



A Guide to Quality in Post-Traditional Online Higher Education

Editors' Foreword

In 2013, Academic Partnerships published, in English and Chinese, *A Guide to Quality in Online Learning*. Neil Butcher and Merridy Wilson-Strydom co-authored the text, and we served as editors. That document focused on formal online courses and programmes leading to certification. Reaction to the guide from around the world was very positive, but, because it appeared at a time of intense press coverage of massive open online courses (MOOCs), some readers asked if we could prepare another document that would explore quality issues in less formal types of online learning.

This *Guide to Quality in Post-Traditional Online Higher Education* is the result. In the year since we issued the first guide, alternative or 'post-traditional' approaches to higher education have continued to multiply. These approaches include new types of informal short courses and approaches to certification, growing openness in access to intellectual capital, and a lively diversification of teaching and learning methods, not least in MOOCs. This new Guide seeks to help individuals and institutions that are venturing into this post-traditional world.

We were very pleased that Neil Butcher agreed once again to be the lead author, assisted this time by Sarah Hoosen, who had worked with him earlier on two significant documents commissioned for

UNESCO's 2012 World Congress on Open Educational Resources. Living in Africa but working globally, both authors know about the diversity of technological infrastructure available in different regions of the world and are able to cite examples of post-traditional initiatives in various countries. We have enjoyed working with such expert and professional colleagues.

A move to greater openness on several dimensions is the common thread in what we are calling 'post-traditional' higher education. The authors stress that it is too early to be prescriptive about good practice in the quality assurance of these new manifestations of higher education because the field is in a state of rapid evolution. Nevertheless, we hope that this guide will encourage individuals and institutions to engage with the drive to openness and develop their own principles and practices to ensure that students benefit from these new opportunities.

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■ Introduction

In 2013 Academic Partnerships published, simultaneously in English and Chinese, a Guide to Quality in Online Learning. It was primarily concerned with online learning in formal higher education, i.e. with formally assessed courses and programmes leading to credentials. Recent years, however, have seen the multiplication of alternative or ‘post-traditional’ elements of higher education. These include new types of informal short courses and approaches to certification, growing openness in access to intellectual capital, and a lively diversification of teaching and learning methods. This new Guide aims to help individuals and institutions that are adopting post-traditional approaches by outlining key issues to consider when assuring the quality of their offerings.

The quality assurance of post-traditional higher education is not straightforward, because openness and flexibility are primary characteristics of these new approaches, whereas traditional approaches to quality assurance were designed for teaching and learning within more tightly structured frameworks. This Guide will grapple with this dilemma, drawing on emerging examples, after putting post-traditional higher education in context and exploring the various new manifestations of openness.

The emergence of these new forms of post-traditional higher education has been driven by various factors, including: global growth of unemployment, particularly among young people (which is raising demands for access to post-secondary education as jobs for unskilled and semi-skilled labour are declining); challenges facing mainstream higher education institutions as they experience diminishing financial support from governments but pressure to increase enrolment numbers; and the potential for innovative experimentation inherent in new forms of technology.

Driven by the core value of education as a human right, ideas of emancipation of education for all, and growing disruption of higher education’s traditional business models, there is a steady move towards ‘openness’ that is driving innovation and has the potential to create a new paradigm in higher education. Openness is an increasing factor in mainstream education, with value being attached to concepts such as open content, open data, and open educational resources (OER), along with notions of transparency and easy access to data and information. Additionally, education providers are increasingly leveraging the Internet, digital content, open licensing, and social networking to create new forms of education. Usually web-based or offered online, these initiatives aim to increase access to higher education and to make its curricula and awards more relevant to contemporary needs.

At the same time, there is also growing recognition of the need for lifelong learning to keep pace with constantly changing global job markets and technologies, as well as to increase income levels, particularly in light of recent global economic disruptions. Education is becoming an integral activity in everyday lives rather than being confined to dedicated places and times, allowing people to develop their skills without always having to undergo formal study.

This guide provides a roadmap of issues generated by the concepts of openness and post-traditional online higher education. It explains their meaning, assesses their implications for institutions, suggesting how they can embrace greater openness and its innovations without sacrificing their reputation for quality. However, most of the developments we describe are new and largely experimental, so it is hard to predict with any degree of accuracy what their long-term effects on higher education may be. We are well aware that new waves of experimentation tend to be accompanied by grandiose predictions of sweeping changes to come, most of which later prove to have been massively overhyped. Thus, the guide confines itself to describing various new forms of post-traditional higher education and reflecting on some of their potential consequences. Whatever the future holds, it is important for higher education institutions to understand and consider these issues. Given the uncertainty about the impact of these trends, we do not offer any simple recipes for successful engagement with post-traditional higher education at this early stage in its development.

The guide is structured in the form of ‘Frequently Asked Questions’ as a simple way of presenting the central arguments. Our primary audiences are: university decision-makers, faculty and academic staff, government policy-makers, funding bodies, and researchers. While a short guide cannot unpack all the rich debates about post-traditional education and quality, we have tried to flag key issues so that you can explore topics of special interest in more detail.

1 What is post-traditional higher education?

Our usual image of a higher education institution is of a place where people go once in their lives, often between 18 and 22 years old, to move through it in a linear fashion over four years. We think of the classroom and the lecturer as the primary sources of information and the campus as the centre of learning.¹ However, that image is changing rapidly. The workplace is demanding skills, such as communication and critical thinking, that we may more easily acquire from informal learning experiences than in institutions. Informal learning can refer to any learning outside of a formal school setting, but a more practical definition is that informal learning is self-directed and aligns with the student’s personal learning goals.² Likewise, new methods of distance education and online learning are transforming the student experience, even on campus.

Students now face an abundance of choices and the idea of studying at one place and for one period is dated. Many students (usually still called non-traditional students) are attending higher education institutions later in life and/or part-time, or they attend several institutions (sometimes simultaneously), extend the time to graduation by taking time off between semesters, mix learning experiences like cooperative programmes or internships with traditional courses, and sign up for alternative experiences such as massive open online courses (MOOCs).³ This is part of a general trend to offer shorter courses, and catalogues of such courses from many sources are appearing.⁴ For example, Academic Partnerships now offers ‘Specializations’, which condense longer programmes on employment-related topics into much shorter stand-alone courses available online worldwide.⁵ Students also have access to flexible learning

opportunities to meet their needs, and access to around-the-clock information and resources to support their success. For example, Contact North presents online and distance programmes and courses offered by Ontario's public education and training providers.⁶ Learners can also get recognition and credentials for their achievements via alternative assessment strategies such as competency-based assessments, portfolios, and badges. We refer to these alternatives as 'post-traditional higher education'.

Miyazoe and Anderson (2013) argue the need for education that creates adaptable and affordable models of high-level interaction, but allows the learner to augment or choose adaptations that meet their constraints of time and money.

For learners who have acquired the skill of managing his/her learning, the formal educational system is losing its traditional status and authority as the only authentic education provider. It is time that we accept this challenge and recreate our institutions for service in a networked, lifelong learning context.⁷

These environments, while still new and evolving, try to cater to both formal and informal learning experiences by giving students traditional assignments, such as textbook readings and paper writing, as well as allowing for more open-ended, unstructured time and encouraging them to experiment, play, and explore topics based on their own motivations.⁸

A striking example is a 16-year old boy from Bangladesh who took as many as 32 Coursera and edX MOOCs in the last year of secondary school, founded a student community 'Education for Everyone in Bangladesh' and launched a "Bangladesh Coursera Portal" to promote MOOCs in his country.⁹

Post-traditional students are typically able to work independently, or at least to seek specific help when they need it. In addition, competency assessment helps post-traditional students to identify areas in which they excel and those where they have gaps, honouring the knowledge, skills, and abilities that they bring and granting credit for course equivalency.¹⁰

2 Does post-traditional higher education always involve online learning and the Internet?

Most forms of post-traditional education are based on the premise that learning can occur anywhere at any time. Students already spend much of their time on the Internet, learning and exchanging new information – often via social networks. So post-traditional higher education generally does use online learning and the Internet.

