

Open Educational Resources: Help or Hindrance to Open Learning?



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Open Learning?*

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Abstract

Thanks to significant external support, notably from the William and Flora Hewlett Foundation, institutions around the world are creating open educational resources (OERs) in the expectation that they will increase access to quality education. Is this hope justified? How often do OERs travel the last mile to the individual learner in the form of award-bearing courses? How open are open educational resources? Is the dogma of the 'freedom culture' obstructing the sensible sharing of learning materials? Has the medium become the message? These questions are examined with particular reference to the Virtual University for Small States of the Commonwealth.

Introduction

Thank you for asking me to give the opening keynote at this International Conference on Open and Online Learning, which I have prepared with my Commonwealth of Learning colleagues Asha Kanwar, our Vice-President, and Paul West, our Director of Knowledge Management and Information Technology. It is a pleasure for me to be in Penang again. I first came here twenty years ago, as a new university president, to a meeting of the Executive Heads of Commonwealth Universities. Asha Kanwar and I were here quite recently for a meeting of the institutions from five Asian countries that offer the Commonwealth Executive MBA and Master of Public Administration programmes.

That meeting was hosted by Wawasan Open University College, a private open university headed by Tan Sri Dato' Professor Raj Dhanarajan, my predecessor as president of the Commonwealth of Learning, a most distinguished Malaysian who once directed the distance education programme of our hosts, the

Universiti Sains Malaysia. We wish him every success with this exciting new venture which is significant in world terms.

It is an important pioneering venture because the only way most countries will be able to raise their participation rates in higher education to the levels of 35% or more now found in developed countries is by relying much more on private universities and much more on distance education. The Wawasan Open University College combines both.

Malaysia has already shown the world the way to a new model in creating the Open University of Malaysia as a private institution with the participation of public universities as shareholders. This tremendously dynamic institution is a world pacesetter in the application of technology to distance learning.

May we also pay tribute to Professor Alain Senteni, one of the organisers of this conference and head of the Virtual Centre for Innovative Learning Technologies (VCILT) at the University of Mauritius? The VCILT is doing great work. When you visit it you feel that 'buzz' that innovation generates. The Commonwealth of Learning was privileged to use the facilities of the VCILT last year for the first 3-week course development 'boot camp' of the Virtual University for Small States of the Commonwealth that was organised by Paul West.

People from 12 countries came there for a world first, the international collaborative development of open educational resources on a Wiki. We shall talk more about the Virtual University for Small States of the Commonwealth in a moment, but first let us give you an advance organiser of what we are going to talk about.

A keynote address should place things in context. We shall begin by reflecting on the title of the conference and the juxtaposition of the words open and online. We shall then give you a brief history of open and distance learning, noting how it has been influenced by new approaches and new technologies.

If you detect a note of scepticism in our account you will be right. The best thing that we can do for our students, as a major legacy of learning with us, is to inculcate in them a spirit of systematic scepticism. We cannot do that if we ourselves are credulous in the face of the latest innovations.

We shall bring this scepticism to an examination of a currently fashionable innovation - the subject of many papers at this conference - Open Educational Resources.

Our title is *Open Educational Resources: Help or Hindrance to Open Learning?*

Open and Online Learning; Distance and eLearning

That's the outline, now for the substance. We note first that the title of your conference 'open and online learning' is an oxymoron. Most of the world's people are not online, even here in Penang, so online learning is not open to them.

The term 'open and distance learning' has attracted tens of thousands of words of commentary and we shall not add to them here. That term is not an oxymoron because distance learning can be open learning

and vice versa. However, you can also have distance learning that is not open and open learning that is not done at a distance.

Our first point, therefore, is that open learning is a precious term that we must not debase. It means access to learning without barriers, access that is not closed. Open learning is an ideal, because there will always be some barriers to learning, but let us accept that the requirement to be online is incompatible with the notion of open learning for most of our fellow human beings.

Distance learning is another useful general term with a simple meaning: learning that bridges distance. The distance can be physical, social, psychological or technological and can separate the learner from other learners, from teachers, from an institution, or from learning resources. Distance learning is a liberating phenomenon with a long history, let us not debase that term either - as we do when we substitute the term eLearning for it.

eLearning is a wonderful development and a great addition to the increasingly rich toolkit of distance learning. However, if we pretend that all distance learning has to be eLearning we are once again cutting off most of our fellow citizens from the remarkable source of empowerment that goes with a broad interpretation of distance learning.

Some history

The history of open and distance learning makes this apparent. We start that history with St. Paul for two reasons. First, by taking the Christian gospel to the world his was one of the most successful educational campaigns in the history. Second, the four key elements of Paul's distance learning system still provide the underpinning for most of what you will be talking about at this conference.

