

Invest in Clicks, not Bricks!



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Abstract

Projections indicate that the world's higher education system must accommodate nearly 80 million more students by 2025. To do so in conventional campuses would require the opening of three large (30,000 students) campuses every week for the next 13 years. Some of these campuses will be built but most will not. Capacity can be increased more quickly and economically by investing in distance and eLearning opportunities. In particular, higher education systems should invest in the creation of open educational resources (OER). This will create a global pool of high quality material that can be adapted and versioned for individual countries and institutions, all of which should engage in this important collective effort to widen access and improve quality.

Introduction

I am honoured to have been asked to give a keynote at this conference two years running and it is good to be back in Dubai. Thank you for the warm welcome that you have given to the delegates from overseas.

The danger that faces me in speaking two years in a row is that I either repeat myself or contradict myself. I'm sure that none of you remember what I talked about last year now, but if I started to give the same speech again you would remember very quickly. So let me recap last year's presentation and lead from it into this one.

Last year my title was *eLearning – Open or Closed?*

In that address I first noted that Open and Distance Learning – or ODL – is still a relatively new phenomenon in this part of the world and so I began with some simple statements about how, by applying technology through open and distance learning, we can achieve a revolution in education.

I said that technology is the answer but then asked: what was the question?

You may recall the ‘Iron Triangle’ that was my metaphor for arguing that today’s technology allows you to achieve the dream of educators throughout history – wider access, higher quality and lower costs – and all at the same time. That is the question that technology answers.

Next I noted that Open and Distance Learning has long been viewed with suspicion in the Arab world. In the second part of last year’s address I tried to tackle that issue head on and suggested what we could do to lessen the hostility.

I argued, first, that the hostility gave us the opportunity to demonstrate to governments that using technology can help to expand quality education at lower costs.

Second, I suggested that we should highlight the potential of ODL to encourage self-directed learning, which is supposed to be an important skill in this 21st century.

Third, and in the same vein, I pointed out that ODL is an excellent way of introducing a richer content of ICT into higher education, which is also considered desirable in the times we live in.

And lastly, I argued that part of our response to the sceptics about ODL should be to clean out the bad apples from our ODL barrel. We must either remove or improve the poor quality and fraudulent institutions that damage the reputation of ODL generally.

Then, in the last part of the 2011 talk I looked at eLearning as a modern expression of open and distance learning, explored its advantages and disadvantages, and made a recommendation for improving its quality.

This year my title is *Invest in Clicks, not Bricks*, and I shall return to some of these themes with even greater confidence.

By ‘invest in clicks’, I mean, of course, to invest in all that is needed to expand and improve online learning. This is not primarily a matter of spending money on hardware and software. That is the easiest part of the challenge. The more difficult, yet most important part of the investment is to change the way that institutions and professors operate.

This is much harder and, for donors and political leaders, less satisfying than investing in bricks – or in marble and glass as you do here in Dubai.

Educational institutions will, of course, always need some physical facilities. If kings, queens and rich people want to leave buildings as monuments to their memories we should encourage them to do that through universities. But the rapid expansion of higher education over the coming years needs a different infrastructure.

Student choices: technology for convenience and deeper learning

It is not only economic imperatives but the behaviour of the students that is driving us to a new infrastructure

Last year I quoted a report on eLearning in North America that had just been published by Professor Tony Bates. He noted a projection that by 2014, which is now just two years away, 80% of US students will be taking some of their courses online. In 2009 the figure was 44%, so that is almost a doubling in five years.

Students will not be studying online in 2014 because they are infatuated with technology. They are comfortable with technology, but their more important motivation is being part of a self-service culture that gives individuals greater freedom and convenience. When re-fuelling their vehicles, buying books or arranging travel, consumers are opting increasingly for the self-service models made possible by ICTs. This trend is now appearing in universities.

In developed countries it now seems that even if the current economic problems are solved, this generation of young people will live in more challenging circumstances than their parents did.

Many of them therefore seek to combine study and employment rather than separating them in time. To achieve that they are prepared to work harder – because studying online requires more commitment than sitting in a classroom. However, more and more students want to be proactive in this way because it gives them more control over that most precious commodity: their own time.

This preference for distance learning and flexible arrangements is even stronger among older students, already in the workforce, who want to continue learning. Moreover, these students may be even more eager to use technology in their studies than younger students. Earlier forecasts that digital technology would great a generation gap in higher education, with young ‘digital natives’ seeking out eLearning while older students avoided it, were simply wrong.

