

Will Higher Education Split?



*4th Annual Australian Higher Education Congress,
Innovation in boosting participation: considering the
potential of IT*

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International keynote: Will Higher Education Split?

By Sir John Daniel, Commonwealth of Learning

Introduction

It is a pleasure to be in Australia again. You have billed this as an International Keynote so let me begin by articulating the dismay felt across world at the afflictions you Australians have suffered as a people in the first two months of this year. We have watched with horror the floods and fires that have caused so much destruction in east and west. May I express the deep sympathy of the international community to the victims and to the nation as a whole? Moreover, this year of disasters bridges the Tasman Sea and I also express my sympathies to any Kiwis present for the terrible earthquakes in Christchurch.

Although the severity of the climatic calamities and natural disasters puts other problems into perspective, I know that the Australia's university sector has its own afflictions. Some institutions have suffered a serious drop in international enrolments that is no less painful for being predictable. Perhaps more significantly for the sector as a whole, there are clearly some difficult issues in the relationships between the universities, the states and the federal government.

I have long held up Australia as a model for regulating and funding universities within a federal structure. Indeed, I continue to believe that you have achieved a better *modus vivendi* than other federations such as Brazil, with its extreme centralisation, Canada with its extreme decentralisation, and India with the universities caught in the crossfire between the states and the Union. Given the complex issues at play here in Australia I am rather relieved to be giving the international keynote, although I do run the risk of being irrelevant to the national concerns that are on your minds.

Thank You for Supporting the Commonwealth of Learning!

Before I dive into my subject let me thank you for the efforts that many of you have made over the years to persuade Australia to resume its voluntary funding to the Commonwealth of Learning. Your country ceased contributing to COL in 2004 just before I arrived as President – although I do not think there was a connection between the two events!

However, I am pleased to say that whereas only 20-plus countries were making contributions to COL at the time Australia left, that number has now grown to 41 out of the 54 member states. In this Pacific region the only other country that is not now contributing is Vanuatu. I find this anomalous, not least because Australia is such a powerhouse in open, distance and technology-mediated learning.

I believe that we deserve your support. When asked to describe COL in one sentence I say that we are small, successful, and not based in London.

Thanks to your pressure I think we are making progress and I understand that Kevin Rudd could be favourable to a resumption of funding. If so there will be a nice opportunity to announce it when Australia hosts the Commonwealth Heads of Government Meeting at the end of this year – so I urge you would keep pushing.

Thank you. That is the end of my plea to you.

The Potential of IT

I was given the topic *Innovation in boosting participation: considering the potential of IT*, and being an obedient fellow I will talk to that.

You also suggested some sub-topics and I shall address those too.

- How can IT be used to boost participation?
- Innovation to achieve higher participation
- A global perspective: reviewing global developments, successes and failures
- To what extent will distance learning reform the higher education sector?

I shall begin by enumerating some of the questions around the issue of boosting participation. Then I shall look at the different ways in which innovation can make higher education more open. Then, after giving a sweeping summary of some global developments, I shall conclude with the interesting question of whether distance education will reform the higher education sector. I suspect that it might, but not in ways we all would welcome.

Since this is an international keynote I shall use examples from outside Australia. This is in no way to depreciate your own considerable achievements. As a country you have made big commitments to educational technology, to community informatics and to giving individuals access to information technology. You are therefore well placed to put in perspective the comments I shall make about the use of technology elsewhere.

I wrap all this up with the subtitle *Will Higher Education Split?* Information technology is a multi-faceted and potentially disruptive phenomenon and we should not assume business as usual. But how could technology help us?

Boosting Participation

The first question is how innovation can boost participation. I start with the basics.

Ministers of Education will tell you that their challenge is to pursue three goals simultaneously. They want to widen access so that higher education and training can be available to all citizens that aspire to it.

Second, that education must be of good quality. There is no point in widening access unless education makes a difference to people's capabilities.

Third, the cost must be as low as possible. Governments and individuals never have enough money. It is morally wrong to make education more expensive than necessary, because low cost enables more people to take advantage of it. But the challenge of achieving these outcomes simultaneously becomes clear when you create a triangle of vectors.

