

The Impact of New Business Models for Higher Education on Student Financing



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*The Impact of New Business Models for Higher
Education on Student Financing*

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Summary

The easiest way to help students finance their participation in higher education is to make it less expensive. The traditional view is that this is impossible because universities depend on highly expert academics, who like other professionals such as dentists, are subject to the ‘cost disease’ because of the length and expense of their training. Today, however, some who developed notion of the cost disease are changing their minds. Technology will be a game changer in higher education through its impact on the behaviour of students and for-profit institutions. The paper first outlines the principles behind the use of technology to cut costs and describes trends that indicate a tipping point in the evolution of the economics of higher education. Finally, we explore the components of the proposed Open Education Resource University, which is one example of a radically new business model.

Introduction: Extrapolating from North to South

The premise of this paper is that no amount of tinkering with student loan and bursary schemes will enable higher education to cope with the continuing surge in participation worldwide unless the price of higher education can be cut. Projections suggest that by 2025 enrolments will be around 100 million greater than the ~150 million students engaged in higher learning in 2010.

Developing countries are struggling to cope with this growth. In 2009 UNESCO’s World Conference on Higher Education published a number of thematic studies on Africa. The study on financing had this to say (UNESCO, 2009):

‘To balance financial efficiency with equity goals, the introduction of tuition fees should be accompanied by the development of student loans. Student loans have been implemented in Africa for more than fifty

years, mainly in Anglophone countries. As of 2008, there are operational loan programmes in at least 13 African countries and Burundi, Mauritius, Mozambique and Uganda are considering establishing programmes. Effective student loan programmes are possible in Sub-Saharan Africa; they require both proper design and good execution. However, cost recovery remains the main challenge in most African countries for student loans to be effective and sustainable. The two main issues facing student loans stem from interest rates that are set far too low, grace periods and repayment periods that are unnecessarily long and that exacerbate the losses, and loans implemented in such a way that students are frequently unaware that they are incurring a real repayment obligation. In addition, legal systems often make debt collection expensive and record-keeping cannot adequately keep track of students/graduates. Finally, insufficient numbers of jobs in African economies challenge the ability of university graduates to repay their loans.'

Clearly, loan systems that are already struggling will have difficulty coping with a massive expansion of numbers and the escalation of higher education costs that will occur if countries stick to traditional approaches to teaching and learning. This paper argues that there are better and cheaper ways of providing quality higher education that will lessen the funding challenge.

Since we argue that the intelligent use of technology is the route to cutting costs, the paper focuses particularly on trends in jurisdictions where technology is most advanced, especially North America. However, we believe that with the rapid improvements in connectivity that are under way these trends will have an even greater impact in developing countries. Those countries have leapfrogged the industrialised world in the use of mobile technology because they have a much smaller installed base of landlines. In a similar way we expect that many of the hundreds of new higher education institutions that will be established in developing countries the coming years will adopt new models of technology-based teaching and learning with much lower costs.

Why Does Higher Education Cost so Much?

In the United States tuition fees for higher education have been rising faster than inflation for several decades, whilst other rich countries that used to charge no fees or fairly nominal fees to students have either introduced fees or raised them. Consumers have begun to notice and resist these rising fees, which inspired Robert Archibald and David Feldman (2010) to justify high fees in their book *Why Does College Cost So Much?*

These American economists write only about the US experience, but the principles and arguments they evoke have wider relevance. They situate the higher education enterprise in the context of the wider economy and make some careful comparisons with the evolution of prices in a range of other industries over more than 50 years. In real terms the prices of manufactures have gone down; those of many services, such as hair dressing, have stayed roughly constant; whereas the prices of personal services by professionals with high training requirements have risen in real terms. They cite academics, dentists, horn players and stockbrokers as examples in this last category.

Are such comparisons valid? The link between the high prices of certain services and the cost of training the professionals who deliver them was labelled the 'cost disease' in the 1960s by William G. Bowen and

W.J. Baumol in a number of papers on the economies of the performing arts. Their argument was that salaries in these and similar areas are pushed up, even if their productivity remains static, by productivity-linked salary increases in other sectors of the economy. Archibald and Feldman adopt this reasoning as the basis for their book, dismissing summarily the possibility of using technology to increase productivity in higher education.