Digitization of content has made sharing of learning resources both simple and highly scalable, thus opening access to intellectual capital as never before. The range of learning resources openly accessible online is vast (and growing very rapidly), so the Internet makes it possible for students and faculty to find and adapt quality learning materials on many subjects.¹¹ Additionally, online learning environments can offer different affordances than physical campuses, including opportunities for increased collaboration that also equip students with stronger digital skills¹², asynchronous learning that is convenient for those

who have full-time jobs or other commitments, and extended access to education for students in remote areas who cannot go to campuses.

3 What does 'open' mean in education?

A common aim in post-traditional innovations is greater openness. 'Open(ness)' has become the watermark for a fast growing number of learning materials and associated platforms and practices emanating from various institutions and individuals. The notion of open learning, once defined largely by admission requirements, has exploded into a rainbow of 'open' concepts, all of which challenge traditional ideas of campus centrality, ownership, restricted access, academic privilege, and educational hierarchy.¹³ However, the word is often applied loosely. Now that it has currency, many different sectors are appropriating it in such expressions as open government, open architecture, open society, open access to research data, and open source software.^{14,15} We also hear terms such as 'Open Scholar', 'Open Professor' and 'Open Assessment'.¹⁶

Two important notions, egalitarianism and sharing, are at the core of the concept of 'open'. Egalitarianism implies an equal right to participate (access, use, and collaboration). Sharing is rooted in the idea of widening access where it has previously been restricted. Enhanced access is often motivated by a desire to share, whether through a wish to contribute to the common good or to participate in a coordinated or collaborative activity.¹⁷ Technological developments have helped the concept of 'open' in education to emerge in its current forms.¹⁸ For instance, 'open content' is an attempt to carry over the logic of 'open source' software to the non-software world of cultural and scientific artefacts like music, literature, and images.¹⁹ Johnson et al (2013) report that open education advocates are working towards a common understanding of 'open' as free, able to be copied, remixable (that is, able to be adapted and combined with other content to create new content), and without any barriers to access or interaction.²⁰

Openness is closely allied to the paradigm of post-traditional higher education because both tackle the challenge of widening access to information and knowledge. The trend towards open education, with its principles of egalitarianism and sharing, helps to drive post-traditional higher education to increase access to education and opportunities for lifelong learning.

4 What are the main expressions of 'openness?'

Higher education has embraced openness for many decades, notably through the creation of open universities.²¹ More recently, various developments in open education such as Open and Distance Learning (ODL), Open Access (OA), Open Educational Resources (OER), and OpenCourseWare (OCW), have each made a valuable contribution to creating a new culture of openness. However, openness is not an absolute concept. For example, although MOOCs often fly the 'open' banner²², many of them are not truly open.²³ Clark (2013) argues that openness and open education need to be viewed along a continuum, with varying degrees of openness and access to knowledge as the guiding core principle.²⁴

Licensing is central to the issue of openness. Legal frameworks (such as Creative Commons – see www.creativecommons.org) help to govern how open a resource really is. They provide legal mechanisms to ensure that authors of materials can receive acknowledgement for their work while allowing it to be shared. They can also restrict commercial activity and prevent people from adapting a resource if they so wish.

There have been attempts to define openness in particular domains. For example, in the area of open content, a widely used description of openness is the ‘4Rs’ by Wiley (2009):

1. Reuse – the right to reuse the content in its unaltered / verbatim form;
2. Revise – the right to adapt, adjust, modify, or alter the content itself;
3. Remix – the right to combine the original or revised content with other content to create something new; and
4. Redistribute – the right to make and share copies of the original content, your revisions, or your remixes with others.

To the degree that a license provides users with no-cost (free) permission to exercise these rights with regard to content, that content is open. Thus, whether these rights are granted unconditionally or permitted only if the user meets certain conditions (for example, requiring attribution, necessitating distribution of derivatives under a specified license, or prohibiting commercial redistribution), it is still appropriate to call this content open. The fewer restrictions a license places on a user’s ability to exercise 4R rights in the content, the more open the content is.²⁵

We can conclude from this that there is no firm definition of what open and openness are. For this reason, it is most helpful to consider the concept of openness in relation to specific terms currently in use.

5 What are some key terms related to openness?

5.1 Open learning

Open learning is a long-established approach to education that seeks to remove barriers to learning, while aiming to provide students with a reasonable chance of success in an education and training system centred on their particular needs.²⁶ This approach to learning gives students flexibility and choice over what, when, where, at what pace, and how they learn.²⁷

The Commonwealth of Learning notes that open learning gives learners choices about:

- Medium or media (for example, print, on-line, television, or video);
- Place of study (at home, in the workplace, or on campus);
- Pace of study (closely paced or unstructured);
- Support mechanisms (for example, tutors on demand, audio conferences, or computer-assisted learning); and
- Entry and exit points.²⁸

These principles clearly accord with post-traditional higher education’s goals of encompassing lifelong learning, flexibility in learning provision, prior and experiential learning and competency-based assessment.

It offers learners the opportunity to accumulate credits from different contexts.

The concept of open learning has been used in educational circles, and particularly in distance education settings, for many years, thus pre-dating most other concepts of openness in education.

5.2 Open source software

'Open source' refers to artefacts that can be modified because their design is publicly accessible. Open source software is computer software that is distributed along with its source code – the code that is used to create the software. This allows the public to use and/or modify the original design free of charge. It usually has a license in which the copyright holder provides the rights to study, change, and distribute the software to anyone and for any purpose.

Well-known open source projects are the Linux operating system, the Mozilla Firefox Web browser, and the OpenOffice.org productivity suite. Some of the most widely used open source Learning Management System tools are Moodle, Claroline, Dokeos Sakai, and .LRN (pronounced 'dot learn'). Each of these projects has gained a level of popularity that rivals their commercial counterparts.

The availability of such open source solutions and their philosophy of shared intellectual capital are important in the context of post-traditional higher education. They offer a low-cost technology option for education service providers (including many outside traditional higher education institutions that wish to offer post-traditional higher education that competes cost-effectively with the established incumbents). Such tools allow anyone to set up platforms to offer education with relatively low investments in IT infrastructure.

5.3 Open access

Over the last decade, rising prices of learned journals have increased subscription costs beyond the reach of many universities, particularly those in developing countries.²⁹ Open Access (OA) is a solution to this problem.

Generally, OA refers to research articles that are freely and openly available to the public for reading, reviewing, and making and distributing derivative works.³⁰ A literature is digital, online, free of charge, and free of most copyright and licensing restrictions. It is made possible by the Internet and the consent of the author or copyright-holder.³¹ Open Access publishing is compatible with peer-review, and open access articles typically go through normal refereeing and editorial processes.³²

5.4 Open data

Open data refers to data that can be freely used, shared, and built on by anyone, anywhere, for any purpose.³³ It is usually non-personally identifiable data produced in the course of an organization's ordinary business, which has been released under an unrestricted license (like the Open Government License – see <http://www.nationalarchives.gov.uk/doc/open-government-license/version/2/>).³⁴ The philosophy behind open data is long established, but the term itself is relatively recent, and can be summarized as:

*A piece of data or content is open if anyone is free to use, reuse, and redistribute it – subject only, at most, to the requirement to attribute and/or share-alike.*³⁵

When governments and organizations build open content and harness open data, they help to establish a culture of openness and sharing. The philosophy underlying open data, namely increasing transparency and publishing information under open licenses, has important implications for developing post-traditional higher education. This level of openness and provision of open data can constitute one of the building blocks to support development of various kinds of post-traditional education.

