



# The Development of Massive Open Online Courses (MOOCs) in New Zealand

Dr Liz Gordon, Pūkeko Research Ltd  
Prof Michael A Peters, University of Waikato  
Prof Tina Besley, Centre for Global Studies in Education

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Liz Gordon  
Michael A Peters  
Tina Besley

Centre for Global Studies in Education  
University of Waikato, Hamilton, NZ

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Wilf Malcolm Institute  
of Educational Research  
*Te Pūtahi Rangahau Mātauranga o Wilf Malcolm*



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There are more than two billion potential students around the world and more than 70% of them cannot afford higher education at all. These folks, coupled with all the post-secondary students and professionals out there, will flock to branded degree courses in a huge way. And degree programs are coming. AT&T's experiment with Georgia Tech and Udacity to deliver an online masters degree in computer science appears to be going well.

The MOOC vendors are trying lots of interesting things. Coursera now offers business programs from Wharton and Rice. EdX is licensing (releasing) its platform to any educational entity or government who wants to produce and distribute education. Udemy has expanded its corporate education offering. And the fidelity and quality of these programs is improving every day.

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Liz Gordon	<a href="mailto:lizgordon@paradise.net.nz">lizgordon@paradise.net.nz</a>
Michael Peters	<a href="mailto:mpeters@waikato.ac.nz">mpeters@waikato.ac.nz</a>
Tina Besley	<a href="mailto:besley@waikato.ac.nz">besley@waikato.ac.nz</a>

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## Summary

This project arose from international work carried out by Professor Michael Peters and Professor Tina Besley around modes of open learning, and follows on from a presentation given at the NZARE seminar on Higher Education in July 2013. The aim was to provide a baseline account of Massive Open Online Courses (MOOCs) in the New Zealand context. An introductory section puts MOOCs into their theoretical and conceptual context in commitments to freedom, citizenship, knowledge for all, social progress, individual transformation and 'openness'. Five themes emerged from the literature: the disruption of higher education, open learning, technology and education, the political economy and learners and learning. The study examines these using qualitative data gleaned from interviews with a variety of stakeholders from the education sector, including peak organisations, university and ITP representatives and other tertiary staff.

**Disruption:** Stakeholders identified a range of potentially disruptive effects of MOOCs, but there is evidence of significant caution among organisations in adopting MOOC models. Disruption may occur from issues of access, price and non-traditional modes of learning, new models of learning and incompatibilities.

**Open learning:** New Zealand is a world leader in open learning models. The OERU has as its key goal to make all learning currently offered in paid tertiary education available free on the internet. The question of whether a New Zealand MOOC could be formed is examined.

**Technology and learning:** Stakeholders recounted that technology is being rolled out that will see MOOC technology at every workstation. There is a general concern that the costs of MOOC models are currently understated because the work is being done by enthusiastic teachers; others argue that low-cost learning can be achieved.

**Political economy:** This section explores why tertiary organisations might invest in MOOCs, especially through xMOOC platforms. A range of factors were identified.

**Learners and learning:** The final questions examines MOOCs from the perspective of learners. Little is yet known about MOOC learners, but many see the potential to improve access and reduce costs to learners, including particular groups of learners.

The conclusion examines the themes raised in the report and considers options for the sustainable development of MOOCs in the New Zealand context.

## Introduction

The *New York Times* dubbed 2012 the year of the MOOCs - Massive Open Online Courses. Suddenly the discourse of MOOCs and the future of the university hit the headlines with influential reports using the language of "the revolution to come." (e.g. Barber et al 2012; Ernst & Young, 2011). Most of these reports hailed the changes and predicted a transformation of the traditional university delivery of teaching and higher education through competition from private venture for-profit and not-for-profit partnerships. The development of MOOCs globally should be seen within the theoretical framework of post-industrial education, distance education and venture capitalism. This is especially evident in the USA where social media has become a dominant cultural phenomenon and where new era business models focus on for-profit institutions, for-profit online courses, learning management systems, where we find an increasing alignment of consortia of universities, big media and multinational publishing companies setting up new commercial synergies between MOOCs, e-books and video content. While MOOCs are an extension of existing forms of distance education as an online learning approach with its home in the movement of open education, both increased scalability and new business models offer opportunities for innovation.