The first element is learning materials, in this case the letters that Paul wrote to the young churches around the Mediterranean, painstakingly copied by hand. Second, there had to be a means of distributing these materials - in the first century they were carried by messengers. Third, there were teachers, called priests and deacons, who read and interpreted the learning materials to groups of people. Fourth, people learned through this process and applied what they had learned.

All subsequent developments in open and distance learning have attempted to improve on one or more of these four components of Paul's system. First was the printing press, which eliminated the need for the fastidious hand copying of manuscripts. The availability of printed materials made surprisingly little difference to conventional face-to-face teaching, where lecturers continued to lecture, but it allowed distance learning to take full advantage of the next technological breakthrough.

That was the development of postal services. Educators don't always apply new technologies quickly but when Britain introduced the Penny Post in the mid 19th century, Isaac Pitman immediately started offering a correspondence course in Shorthand. A large industry grew up over the subsequent century in countries with postal services. Much of this industry was in the private sector and operated for profit.

The next milestone was the creation of the UK Open University in 1969. This brought three important innovations. First, it made distance learning at scale an objective of public policy, with public funds to

match. This enabled the Open University, among other things, to invest in a strong, pervasive and effective student support system and to have access to public broadcasting channels.

Second - and the founding Vice-Chancellor, Walter Perry, thought this the most important innovation - it introduced the notion of the course team. Instead of being prepared by individuals, courses were prepared by multi-disciplinary teams with rigorous quality assurance mechanisms. The quality of Open University learning materials - on all media - was hailed with respect and amazement by academics around the world both for their intellectual muscle and their pedagogical effectiveness.

Third, the Open University committed itself to deploying the full range of communications media available then and in the future. Making one of the most important statements in the history of open and distance learning, the University's first Chancellor, Geoffrey Crowther, had this to say at the inaugural ceremony in 1969:

The world is caught in a communications revolution, the effects of which will go beyond those of the industrial revolution of two centuries ago. Then the great advance was the invention of machines to multiply the potency of men's muscles. Now the great new advance is the invention of machines to multiply the potency of men's minds. As the steam engine was to the first revolution, so the computer is to the second. It has been said that the addiction of the traditional university to the lecture room is a sign of its inability to adjust to the development of the printing press. That, of course, is unjust. But at least no such reproach will be levelled at the Open University in the communications revolution. Every new form of human communication will be examined to see how it can be used to raise and broaden the level of human understanding. There is no restriction on techniques.

The UKOU has remained faithful to this commitment. We are amused when people who dabble in eLearning on a small scale compare their own efforts in a condescending manner to the 'correspondence courses' offered by the Open University. In reality the UKOU has always adopted new media as soon as they were accessible to enough students to be called open learning. It was already using computer-supported collaborative learning back in the 1980s. By the late 1990s it had 150,000 students working with it online from home. It is an institution that has remained at the leading edge and we shall talk later about its hottest current innovation, OpenLearn.

The Iron Triangle

The Open University was a milestone - we would say a revolution - because it broke open the iron triangle that has constrained education throughout history. Those responsible for providing education, particularly governments, usually have three aims. They want wide access to quality education at low cost. The snag is that when you express these three vectors, access, quality and cost, as a triangle it is an iron triangle.

We call it an iron triangle because when you try to alter one side of the triangle using conventional teaching methods you are constrained by the other two sides. Try to increase access by putting more students in the classroom and people will accuse you of sacrificing quality. Try to improve quality by providing more learning materials and you will increase cost. You get the picture.

The Open University was revolutionary because it increased access whilst at the same time increasing quality and reducing costs. It did this by taking advantage of technology. Technology is the application of scientific and other organized knowledge to practical tasks by organizations consisting of people and machines. Distance learning uses it in a number of ways to break out of the iron triangle.

First, it takes advantage of economies of scale in reproducing learning materials. The unit costs of printing decrease with the numbers you print, and that is even truer of later media such as DVDs. Economies of scale get better and better with each generation of technology.

Second, it takes advantage of economies of scale in distributing materials. Postage is less costly than St. Paul's messengers and electronic distribution is almost cost free.

Third, it takes advantage of what you could call qualities of scale. You can make big investments in quality services to students, using everything from face-to-face tutorial sessions to sophisticated web-based services.

Fourth, distance learning uses what are still the most basic characteristics of technology, namely division of labour and specialisation. Open and distance learning allows educational practice to make the transition from the cottage industry, where one artisan does everything, to a technological approach where teams work together to bring a range of skills to bear on the task.

Putting it another way, the secret of quality distance education is to take the teaching and learning process apart into its component elements (including the administrative and social elements), focus on doing each one as professionally as possible, and then put the process back together. This is the answer to those who claim that this or that learning outcome cannot be achieved by distance learning. When you take the process apart you will almost always find that parts of it can be done at a distance and parts cannot.