5.5 Open educational resources

Open Educational Resources (OER) apply open source principles to the release of educational content.³⁶ The term refers to any educational resources (including curriculum maps, course materials, textbooks, streaming videos, multimedia applications, podcasts, or any other materials designed for use in teaching and learning) that are openly available for use by educators and students, without the need to pay royalties or license fees.³⁷ OER can exist as smaller, stand-alone resources (reusable learning objects) that can be mixed and combined to form larger pieces of content or as larger course modules or full courses. OER can also include simulations, virtual laboratories, collections, journals, and tools. These materials are considered open if they are released under an open license such as a Creative Commons license.

The 2012 Paris Declaration on Open Educational Resources adopts the definition of OER as:

*Teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions.*³⁸

The fundamental principle underlying OER is the freedom to share knowledge, which should be legally, socially, and technologically open.³⁹ This ensures greater access for more people than a similar commercial product that is not free. It also increases flexibility of use, which in turn creates opportunity for greater access.⁴⁰

OER create multiple opportunities to innovate in teaching and learning. For example, sharing of resources opens access to intellectual capital, which can dramatically improve the affordability of education. It can also enable better personalization of instruction,⁴¹ by focusing less on the content (which is freely available) and more on the facilitation of learning interactions. This directly facilitates post-traditional higher education by allowing increased access to education and encouraging educators to think beyond traditional ways of teaching.

OER have also been adopted by institutions such as Massachusetts Institute of Technology (MIT OCW Initiative) and Rice University (Connexions project), the world's large open universities (such as the Indira Gandhi National Open University and the UK Open University), and populist and community sectors (such as WikiEducator, P2PU; Washington's Open Course Library). New collaborations, such as the OER university consortium, are also opening doors to new levels of educational democratization and growth through access to higher learning.⁴²

5.6 Massive open online courses (MOOCs)

MOOCs have captured the attention of the news media as no other development in higher education in recent years, leading The New York Times to declare 2012 ‘the year of the MOOC’. In the context of this Guide, MOOCs highlight three issues. The first concerns the essential nature of post-traditional higher education. Should post-traditional higher education share a key feature of traditional higher education, namely the award of credentials, or is it mainly about expanding opportunities for informal learning? To date, most MOOCs do not lead to credentials that would be accepted for credit at the institutions that offer them. We return to this issue in FAQ 9.

Second, how open are MOOCs? We noted in FAQ 4 that, although openness and open education should be viewed along a continuum, the concept of making the content of education open for re-use is particularly important. Yet the content of many MOOCs is not open in this way. Third, MOOCs are an excellent example of the rapid diversification of post-traditional higher education, as is clear from a summary of their history.

The term MOOCs was coined in 2008 to refer to a web course with potentially thousands of participants that people could take from anywhere across the world. It was based on an extensive and diverse set of content, contributed by a variety of experts, educators, and instructors, and aggregated into a central repository. The originality of the idea was that this content could be ‘remixed’ by learners in whatever manner suited each of their learning journeys. All course materials and the course itself were open source and free, with the option of a paying a fee for those wishing to obtain university credit.⁴³

However, the MOOC concept took a very different turn in 2012, when a number of well-known US universities offered informal learning on various topics to large global audiences using a very traditional instructional model. Students who passed the computerized tests could not obtain credit, and in most cases the study materials did not carry open licenses.

Whilst the two types of courses, often called cMOOCs and xMOOCs respectively, have some common features, they clearly differ in the learning theory and pedagogical model they employ – in particular, the ways in which social interactions happen during the courses. Furthermore, the concept of openness behind each of the formats contrasts sharply.⁴⁴

In essence, cMOOCs are based on a philosophy of connectivism and networking, where students learn from educators and from each other in online course environments. These online courses are community constructed and driven.⁴⁵ xMOOCs tend to follow traditional behaviourist approaches to learning and the structure of existing educational practices. They typically have traditional course structures, content, and methods, with videotaped lectures, online quizzes, and weekly assignments. Their primary innovation is scaling.⁴⁶ Existing institutional courses have often simply been translated into a web-based environment and made available to all.

Despite their differences, the technological advances, which include the quality of online delivery platforms,

the ability to personalize material, and the capacity to analyse huge numbers of student experiences to see which approach works best, allow MOOCs to offer learning opportunities to millions of people.⁴⁷ They have the potential to reach and serve very large numbers of learners who would otherwise not have access to education.⁴⁸ They offer the possibility for continued, advanced learning at close to zero cost, enabling students, lifelong learners, and professionals to acquire new skills and improve their knowledge and employability.⁴⁹

Since 2012, as many higher education institutions and other organizations around the world have joined in, MOOCs have multiplied fast. Although they were originally a North American phenomenon, many other countries are now developing their own MOOC platforms and converting existing courses into MOOCs. Examples include FutureLearn (UK), NPTEL (India), OpenUpEd (Europe-EADTU), Schoo (Japan), Open2Study (Australia), Veduca (Brazil), FUN (France) Iversity (Germany), and Wisdom Tree (China).⁵⁰ There were over 1,000 MOOCs on offer in early 2014. The pedagogical styles of MOOCs have also diversified greatly with recent offerings having features of both cMOOCs and xMOOCs. This means that definitions of ‘massive’, ‘open’, ‘online’, and ‘course’ now vary widely.

Much of the diversification of MOOCs is motivated by two aims, often pursued simultaneously. The first is to provide credible recognition for the successful study of a MOOC. The second is to generate revenue for the institutions offering MOOCs, since most cannot continue indefinitely to invest money in creating courses while offering them free.

6 What is driving post-traditional higher education?

The key characteristic of post-traditional higher education (PTHE) is that it makes higher learning more open and accessible. Several factors are both stimulating and enabling this development.

Technology. ICT enables exponential increases in the transfer of data through increasingly globalized communication systems and connects growing numbers of people. The Internet allows us to copy and share information with previously unimaginable efficiency.⁵¹ The economics of distributing information digitally facilitate widespread, free sharing on a scale never seen before. The Web 2.0 explosion has created free tools that distribute content across the network.⁵² Collective intelligence and the mass participation of amateurs in previously specialized disciplinary areas are extending the boundaries of scholarship. Open source software provides users with free and legal replacements for expensive tools.⁵³ Educational resources are now available to more people than ever before.⁵⁴

Knowledge is a common good. PTHE is also driven by the fundamental principle that knowledge is a common good and should be maximally accessible.⁵⁵ As Wiley and Hilton (2009) note:

*Openness is a fundamental value underlying significant changes in society and is a prerequisite to changes institutions of higher education need to make in order to remain relevant to the society in which they exist.*⁵⁶

Increasing openness in society is stimulating radical experiments in higher education and putting pressure on

institutions. Some data that were once unavailable to the public are now freely accessible. Expensive reference texts such as encyclopaedias are available for the price of an Internet connection.⁵⁷ The rise in open access also drives a culture of openness in research so that open peer-reviewed publications are multiplying; for example, the Directory of Open Access Journals <http://www.doaj.org> gives an inventory of 9,804 Open Access journals (listed as of February, 2014).