Open education has involved a commitment to openness in the broadest terms and is seen by advocates as a political and social project. The concept of openness in regard to education predates the openness movement that begins with free software and open source in the mid-1980s with roots going back to the Enlightenment that are bound up with the philosophical foundations of modern education with its commitments to freedom, citizenship, knowledge for all, social progress and individual transformation.

These early origins and the basis for open education have been expressed in a variety of forms from the 'open classroom' to the 'open university'. Political, social and technological developments have taken place in parallel with the history of the movement of open education that have heightened certain political and epistemological features and technologically enabled others. These emphasise questions of access to knowledge, the co-production, co-design and co-evaluation of educational programs and of knowledge, the sharing, use, reuse and modification of resources while enhancing the social ethics of participation and collaboration. Open education as a movement sits within the broader framework of the history of openness that brings together a number of disciplines and fields to impact directly upon the value of knowledge and learning, their geographic distribution and ownership, and their organization.

The movement toward greater openness clearly represents a change of philosophy, ethos, and governance and a set of interrelated and complex changes that transform markets, altering the modes of production and consumption, ushering in a new era based on the values of openness: an ethic of sharing and peer-to-peer collaboration enabled through new architectures of participation. These changes indicate a



broader shift from the underlying industrial mode of production, from a productionist metaphysics to a post-industrial mode of consumption as use, reuse, and modification where new logics of social media structure different patterns of cultural consumption and symbolic analysis becomes a habitual and daily creative activity. The economics of openness constructs a new language of 'prosuming' and 'produsage' in order to capture the open participation, collective co-creativity, communal evaluation, and commons-based production of social and public goods.

The social processes and policies that foster openness as an overriding educational value is strongly evidenced in the growth of open source, open access, and open education and their convergences that characterize global knowledge communities. Some observers argue that openness seems also to suggest political transparency and the norms of open inquiry, indeed, even democracy itself as both the basis of the logic of inquiry and the dissemination of its results based on concept of the open society and open government that aims to promote strong citizenship participation.

With the advent of the Internet, Web 2.0 technologies and user-generated cultures, new principles of openness have become the basis of innovative institutional forms that decentralize and democratise power relationships, promote access to knowledge and encourage symmetrical, horizontal peer learning relationships. In this context radical openness is a complex code word that represents a change of philosophy and ethos, a set of interrelated and complex changes that transform markets, the mode of production and consumption, and the underlying logic of our institutions. It is not clear at this stage whether or how MOOCs will advance these values.

The theory of openness points to fundamental differences between the logic of industrial systems and that of information systems. Computer-based information systems embrace all forms of automation, expert systems, search engines, management information and processing systems that include both hardware (monitor, processor, printer and keyboard) and software (the programs), together with databases and networks that make up what is known as the information technology platform. These can provide truly global systems based on algorithms that have a kind of scalability that dwarfs the old assembly line production.

Social media differ from industrial media: social media are based on Internet-based applications that build on the ideological and technological foundations of Web 2.0 and enable user-generated content. In this sense then, MOOCs might be seen as a form of industrially scaled automation of the teaching function that uses Internet platforms to deliver content globally. MOOCs are based on the traditional one-to-many broadcast principle rather than the many-to-many, horizontal peer-learning structures. The major pedagogical question is to what extent massively large online classes permit or encourage peer learning or interaction.

Various reports including Ernst & Young's (2012) *University of the Future*, Michael Barber et al's (2013) *An Avalanche is Coming: Higher Education and the Revolution Ahead*, and *The New York Times* "Schools for Tomorrow" Conference, predict a

profound transformation of higher education based on the democratization of knowledge and access, contestability of markets and funding, new digital technologies, and greater global mobility and integration with industry. Just as the forces of technology have transformed media, banking and finance, so too the speedy adoption and growth of MOOCs will transform the global landscape for universities creating a more global system with the possibility of a multi-institutional and multi-credit qualifications.

The existing players – edX, Coursera, Udacity, Udemy, P2Pu, Khan Academy, Open2Study – demonstrate a mix of for-profit and not-for-profit start-ups with increasing development of MOOCs in Germany, Japan, Australia, UK, Brazil, New Zealand and China. The legislated change in California with the Online Student Incentive Grant programs are focused on the right to educational access to prevent bottleneck problems with enrolments at the community college level. While the legislation has been put on hold to be re-evaluated in the summer, the resulting draft legislation clarified objectives concerning the provision of instructional support and related services to promote retention and success with the accent on including adaptive learning technology systems that can provide significant improvement in student learning and learning measurement analytics. The temporary defeat of the Bill was in part the result of opposition by academic staff associations to private companies poised to play a larger role in the public higher education market. Those who opposed the Bill emphasized that MOOC courses suffer from high dropout rates, poor outcomes for students struggling with basic skills, and high cheating rates. The critics also argued that MOOCs produce the worst outcomes for exactly those students they would most likely serve.

