Human Development for Innovation: Changing the Profile of Global Higher Education

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Main Points

- In the coming decades, higher education will expand greatly in the countries of the global south where the large majority of people under 25 live.
- To compete, institutions of higher education must achieve economies of scale by targeting the massive numbers of people at the bottom of the pyramid, not just the elites. This will mean more distance learning and more cross-border provision.
- The rapid spreading of telephone and Internet connectivity will unite the world's rich and poor and transform the digital divide into a digital dividend.
- Increasing access to open educational resources will accelerate capacity development by increasing the quantity and quality of available learning material.
- Distance learning fosters the spirit of innovation by confronting students with different perspectives and obliging them to construct knowledge for themselves.
- Developing country providers, having lower costs, will reverse the direction of cross-border relationships and serve students in richer countries.
- International attention is being paid to the challenge of quality assurance in the massive and complex global postsecondary system that is emerging.
- As economic activity shifts away from the US into the emerging countries, American universities will increasingly export their research strengths to train the millions of new Ph.D.s required.

Abstract

China now has the largest postsecondary education system with 21 million students and an Age Participation Rate (APR) of 19%. India lags behind with an APR of 10% and some 10 million students. Creating an innovative society requires postsecondary education to be more widely available and developed countries have APRs of 40% or more. China and India must continue to grow their postsecondary systems. India's combination of demography (60% under 25) and democracy will propel its postsecondary enrolments past those of both the US and China.

As China and India come to dominate postsecondary education in the 21st century their patterns of provision will effectively define its global profile, which will differ from the current profile for both economic and technological reasons. First, private, for-profit education will play a larger role 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, distance learning lends itself readily to conducting higher education across borders. Distance learning, by its nature, is more likely to foster the spirit of innovation than face-to-face instruction.

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In America the for-profit sector, for example 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 around the world.

The paper notes how connectivity and open educational resources could be combined in conducting postsecondary education at scale with lower costs and consistent quality. It also indicates steps being taken internationally to regulate and assure the quality of these very large postsecondary systems in the interests of protecting students.

Introduction

Academe resists change. 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 (Daniel, Kanwar & Uvalić-Trumbić, 2006).

Spreading connectivity, allied with the multiplication 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. Indeed, there are already 130 million tertiary students when part-timers are counted. 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. Today with over 20 million students, China has comfortably overtaken the US as the world's largest higher education system, although it has recently slowed 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 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 appreciated 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

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students, far more than today's global total. Tens of millions of young adults in poor countries will aspire to postsecondary education in the coming years.

Inculcating the spirit of innovation in students and institutions is the main focus of this book. However, before we can educate for innovation we have to put down solid educational foundations. We do more to create an innovative society by educating the generality of the people to a level that gives them autonomy and confidence than by further gold plating the education of the elite. We shall ask how developing countries could provide higher education to a much higher proportion of their people. Fortunately, some of the methods they are likely to use also nurture innovative people.

What are the possible responses 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 for-profit providers. Third, seeing a massive market opening, we predict that the first-world institutions, both public and for-profit will expand their cross-border provision of educational services.

Furthermore, these new patterns of provision are also relevant for the US, where escalating costs are putting higher education out of the reach of poorer Americans. The average cost of tuition in US postsecondary institutions has risen by 385% in 20 years or, taking a longer view, has risen by inflation plus 2.8% annually since 1910. The result today is that only 10% of Afro-American boys and only 7% of Hispanic-American boys go on to college.

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. But 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.

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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. An increasing proportion of the burgeoning numbers of young adults in the developing world will want education at all levels. In this era of lifelong learning it is impossible for governments to provide, at no cost, all the education that people may need throughout life. Governments must focus their contributions.

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 for-profit institutions. This is a political dilemma for many developing-country governments.

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 higher education? How do they achieve 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, it is hard to appreciate what a hot issue they are in the rest of the world.

Fees are a special problem for countries that made higher education free - that it to say totally subsidized by the state - when only a tiny proportion of the population went to university. At that time entry to higher education was highly competitive and many believed - and still believe - that combining competitive entry with free tuition would produce equitable participation from across society. 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 that must respond directly to the will of the people, but also as a result of the one-child policy, which makes Chinese parents eager to spend money to give their 'little emperors' a good start in life.

Changes in fees policy is important, because what the public sector does in relation to fees clearly constrains the for-profit sector. Having a free public sector alongside an expensive for-profit sector does

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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 for-profit sector finds itself on a more level playing field.

This in turn makes it easier for the for-profit sector to build arrangements for need-based scholarships and loans into their fees regimes. Within a decade or two, private, for-profit provision, already estimated at $385 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 might the first-world for-profit sector, in all its diversity, help to provide higher education to the developing nations? Much of it will likely follow traditional patterns of classroom teaching, but two other related forms of provision will have a 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 in situations where the teacher, student, programme, institution/provider or course materials cross national jurisdictional borders. Cross-border higher education may include higher education by public/private and not-for-profit/for-profit providers. It encompasses a wide range of modalities, in a continuum from face-to-face (taking various forms as students traveling abroad and campuses abroad) to distance learning (using a wide range of technologies and including e-learning)."