William Bowen himself, however, is not so sure. In his foreword to *Unlocking the Gates: How and Why Leading Universities are Opening Up Access to Their Courses* by Taylor Walsh (2011), he says that he is rethinking his scepticism about the potential of new technologies to improve productivity in higher education.

It is not surprising that the price of dentistry rises by more than inflation because, despite the use of increasingly sophisticated equipment, it remains a personal service with little scope for automation. Horn players (as examples of orchestral musicians) are a more debatable case. They are unquestionably a rare and specialised breed, but their productivity has increased dramatically in recent decades simply because most people now listen to horn players, with equal or greater enjoyment and at much lower cost, on iPods and CDs than by going to concert halls. The most interesting comparison is with stockbrokers. Their prices went up more rapidly than those of higher education until the 1980s and then fell steadily to a relatively much lower level. This was because brokerage services went online, giving the individual punter much more control.

That is surely a more valid comparator for higher education. Technology now allows institutions to deliver much of the content of their programmes through media and to give students more control as distance learners. This can cut costs dramatically without loss of effectiveness.

The Iron Triangle

The goal of most governments is to widen access to education while improving its quality and reducing its cost. We find it helpful to visualize this challenge as a triangle of vectors (Fig. 1-A). This makes the basic point is that with conventional teaching in classrooms there is little scope to alter these vectors advantageously because improving one vector will worsen the others. Pack more students into the class and quality will be perceived to suffer (Fig. 1-A1). Try to improve quality by providing more learning materials or better teachers and the cost will go up (Fig. 1-A2). Cutting costs may endanger both access and quality (Fig. 1 A-3).

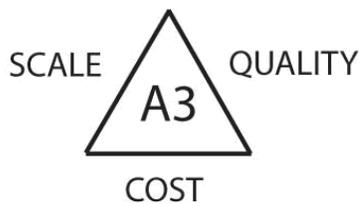
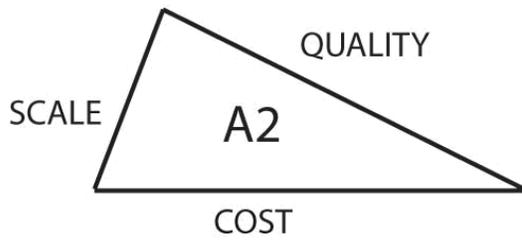
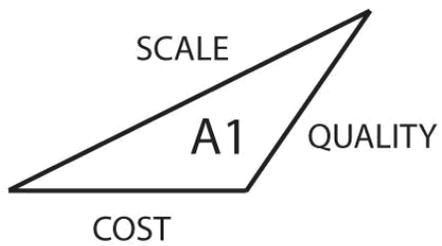
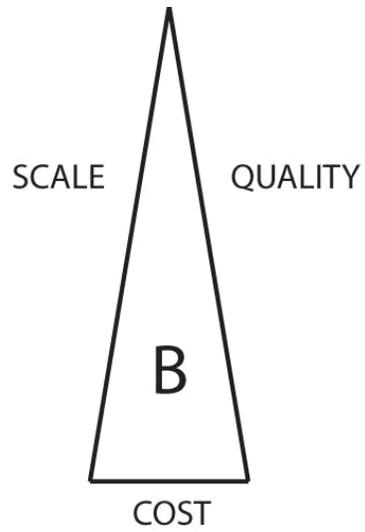
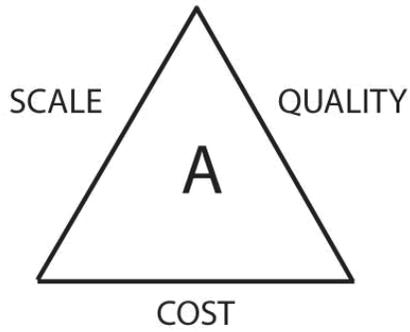


Figure 1.
The 'Iron Triangle' of Scale (Access), Quality and Cost

For this reason we have called this the 'iron triangle'. It has constrained the expansion of education throughout history and has created in the public mind an insidious link between the quality of education and its exclusiveness. If this were the end of the story, Archibald and Feldman's conclusion that the cost of higher education must rise inexorably would be correct.