### **Developments in New Zealand**

This report identifies and clarifies two competing notions of openness that shape and differentiate opposing concepts of MOOCs 1) the notion of openness that belongs to open markets associated with venture capital innovation, and private provision of public education and 2) a much older and traditional notion of openness that governs MOOCs as a public technologies based on user-generated logics to provide solutions to the distribution of scarce public goods in education.

In New Zealand there appears to be an underlying commitment by most of those interviewed toward the latter concept and also a considerable field of expertise that enables New Zealand as a small country to be one of the world leaders in the provision of open education. This study suggests that government and various education agencies should work to fund, coordinate and investigate MOOCs in both senses of the term in order to preserve competitive advantage and enhance the quality of higher education as a basis for its further internationalization on the understanding that the choices are not simple trades-offs but often rather messy hybrids.

In July 2013, the New Zealand Association for Research in Education (NZARE) held a seminar on higher education in Wellington. At this forum, Peters (2013) gave an overview of the development of massive open online courses (MOOCs) internationally, and posed the question of how such developments could be understood. The paper discussed a range of scenarios regarding the future trajectory of the various MOOC models, but did not touch on their implications for New Zealand, nor the current 'state of the play' in this country.

Internationally the literature has focused around five main themes in regard to MOOCs:

- The potential disruption to existing models of tertiary education
- The concept of openness and open learning
- The ability of the internet to deliver a technological revolution in learning
- The political economy of higher education, and
- Questions around teaching and learning.

All of these themes will be examined in this paper, in relation to the New Zealand context.

There has been significant interest in MOOC models by a range of New Zealand institutions. The Ministry of Education and the Tertiary Education Commission, for example, have been working together and with a range of organisations to discuss and view developments. There are some background papers that have been developed and regular meetings of a working group. To date, there is no formal policy position on MOOCs in this country which means, by default, that individual tertiary institutions make their own decisions about the kind of engagement and amount of involvement they may have with MOOCs.

The recent ITES conference, held in Auckland in June, was more about showcasing international speakers than developing tools for MOOCs in New Zealand. Indeed, it was interesting how poorly informed many participants, from senior levels of the education sector and industry, were about developments already occurring in New Zealand. That conference clearly demonstrated the need for a baseline study of this kind, from which other, local and national, initiatives may be developed.

### **Purpose and method**

Ako Aotearoa provided a grant to facilitate this project, which was met by equal funding from the Wilf Malcolm Institute of Educational Research (WMIER) at the University of Waikato.

This small project seeks to answer the questions: what is the state of play in MOOC development in New Zealand, and what are the factors that influence and affect such development? The main source of data has been a series of interviews with decision-makers, union and student leaders, developers and others located in

universities, polytechnics and government agencies. A number of those interviewed were also involved in a national technology development working group, which was meeting during the period. The interviews were undertaken between November 2013 and January 2014, either face-to-face or by telephone. The interview schedule is attached as Appendix 1.

Those interviewed were happy to participate but a number were concerned about issues of confidentiality in relation to organisational plans. Some organisations were keen to control the message about MOOCs in their organisations. This led to a situation where, in a small number of organisations, a number of potential participants were identified from technical and other staff, team leaders and senior managers, but only one (in each case a very senior manager) finally agreed to be interviewed. While the field of MOOCs promotes openness, this does not mean that large organisations are necessarily prepared to discuss all their plans publicly. It has been intended to interview a wide range of people – we thought up to 50 – but this number was unrealistic. Not that many people are aware of or working on MOOCs in New Zealand at present, and of those who were, not all were mandated to speak.

We made contact with 32 potential interviewees, and ended up completing a formal transcribed interview with 15 people, plus a variety of ‘talks’ with others, which were not transcribed. One organisation declined to participate. The participants were based in government agencies, sectoral groups, universities, polytechnics/ ITPs and some other organisations. While the numbers were small, we believe it was representative of the size of the sector at present. Furthermore, the small size of the sector did not preclude a very wide range of views about MOOCs in New Zealand. Those who did participate were knowledgeable and were able to provide ample information for this ‘baseline’ report.