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 wish to subsidize another nation's students when they are having trouble meeting the educational needs of their own citizens.

In the West we usually think of Erasmus as the pioneer of international student mobility, but the honor should really go to Huen Tsang, a Chinese scholar who studied in India nearly a millennium earlier. Academic exchanges between China and India thrived in the middle of the first millennium, notably around Nalanda University, a centre of Buddhist scholarship near Patna in India.

Today's term 'cross-border' implies an acceptance of national borders that might have seemed strange to these academic nomads of ancient Asia and 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.

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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 for-profit providers.

Distance Learning

Distance education is a good way of reaching large numbers. Take the example of India. 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 today's 7% APR to, say, a 37% APR will add 30 million more students. In late 2006 India's Knowledge Commission called for the number of Indian universities to grow from 350 to 1500 by 2015 - and that is only to cope with a doubling of the current APR from 7% to 14%.

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

The Indira Gandhi National Open University now has 1.5 million students and the state open universities are growing 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, created only in 2003, already has 60,000 students. The Yashwantrao Chavan Maharashtra Open University aims to grow from its present 200,000 students to 400,000 in the next 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 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 public institutions from other developing countries. The Indira Gandhi National Open University, probably the world's largest unitary

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university, is already active in 26 other countries. The University of South Africa (UNISA), a distance-teaching university created back in the 1940s with an enrolment of a quarter of a million, has long had students all over Africa. Nelson Mandela and Robert Mugabe are both graduates, having studied in prison. Today, as well as recruiting individual students, it is setting up institutional agreements to augment provision in countries like Ethiopia.

However, for-profit 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 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? Providers of distance learning must address the five A's of affordability, accessibility, appropriateness, accreditation and acceptability. If the aim is to nurture an innovative society, is distance learning more likely to foster creativity than face-to face instruction?

Affordability, Accessibility, Appropriateness, Accreditation and Acceptability

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 for-profit providers. When Britain introduced the penny post in 1840, Isaac Pitman almost immediately started offering a correspondence course in shorthand, and for-profit 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.

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Today's 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."

The current wave of distance learning, often called eLearning because of its extensive online components, has a special appeal to the for-profit sector. It has a cost structure in which a higher upfront investment is rewarded by lower marginal costs when volume is achieved. The US-based Whitney International University System (WIUS) is the best example of a for-profit institution that is acting on Prahalad's vision and investing aggressively in a new technology-based model of distance learning that will reduce costs sufficiently to make programmes accessible to students in poorer countries.

The WIUS mode of distance learning 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 whose task is to interact online individually with relatively small groups of students. 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.

The WIUS is expanding rapidly both by acquiring universities in other countries and by 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.

Accessibility is, of course, 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, we should recall that twenty years ago the online technology that now permeates the West hardly existed there either.

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. Sharing facilities is one way of maximizing the availability of connectivity. This is the principle behind the WIUS' institutional partnerships and the expanding numbers of communal telecentres.

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

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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. 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.

Distance Learning for Innovation

How will the expanding role of distance learning affect the potential of postsecondary education to produce innovative people? Its impact should be favourable for three reasons.

First, affordability is the father of innovation. In Amartya Sen's words, "education is the royal road to freedom: the royal road to that fundamental freedom of the human spirit that underpins other more practical freedoms". By making postsecondary education more affordable distance learning will free the imaginations of millions of human beings.

Second, the team approach usually adopted for distance teaching at scale facilitates education for innovation in a number of ways. It makes teaching more systematic and purposeful, so that the structure of knowledge is clearer and any explicit learning objective, such as the encouragement of creativity, is more likely to be achieved. Teams usually present various perspectives on topics, often from different disciplines, obliging students to make links. Open educational resources make it easy to synthesise such diversity.

Third, distance learners, who have to be more autonomous and motivated than classroom learners, bring a greater sense of personal responsibility and agency to their studies as they construct their knowledge in an

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active manner. In many cases they have the advantage of being older as well, so that postsecondary learning releases latent creativity. Finally, well organised distance learning systems give more personal support to students, through tutors working with groups of limited size, than is possible in mass classroom teaching.

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 developments effectively. This is the context of recent UNESCO/OECD collaboration on Guidelines for Quality Provision in Cross-Border Higher Education (UNESCO/OECD, 2005). 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.

UNESCO has also created, and convenes biennially, the Global Forum for Quality Assurance and the Recognition of Qualifications in Higher Education. It creates opportunities for stakeholders and providers to share best practice and propose solutions to the challenges of creating a robust global postsecondary system accessible to all.

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Conclusion

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 postsecondary institutions that wish to join 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 the bottom of the pyramid, not just the elites, will economies of scale be achieved. This will require innovative uses of distance learning technologies. Expanding connectivity and the multiplication of open educational resources should allow institutions to create scalable combinations of synchronous and asynchronous learning that retain some of the familiar and reassuring elements of face-to-face teaching.

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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