

# Higher education in the 21<sup>st</sup> century: the challenges for open and distance learning

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## 1. Introduction

Ladies and gentlemen: we live in extraordinary times. Never before has the world been so prosperous, never before have so many people lived such long and healthy lives, never before have we witnessed such dazzling technology and never before have we reached, on average, such levels of education. And yet, in absolute numbers, never before have so many people lived in such poverty, never before have so many died from preventable diseases, never before has the planet been so threatened, never before have so many needed education. And it is education that fuels sustainable development, education that is fundamental to enlightened citizenship, to the peace and harmony – and even the continued life – of our species on this planet. It is an education which will have to reach many many more than hitherto, and an education which must be infused with the dramatic portent of our times – historic times where the extremes are not only unacceptable by any standards but capable of being solved with what we have between us.

How are we doing in terms of numbers? I remind you of the UN Millennium Development Goals and Education for All programme of UNESCO, both of which secured commitment from a whole range of players. One must acknowledge that progress has been made but in terms of the number of people still not in basic education, much less secondary and tertiary education, there is a great deal more that needs to be done. We haven't enough schools, we haven't enough universities and we haven't enough teachers. What can be done?

It is clear that, financially, building the vast infrastructure required by traditional bricks and mortar universities, colleges and schools to meet the demand is simply not a viable proposition – even if we could staff such an infrastructure. Governments, policy makers and donor bodies (as well as members of the public) will have come to a point where we have to accept there are other models, for HE at least, which can and do run in parallel with the conventional public sector - a sector which itself will have to change. Such models include:

**the private sector** - which has grown at a remarkable pace in quite remarkable and innovative ways and is providing a significant percentage of provision in many countries, not just in the developing world;

**the Open and Distance University movement around the world** - which is moving ahead in leaps and bounds. In India, for example, 24% of students in tertiary education are enrolled in institutions of this sort; and

**informal learning, non-traditional learning**, learning made possible by the advances in technology, to which I will return shortly.

There can be no doubt that, in all quarters, higher education is changing quite dramatically. I would argue that change is happening more quickly in the private sector than in the public sector – and that may well be the profit motive working – but the fact remains that new and innovative ways are being found to meet not only the needs of the 21st century, but also the rights of people to be educated, both in the developed and developing countries. The question is whether innovation is being embraced quickly enough and whether we have reached a scale which is necessary to the task, whether technology can help us and whether there is any way we can bring more hands to the wheel.

I have found in reading through current literature on higher education that the metaphor of a ‘perfect storm’ is being used more often than one would expect, in quite diverse parts of the world. I find that reassuring because it means that there are more and more people realizing just how serious are the changes in higher education. You will remember that a perfect storm can only happen when a whole range of factors are in place and work together. There are of course different outcomes to storms depending on where you are and how you have secured yourself and your property. Being alert to the possibility is however the first step in making sure damage is avoided or at least managed – and maybe a transition to another infrastructure also managed.

I want to point to some of the factors and forces which are playing out at the moment and ask the question as to what they might mean for higher education – and whether it matters.

## **2. Factors creating a perfect storm**

It is appropriate to very briefly remind you of the factors creating a perfect storm. We know that there are dramatic changes in demographics and we know that globalisation has already wrought massive change. Markets are more open than at any previous time, whole new economies are emerging and cultural boundaries are being redrawn. And to this must be added technological change, enabling much of what I refer to, but presenting ever more possibilities and potential. All of these changes promote intense competition, competition between nations, between economies and even universities. For universities in many ways are in the frontline of such competition.

For the purposes of understanding where competition comes from it is useful to think of the underlying forces in what many call a ‘new economy’. It is argued that market-driven and technology-enabled innovations have changed the way the economy is organised and the functional ‘rules’ have changed. Hence the title of Kevin Kelly’s influential book *‘New Rules for the new Economy’*. At the core of these changes are *“precisely those economic arrangements (that are) related to the collection, dissemination and management of information and knowledge: historically higher education’s core social functions.”* (Schuster and Finkelstein, page 6).