It became evident that factors related to competitiveness in the sector were in play at times. The study therefore promoted an ethical process that anonymised most contributions, and made a commitment that, if a speaker or organisation could, or needed to, be identified through a particular contribution, this would be signed off prior to the report being completed.

Other material was collected through a brief literature search, and an analysis of daily ‘MOOC’ press articles retrieved through Google Alerts. This latter source produced so many resources, estimated at close to 1000 items, that we ran out of time to analyse them all. One commentator accused the media of treating the MOOCs as a love affair between the universities and venture capital, and certainly there is a huge and diverse reporting on MOOCs.

This paper will report on the state of play of MOOC development in New Zealand at the present time, and share information about what is happening in various parts of the sector. A secondary theme will examine where and how decisions are being made, and what the potential implications are for both organisations and learners in this country.

## Putting MOOCs in perspective

The New York Times declared 2012 to be the year of the MOOC (Peters, 2013), and Anderson (2013) comments that 2013 “is becoming the year to talk about MOOCs!” There is some irony in this. The literature on MOOCs appears to be expanding faster than the number of MOOC courses as demonstrated by, for example, Haggard et al’s (2013) literature review for the UK Department for Business Innovation and Skills. Having said that, 2013 saw an enormous increase in new MOOCs, several new MOOC platforms and many attempts to debate and resolve key conceptual and infrastructural issues.

The MOOC ‘platform’ has become the central organising principle of one part of the sector. The platforms are organisations or companies that group together learning institutions (including universities, museums, and similar organisations) to offer a series of individual courses. In general, courses are not arranged into a coherent pattern or programme and most do not offer progression through a topic from novice to expert. Most of the courses tend to be entry level, although others require significant prior experience, for example in computer programming languages or scientific literacy. Some commentators have noted that while the courses are often run by leading international figures in top universities, there is surprisingly little attention paid to any coherent principles of learning progression (Daniel, 2012).

The MOOC platforms not only bring together organisations, but also provide the technical expertise, marking options and internet systems to ensure that the MOOC can be effectively run. These factors are discussed later.

The expansion in course numbers is best demonstrated by the following graphic, developed by Dhawai Shah in an article for *Edsurge* on 22 December 2013.

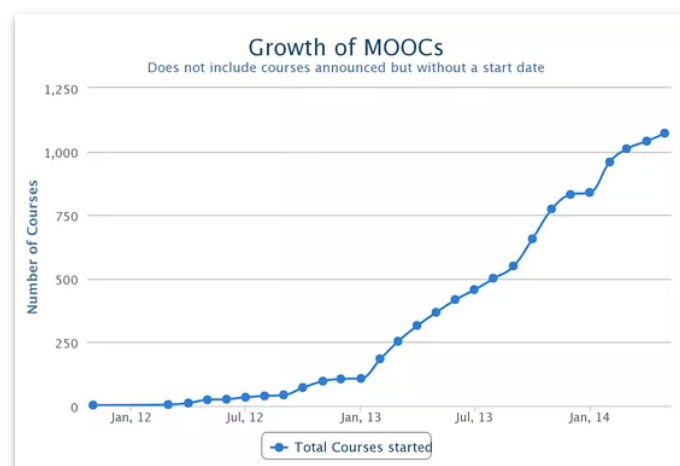


Figure 1. MOOC course numbers 2012-2013, with new courses announced for 2014.

The new MOOCs have emerged primarily through the expansion of platforms, as well as individual universities setting up courses. Both processes are of interest. The



biggest influence on the number of MOOCs has been the expansion of Coursera, the largest MOOC platform. In September 2012 it had barely 100 courses, and by June 2014 there were 666 courses listed on the website.

The visibility of the MOOC platforms and their courses is inevitable: the involvement of high status universities and venture capitalists together in a new format was bound to capture the attention of the media (Daniel, 2012). But for many the platforms are simply a new formatting of work that has been proceeding for some time: a way to offer good quality learning online to all who want to learn.

Attempts to offer higher education courses openly and online have been occurring since the development of the internet, which itself was born from the principles of openness.