With traditional methods of face-to-face teaching this is an iron triangle. This iron triangle symbolises the closed system of classroom teaching. You want to stretch the triangle to give greater access, higher quality and lower costs. But you can't!

Try extending access by packing more students into each classroom and you will be accused of damaging quality. Try improving quality by providing more and better learning resources and the cost will go up. Try cutting costs and you will endanger both access and quality.

This iron triangle has hindered the expansion of education throughout history. It has created in the public mind – and probably in your own thinking – an insidious link between quality and exclusivity. This link still drives the admission policies of many universities, which define their quality by the people they exclude.

But today there is good news. Thanks to globalisation successive waves of technology are sweeping the world – and technology can transform the iron triangle into a flexible triangle.

The Revolutions of Technology

By using the technology of distance education you can achieve wider access, higher quality and lower cost *all at the same time*. This is a revolution – it has never happened before. This is what educational technology can achieve if used properly.

What is technology? I define it as the application of scientific and other organized knowledge to practical tasks by organizations consisting of people and machines, so it draws on non-scientific knowledge as well as applied science. Technology is about practical tasks rather than theory and always involves people and their social systems. Expanding and improving education is a very practical task. People and their social systems are at the heart of it.

How does technology work? Some people distinguish a number of generations of technology but I shall content myself with two: the productive technology that drove the industrial revolution and the digital

technology that surrounds us today. Each of these manifestations of technology has important strengths and we do best to combine them.

The fundamental principles of productive technology, articulated two centuries ago by the economist Adam Smith, are division of labour, specialisation, economies of scale, and the use of machines and communications media. These principles remain very important to the aims of increasing access, cutting costs and improving quality. I shall argue later that people often forget these principles when they launch into eLearning – which is why eLearning so often disappoints.

Digital technology has not yet had a giant intellect like Adam Smith to clarify its essential nature for us but, appropriately perhaps for something essentially unstructured, the concepts of networks, connectedness, collaboration and community capture elements of it.

For us a key question is: what does the incorporation of digital technology add to the use of productive technology – and is it scalable? The aim is increased access, better quality and lower costs.

Dimensions of Openness

Using technology to make anything better, cheaper and more available is clearly a good thing, but there are various ways in which we can boost participation by making higher education more open. Let's review some of the dimensions of openness.

One hundred and fifty years ago the University of London launched its External Studies Programme on the principle that it did not matter how people acquired knowledge provided that they could demonstrate mastery in the examinations. In the century and a half of its existence five London External graduates have won Nobel prizes so no one can say it was a Mickey Mouse programme. Over the years more and more teaching was offered to help people prepare for the examinations, either by third parties or by London itself, but today the original 'examination-only' concept suddenly looks very modern, for reasons that I will come to in a moment.

A century after London University the UK Open University, which has embedded the term 'open' in the vocabulary of higher education, set out to be open in two ways. First, it abolished all academic pre-requisites for admission. Second, it operated at a distance. Its slogan is open to people, open to places, open to methods, and open to ideas. Openness to methods was clearly required by the decision to carry out distance teaching at scale, and openness to ideas reflected a desire to use its scale and intellectual muscle to re-think the orthodoxy in some disciplines.

Nevertheless, the Open University curriculum is closed in the sense that the programmes and courses were defined and developed by the University – students can take them or leave them although they have great flexibility to mix and match.

However, at the same time as the UKOU opened 40 years ago, the State University of New York set up Empire State College with the aim of opening up the curriculum by allowing students to invent their own courses of study according to their interests and needs.

Open Educational Resources

Fast forward to the present day and the technology of the Internet has taken the concept of openness much further. We can now readily find information, knowledge and course content on the web, and thanks to the Open Educational Resources (OER) movement we can now use and adapt this material with confidence.

For example, colleagues at the Asia eUniversity say that once they have agreed on course curriculum outlines they do not need to develop any original learning materials because they can find good quality material on the web for all the topics they require and adapt it to their precise needs. Other distance teaching universities, such as Athabasca University, will not approve development of a course until proposing department has shown that it has done a thorough search for relevant material that can be used as a starting point.