Therefore you put together a blended system, which usually has two advantages. First, you gain in efficiency on the parts you do by distance learning. Second, the parts that require contact will probably be done better as a result of the analysis you have conducted.

For example, when the Open University came to design practical work for its science and engineering students it thought deeply about how to use their time efficiently with experiments that would enable them both to learn the necessary practical skills and to gain deeper understanding of physical and technological phenomena. The result was a series of experiments that were later adopted by conventional universities because they were so powerful.

Access: the next frontier

Technology has helped to create an educational revolution through distance learning and millions of people have benefited by gaining access to higher learning that would previously have been impossible. The enrolments in the world's 40 or so open universities, many of them here in Asia, number in the millions.

But there is still a huge task ahead. In developed countries 40% or more of the age cohort undertake higher education. Our host country, Malaysia, is heading determinedly towards this figure, helped by a

policy that looks with favour on both distance learning and private colleges and universities. However, in much of south Asia and sub-Saharan Africa participation rates languish below 10%. How are these countries to catch up? The numbers are huge.

If we were to achieve a 35% participation rate in higher education among the 4 billion people at the bottom of the world economic pyramid it would generate 150 million students, which is far more than the world total today.

How can we serve such numbers? There is no single solution. In a paper with our UNESCO colleague Stamenka Uvalia-Trumbia, Asha Kanwar and I have argued that alongside the multiplication of conventional bricks-and-mortar institutions the answer lies in a big expansion of private, for-profit providers; in much more use of distance learning and, as a corollary to both, more cross-border provision.

Distance learning has already made a tremendous contribution to increasing access cutting costs and raising quality. But to conquer the challenge of access at the bottom of the pyramid it must cut costs further whilst maintaining quality. How can this be done?

The three essential components of distance learning are course development, student support and logistics, including administration. Can technology help us to cut costs in each category?

The most helpful underlying technological development is the steady extension of connectivity, in which we include mobile telephony. We can now foresee a day when most people will be connected, at least through a tele-centre or ICT kiosk in their community. How does connectivity help us make distance learning more cost-effective?

Let's take the components of distance learning in reverse order. First, connectivity can reduce the costs of administration and logistics. It is already doing so. Experience in Africa has shown that mass mailings of text messages to mobile phones have a measurable effect in motivating students to complete and submit their assignments. Web-based systems allow students to do much of their own administration, which both motivates them and cuts costs.

The second component, a quality student support system, is something we can never take for granted. However, both public and for-profit systems now have widespread experience with the effective management of large student support systems using part-time tutors. These systems benefit from increasing connectivity by allowing quicker feedback on student assignments and easier tutor-student and student-student communications.

The third component is course development. Developing good distance learning courses is expensive because it requires intellectual effort by skilled people, preferably working as a team. The secret of cutting costs is not to skimp on the intellectual and pedagogical input to courses but to achieve economies of scale by having each course - or a version of it - reach many students. For this reason the notion of sharing and adapting courses between institutions has been on the distance learning agenda for many years, but with disappointing results in terms of courses actually shared.

There are two reasons for the disappointment. First, even distance learning institutions suffer from the 'not-invented-here syndrome' that makes them reluctant to use material from elsewhere. Second, the adaptation of courses that are not in electronic formats is cumbersome and expensive.

Recent developments have altered this picture dramatically. We all now use search engines to locate material on the Web, which makes us less prone to the 'not-invented-here syndrome'. Second, the availability of materials in electronic formats has made sharing and adaptation easy.

The result is the growing worldwide movement to create open educational resources.

Open Educational Resources

The potential of open educational resources, or OERs, to make quality learning material available at low cost has attracted the support of donors that wish to increase access to education worldwide. We pay a special tribute to the William and Flora Hewlett Foundation that has made particularly large and intelligent investments in the creation of OERs. Our remarks as we assess the state of play in OERs are intended in a constructive spirit. Without Hewlett's commitment there would be much less to assess. We mention three of Hewlett's projects in particular because they highlight the evolution of OERs in relation to access.

In 2001 the Massachusetts Institute of Technology (MIT) caused a stir by making the course notes of its faculty available on the web for all to see. This launched the OER movement with all the prestige of MIT. The material on display is information on course curricula rather than self-learning materials but it is widely consulted as a benchmark by faculty and students around the world.

Last October the UK Open University took this one stage further with its OpenLearn initiative. This makes self-learning materials, student support and collaboration tools available on the web. OpenLearn receives 20,000 visits a week and is intended to be of more direct value to students than the MIT material. The site also has a LabSpace where people can mix, match and adapt the materials.