Unemployment. A high level of unemployment, particularly among young people, is a feature of the contemporary world. Reducing economic, geographic, and social barriers to participation in post-secondary education and training is an important element of the solution. This means ready access to affordable learning materials relevant to the labour market, to personal support and to mechanisms for certification that match the scope and content of the skills and knowledge acquired.

Governments. Many governments around the world are taking steps to open up their data and adopt policies for maximum transparency and citizen engagement. An example is Australia's AUSGOAL (<http://www.ausgoal.gov.au/>), the nationally endorsed Australian Government's Open Access and Licensing Framework, which recommends the suite of CC licenses for copyrighted material and the CC Public Domain Mark for non-copyrighted material.⁵⁸ As governments move towards open policies, hundreds of billions of dollars of educational and research resources will become freely and legally available to the public that paid for them. This argument is also seen in debates about access to results of academic research, much of which is funded by taxpayers. For example, Brazil introduced legislation that requires government-funded educational resources to be made available to the public under an open license. It highlights that resources produced by public servants in an official capacity should be openly licensed or otherwise released under an open access framework.⁵⁹ Inter-governmental organizations have also moved in this direction. Examples include initiatives like the UNESCO World OER Congress in 2012, and UNESCO/COL's development of policy guidelines covering the implementation and standardization of OER in higher education.⁶⁰

Higher education costs too much. The growing cost of higher education is also driving an increase in openness. In some countries, the inflation of tuition fees has put post-secondary study out of reach for some people. Many higher education institutions face financial challenges themselves, compelling them to review their business models. In parts of the world, they are struggling with large enrolment numbers as global demand for access to higher education continues to rise. MOOCs were hailed as a possible solution to make education widely accessible at a lower cost, but institutions have yet to integrate MOOCs into a viable economic framework.⁶¹ In other countries, the high price of textbooks is a significant element in the cost of higher education, which OER have great potential to reduce.⁶² This has seen faculty, governments, and foundations building and/or commissioning and sharing high-quality, openly licensed textbooks with the world.

7 What will be the impact of post-traditional higher education on institutions?

The steady growth of various manifestations of post-traditional higher education will potentially impact on conventional higher education in various ways. Some will be perceived as negative, whilst others will be viewed more positively.

Challenging intellectual authority. Universities once held a monopoly on access to expert faculty.⁶³ However, openness is challenging the notion that formally credentialed ‘experts’ are the only producers of knowledge or the sole sources of innovation.⁶⁴ Open service providers are challenging this mindset. Examples are MIT OCW and the Carnegie Mellon University Open Learning Initiative, which make content openly available, and providers like ChaCha, which gives free, real-time answers to any question both online at ChaCha.com and through mobile phones. This fosters a competitive climate for higher education institutions, and encourages them to develop strategies to grapple with the challenges and opportunities presented by openness.⁶⁵

Abundant content. One impact of openness has been that parts of education which drew value from scarcity have become abundant. Educational content for many subjects is now freely and openly available online.⁶⁶ Open textbooks provide faculty and students with a low-cost alternative to traditional publishers’ textbooks.⁶⁷ For example, Lilongwe University of Agriculture and Natural Resources, Bunda campus (previously known as the Bunda College of Agriculture) in Malawi, developed a textbook on Communication Skills using openly licensed content. Prior to this, there was no textbook for the Communication Skills syllabus. Lecturers used several texts, to which the students did not have access, to teach the syllabus. A series of writing workshops facilitated by OER Africa assisted staff to source, analyse, and adapt a variety of existing OER to help craft the textbook. The team members wrote new materials but also used and adapted material from all around the English speaking world to suit the specific needs of this course.⁶⁸ The project resulted in the compilation of a first-year communication skills textbook.

Students as open scholars. Openness can transform student activities and create ‘open scholars’. Anderson (2009) characterizes open scholars as being able to create, use, and contribute OER, self-archive, apply their research, do open research, filter and share with others, support emerging open learning alternatives, publish in open access journals, comment openly on the works of others, and build networks.⁶⁹ This can also improve research, as academics can focus on teaching research skills, and developing students as producers.

Outreach. Post-traditional higher education creates space for better outreach and community engagement, which is particularly important for universities in developing countries. Thus, for example, Makerere University in Uganda developed a programme to improve the production and economic performance of dairy farms after the dairy industry was identified by the Ugandan government as a priority sector for development. The programme involved graduate students collecting baseline data with which interventions could be designed, and then serving as conduits of information between the University and farmers as they aided in implementation and monitoring of the success of these interventions on the dairy value chain. The results of the project and knowledge gained from this engagement were captured in the form of OER, so that they can be re-used by future students and by other universities undertaking similar initiatives, making the replication of this initiative feasible and cost-effective.⁷⁰

Control of software. Open source software allows institutions to set up their own platforms based on cloud

services. A common open source application in education is Learning Management Systems (LMS), which facilitate administration, documentation, tracking, and reporting of training programmes, classroom and online events, e-learning programmes, and training content. The availability of such software reduces the cost to institutions of deploying teaching tools. Furthermore, the growing community of contributors helps to keep the software current, allowing institutions to collaborate and adapt as new changes are offered. This helps to drive innovation.

Unbundling. Some open education proponents, such as Wiley (2009), speak of the ‘disaggregation (or unbundling) of education’, and speculate how core institutional services might evolve as independent elements in an open education ecosystem.⁷¹ Institutions will need to decide what role they are going to play in higher education and innovation and may need to become open service providers to maintain their positions. The educational focus of institutions will tighten so that they make more efficient use of the resources they have.

8 How can we assure the quality of post-traditional higher education?

As online post-traditional higher education develops and grows, the issue of quality is becoming increasingly important. The quality assurance (QA) of MOOCs is a particular area of concern because they usually lack structure (compared to other online courses), are largely self-directed learning and rarely include a central role for an educator.

However, fundamental judgements about quality should not depend on whether education is provided in a traditional or post-traditional manner. For example, xMOOCs largely replicate traditional university courses, so the same quality principles that institutions use for all courses can readily be used to improve the quality of their MOOCs. Similarly the quality criteria used to assess the quality of any educational materials can be applied to OER.

On its current trajectory, therefore, the growth of openness is unlikely to demand major changes to quality assurance practices in institutions. The principles of good quality higher education have not changed. Quality assurance has two basic functions: accountability (summative assessment) and improvement (formative assessment). Quality procedures for accountability purposes are often based on criteria set down by external bodies. They aim at strengthening external control, with possibility of undertaking corrective action where necessary. Quality procedures for improvement aim at enhancing future performance rather than judging past performance.⁷²

Changes to traditional systems may, however, be occurring in the roles of stakeholders. Our earlier Guide to Quality in Online Learning noted that higher education institutions must always take full responsibility for the quality of their offerings.⁷³ Thus, open content release should be subject to ongoing institutional QA processes.

Providers outside the formal higher education sector undertake quality review themselves, and

traditional quality assurance and accreditation usually do not cover their work.⁷⁴ However, countries are beginning to consider ways of tackling this provision. Norway, for example, is reviewing the QA of web-based education in general because MOOCs have sharply increased the volume of education delivered in this way.⁷⁵

Daniel (2012) suggests that open courses and content be evaluated by learners and educators, leading to league tables that rank the courses by the quality of the offering. In this way, it is possible that courses from institutions and individuals that rate poorly will either disappear due to lack of demand or survive by improving course quality in response to those poor ratings.⁷⁶ There are already efforts to provide learner ratings – see, for example, Moocivity (<http://www.moocivity.com/>); Coursetalk (<http://www.coursetalk.org/>) and Grade My Course (<http://www.grademycourse.com/>).