However, technology is able to stretch this triangle so that you can achieve the revolution of wider access, higher quality and lower cost (Fig. 1-B). Traditional distance education institutions, often called open universities, have been doing this for years. Not only do they enrol millions of students but some also achieve high ratings for the quality of their teaching. The most recent national quality assessments for teaching in England put the UK Open University in fifth place out of a hundred institutions, one place above Oxford (Fig. 2)[1]. The Open University has also come top – and never lower than third – in national surveys of student satisfaction conducted with a very large sample of students in all English universities.

BRITAIN'S TOP NINE UNIVERSITIES

Quality Rankings of Teaching

based on all subject assessments 1995-2004
(*Sunday Times University Guide 2004*)

1	CAMBRIDGE	96%
2	LOUGHBOROUGH	95%
3=	LONDON SCHOOL OF ECONOMICS	88%
3=	YORK	88%
5	THE OPEN UNIVERSITY	87%
6	OXFORD	86%
7	IMPERIAL COLLEGE	82%
8	UNIVERSITY COLLEGE LONDON	77%
9	ESSEX	77%

Fig. 2 National rankings of teaching quality in England

This revolution of providing high quality teaching to large numbers at low cost was achieved with the traditional distance learning technologies of the industrial era (print, audio, video and stand-alone computers). It was based on the principles of industrial production, which were identified two centuries ago by Adam Smith as division of labour, specialisation, economies of scale and the use of machines and media.

Today there is a new generation of digital technology characterised by the concepts of networks, connectedness, collaboration and community. As well as increasing the economies of scale, since digital material costs almost nothing to distribute, this technology also speeds up and intensifies the interactions possible between students and their teachers. The result has been to take technology-mediated learning far beyond the confines of the open universities. Most traditional campus universities, at least in countries that have a basic IT infrastructure, are now dabbling in distance education online. Even more significantly, students are seeking this form of teaching in larger and larger numbers.

Online learning may be a disruptive technology for higher education partly because, as a survey by Tony Bates reveals, public universities are engaging with online learning rather timidly and not very competently. This leaves the door open for private and for-profit providers, which are operating in the online world with greater determination and professionalism, to redistribute the teaching function of higher education.

Trends in Online Learning

In his report 2011 Outlook for Online Learning and Distance Education, Bates (2011) identifies three key trends in US higher education. It is fair to assume that other countries will follow similar paths as connectivity improves.

The first trend 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 in public sector higher education are short on ambition. He argues, as do we, that 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. In general, the traditional public higher education sector seems to have little heart for eLearning. Many institutions charge higher fees to online students, even though the costs of serving them are presumably lower, suggesting that they would like to discourage this development.

A third finding, which should stimulate the public-sector to take eLearning more seriously given its rapid growth, is that in the US 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.

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, a UK Report: *Collaborate to compete: Seizing the opportunity for 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. This is already a growing trend in the US. For example, Best Associates, a Dallas-based merchant bank with various investments in education, operates an *Academic Partnerships* programme with a rapidly growing number of state universities. The basis of the model is to help these institutions offer high-demand and socially important programmes (e.g. M.Ed., B.Sc. Nursing) online at scale. The public institution sets the fees, of which it retains 20-30% with the rest going to Best Associates. The system can operate successfully with much lower fees than these institutions would normally charge. Some have reduced their fees substantially but others have not.

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". With access to broadband Internet connections spreading rapidly this statement may well have global validity.

Will Higher Education Split?

This leads to an interesting question. Will higher education split over the coming years into a public sector focused on research and a for-profit sector doing most of the teaching? And if so, does it matter? Some governments would like to see higher education divide itself into research universities and teaching institutions. Extrapolating the trends Bates has 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.

We should remember that disruptive technologies, of which online learning may prove to be one, rarely favour existing providers. When photography went digital the electronics industry displaced the makers of film from the market.

What About Costs and Fees?