Alongside openness sits the principle of connectivism. This was initially articulated by George Siemens, with the view that there is knowledge that can be taken advantage of in networks. Siemens used his views to develop an initial online course, open for anyone who was interested in it:

That class, called Connectivism and Connective Learning/2008 (CCK/08), put into practice the main characteristics of connectivism by allowing a large number of students to collaborate between themselves, create new content and start new discussions and debates. They did this using many different platforms such as forums, blogs and social networks. The aim was to allow students to create their own personal learning environments (PLEs) independently and at the same time support an interconnected knowledge<sup>1</sup>.

A further principle is the concept of mass or massiveness. This is often not very well understood. It does not necessary relate to any particular courses, and the numbers taking such courses, although MOOC enrolments have tended to be very large to date. It refers more to the principle that a mass of people *can* enrol in and participate in a course – there are no technical, resource, pedagogical or actual barriers to mass participation.

Much has been made in the literature of the two kinds of MOOCs that have emerged, each with their own sets of characteristics. The cMOOCs are seen to emerge from the traditional of open learning and foster collaborative, open, free courses. The xMOOCs come from a more commercial basis, aiming to explore the use of the internet and online learning to earn income. The fact that a number of venture capital organisations have invested in xMOOC platforms is generally seen as a signal that the commercialisation of MOOCs is imminent, although only one known degree as yet charges course fees for a MOOC. Daniel (2012) notes that:

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<sup>1</sup> <http://mooconewsandreviews.com/what-is-a-massive-open-online-course-anyway-attempting-definition/>

MOOCs have already bifurcated into two types of course, which are known as cMOOCs and xMOOCs. They are so distinct in pedagogy that it is confusing to designate them by the same term.

It is evident that both cMOOC and xMOOC models are currently in use in New Zealand. In practice, most are cMOOCs, with two institutional exceptions. The distinction is important for some of the participants in this research study. One, with a strong commitment to open learning, commented that: "openness needs to meet two principles: first is no cost access, and the second the four rs- reuse, revise, remix and redistribute educational materials. Openness must meet those two requirements."

Several of the participants were engaged in significant open learning projects. Another participant articulated the ways in which one institution had attempted to develop a more open learning style:

Over the past twenty years we have been engaging with our wider community through a range of programmes, with the aim of connecting with a wider audience, distributing education and learning across the region, communicating more widely with specific learning groups, second chance learners and so on. It is a natural transition from that to thinking about the wider engagement that MOOCs offers. So we are not a late-comer to MOOCs, we see them as fitting into our wider engagement strategy.

However, there was also a view among some participants that universities in New Zealand "are not engaged with openness, but with its opposite: commercialisation, licensing, ownership of IP and the like. As a result of government funding priorities, the tertiary sector is not rewarded for being collaborative". The participant making this comment went on to note that the lack of openness and collaboration was particularly evident in the Institutes of Technology and Polytechnic (ITP) sector. As this report will show, this perception is not actually true: the polytechnic sector is, to an extent, leading collaborative online learning in this country.

Not all online learning processes are MOOCs, and one person attempted to identify all the elements that made up a MOOC:

...unfortunately, like many acronyms, people grab hold of them and pervert them. So open might mean anything that is open enough so that anyone could drop in, but might not meet our definition of a course: coherent in content and progressive. A MOOC is not a tutorial or a Webinar, although it may use these as part of the learning process. So it is supposed to be a course, and it can be any size. It has to be open to anyone. Massiveness is both a procedural and technical challenge - how can you tell how big it is going to be? How can you build it? Do you use crowd-sourcing? And what is a course? One course within a programme? Could you do a course on Skype? Finally, MOOC implies something more educational than a training course.

The two organisations engaging at the xMOOC end of the spectrum have both joined MOOC platforms. The University of Auckland now offers courses through FutureLearn, which is the first UK-led MOOC platform. It is led by the Open University and currently has close to 30 participating organisations. Massey University has joined the Australian Open2Study consortium, which is backed by Open Universities Australia (OUA), and is of a similar size.

While MOOCs and other technological developments provide the opportunity for tertiary organisations to work collaboratively together, there was a degree of scepticism among some participants about this possibility for New Zealand. One person noted that the possibility was there “in principle”, and other said that while it was “true, there is also the opportunity for the opposite”. One participant noted:

I don't think that (collaboration) will happen. We have the potential now and every reason to do so and there is very little happening. I don't think the MOOC model will change that. Open education is making only minor headway.