This challenges the role of higher education institutions and national QA and accrediting bodies as custodians of quality. It also raises concerns in the area of cross-border higher education, particularly as this pertains to the role of national and regional QA and accrediting bodies in assuring the quality of courses outside their jurisdiction. Open content gives students an important role in deciding what is useful and what is not. Post-traditional students have a greater ability to assess quality, particularly where transparent information gives them the chance to review study options before enrolling.

For informal education providers, a case for regulatory oversight may seem a sensible option. However, such efforts tend to be national (and may therefore not include the quality of international offerings), and may imply high levels of policing (which may reinforce the status quo). Given the rate of expansion of open education offerings, it is unlikely that national bodies will be able to regulate the delivery of PTHE. Indeed, attempting to do so may stifle innovation.

Accreditors need to think about their relationship to innovation. If the standards are built largely to assess incumbent models and are enforced by incumbents, they must be—by their very nature—conservative and in service to the status quo. In some ways, accreditors are being asked to shift or at least expand their role to accommodate these new models.⁷⁷

The Council for Higher Education Accreditation (CHEA; 2014) intends to develop a ‘Quality Platform’, to provide an external review of the quality of post-traditional providers. This would establish standards by which to review such providers.⁷⁸ Uvalić-Trumbić (2013) proposes that these reviews would judge provision against its primary purpose: what is it offering to the student? Using peer reviews, standards can be used to judge the provider’s success with regard to student learning and might benchmark the provider’s capacity and performance in relation to comparable providers. A provider that successfully completes the review would be identified as a ‘Quality Platform Provider’, which could provide an indicator of quality to colleges and universities when considering the award of credit or recognition.⁷⁹

8.1 OER: what are the quality considerations?

OER have tremendous potential to improve the quality, accessibility, and effectiveness of education, while serving to restore a core function of education: sharing knowledge. The transparency provided by OER (where resources produced by staff are shared openly) places social pressure on institutions and teaching staff to increase quality, allows them to coordinate curricula better, and provides resources for students' learning and for academic planning. This was seen for example at the University of Cape Town in South Africa, where participation in the African Health OER Initiative resulted in staff being aware of higher levels of scrutiny when creating OER, leading them to focus their efforts on the creation of good quality OER.⁸⁰ Traditionally, academics protected their intellectual capital. Moving towards openness exposes their teaching to the pressures of peer review, which can increase transparency and improve quality.⁸¹

In instances where academics produce new materials, their ability to draw inspiration and ideas from other people's openly accessible teaching materials can also increase quality. When adapting material, OER can be localized to suit local contexts to make the content more relevant and useful. For example, in Guyana, an ICT-friendly component for the teacher education curriculum was achieved by using an existing curriculum framework (the UNESCO ICT CFT) and repurposing OER.⁸² Sharing the derivative work with the larger OER community, allowing for additional cycles of use, modification and reuse, enhances its value. The establishment of such a cycle can help to improve quality. The idea that hundreds or thousands of individual scholars, teachers, practitioners, and students can create, review, and modify OER helps to ensure that factual inaccuracies, incomplete information, and cultural biases are questioned, while newly discovered information and knowledge is included in OER in a continuous cycle of improvement.

OER can also improve quality via the traditional peer review process that is now built into the workflow of OER repository platforms. Connexions, for example, has 'lenses', where a community or association can provide post-publication review by rating and commenting on selected resources in the Connexions repository.

Increasingly, while teaching staff are expected to have the knowledge and skills to teach in a broad spectrum of subjects, they often lack the time to re-visit and modify curriculum and educational materials on a regular and systematic basis. OER can be leveraged to improve quality through capacity building, by providing institutions and teaching staff access, at relatively low cost, with the means to create and adapt high quality teaching and learning materials. This can help to develop competence in producing such materials and in carrying out the necessary instructional design to integrate such materials into high quality programmes of learning.

We stress, however, that the quality of teaching materials will not change (for better or worse) simply because OER are being used. Institutions will need to continue to assure quality in the same ways they did before. Changing the licensing of material will not change the content or quality of the material. As Wiley (2013) points out:

Quality is not necessarily a function of copyright status. We are forced to admit that it is possible for openly licensed

*materials to be 'high quality.' We are also forced to admit that taking poor quality instructional materials and putting an open license on them does not improve their quality, either*⁸³

He emphasizes that quality is not a direct function of copyright status --neither OER nor traditional material can claim, intrinsically, to be of high quality. The primary meaning of quality that needs to be considered for educational materials is to consider the degree to which they support learning.⁸⁴

In the final analysis, responsibility for assuring the quality of OER used in teaching and learning environments will reside with the institution, programme/course coordinators, and individual educators responsible for delivery of education.

*Local experts must vet the quality of whatever resources they choose to adopt, and cannot abdicate this responsibility to publishing houses or anyone else.*⁸⁵

8.2 MOOCs: what are the quality considerations?

More than any other manifestation of post-traditional higher education, MOOCs have seared the potential of online learning into the consciousness of those working in higher education. MOOCs attract a large and diverse audience of learners, as demonstrated in research by Hill (2013), which indicates that there are at least four different types of people who enrol for MOOCs:

- 1) Curious observers who register to see what the course or the content is about;
- 2) Auditors or passive participants, who listen to most of the lectures and may follow discussions, but do not complete assignments and write examinations;
- 3) Drop-ins, who complete some portion of the course, but do not complete the full requirements; and
- 4) Active participants, who complete all of the activities and assessments (they usually comprise fewer than 10% of enrolments).⁸⁶

Weller (2013) holds that the most of the quality measures that have been developed for formal education do not apply to MOOCs, because in formal education there is a specific relationship between the education provider and the student.⁸⁷ Student assessment and certification is a central feature of this relationship, and one of the main criticisms of most MOOCs is that this key feature of higher education is missing.

Bates (2012) argues that, until institutions offering MOOCs are willing to award credit and degrees for them, they will still be regarded as a second-class form of education. He notes that MOOC providers like MITx do not recognize their own MOOCs for transfer into a degree, but allow their own MIT students, who have been admitted to campus-based programmes, to take them for credit. We can conclude from this that the institution regards MITx students as inferior to the ones who take its campus-based credit courses.⁸⁸ We explore the general question of awards for post-traditional higher education in FAQ 9 below. What other criteria can be used to assess the quality of MOOCs?

The European Association of Distance Teaching Universities (EADTU) is initiating a European MOOC platform called OpenUpEd. It has 12 university partners and is offering 40 courses in 12 languages. OpenUpEd created quality benchmarks for their MOOCs, and have noted that courses should show eight common features:

1. **Openness to learners** - This captures aspects such as: open entry (no formal pre-requisites), freedom to study at time, place and pace of choice, flexible pathways, suitability for a wide variety of lifelong learners. In a broader perspective this feature stresses the importance of being open to learners' needs.
2. **Digital openness** - Courses should be available online for free but in addition apply open licensing so that material and data can be reused, remixed, reworked and redistributed (e.g. using CC-BY-SA or similar)
3. **Learner-centred approach** - Courses should aid students to construct their own learning from a rich environment, and to share and communicate it with others; they should not simply focus on the transmission of content knowledge to the student.
4. **Independent learning** - A MOOC should provide high quality materials to enable an independent learner to progress through self-study.
5. **Media-supported interaction** - Course materials should make best use of online affordances (interactivity, communication, collaboration) as well as rich media (video and audio) to engage students with their learning.
6. **Recognition options** - Successful course completion should be recognised as indicating worthwhile educational achievement.
7. **Quality focus** - There should be a consistent focus on quality in the production and presentation of a MOOC.
8. **Spectrum of diversity** - A course should be inclusive and accessible to the wide diversity of citizens.⁸⁹

What the EADTU calls 'recognition options' is currently a major preoccupation of MOOC providers, partly in response to criticisms like that of Bates. We address this issue further in FAQs 9 - 11.