For this paper the key question is whether these changes herald a new – and much less costly – business model for higher education, thereby significantly reducing the challenge of student financing. Again, the US is the best place to see trends emerging. Although US tuition fees have risen faster than inflation for decades, there are signs that higher education there has reached a tipping point. This is not to argue that the fees bubble will suddenly burst. More likely lower cost alternatives to the current model of high fee programmes will steadily take market share. Already some US states are pressuring institutions to cut costs and fees, some institutions (e.g. the University of California) are finally taking eLearning seriously, and models such as Best's *Academic Partnerships* will gain ground. The success of the Western Governors University, which was viewed as a rather odd initiative when it was created in the late 1990s, is an indicator of how things can change. This institution, which charges fees of \$5,000 per annum and makes no demands on public funds, is attracting increasing numbers of students.

All indications are that the for-profit sector has ample room to cut fees and still make good profits. At present this sector makes very high profits because it operates a lower-cost model of provision but can set fees comparable to those of the public sector with its higher cost base. As the public sector starts to cut fees the for-profit sector will follow the downward trend.

The Open Education Resources University

One example of a model that could cut the costs of higher education dramatically is the Open Education Resource University that is being explored by a group of public universities from several countries. Open Educational Resources, or OER, are defined as:

“publicly available resources that may be used for educational purposes. The range in types of material is much broader than that for Open CourseWare, from suitability for children to college students to professionals. These materials are more often smaller modules rather than complete lesson plans or complete courses.”

OER may well be the most radical technology-based tool for disrupting higher education. How might they help to widen access and cut costs?

We are already seeing institutional policies that encourage the use of OER to avoid having each teacher re-invent the wheel in each of their courses. For example, once academics at the Asia eUniversity in Malaysia have agreed on course curriculum outlines they do not develop any original learning materials because they find that good quality OER for all the topics they require is already on the web – they simply adapt them to their precise needs. Likewise, Canada’s Athabasca University will not approve development of a course until the proposing department has shown that it has done a thorough search for relevant open material that can be used as a starting point.

But some want to go much further. Paul Stacey, of Canada’s BC Campus, has outlined the concept of *The University Open*. He points out that the combination of open source software, open access publishing, open educational resources, and the general trend to open government creates the potential for a new paradigm in higher education. Similar ideas often occur simultaneously in several places at once and in Europe we have seen the development, under the leadership Germany’s Ulf-Daniel Ehlers and the UK’s Grainne Conole, of the notion of *Open Educational Practices* built around the use of open educational resources.

However, radical innovations in higher education must be accompanied by robust frameworks of accreditation and credentialing in order to reassure students and attract a broad public. UNESCO has invested much effort in the last ten years in helping students to feel secure about the accreditation status of institutions where they plan to study. We refer to the regional conventions on degree recognition; the UNESCO-OECD Guidelines for Quality Provision in Cross-Border Higher Education; the UNESCO portal of recognized institutions, and joint work by UNESCO and CHEA on the problem of degree mills.

In February 2011 the Open Education Resource Foundation convened a meeting in New Zealand to operationalize the *Open Educational Resource University*, a concept developed from Paul Stacey’s *The University Open*.

The idea is expressed in Fig 3, which comes from Jim Taylor of the University of Southern Queensland, an academic leader with a very credible track record of innovation. Students find their own content as OERs; get tutoring from a global network of volunteers; are 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 innovated radically 150 years ago when it declared that all that mattered was performance in examinations, not how knowledge was acquired. That programme has produced five Nobel Laureates, so no one can call it a Mickey Mouse system.