Schuster and Finkelstein also argue *that “the economic changes, especially in relation to information and knowledge, are associated with a major ideological and philosophical shift in how society views higher education, namely, increasingly as a private rather than a public good and as an “industry” that must be ever more open to competition within and from without rather than as a protected social institution.”* (Page 6) This of course links to the growing privatisation of higher education. It may well be a concomitant of the so-called ‘massification’ of higher education where the demands on the public purse are too heavy and simply have to be shared, either with the student, or the employer, or any investor who is ready to provide the experience and make a profit in the process.

What is clear, however, is that the core functions of the university were based on what Carol Twigg calls “familiar *technologies (the book, the classroom) and economic arrangements.*” (Schuster and Finkelstein, page 9) And you change those technologies, change the economic arrangements, and the structure of the institutions themselves and the way they organise their activities also changes – and changes quite dramatically.

In developed countries, but also increasingly in less developed countries, technology has undoubtedly been a major catalyst for change. The Internet on its own has been dramatic enough but as other technologies have advanced we now live in a world where “*merchants in Zambia use mobile phones for banking; farmers in Senegal use them to monitor prices; health workers in South Africa use them to update health records while visiting patients.*” And we realize that although the personal computer changed so much and unleashed all sorts of innovation, it is “*the pocket-size Ultra Mobile Device (UMD) - an all-in-one phone, personal organiser, movie camera, media player, PC and fashion statement*” that will enable the “*networked generation (that is, those in today’s infant classes)..(to)...look forward to an education in which they’ll be able to pick ‘n’ mix from the net, video-conferenced tutorials and DVD-quality distance learning packages which, because of the immediacy of the UMD, won’t seem in the least bit distant.*” (Futurelab July 2007).

With this convergence of technologies (including near universal satellite coverage), we can now reach people where they are, wherever they are, making learning more accessible than ever before. This clearly has revolutionary potential for the educational endeavour. We already have students who are able to delegate one of their number to attend a lecture and podcast it to their classmates; students who can watch the very best academic performers on their internet sites and not suffer less than best at any particular university; students who can access more and more material on the internet’s open content sites; students who can take one or more courses at universities across national (and certainly individual university) boundaries; students who indeed learn in whole new ways. These are students who are different from their predecessors – in technology terms they are also more sophisticated than their teachers.

In a recent article for *Innovate*, the Journal of Online Education, Catherine McLoughlin and Mark Lee describe a future where *“social technologies coupled with a paradigm of learning focused on knowledge creation and community participation offer the potential for radical and transformational shifts in teaching and learning practices, allowing learners to access peers, experts, and the wider community in ways that enable reflective, self-directed learning.”* This is of particular significance, they argue, *“in a postsecondary education climate where there is likely to be continued blending and merging of informal and formal learning, where the value of textbooks and prescribed content is already being questioned, and where the open-source and open-content movements.....are finally being recognized, supported and accepted”* and can result in *“educational experiences that are productive, engaging, and community based and that extend the learning landscape far beyond the boundaries of classrooms and educational institutions.”*

The consequences for the system are colossal. The physical facilities have to be different; the nature of the materials produced has to be different – especially those that do not harness the technologies available; the material produced needs to match up to the best on open content sites; and, importantly, the ways of learning are different. And of course quality benchmarks are going to be different as well. In a world where the mobility of students is highly prized and competition intense - quality and quality assurance are very high on the agenda. Quality and associated ‘brand’ have probably never been more important. More and more universities for the first time are hiring marketing specialists and advertising consultants, conducting branding campaigns and generally behaving much the same as ordinary businesses do in a competitive environment. As students are being required to pay more for education, they are increasingly alert to their job prospects and to the economic value of degree offerings. As the realities of globalisation dawn on more and more people universities are doing more to internationalise their offerings.

And as the demand for higher education worldwide becomes ever more critical, more and more private sector businesses are moving in to the market. We now have ‘corporate’ universities which can tailor the material to their own preferred outcomes, and private for-profit providers such as US-owned Kaplan Inc, the University of Phoenix and Australia-based IBT Education which offer a whole range of disciplinary offerings. Most of these look very much like ordinary universities - and there are a growing number all over the world, even in developing countries. They have huge cost advantages and are building brand dramatically. There is no doubt they change the game.