9 Can post-traditional higher education lead to awards?

The nature of post-traditional education is such that it can either be formal, leading to awards, or informal, allowing users to participate and gather information as they desire – it depends on the needs of the user.

Increasingly, formal and informal education providers are considering ways of providing recognition to users. This can either be via formal routes of accreditation and certification (FAQ 11) or using informal methods such as badges (FAQ 10) and credit point systems like Degreed, which assesses formal and informal learning and packages it into a score, validating users' lifelong learning.⁹⁰

Pathways that allow students to move between informal learning and formal accreditation already exist.

Institutions may allow a range of options such as competency-based testing, prior learning assessment and recognition, and the passing of standard examinations that are accepted for credit. Open education can take advantage of existing pathways to individual accreditation in the form of academic credit and credentials.⁹¹

An example of an informal provider of education is the Khan Academy, a non-profit educational organization that provides free video tutorials and interactive exercises. The lessons were conceived primarily for self-education, but are also suitable for use in the classroom. So whilst Khan Academy can be classified as an informal education provider, its offerings are being integrated into more formal settings, illustrating the blurring between formal and informal education. The Khan Academy does not provide formal accreditation, but users can earn badges and points for learning. The more users challenge themselves, the more badges they can earn – motivating learners to learn (see <https://www.khanacademy.org/badges>).

Clark (2013) suggests that it is important not to be fixated on resolving the issue of certification and accreditation, as the majority of lifelong learners appear to not want certification.⁹² Additionally, as this area of accreditation and recognition of post-traditional higher education is relatively new, there are no clear-cut answers and this debate is likely to continue as developments like MOOCs evolve and change. As new entrepreneurial opportunities multiply, it may be unwise to focus on past models such as awards. As Gupta and Qasem (2012) argue,

*The biggest challenge in innovation is envisioning a new paradigm and abandoning the old constructs. Certification may just be a construct of the old paradigm. The fundamental purpose of accreditation is to serve as a currency of competency.*⁹³

Thus, as higher education institutions respond to innovation, they need to position themselves to explore new opportunities.

10 Open badges: what is their relevance to quality?

Mozilla developed Open Badges, which is an online standard to recognize and verify learning.⁹⁴ It is a free and open technical standard that any organization can use to create, issue, and verify digital badges. It was created in recognition of the increased opportunities for personal growth and learning through various informal, participatory, and creative contexts, but the lack of formal recognition for these acquired competencies and skills. Mozilla thus developed a ‘badge ecosystem’ that allows users to exhibit their learning and proficiencies with earned personal badge collections.⁹⁵ The idea is to collect credentials about different aspects of a person’s life – work, school and recreation – and bring them together in an accurate picture of themselves, and to signal achievements to peers, potential employers, collaborators, educational institutions.⁹⁶ The goal is to support lifelong learning through on-going access to badges.

Users can collect badges from multiple sources, online and offline, into a single ‘backpack’ (the core management tool for earners to store badge data and set share controls). These badges can build upon each other and be stacked to provide a complete picture of a person’s skills and achievements. Users can then display their skills and achievements on social networking profiles, career sites, personal portfolios and websites. The Open Badge Infrastructure is the technical vehicle that enables interoperability among different badge systems. It supports the issuing, management, and display of badges. Participating issuers and displayers are free to innovate and design experiences of their own that are independent of the infrastructure. Some issuers may charge for certain assessments that result in the earning of badges, and some displayers may charge fees for sharing badges with particular networks or profiles.⁹⁷

The value of the badge comes from the information or metadata attached to it, which provides justification and validation. Each badge has important data built in that links back to the issuer and relevant standard bodies, criteria (how and when the badge was earned), and verifying evidence (it links back to artefacts, documents, or testimonials demonstrating the work that lead to earning the badge).⁹⁸ It thus provides concrete evidence and proof of skills, achievements, and interests. This is regarded as important in helping to open new career and learning opportunities. Additionally, this supporting data reduces the risk of ‘gaming’ the system and builds in an implicit validation system.⁹⁹

Badges can be created, defined, and issued by a wide range of sources, including formal and informal educational institutions, professional organizations, individuals, multinational companies, online courses and open courseware initiatives, and groups focused on professional development.¹⁰⁰

There are various different types and granularities of badges – for example, there are basic, foundational badges for simple requirements or prerequisites, and intermediate and expert level badges that provide pathways and milestones to guide learners through to mastery. Multiple badges can be aggregated into higher-level ‘meta-badges’ that signify more complex literacies or competencies. These meta-badges can be created and issued by organizations to target specific sets of skills and to signal general mastery.¹⁰¹ Badges are typically not seen as standing in for credentials on the level of an entire programme or course. They are instead envisioned as signifying fairly specific kinds of achievements and competencies.¹⁰²

Badges may provide a way of recognizing achievement within MOOCs, as well as driving engagement with them. They may indicate the expertise of a student in a particular role or topic, and can identify a student’s profile of skills to colleagues and employers. Badges may offer a flexible mechanism for recognizing achievements as steps towards more substantial goals. Educators can also use badges to motivate learners. They may be used to show that a learner has participated in, or successfully completed, a course or has demonstrated a particular level of competency in an activity or skill.¹⁰³

Badging can also provide an informal alternative to accreditation. Open badges can provide a credential for learning that occurs in a non-traditional setting. However, since they can also be used in a traditional setting, traditional higher education institutions can use open badges to enhance their current course

offerings and encourage lifelong learning.¹⁰⁴

As one example, Deakin University in Australia is experimenting with awarding peer credit badges to recognize student performance in the soft skills of teamwork, leadership, and communication. Students are encouraged 'to create and share rich evidence of their attainment of learning outcomes' through providing feedback on each other's work and award peer credit using digital badging. This is part of an institutional strategy to use MOOCs, with the first one focusing on humanitarian emergencies. Up to 100 participants can elect to have their learning recognized for credit by paying a fee. The credit is only valid if the student chooses to articulate into a Deakin postgraduate award programme in International and Community Development. The digital badges do not count towards marks, but will be noted by assessors. Deakin hopes that this combination of peer assessment and incentive to convert a MOOC into credit is 'one possible way of authenticating online learning'.¹⁰⁵

Another example is the DeTao Masters Academy (DTMA), a private-sector organization in China, that aims to improve the innovative capacity of business by making hundreds of world-renowned experts available to conduct education and training at advanced levels and work on projects in industry. DTMA has developed its own series of DeTao Badges to capture and validate the skills and competencies acquired through the education and training arm of their activities.