Research by the UK Open University on its own large and highly diverse student body concludes that while there are clear differences between older and younger people in their use of technology, there is no evidence of a clear break between two separate populations.

The UKOU research was conducted on an age-stratified, gender-balanced cohort of 7,000 students aged between 21 and 100. There were 2,000 between ages 60 and 69, 1,000 aged 70 and over, and, for comparison, four groups, 1,000 in each, from students respectively in their twenties, thirties, forties and fifties. All were surveyed by detailed and carefully constructed questionnaires.

The overall response rate was 58% but with a remarkably uneven age distribution. 81 per cent of the over-seventies responded, but only 31 per cent of those in their twenties. Furthermore, in a challenge to common stereotypes, over 60 per cent of the over-sixties chose to respond online rather than by post, while only 46 per cent of those in their twenties did so.

The results showed that while there are differences in attitudes to and familiarity with digital technology, they are not lined up on each side of any kind of well-defined discontinuity. The change is gradual, age group to age group. There is no coherent ‘net generation’.

However, one extremely important discovery was a correlation – independent of age – between attitudes to technology and approaches to studying. Students who more readily use technology for their studies are more likely than others to be deeply engaged with their work. In the words of the report:

“Those students who had more positive attitudes to technology were more likely to adopt a deep approach to studying, more likely to adopt a strategic approach to studying and less likely to adopt a surface approach to studying.”

This evidence that, at any age, a good attitude to technology correlates with good study habits is also important in giving the lie to the view that eLearning tends to trivialise learning. Instead, as we argued earlier, the intelligent use of technology can improve the quality of learning.

Were student preferences for online learning simply a matter of convenience and freedom from the constraints of institutional timetables, then resisting them might be an option. But if technology-mediated learning also means deeper learning the pressure on teachers and institutions to adjust is overwhelming. How should they do so?

The challenge to teachers

I begin with the challenge to teachers, which is twofold. They must be individually competent at using technology for teaching and they must be comfortable operating within technology-based learning systems.

Regarding the first, we can learn much from the attempts in many countries to introduce computers into school systems. Effective use of ICT in school classrooms requires three things: teachers who are trained to use ICT; learning materials that exploit the strengths of ICT; and appropriate hardware and software.

Logically you would think that the implementation of ICT in the schools should follow that sequence: train the teachers; secure a supply of learning materials and then introduce the equipment. In reality, the introduction of computing into schools almost always follows the reverse order. First, ministers return starry-eyed from meetings with equipment vendors and place big orders for computing devices; second, the teachers struggle to cope; third, learning materials are commissioned.

To help the education sector professionals who have to salvage something from the wreckage of doing things backwards like this, UNESCO, working with partners, has developed an ICT Competency Framework for Teachers in collaboration with computing industry partners.

My own organisation, the Commonwealth of Learning, has developed a Certificate for Teacher ICT Integration, mapped onto the UNESCO Competency Framework, which allows teachers to obtain formal recognition for acquiring training in this field.

I cite this experience because the description of competencies in the UNESCO Framework is also relevant for higher education. The Framework emphasises ‘that it is not enough for teachers to have ICT competencies and to be able to teach them to their students. Teachers need to be able to help the students become collaborative, problem solving, creative learners through using ICT so that they will be effective citizens and members of the workforce. The Framework therefore addresses all aspects of a teacher’s work’.

Last week I was at a meeting with senior education officials from a number of Caribbean countries where the UNESCO Framework is being implemented and the Commonwealth of Learning’s Certificate is being

offered. During that meeting Neil Butcher, a South African expert with wide international experience of introducing ICT into education, made two good observations.

His first comment was that the frequent pattern of putting computers in schools without proper preparation may not, in fact, be such a bad thing. That is because the crises it generates put systems under tremendous pressure to train teachers quickly and effectively. Without such pressure this could easily be a languid and unfocussed process. Certainly, the ministry of education officials in these Caribbean countries, realising they had an urgent problem, engaged very seriously with the implementation of training solutions.

Neil Butcher's second comment, which is implicit in the description of the UNESCO Framework that I read out, was the teachers should not be aiming primarily to keep up with their students in gaining facility with all the latest ICT gadgets and software. Rather, their objective should be to acquire the skills necessary to help students use ICT wisely in their lives and studies. These same principles apply just as strongly to higher education.