Another participant noted that institutional responses were shaped by both external and internal factors. In general (and with one or more notable exceptions), those working on MOOCs at the subject, department or discipline level tended towards a cMOOC approach, but at the organisational level, the tendency was towards xMOOCs. The competitive pressures on organisations were seen as the main reason for this.

New Zealand tertiary education organisations (TEO) are mainly in their infancy in relation to MOOC development. Officials, practitioners and leaders are feeling their way. As one participant noted: “The key thing is to proceed with care”.

All of the participants interviewed for this study believe in the potential of MOOCs to meet social goals (extending educational access in both advanced and developing worlds) and practical goals (offering new forms of low-cost education online) (Dennis, 2012). But there are many issues that need to be addressed before the mass MOOCification of New Zealand tertiary education can take place (or even to be able to say if it should take place). This report examines the key issues from the perspective of the participants.

## Are MOOCs disruptive of existing educational provision?

The claim that MOOCs will disrupt higher education comes from Christensen's (1997) theory of disruptive innovation. As Flynn (2013 p. 150) explains:

Sometimes the introduction of a new product, idea, service, or technology sets off a cascade of unexpected changes that move through society like a tsunami... The introduction of a particular business product or service may create whole new markets that eventually displace old markets while at the same time lowering prices. Personal computers put an end to the typewriter and set in motion the decline of print media. Tablets and smart phones are now displacing personal computers. Skype is changing the whole telecommunications industry. These innovations are disruptive because they unexpectedly dismantle old markets, their technologies, and their ways of operating.

As Flynn notes, the importance of the concept of disruptive innovation is not so much the disruption itself, but what it reveals about both the pre-existing and new models. To illustrate this, Flynn relates the story of Sebastian Thrun's epiphany from Stanford University Professor to founder of one of the first online platforms, Udacity. Thrun noted that once he had made the switch from face-to-face teaching to MOOC, he could never go back. Flynn (2013 p. 153) quotes Thrun as stating: "I feel like there is a red pill and a blue pill, and you take the blue pill and you go back to your classroom and lecture your 20 students. But I've taken the red pill, and I have seen Wonderland".

Such dichotomous thinking contributed to the conception of MOOCs as an innovation that was (a) quite different to anything that had gone before, (b) incompatible with existing models of higher education, and (c) destined to make existing models obsolete, or at least reduce their importance. In this disrupted universe, the MOOC and the university, like matter and anti-matter, could not survive together. These three aspects of disruption will be explored below.

### **The end of higher education?**

To deal with the third theme first, Haggard et al note that most analyses of MOOCs to date "concur that they are disruptive and possibly threatening to current HE models" (2013 p 5). Noting that this literature is "more impartial and comprehensive" (ibid) than other writings, the authors state that it "consistently identifies MOOCs as a tipping point for HE".

Examples of this type of discourse include Ernst and Young's (2012) Australian report "University of the Future: A thousand year old industry on the cusp of profound change", and the British Institute of Public Policy Research's (2013) report, written by Michael Barber et al, which was given urgent and uncompromising title: "An avalanche is coming: Higher education and the revolution ahead".

They both argue that MOOCs have unleashed online knowledge that was previously available only to an elite within universities, and made it available, at least in theory, openly ('openly' generally means available to all, without barriers of cost or access). In a competitive market, with tight fiscal environments, higher education is unable to deliver what is required. The context that demands change is described as follows (Barber et al, 2013 p. 3):

Given the state of the global economy, tensions in international relations, massive gaps between wealth and poverty, the deepening threat of climate change and the ubiquity of weapons of mass destruction, our contention is that we need a generation better educated, in the broadest and most profound sense of that word, than ever before. We need – as the London 2012 Olympics promised – an inspired generation, all of whom are well-educated and some of whom are able to provide the bold, sophisticated leadership that the 21st century demands. We need citizens ready to take personal responsibility both for themselves and for the world around them: citizens who have, and seize, the opportunity to learn and relearn throughout their lives. We need citizens who are ready and able to take their knowledge of the best that has been thought and said and done and apply it to the problems of the present and the future.

The problem with this statement and with the hyperbole behind it (it is, slightly uncomfortably, redolent of older discourses of Empire and cultural superiority) is that there is a large disconnect between the potential of MOOCs and these rather high-blown ideals. Even if a MOOC on, say, climate change could educate millions or even billions about the issue, there is a large gap between such education, national and international leadership and change. This is never explained in the Barber et al report and its vision remains unlikely to be fulfilled.