Badges allow for the capture of recognition of specific skills. Wiley (2012) points out that each badge represents achievement of a learning outcome, rather than a course-level achievement. It thus allows for an indication of mastery of a specific learning outcome as opposed to a 'grade' in a 'course', allowing students greater control of their own learning data and employers and schools immediate access and better detail. It potentially forms a highly efficient conduit for controlling, transmitting, and receiving credentials. However, it is not yet clear exactly what significance this infrastructure will have.¹⁰⁶

It is not possible to verify the quality of a badge. Mozilla admits that, 'in order for any badge system to accumulate value and for badges to carry or contend with the weight of formal grades or degrees, quality and vetted assessments will be critical'.¹⁰⁷ However, they offer little indication of how these critical issues of quality and 'weight' will be reflected. Whilst badges may present possibilities for providing credentials, they do not yet answer the question of how the academic significance or market value of these credentials will be measured and understood.¹⁰⁸ Thus Open Badges may provide a portfolio of evidence of learning, but they do not yet provide an indication of quality.

11 How can accreditation adapt to post-traditional higher education?

Accreditation refers to a process of formal certification by a third party or an intermediary such as an institution, organization, community, government, or guild. It implies that the receiver meets the standards of the accreditor. For students, accreditation provides formal credentials such as academic credit hours, a license, diploma, certificate, or degree. For higher education institutions, it provides

endorsements, branding, and access to markets and resources through accreditation by governments, professional associations, and other accreditation bodies or authorities (Wellman & Thomas, 2003).¹⁰⁹

The growth of openness and recent development of MOOCs have raised questions about how these courses and offerings may be assessed and accredited and what role accreditation would play in this context.^{110,111} With new ways of learning, there is also a need to consider new ways of recognizing learning. Higher education once held a monopoly on credentials that established a person as an expert in his/her field, but, with increasing openness and competing education providers, universities may not hold the monopoly on certifying prospective employees for much longer.¹¹² In some areas, they have already lost their monopoly, particularly in instances where professional bodies are playing an increasingly significant role in providing credentials. For example, the American Association for Marriage and Family Therapy's Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE) is a specialized accrediting body that accredits master's degree, doctoral degree, and postgraduate degree clinical training programs in marriage and family therapy throughout the US and Canada (see <http://www.aamft.org/iMIS15/AAMFT/>).

However, there are currently some mechanisms to recognize informal learning in a way that leads to individual accreditation. One such mechanism is credit transfer, which refers to institutions granting credit to students who have taken courses at other institutions.¹¹³ Some students who are enrolled in degree programmes have been able to negotiate credits for 'open courses' on a case-by-case basis. For example, students in David Wiley's Open Edu 2008 course offered at the Utah State University were able to arrange for credit in their home institutions even though the course was not taught and assessed at the universities where they were registered. Most students who received credit for the course were not registered at Utah State University.¹¹⁴ However, for students involved in cross-border education credit transfer is sometimes problematic because the rules are different.¹¹⁵

Another, more commonly explored mechanism for accreditation is the recognition of prior learning (RPL), also known as Accreditation of Prior and Experiential Learning (APEL), Prior Learning Assessment (PLA), and Prior Learning Assessment and Recognition (PLAR). This is a process allowing learners to demonstrate and obtain recognition for learning they have acquired outside a formal educational setting.¹¹⁶ Research shows that, for RPL, the use of learning portfolios is fairly popular, followed by examinations that allow learners to challenge-for-credit through assignments, examinations, interviews, courses, tutorials, demonstrations, self-assessment, external evaluations, essays, and face-to-face or online workshops.¹¹⁷ Whilst many RPL-supportive institutions have developed resources and structures that cover most aspects of accreditation and assessment, these RPL practices and policies differ widely between countries and institutions. They evaluate learning that has occurred outside a given degree-granting institution, but still in relatively strict accordance with the criteria of that institution. In RPL, the 'course' is generally the smallest unit of analysis, with groups of courses or course credits being the most common objects of assessment. Thus RPL credentialing is not on the level of detail or granularity of many OER. Friesen and Wihak (2013) highlight three possible connections between RPL

and open education that hold promise for credentialing open learning experiences:

- 1) RPL may be used to assess and credential open educational activities through the use of examination banks such as the College Level Examination Programme (CLEP);
- 2) Learning occurring in xMOOCs (MOOCs based on already credentialed courses) and in other open contexts resembling 'courses' may be assessed in RPL through course-based portfolios; and
- 3) RPL may also be enabled through the specification of 'gap learning' facilitated through OER of many different kinds.¹¹⁸

However, there is lack of standardization in institutional processes with regards to international credit transfer and course articulation in cross-border higher education.

Schmidt et al (2009) point out that adopting these existing pathways to gain recognition for learning in informal contexts represents an attempt to tweak the current accreditation system, rather than to rethink the entire concept of accreditation within an open paradigm.¹¹⁹ Nevertheless, the boundaries between traditional approaches to accreditation and emerging forms of certification resulting from free online courses operating in the informal and non-formal education sectors may begin to blur over time.¹²⁰

In terms of certification, open courses such as those offered by Stanford and MIT provide a 'Statement' or 'Certificate of Accomplishment' which clearly denote that the accomplishment is not equivalent to completion of a 'normal' Stanford or MIT course. However, MOOC providers are no longer restricting their certification to 'Certificates of Participation' or 'Certificates of Accomplishment'.¹²¹ MOOC companies are experimenting with various accreditation tools, including certificates for successful completion of courses, badges, partnerships with testing centres for local invigilated examinations, and attempts to convince accredited institutions to award their own credit for successful MOOC completion.¹²²

For example, providers such as Udacity and Coursera are partnering with accrediting agencies and universities to provide official accreditation for their courses. Coursera has an agreement for credit equivalency with the American Council for Education for some of its courses.¹²³ Similarly, Udacity has partnered with Georgia Technical University to offer accreditation for a Masters course on computer science¹²⁴ (This is an example of the wider trend of 'unbundling' higher education, with different organizations handling different parts of the process).

Some MOOC providers are offering students the chance to get a certificate, which proves both that the student completed the course and that the person taking the tests is the same person who enrolled for the course. This certification is usually provided at a fee, while MOOCs remain free. For example, Brazilian MOOC provider, Veduca, provides free content, but learners pay if they want certification of their studies. For their MBA course – the first open online MBA – user certificates are issued by the Brazilian Ministry of Education, and students are tested at one of 240 test centres nationwide.¹²⁵ UniSEB University Center, a distance learning service provider in Brazil, has partnered with Veduca to oversee

the fee-based certification process.¹²⁶

Coursera uses crowd-sourced ‘peer grading’, which involves students assessing each other’s performance, both by assigning them marks and offering comments. As one example, Coursera needed a solution to the challenge of grading 100,000 poetry examinations and found that having groups of students assess their peers’ work resulted in marks that were very similar to those assigned by academics. Whilst the availability of academics to grade is difficult to scale up, peer grading can do so. A collateral benefit to peer grading was reportedly also identified; graders learned just as much from the act of grading as recipients learned from the peer comments they received.¹²⁷

The formal higher education sector is also showing increased interest in assessment, credentialing, and accreditation models for no-cost access to learning opportunities. A good example of this is the OER university (OERu). This is an international network of 26 accredited institutions that plans to accredit open courses on five continents. OERu focuses on students seeking formal academic credit and seeks to ensure equivalence of qualifications compared to on-campus offerings. The OERu network provides content services for learners using courses based solely on OER at no cost to the learner. Interaction services are also provided to learners at no cost. It reduces the cost of support services and technology services by using shared infrastructure based entirely on open source software administered by the OER Foundation, a non-profit organization. These services are funded by membership fees paid by the OERu anchor partners participating in the network. This unbundling of services enables OERu anchor partners to provide the learner assessment and credentialing services on a fee-for-service basis, at significantly reduced cost when compared with full tuition.¹²⁸ Thus, this model is based on disaggregation or unbundling of services, in terms of which the OERu partner only provides summative assessment services. Assessment and credentialing processes follow the local institutional policy requirements, including those of the national quality and/or qualifications authorities which administer the accreditation status of the conferring OERu partners.¹²⁹