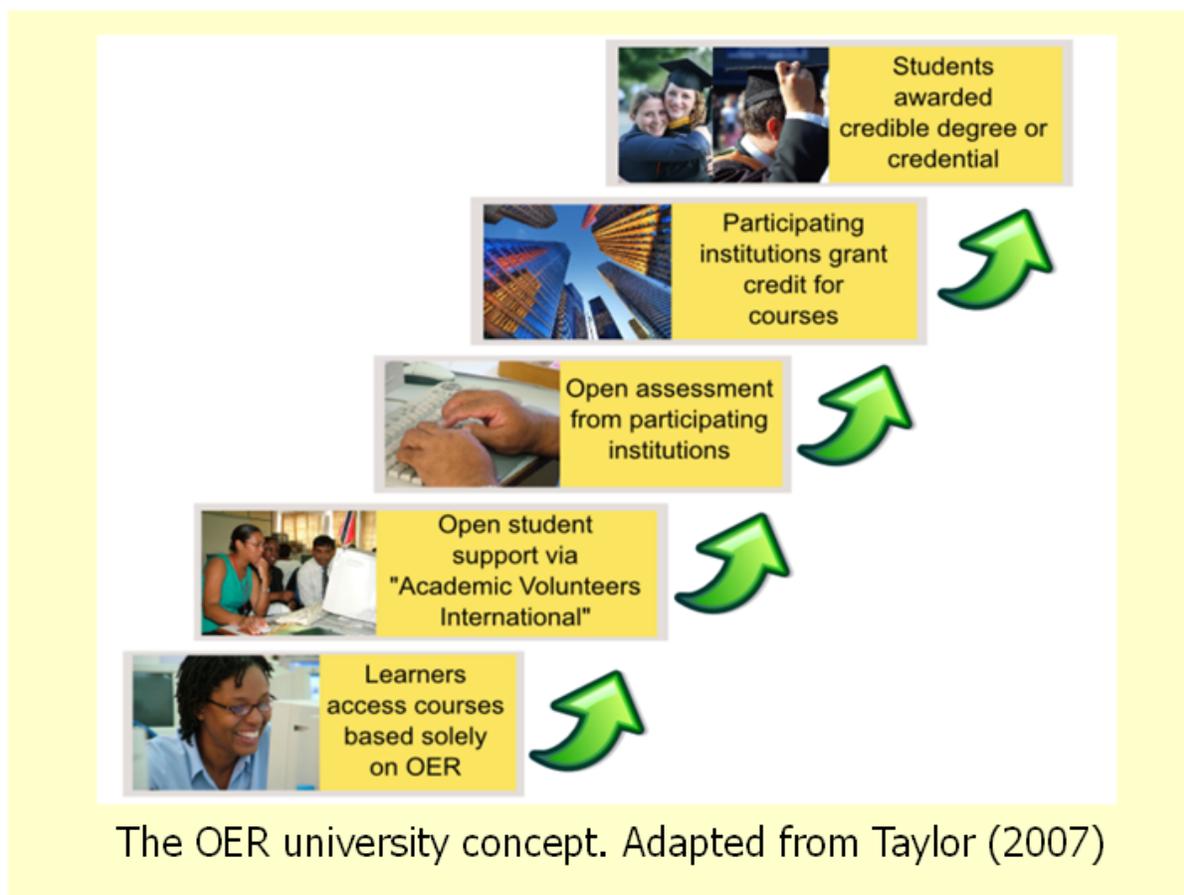


Figure 3. The Open Education Resource University concept

As regards the first step in this ladder, open educational resources are unquestionably being used. Literally millions of informal learners and 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 a network called 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 UKOU's OpenLearn site has 11 million users and hundreds of courses can be downloaded as interactive eBooks. Furthermore, with 300,000 downloads per week, the UKOU alone accounts for 10% of all downloads from iTunesU. And we must not forget the worldwide viewing audience of hundreds of millions for OU/BBC TV programs.

Martin Bean, the Australian-American who left Microsoft HQ to become vice-chancellor of the UK Open University in 2009, argues that the task of universities today is to provide paths or steps from this informal cloud of learning towards formal study for those who wish to take them. Good paths will provide continuity of technology because millions of people around the world first encounter higher education institutions such as the Open University through iTunesU, YouTube, TV broadcasts or the resources on various university websites. The thousands who then elect to enrol as students in these institutions will find themselves studying in similar digital environments.

Where does all this take us? In particular, what are the implications for public-sector institutions? We suppose that the institutions best equipped to make a success of the Open Education Resource University are institutions in the public sector that already operate successfully in parts of this space and award reputable credentials.

While this choice may seem obvious, we quote in our support former Princeton President Harold Shapiro. He expressed the inadvisability of conventional universities launching into new distance learning ventures in these words: 'But you have to ask yourself, where we have the talent? You can't just turn around tomorrow and say 'maybe we should start doing something different' – you have to accumulate the talent first'.