While the IPPR report starts from the perspective of the needs of society, Ernst and Young's analysis proceeds from an institutional perspective:

Faced with this dynamic industry landscape, Australian universities should critically assess the viability of their institution's current business model, develop a vision of what a future model might look like, and develop a broad transition plan. Deliberations on future models need to include which customer segments to focus on, what 'products' or services they need, optimal channels to market, and the ideal role of the university within the education and research value chains. Support functions will need to be streamlined and in some cases fundamentally reconfigured. Regardless of the path chosen, universities will need to align new directions to their institution's core purpose and values (EY, 2012 p, 5).

Compared to the Barber et al report, this report takes a pragmatic organisational approach. Thus the disruption emerging from technological change is expected to



provide impetus for both the state of society and the shape of institutions. However, the New Zealand participants in this study were not convinced by these arguments, calling them, as one put it: “more hype and less analysis”.

Not really, no, not disruption. MOOCs provide the opportunity for senior leadership teams in universities to talk about online learning and how the digital world is challenging what we have done in the past, and what can and cannot be done.

Some argue that advancements in teaching and learning technologies have raised important strategic questions for the tertiary sector (see Marshall 2013). One argument that MOOCs are not fundamentally disruptive is that distance modes of learning have been operating for many years (from 1962 at Massey University). MOOCs are seen, from this perspective, as merely another form of distance learning. But there are a number of features of MOOC development that can sustain a more radical departure from existing models.

While early MOOCs have generally adopted traditional models of transmission teaching from the 1980s on a wider scale, more recently progress has been made in exploring new modes of teaching and learning through MOOCs. They might now be disruptive in a number of ways, such as: “disrupting discussions around possibilities for extending learning, disrupting demand for education and disrupting the notion that we have to go to a place to learn, and that learning is only for people who can afford it”, as one participant noted.

Two participants identified factors inside the sector which could be challenged and disrupted by MOOCs. One referred to the ‘flipped classroom’, “and encouraging people to think about pedagogy, like moving beyond the replication of existing tertiary education to something different”.

The implications of MOOCs for pedagogy, teaching and learning are explored later in this report.

The New Zealand participants in this study do not envisage a fundamental reconfiguration of universities, but possibly pressure in specific areas:

I don't think MOOCs are going to disrupt the university. It has survived industrial revolution and will survive the knowledge revolution. But it can be a catalyst for universities to become more open in practice.

Most participants identified some potential for disruption. One noted that MOOCs could replace weaker parts of the system: “...particularly where place-based learning is weak, such as the regional polytechnics which have difficulty meeting targets. Regional MOOCs may be seen as a cheap alternative to replace these”. The possibility of MOOCs playing a significant role in vocational education was mentioned by a number of participants.

Two others saw MOOCs having disruptive potential because of the high price being paid for tertiary education:

Yes. I think they have - they are a response to access issues in terms of price as much as disadvantage. In the end they will appeal to a segment of the market.

They have potential - lots of different disruptions - if you can access tertiary courses for free, why would you want to pay for any? Tertiary institutions wouldn't exist.

Another two people saw MOOCs as augmenting parts of the system, such as adult education courses that have lost significant government funding in recent years. Older adults are viewed as a likely area for recruitment, as from an economic rationalist perspective the return on investment of a paid tertiary education is considered low for that group. One person questioned whether MOOCs might be more of a shaping strategy: “disruption usually happens on a foundation of non-consumers – do MOOCs have value for people not currently able to consume higher education?”

Another participant was interested in the opportunity of setting up digital repositories of learning, so that people would be able to choose lectures through a portal and increase the quality of learning inputs. This person was interested in the use of MOOCs to support complementary learning, where a person learns from a range of sources.

The voice for fundamental disruption has perhaps been at least mitigated in recent times by alternative voices: progressive reform rather than structural revolution. One area where predictions of significant disruption remain is around the economics of higher education. There is an assumption that, in most cases, people will seek a cheaper learning option where they can. A recent article in the *Economist* outlines the economic case for MOOCs<sup>2</sup>. It makes four main points:

1. Traditional universities require physical proximity, and thus: “adding students is expensive – they require more buildings and instructors – and so a university’s marginal cost of production is high”.
2. For the same reason, it is difficult to improve productivity: “University lecturers can teach at most a few hundred students each semester – the maximum that can be squeezed into lecture halls and exam-marking rosters”.