In another example, Excelsior College, which offers credit by examination as a means to earn college credit, has introduced the ‘\$10K Degree’ programme. This programme allows distance education students to earn a degree cheaply (by North American standards) through a variety of selected OER such as those from the Saylor.org, MIT, and Khan Academy, which have been matched with Excelsior’s examinations.¹³⁰

The Thomas Edison State College Foundation is also funding development of a competency-based programme that leverages MOOCs and other open resources and the College’s expertise in assessing prior learning to create new pathways for degree completion. Its plan is to develop assessments for open courses and resources that appropriately map to their degree programmes, so that students who complete these open courses can earn credit toward their degrees.¹³¹

Such initiatives may contribute to the integration of alternate forms of certification for open access to

free online learning opportunities into the formal higher education sector, but it is possibly too early to determine whether or not this will happen.

12 What key policy issues does openness pose for institutions?

There is much hype and speculation about openness, technology-enabled education, and MOOCs, and their potential for transforming higher education is clear. No single response can cover every institutional context, but it is clear from the previous FAQs that institutions would be wise to engage with openness as a core organizational value in order to remain relevant to students. They will benefit most by leading change rather than being led by it.¹³²

Rather than creating new policies to tackle these changes, it may be better to review and revise existing policies. Developing new policies may narrow strategic focus at a time when options are unclear. The times call for policy environments that reward innovation and mechanisms that integrate innovations into institutional systems. The following areas, amongst others, require attention:

Staff incentives, rewards, and promotion. Policies, practices, and institutional cultures tend to reward individual endeavour over collaboration, for example by favouring the personal creation of teaching materials more than the adaptation and use of existing materials and content. Incentives and quality assurance processes should include choice and use of existing content. Incentive structures may also reward collaborative activity and innovative applications of technology and foster open access publication and the extension of research communication beyond traditional academic journals.¹³³ Educators are now required to act as content guides and facilitators to help students to identify credible resources and aggregate content from diverse sources.¹³⁴ The time and effort required to develop and support courses harnessing open content need to be recognized.

Tools for student assessment. Open learning offers new opportunities for students, but open assessment and accreditation require strong support.¹³⁵ Institutions should consider whether their policies on assessment tools such as RPL require revision.

Technology infrastructure. Institutional technology plans also warrant regular review because technology evolves rapidly and up-to-date ICT infrastructure is needed to access open material. All stakeholders should be involved in developing these plans.

Digital literacy. Digital literacy is now a key skill in every discipline and profession, yet such training for academics is often lacking. The adoption of progressive pedagogies is frequently enabled through emerging technologies, requiring a change of perspective among academics.

Fostering pilot projects. New models of education are bringing unprecedented competition to the traditional models of higher education. As new platforms and models – such as MOOCs – emerge, there

is a need to evaluate them and determine how to best support collaboration, interaction, and assessment.¹³⁶ One way of doing this is to test small projects and see which ones work. Many MOOC initiatives now start with pilot courses to survey the landscape and learn from their implementation.¹³⁷ For example, the World Bank, in collaboration with the Tanzanian Commission for Science and Technology (COSTECH), is running a small pilot to meet the specific needs of students and the Information Technology sector in Tanzania. The focus is on supporting an effort to incorporate existing Coursera offerings as part of a broader initiative to help equip students with market-relevant IT skills, in recognition of the growing demand for technically skills workers in Tanzania.¹³⁸

Intellectual property rights and copyright. Institutions should review their policies on intellectual property rights and copyright. These should detail the respective rights of the institution and its employees, students, and sub-contractors regarding intellectual capital. Universities may enhance their reputations and gain market advantage by making intellectual capital easily accessible under open licenses.¹³⁹

13 Do institutional quality practices need to change?

As we noted in FAQ 8, the growth of openness is unlikely to demand major changes to quality assurance practices in institutions. The principles of good quality higher education have not changed.

Openness implies integrating open approaches into existing institutional practices in areas such as course design, credit transfer, and RPL (as discussed in FAQ 11). Given the context of post- traditional higher education, employers should be involved in curriculum design and delivery for some courses so as to ensure, for example, that work placements have clear learning outcomes. QA can support institutions in this process, thus promoting the development of more flexible learning pathways and helping to demonstrate that study programmes meet labour market needs.¹⁴⁰

Openness brings new modes of delivery, so institutions may need to adapt their concepts of quality and develop indicators to match.¹⁴¹ The OERu, for example, has realized that some adaptation of traditional quality standards may be needed. It does not use conventional student support methods, but leverages peer-to-peer support approaches incorporating social media and other online technologies. This is an example of how quality standards that are based on the assumption that an institution offers a full package of services including course materials and student support require adaptation.¹⁴²

There have been several attempts to develop quality standards for aspects of post-traditional higher education. The Commonwealth Educational Media Centre for Asia in New Delhi developed Quality Assurance Guidelines for Open Educational Resources using a TIPS Framework (TIPS is an acronym for Teaching and learning process, the Information and material content, the Presentation, product and format, and System, technical and technology). It offers guidelines to authors on how to create OER. Institutions can adopt these guidelines for their internal quality assurance purposes.¹⁴³ Achieve (2011) provides eight criteria in a framework called Achieve-OER Evaluation to assess OER quality according to

the USA common core state standards for curricula.¹⁴⁴

The open approaches of post-traditional higher education, notably large-scale learning opportunities like MOOCs, can generate large amounts of data on how students work with materials and interact with each other. Learning Analytics is the term for using such data for personalizing the learning experience and for performance measurement. As the field of learning analytics matures it should foster the continuous improvement of learning outcomes.¹⁴⁵ This data will be a valuable commodity, but it remains to be seen whether it will be made openly available or exploited purely for commercial gain.

14 Will openness change the spending priorities of institutions?

The move to openness is rapidly commoditizing academic content, thereby reducing its economic value. This will harm institutions that see their primary business as providing content, either through lectures or distance education materials. To adjust to increasing openness they should broaden their focus.

First, they require robust technology platforms. All students need broadband Internet connectivity to engage with the proliferation of open initiatives, open content, tools and products.¹⁴⁶ Also needed are content management and delivery platforms accompanied by good technical support and user training. Institutions should ensure ubiquitous student access to IT devices if this is not already the case.

By harnessing ways of developing better programmes, courses, and materials, increased investment in teaching and learning can increase efficiency and productivity.¹⁴⁷ This will enable institutions to integrate OER, MOOCs, and open data into their course delivery.

Conversely, institutions may wish to be generators of OER. Costs would include converting courses to an open courseware format, scrubbing content to remove copyrighted material and acquiring the necessary hardware and software. At the UK Open University the new paid enrolments that they generate more than cover the cost of their open and free media offerings (such as OpenLearn and BBC). In other cases institutions can use the model that Stacey (2012) calls 'Content for free, Teaching & Credentialing for a fee'.¹⁴⁸

As new strategies and models such as MOOCs, open assessment and open badging emerge, institutions should make speculative investments so that they can engage systematically with post-traditional higher education. As noted in FAQ 12, this could be done through pilot projects that can be scaled up if they work well. Above all, institutions should adopt a proactive strategy to experimentation and development.

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