Let me mention here, without elaborating further, a very new concept that brought people from all over the world to a meeting in New Zealand last month. This is the Open Educational Resource University. The idea, and this slide comes from Jim Taylor of the University of Southern Queensland who is one of the thinkers in the movement, is to have students find their content as OERs, get tutoring from a global network of volunteers, be assessed, for a fee, by a participating institution and earn a credible credential. Such a system would reduce the cost of higher education dramatically and clearly has echoes of the University of London External system that I just mentioned.

I commend USQ on getting involved in this movement as part of its community service function.

We know that already literally millions of students are using the open educational resources put out by MIT, the UK Open University, and others to find better and clearer teaching than they are getting in the universities where they are registered. The 32 small states of the Commonwealth are working together within the Virtual University for Small States of the Commonwealth to develop open educational resources that they can all adapt and use.

The interest is considerable. The UK Open University is one of the most popular iTunes sites, with 300,000 downloads per week. A proportion of those who download from iTunes later enrol as students.

This is very relevant to one of the questions that you gave me: to what extent will distance learning reform the higher education sector? Until the open content movement gained momentum, distance education had high entry barriers which made sensible institutions think carefully about entering the market because they faced two options.

First, an institution could invest serious money in the development of high quality courses by a dedicated distance learning unit and hope to amortise the investment over significant numbers of students. Alternatively, it could let a thousand flowers bloom by encouraging each instructor to do their own thing in putting their courses online. The first required courage and planning, the second led quickly to the realisation that costs were being added rather than cut –and that students might not have a complete online route to the qualification they sought.

The Pitfalls of eLearning

The availability of OERs has lowered the entry barriers under both options by reducing the cost of what can be the most expensive element of distance learning, namely course development. Nevertheless, whichever option is followed institutions should keep a corporate grip on the development of distance learning for two reasons.

The first is to ensure coherence in programme offerings. As I shall show in a moment, students are increasingly expressing a preference for eLearning, so they are attracted by routes that allow whole programmes to be taken in this mode, rather than a scattering of courses here and there. Furthermore, although students do not look for cookie cutter consistency of course formats, they do like to encounter similar processes of course navigation as they move through the programmes.

The second reason for keeping an eye on the process is costs. Compared to the use of productive technologies in early forms of distance learning, the digital technology of eLearning presents two costly temptations.

One is to skimp on the original development of each course with the intention of updating and revising it regularly. This can be more expensive than doing a good job first time around and letting the course have a reasonable lifetime, making only those revisions that are absolutely necessary.

The other temptation is to compensate for weaknesses in the course by implying that instructors are available 24/7 to deal with student queries. This is not only expensive, but is likely to dampen the ardour of academic staff for eLearning very quickly.

Some important research by Bob Bernard and his group at Concordia University, Montreal is relevant here. They did a meta-analysis of 600 papers reporting attempts to improve student performance in distance learning courses by increasing one of three types of interaction: student with instructor; student with student; and student with content.

The results revealed that effectiveness increased in that order. Increasing student-content interaction was most effective; increasing student-instructor interaction was least effective. This again suggests that careful course preparation, which builds in more engagement with course content, is more effective and probably less costly than expecting academics to be answering e-mails, SMS or phone calls at every hour of the day or night.

Will Distance Learning Reform Higher Education?

All this is reinforced in an important report on the *2011 Outlook for Online Learning and Distance Education* by my fellow Vancouverite Professor Tony Bates.

I picked up three key points from his report. First is the rapid growth of eLearning. Enrolment in fully online (distance) courses in the USA expanded by 21% between 2009 and 2010 compared to a 2% expansion in campus-based enrolments.

His second finding is that despite this growth, institutional goals for eLearning are unambitious. The intelligent use of technology could help higher education to accommodate more students, improve learning outcomes, provide more flexible access and do all this at less cost. Instead he found that costs are rising because investment in technology and staff is increasing without replacing other activities. There is no evidence of improved learning outcomes and a failure to meet best quality standards for eLearning in some institutions.

