yield academic benefits.

Fourth, the growing availability of telephone and Internet connections is starting to unite the world's rich and poor and to transform the digital divide into a digital dividend.

In previous eras the use of technology in developing countries usually resulted in a transfer of wealth to the developed world: the rich got richer and the poor got poorer. Those days could soon be over. Because of their lower costs, developing countries may gradually reverse the direction of cross-border relationships so that their providers serve students in richer countries. As more economic activity shifts away from the US into the emerging economies, American universities might find that their most important role is to shape these developments by exporting their research strengths and training many of the millions of new Ph.D.s required.

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