Even the fundamental function of a university - research, more especially scientific research – has been dramatically changed. I remind you of the likes of InnoCentive, a company founded by the pharmaceutical Eli Lilly in 2001, an open, online platform that connects world-class scientists, engineers, professionals and entrepreneurs with companies to collaborate on complex scientific challenges. It

now has more than 145,000 engineers, scientists, inventors, business people, and research organizations in more than 175 countries interested in solving problems – and it represents a fundamental transformation in research and development.

Perhaps the most dramatic of the changes is the ‘unbundling’ or disaggregation of educational activities and processes, turning them into lots of different businesses – and that in turn changing the landscape in ways few of us could have dreamed about. It also changes the costings and pricing assumptions that we make at present. New providers have emerged that target specific activities and processes. Let me give you a small list of four to illustrate the point:

Firstly - you just have to think about organisations like Blackboard and eCollege (which is now owned by Pearsons). They provide the means for establishing online campuses as well as enhancing the academic programmes themselves. What they have facilitated is of course the whole e-learning business where traditional universities which were not really in competition with the OU (for example) are now very much in competition. The nature and value of this market is difficult to quantify but let there be no doubt it is there and growing.

Secondly - publishers and media companies have turned the textbook market into entirely new businesses. Think about Pearsons, Thomsons, Sage, and Elsevier. These are organisations which might have partnerships with universities which accredit their offerings – and those offerings I will remind you are mostly conceptualised, designed and written by top academics working part-time for handsome remuneration and unconstrained by faculty boards and animosities, senates and their internal politics, and bureaucracies and their geological time lines. Publishing, as an industry, has been deeply affected by technology, and in particular the Internet. Everybody is a publisher now – and scarcity has turned into abundance. Not only that, but models of authorship (and the vast collaborations made possible by the Web) have turned a range of traditional practices upside down. Pearsons, for example, no longer describe themselves as in the publishing business but rather the education business.

And thirdly - there are companies that offer remedial and supplemental educational services or counselling such as Sylvan Learning Systems (the original tutoring business now morphed into an internationally focussed higher education company called Laureate Education Inc) or Stanley Kaplan (owned by The Washington Post). Kaplan has already extended its reach into partnerships with several universities in the UK. Lest you imagine this is an American phenomenon, the front page article in the UK Times Higher Education last year (September 21, 2007) carried a story with the headline ‘private tuition booms’. One of the biggest in the UK reports a 40% increase in their business in the last two years. Even the business of assessment has private sector outsourcing to companies such as Edexcel. Nothing seems sacred. Pearsons now also own Edexcel.

Finally - there are others around (such as Teaching Company or Recorded Books) providing excellent lectures (catalogue lists over 300) by award winning academics. And then there is iTunes University, which delivers access to course

content from hundreds of colleges and universities (including The UK Open University!), so users can easily search, download, and play educational material just like they do music, movies, and TV shows. Add to this the increasing amount of online lecture content and Web resources and you have a whole new world. Overlay the whole concept of Web 2.0 on education and you will discover a whole new world indeed.

You may wonder why I spend so much time drawing your attention to these matters. I do so because I believe these trends have profound consequences for the business model upon which all universities run their operations – and because I believe that embracing the unprecedented opportunities offered by our global technologies is not only the major strategy for addressing the massive demand for higher education in the 21st century, but also for re-engaging youngsters with the education endeavour.

### **3. These changes prompt some tough questions in higher education. Just two examples.**

Firstly we have to ask ourselves some serious questions about the production of some of our teaching materials, not only because the traditional model is an expensive one but also because it is relatively slow in a world growing so accustomed to the swift satisfaction of consumer needs. The OER movement is very significant in this respect: it has the capacity for reducing the cost of education, while at the same time diversifying the provision – especially in higher education. At the moment, for the most part, we have an expensive ‘business’ model where each university devises its own version of relatively straightforward material. One has to ask how different can undergraduate Chemistry or Physics be? The high level and expensive staff resource that presently goes towards presenting different courses to different students in various parts of the world is, to my mind, difficult to justify in the face of the pressing need to reduce cost and reach more people.