We would add that you must also have the right mindset. It would be difficult for a university that has put scarcity at the centre of its business model suddenly to embrace openness. In the coming years universities will have to ask themselves whether they can sustain a model based on high fees and restricted access as other parts of the sector cut fees and widen access.

As examples of two public institutions that both opened their doors forty years ago and offer technology-mediated learning successfully we give the examples of the UK Open University and SUNY's Empire State College in the US. Both are credible performers offering solid credentials.

Let us juxtapose Martin Bean's remark about leading learners step by step from the informal cloud of learning to formal study with Jim Taylor's representation of the steps in the Open Educational Resource University.

The first step, namely access to open educational resource learning materials, is increasingly solid. The pool of OER is growing fast and it is easier and easier to find and retrieve them.

The solidity of the top step, credible credentials, depends on the involvement of existing, reputable, accredited institutions that resonate with this approach.

What about the three intermediate steps? For the first, student support, distance teaching institutions already have the skills necessary. They manage extensive networks of tutors or mentors. SUNY's Empire State College has unique skills for this task given that students will often not be working with material

created by the institution but OER they have discovered for themselves. Its unusual mentoring model is well suited to this.

Jim Taylor envisages the emergence of a body rather like Médecins sans Frontières or Engineers without Borders, which he calls Academic Volunteers International. That may work in some places, but having students buy support on a pay-as-you-go basis would also work and might make for a more sustainable model.

Furthermore, social software is greatly enriching the possibilities for student support and interaction. For example, the UKOU's OpenLearn website is not just a repository of OER but a hive of activity involving many groups of learners. Digital technology is breathing new life into the notion of a community of scholars and social software gives students the opportunity to create academic communities that take us well beyond the rather behaviourist forms of online learning that give some eLearning a bad name. Some of this social learning activity involves various forms of informal assessment that can be most helpful in preparing students for the formal kind.

When we come to step three, assessment, it seems to us that payment is essential. However, this is well travelled territory. It takes us back 150 years to the University of London External model with the difference, again, that some assessments would have to be designed for curricula developed by the student, not the institution. With credible assessment by reputable institutions the next step, the granting and transfer of credit, is straightforward and leads to the top step of credentials.

Implicit in our own vision for the Open Educational Resource University is that it is not a new stand-alone accredited institution, but rather an umbrella organization for a network of participating institutions with longstanding reputations and accreditation.

No established institution is likely to adopt the Open Educational Resource University model for its core operations in the foreseeable future since the revenues – as well, of course, as the costs – would be much lower than they are used to.

The meeting on the Open Educational Resource University in New Zealand in February 2011 generated this headline in The Australian newspaper: “University of Southern Queensland plan for free online university”. Naturally, Jim Taylor faced some questions from his president at the University of Southern Queensland when he got home! However, USQ has a long and strong track record in open, distance and blended learning and intends to test the waters by offering studies on this model initially as part of its community service function. That seems a sensible approach.

Conclusion

The aim of this paper has been to suggest that in discussing student financing we need to look beyond the current standard model classroom teaching to the likely developments in learning systems over the next decade. These have the potential to cut costs dramatically and thereby lessen the challenge of student financing.

That is fortunate because nearly one-third of the world's population (29.3%) is under 15. Today there are

165 million people enrolled in tertiary education.[2] Projections suggest that that participation will peak at 263 million in 2025.[3] Accommodating the additional 98 million students would require more than four major campus universities (30,000 students) to open every week for the next fifteen years unless alternative models emerge.

Clearly, financing students on this scale does require new economic models of higher education. This paper has indicated that these are being developed through a combination of online learning, open educational resources, and for-profit provision. For-profit provision is already growing rapidly in the developing world and with improving IT infrastructure these institutions will be well placed to introduce new, less expensive approaches to teaching and learning. The public institutions in these countries – not only the open universities but also campus institutions – should avoid the timid approaches to online learning of by their counterparts in the rich world. By making a robust commitment the use of technology they can drive quality and access up while driving costs down.

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[1] These national assessments of teaching quality were discontinued, at the request of the ‘elite’ universities, after this table was published, so there is no more recent data.

[2] ISCED levels 5 & 6. UNESCO Institute of Statistics figures

[3] British Council and IDP Australia projections