Teachers must be individually competent at using technology for teaching and also comfortable operating within the learning systems that develop around technology. Regarding this second requirement, the objective is easy to state but challenging to achieve.

Professor Tony Bates put it well when he observed that most conventional university teaching follows the 'Lone Ranger' approach. The individual faculty member carries out all the steps in the instructional process: designing the curriculum, preparing teaching materials, instructing the class, assessing learning through assignments and examinations, and evaluating the effectiveness of the whole process.

Whether or not this is an optimal approach to classroom teaching, Bates argues that it is certainly not a good approach to online teaching. Few teachers have the time or the inclination to acquire the many skills involved in preparing good online learning materials and supporting students as they work through them. Moreover, becoming expert in all these areas is not usually a good use of the individual professor's time.

It is much better to take a team approach.

In principle this should not be difficult because university faculty find collaboration and teamwork natural when they conduct research. However, to ensure that such practices are adopted in the teaching function requires the institution to invest in nurturing them. This means rewarding teamwork and providing skilled technical back-up in areas like programming, media, searching for open educational resources and operating the learning-management systems. Having such support will make participation in the team a rewarding experience for faculty.

Open Educational Resources

Today this notion of teamwork in preparing materials for online learning extends well beyond the institution. Indeed, it is effectively global. That is because of Open Educational Resources or OER.

I talked about these last year. In particular I mentioned the TESSA project, which involves OER used by hundreds of thousands of teachers across Africa in four languages, including Arabic. I also talked about a

project, now completed, that had six countries working together to create a complete senior secondary curriculum as OER.

OER have continued to blossom and multiply since we met last year. Indeed, Paul Stacey, an astute observer of the scene at BCcampus, called 2011 ‘The Year of Open’.

Just one example was a meeting that took place in New Zealand, just after your conference last year, to explore the creation of an Open Education Resource University as a consortium of institutions worldwide. That idea has gathered momentum and there are now some ten institutions from all over the world, working to make it a reality – although I don’t think there is a member from the Arab region yet.

Meanwhile COL and UNESCO are working together to expand the knowledge of OER among educational leaders and policy makers. Through 2010 and 2011 we carried out a project called *Taking OER Beyond the OER Community: Policy and Capacity for Developing Countries*, which achieved some useful outcomes. We held nine workshops on OER for education leaders in Africa and Asia along with three online forums and a policy forum at UNESCO HQ Paris. Taken together these workshops reached hundreds of decision makers from many countries, most of whom previously had only a vague idea of OER and their potential.

Following the advice from those meetings UNESCO and COL produced two documents late last year that are available to you: *A Basic Guide to OER* and *Guidelines for OER in Higher Education*.

The project has now evolved to focus primarily on governments. It is called *Fostering Governmental Support for OER Internationally* and is partially funded by a grant from the Hewlett Foundation. I am directing this phase of the project personally with the able assistance of senior consultant Stamenka Uvalić-Trumbić, who was formerly at UNESCO as Head of Higher Education.

There are three interlinked activities.

First is a survey of all the world’s governments, being conducted collaboratively by the OECD, COL and UNESCO to find out whether they already have, or intend to develop, policies on OER.

Second, because questionnaires only take you so far, between now and June we will hold policy forums on OER in all UNESCO regions. I referred just now to the consultation in the Caribbean last week. The meeting for the Arab States will take place in Oman on May 7-8 and all governments in the region will receive invitations.

One focus for those meetings will be the third activity, which is the drafting of a Declaration on OER that will be presented to the World OER Congress in Paris in June. A preliminary text was developed in December after a meeting of the project’s International Advisory and Liaison Group and it will be refined at each of the policy forums. The aim of the Declaration is to get greater buy-in from governments to the promotion of OER and of open licences for educational materials generally.

OER have great potential for reducing the cost of expanding quality education, so we hope that governments will adopt a Declaration urging that educational materials produced with public funds be made available under open licences. Government backing for open licensing of public educational

materials is essential if we are to make OER the normal way of doing business instead of a marginal, donor-driven phenomenon.

It will be a robust campaign and already the battle lines are being drawn. Two weeks ago Wikipedia – the huge free encyclopaedia – was shut down for a day to protest against legislation introduced into the US Congress to limit the sharing of educational material. I am delighted to say that as a result of the fuss created in the online community that legislation, which was intended to restrict our ability to share educational material, has been withdrawn. But I am sure that the opposition to openness and sharing will regroup and come back to fight us again.