If MIT's OpenCourseware shares information and the UKOU's OpenLearn shares learning, the next step is to share teaching - or course development. This is what COL and 28 country partners are now doing through the Virtual University for Small States of the Commonwealth, which COL is coordinating through Paul West.

People from many developing small states are already working collaboratively to prepare learning materials on Tourism and Entrepreneurship, Teacher Education and Life Skills. These international course teams are developing OERs on a Wiki called WikiEducator that COL created last year. The OERS they produce will be adapted appropriately as courses for each country.

So far, so good! In a few years we have progressed from sharing lecture notes to sharing learning materials to sharing course development. Why then, do we ask whether open educational resources are a help or a hindrance to open learning? We have a number of related worries.

For starters there is the classic development challenge of the last mile. Fancy fibre telecom systems often don't cover the last mile to the individual user. The results of agricultural research frequently don't reach

the poor farmer in the African village. Simple disease-avoidance information doesn't make it to illiterate mothers who could use it to keep their children healthy.

So the big question is, will all these nice OERs make it out of their electronic repositories and take the form of real courses that can be studied for credit by real people, even if they don't have access to technology? That is the key question for the Virtual University for Small States of the Commonwealth. We hope that by the end of this year we shall be able to answer it positively. What are the challenges?

The first is simply getting the OERs produced. Collaborating online from more than 20 small countries is not straightforward, especially as the course developers have other duties besides contributing to OERs. A second challenge is for each country to convert the OER into a course that is appropriate for its needs and its qualification framework. To address this problem we are working with the South African Qualifications Authority to come up with a common framework that blends what the small states already have. We are urging the participating states to start early in fitting the courses derived from OERs into their institutional curricula. A third challenge is to create delivery and student support systems appropriate for each of 28 small countries.

Our purpose today is to urge all of you who want the OER movement to achieve its potential for expanding access to education to work on the last-mile problem. This means avoiding two common pitfalls.

The first is our tendency to get preoccupied with the medium rather than the message. We get so carried away by perfecting the medium that we forget the message it is meant to carry. We are all for research, but the history of educational technology shows that people often get so carried away by refining and perfecting their tools that they lose sight of the ultimate purpose, which is to expand access to learning for real people. Rather than waiting for the perfect all-singing, all-dancing OER in the perfect learning object repository we need OERs that are good enough for onward adaptation and readily accessible.

A second and related pitfall is obsession with the meaning of 'open' in open educational resources. From what we have already said you will know that we believe in openness. To go on our WikiEducator, OERs must be fully open in the sense of a CC-BY-SA license. Anyone can use and adapt the material provided they acknowledge the source and put their new adaptation back into the system. But WikiEducator cannot be the only game in town. There will often be a trade-off between openness and quality.

For example the excellent UKOU materials on OpenLearn can be widely used and adapted, but they do carry a Non-Commercial use restriction. Such a restriction was a necessary condition for getting the UKOU to open up its materials in the first place and is perfectly reasonable pending much more experience of the real use and adaptation of OERs by institutions and individuals.

In fact, the Non-Commercial restriction places no restriction on the using institution's ability to charge for all costs, be they registration fees and printing costs, and overheads and salaries. The restriction simply means that the material should not be used for generating bottom-line profits without first contacting the owners of the intellectual property and securing permission.

Some course developers may want to introduce third-party copyrighted material into their distance learning materials. This is a perfectly rational calculation if the material is of classic importance or if the cost of copyright clearance for using it is less than recreating something similar.

We believe in simplicity but we live in a complex world that cannot always be simplified as far as we might like. WikiEducator is really another oxymoron - a repository restricted to totally free materials. We also need repositories that can contain material that can be used with different levels of freedom, the challenge being to tag each one in such a way that users know what they are getting.

The Commonwealth of Learning has invested considerable effort in helping countries understand the world of copyright, copyright exemptions and Creative Commons licenses in order to help them extend access to learning at the lowest possible cost. This advice is summarised in the Copyright Guideline available on our website.

Conclusion

It is time to conclude. Are open educational resources a help or a hindrance to open learning? We believe that they can be a terrific asset but that is still an act of faith. Before we can say with certainty that OERs are part of the answer to the access problem we need to see large numbers of them cover the last mile to disadvantaged learners and give them useful qualifications or skills.

Do not let your fascination with perfecting OERs or computer-supported collaborative learning or pedagogical scripting - or whatever excites you - distract you from the goal of improved access to learning. Do not make your commitment to the freedom culture a straitjacket that prevents you from helping learners in sensible ways. Focus on the benefits to learners, individually and collectively, and you will indeed live to see the day when open and online learning is no longer an oxymoron.

References

[Commonwealth of Learning \(2007\) Copyright Guideline](#)

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