We also have to ask ourselves some questions as to how best we deliver ‘customer service’ and student support in this new world and how we harness the technology and the social networks it has spawned to enhance student support with peer-to-peer mentoring and collaborative learning models; how we deal with the shifting boundaries between formal and informal learning; how we harness the content that is being created on the internet in this remarkable new way. What we see on the Web are people from all over the world creating communities of interest (some of them very sophisticated indeed) on a whole range of subject matter – and what we need to do is ask ourselves how we harness this energy and recognise the learning – how we learn from how our students are using the internet and all its networks.

### **4. So what implications does this have for open and distance learning?**

Quality: there are some who remain sceptical about the quality of the learning experience delivered via technology and cite the centrality of the conventional

face-to-face teacher-student relationship. Throughout its history, however, the OU in the UK has explored and exploited cutting-edge technological innovations to provide a high-quality, responsive and truly interactive open and supported learning environment. Indeed, the quality of our teaching has received the highest rating in the UK for student satisfaction for the third consecutive year in the 2007 National Student Survey. We use telephone and email of course, and we do have face-to-face (if students want it) and residential schools, but our virtual learning environments are astonishingly well used .....and students love it!! Wikis, blogs – you name it.

And then there is the rise of the Open Educational Resource movement - one of the most exciting developments made possible by the web. Several universities have placed educational resources on the web, free to use to people anywhere in the world – including the UK OU. You can imagine how significant this is for the many people who do not have access to decent libraries, textbooks and educational media. In the science and technology domains where Africa and elsewhere are so desperately short of people educated in these disciplines, it is manna from heaven. The Open University keeps statistics of the number of visitors to our OpenLearn site as do MIT and others who have joined the movement. The figures are astonishing, being accessed by millions and millions of users from virtually every country in the world.

One needs to understand however that it is universities mostly in the northern hemisphere which are making material available – and while the material relating to science might not be dominated by a particular world view (and even that could be contested), that relating to the humanities and social sciences is seriously deficient of material which would be recognisable and embraced by people whose cultures and traditions are very different. And that is before we begin thinking about language issues. These are non-trivial matters especially in the educational endeavour. If would-be and unconfident learners recognise nothing of what they know in educational materials, it is much more difficult for them to progress. We have a leadership challenge here for universities all over the world. It seems to me that if universities do not recognise the importance of changing the present dominance, it is difficult to imagine who would.

We can, however, take hope from projects such as the Commonwealth of Learning supported WikiEducator facility. WikiEducator is an online global community of scholars, teachers and trainers from remote locations who are committed to the collaborative authoring and development of free educational content for use in a variety of teaching situations. These OERs can then be re-contextualized and repackaged for use in their own teaching and learning situations. Launched in 2006, its use is growing rapidly with the number of registered users passing the 1500 mark and number of visits per month now exceeding 80,000.

## 5. In conclusion

Ladies and gentlemen - the wonderful thing is we have the means for education for many, many more people; not conventional education for the few (relatively speaking) who can travel the distances to physical sites of learning, more especially universities. That perforce will remain the privilege of the few. But our science, our technology, our imagination and our ingenuity have brought us now to a situation where we have other means.

There is now near universal satellite coverage, there is an internet which holds vast and ever-growing stores of knowledge, and we have learnt much about pedagogy and how to teach and learn in this new environment. Mobile telephones and other technologies have now converged - nowhere is this more potently displayed than in the new Apple iPhone. Technology prices are dropping all the time while robustness and reliability of the technology is dramatically increasing all the time. So it is an exciting time full of possibilities – possibilities way beyond any possibilities at any time in our history.

So my thesis today, ladies and gentlemen, is that we exploit the potential of the new technologies and embrace the distance education opportunities now rendered possible by them and also the networks they have spawned. And we do so in the conscious knowledge that they may well be central to the solution of many of the problems facing us in the 21<sup>st</sup> century – indeed as James Martin has reminded us, the very meaning of the 21<sup>st</sup> century is that we do solve these problems. Thank you.

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