As Larry Lessig, who developed the Creative Commons licence, has said “a technology has given us a new freedom”. As educational institutions, we must use this new freedom to expand quality education and OER are one element of that task. We believe that this joint UNESCO – COL project will help to get the concept of open availability of materials into the mainstream of education.

I hope that the Hamdan bin Mohammed e-University and all the institutions represented here will both benefit from OER as users of materials produced elsewhere and also contribute to this global commons of quality material.

I find that the concept of OER seems rather abstract to those who have not actually used them. The key feature of OER is not just that they are freely available for use, it is that they can be adapted and re-purposed to suit your precise needs. Doing this, with good OER as a starting point, will usually be much quicker and less expensive than developing your own materials from scratch.

We had a good example of this at the Caribbean Forum on ICT in Education last week. Ministry of Education officials in several countries of the region were under the gun because their ministers, in a fit of enthusiasm, had distributed computers to schools and children without the necessary preparation and it had become a political issue. Training the teachers, so that they could get a grip on the situation, was an urgent necessity.

Fortunately, the UNESCO ICT Competency Framework for Teachers was there to provide a solid curriculum structure and COL’s Commonwealth Certificate for ICT Integration was a ready-made structure of courses leading to certification. The urgent task was to provide learning materials that could help teachers to master this content.

Neil Butcher, the consultant for the project in Guyana, decided to see what was available as OER on the Web and to work with Guyana’s Cyril Potter College of Education to adapt it to the needs of the moment.

Even Neil, who was already an OER enthusiast, was amazed by the results. Not only were good materials made available at a fraction of the cost of developing them from scratch, but the faculty members of the College were very enthusiastic about the process. As many of you know, developing good learning materials for distance education is a slow and demanding process. The faculty involved were delighted to be able to respond quickly to an urgent need by starting from good existing material and adapting it to the precise needs of their Guyanese teachers.

The Challenge to Institutions

I said at the beginning that current circumstances put terrific pressure on teachers and institutions to adjust. Having addressed the challenge to teachers let me end with some much briefer comments about institutions.

I have talked about OER, which you can modify to purpose, so I begin by adapting a statement made by the veteran Irish distance education scholar, Desmond Keegan, many years ago. He said that “in conventional education the teacher teaches, whereas in distance education the institution teaches. This is a fundamental difference”.

I paraphrase that to say that “in traditional universities the teacher teaches, whereas in e-universities the institution teaches”. It remains a fundamental difference.

Don't get me wrong. Teachers are essential, but in a quality e-university they work in teams and need much greater institutional support than in a conventional university. In conventional universities the institution gives each faculty member a salary, an office and access to classrooms, laboratories and libraries. In return the professor teaches classes and submits grades to the institution.

In an e-university institutional responsibilities are more extensive. The learning management system, or virtual learning environment, is intimately connected to all the university's other systems. Keeping it functioning well is mission critical. Course teams must be supported with educational software and media specialists, and the library must be adept at finding open educational resources and helping the university to obtain open licenses, such as Creative Commons, for its own courses and products.

This means that an e-university has to function like a business as well as nurturing an academic community. This is why for-profit businesses are taking such an interest in online learning. Earlier I cited a report by Tony Bates. In it he also notes that in the US the for-profit sector has a much larger share of the online market than it does of the conventional higher education market.

Last year I gave a number of speeches in which I asked whether higher education would soon split into a for-profit sector doing most of the teaching and a public sector focusing mainly on research. That is the scenario that you can construct if you bring together the trend for students to opt increasingly for online learning and the determination of for-profit institutions to expand into this method of offering higher education.

Of course, current trends never usually continue until radically different outcomes are produced. Students may change their minds or public institutions may fight back and engage with online learning. In the words of my title, universities may decide to invest in clicks rather than bricks. Nevertheless, online learning looks like a disruptive technology – and disruptive technologies rarely favour existing providers.

Conclusion

It is time to conclude. I have argued that higher education should now invest in clicks rather than bricks. Investing in clicks means much more than buying fancy computing equipment. Committing an institution

to online learning has radical implications for the way that it functions from top to bottom. I have tried to explain some of those implications.

I hope that public sector higher education does decide that it will not abandon its teaching function by letting the for-profit sector monopolise online learning. We need a diverse higher education sector and to conduct teaching and research in symbiosis.

The Hamdan bin Mohammed e-University, as a relatively rare example of a public-sector e-university, is in the forefront of this battle. I wish you well.