A third finding, which should worry public-sector higher education given the rapid growth of eLearning, is that in the USA the for-profit sector has a much higher proportion of the total online market (32%) compared to its share of the overall higher education market (7%). Seven of the ten US institutions with the highest online enrolments are for-profits. For-profits are better placed to expand online because they do not have to worry about resistance from academic staff, nor about exploiting their earlier investment in campus facilities.

I observe the rapid development of online teaching in for-profit institutions from another vantage point, as a member of the Advisory Committee for the Whitney International University System, which is an American-owned group of five for-profit universities in Latin America. The percentage of distance learning students by institution varies from a low of 2% to a high of 71%, although few of these students are in 100% online courses. However, the projected growth of distance learning across the system ranges from a low of 32% at an institution in Argentina, which already has the highest proportion of distance learners, to a high of over 3000% at their institution in Chile.

Tony Bates concludes his report by alerting Canadian institutions to a growing market that is not well served by campus-based education. In his view Canadian public colleges and universities are not moving into online distance learning fast enough to meet the demand. "If public institutions do not step up to the plate, then the corporate for-profit sector will".

Will Higher Education Split?

This leads us to an interesting answer – that you may not welcome – to your question about how distance learning will reform the higher education sector. Will higher education split over the coming years into a public sector focussed on research and a for-profit sector doing most of the teaching? Several inputs make such a hypothesis plausible.

Exhibit One is the [communiqué of UNESCO's 2009 World Conference on the New Dynamics of Higher Education](#) which identified vastly increased demand, or massification, as the major trend. There will be a huge demand for teaching, to which higher education will need to respond in new ways.

Exhibit Two is Ben Wildavsky's very readable book, [The Great Brain Race: How Global Universities are Reshaping the World](#). Wildavsky is writing primarily about the 3% of the world's 17,000 higher education institutions that figure in contemporary global rankings. These [rankings, such as those from Shanghai's Jiao Tong University](#), are essentially about performance in research. In response to the question 'where is teaching in the international rankings?' the American higher education scholar Philip Altbach replies, 'In a word – *nowhere*'.

Exhibit Three, cited by Wildavsky, is Jamil Salmi's book, *The Challenge of Establishing World Class Universities*, which analyses what makes for a top university. Here again, the designation refers to only a tiny fraction of the world's universities, but some countries are lavishing funds on favoured institutions in a probably futile attempt to get them into the list of the top 100 – or top 300 – research universities. Perhaps alarmed at the Gadarene rush that he has helped to provoke, Salmi is now sounding a warning note. He now writes of *Nine Common Errors in Building a World Class University* and cautions those focussing on boosting one or two institutions not to neglect 'full alignment with the national tertiary education strategy and to avoid distortions in resource allocation patterns within the sector'.

The upshot of all this, made very explicit in the recent dramatic funding cuts made by the Higher Education Funding Council for England [was at www.lfhe.ac.uk/governance/newsarchive/news_item2feb2010.html], is to swing the balance of public investment in higher education significantly towards research and away from teaching.

Exhibit Four is Archibald and Feldman's book *Why does College Cost so Much?* Their implicit conclusion is that universities will not or cannot use technology to be more efficient and cut costs. Sadly, as I just noted, Tony Bates' findings support them, for he finds that in public universities the adoption of eLearning is driving costs up rather than down, is not improving learning outcomes, and is often of poor quality.

Can We Cope with a Disruptive Technology?

Where does this leave us? A disruptive technology, which online learning may prove to be, rarely favours existing providers. When photography went digital the electronics industry displaced the makers of film from the market.

Bates notes that over 80% of US students are expected to be taking courses online in 2014, up from 44% in 2009. Clearly the providers that are already established in this mode of delivery, i.e. the for-profits, will have the advantage. Indeed, the *UK Report Collaborate to compete: Seizing the opportunity of online learning for UK higher education*, explicitly recommends that public higher education institutions should link up with for-profit companies in order not to get left behind in offering online learning.

Some governments have long desired to see higher education divided into research universities and teaching institutions. Extrapolating the trends we have identified suggests that their wish may come true, with the added difference that most research will take place in publicly-supported institutions while most teaching will be done by for-profit enterprises.

I leave you to ponder that.