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<sup>2</sup> <http://www.economist.com/news/finance-and-economics/21595901-rise-online-instruction-will-upend-economics-higher-education-massive>

3. While the cost of producing a MOOC is relatively high, there is a “rock bottom marginal cost: teaching additional students is virtually free”, and
4. As the marginal cost of each student is virtually nil, so the scope for profit is enormous: “A low price maximises registrations and profit. But as prices converge towards marginal cost, there will be little scope for undercutting the competition. Instead MOOCs are likely to compete on quality... Higher production costs are a small price to pay to attract much greater numbers of students. Such markets often evolve into winner-take-all, “superstar” competitions. The best courses attract the most customers and profit handsomely as a result. In this respect online education may more closely resemble information industries such as film-making than service industries such as hair-cutting”.

This theme is explored below under political economy. It might be argued that New Zealand tertiary leaders are somewhat complacent about the potential for MOOCs to disrupt current institutional forms. If we consider what the internet has done to, say, the media and banking industries in New Zealand, there is reasonable industrial evidence that big change is coming to learning organisations. Whether those interviewed simply lack a broader viewpoint, or whether the potential for change is over-rated, remains to be seen.

### **How different are MOOCs from other forms of learning?**

The second disruption is said to be that MOOCs are different from, and indeed incompatible with, traditional models of teaching and learning in higher education. Thrun’s red pill/ blue pill comment, quoted above, illustrates this position. The New Zealand participants saw the possibilities for differences emerging especially through the cMOOC, open learning, end of the MOOC spectrum. One participant outlined the reach and benefit of an open approach:

The opportunity is unique, particularly with cMOOC hybrids working to distribute learning materials across the internet. There are two flagships. The first is WikiEducator, which has 65,000 members seeking to offer education in the public domain or carry a copyright licence. The second is the OERu collaboration of 32 institutions working towards a more affordable and flexible education opportunities.

This approach is in contrast to the xMOOC model. For example, learners with Coursera must agree that Coursera owns the economic rights to the learning – so that learners cannot present their course for credit at any university.

Indeed, Coursera is already charging for ‘verified certificates’ for certain courses, at prices of around \$40-50 US. The learner joins the ‘signature track’ for the course, which verifies identity through facial and typing recognition, completes the course and gets a certificate.

Those working on cMOOCs envisage approaches to learning that differ significantly from institutional learning:

CMOOCs offer unique opportunities for development. Working through future scenarios, we had predicted students would be able to pick up a programme that they themselves had put together. So the focus was on student centred learning, within quality consortia. That is different from the pedagogy adopted in particular by xMOOCs, which is moving back towards industrialised approaches – a pedagogy that is about delivery rather than engagement.

The xMOOC model was viewed as offering a more traditional approach by all participants: “basically just traditional online learning, although they also bring significant opportunities for self-service learning and there will be a market for that. But the model will still require the well-motivated, self-starting learner”.

MOOCs range from being almost identical in form and content to other forms of learning, to being quite different, in terms of the values, the pedagogy and the issues of economics, control and ownership (which are discussed below under political economy). For Massey University, for example, involvement in a MOOC platform (Open2Learn) is seen as a logical continuation of fifty years of extramural teaching and learning. While the global reach, technology, and platform are all unfamiliar, in a sense it is business as usual.

While the xMOOC model is on the ascendancy currently, the more disruptive cMOOC models have yet to have their day, according to participants, for purely market reasons, as well as others:

Open business models (using cMOOCs) will triumph in the long run simply because the closed xMOOC alternatives will not be able to compete with the cost savings of open models.

Thus, some participants argue, the potential for disruption based on different models of learning has not yet been realised.

### **Are MOOCs incompatible with existing forms of learning in higher education?**

The third potential source of disruption is the forms of learning that MOOCs bring. One of the participants put it like this:

One of the real tensions is the transition from an elite model to mass to universal model of education. These options are not alternatives but must co-exist.

Pence (2012-13 p. 25) notes that:

There are two critical questions in the discussion of MOOCs: can MOOCs provide a less expensive substitute for face-to-face instruction, and will MOOCs represent such a major change in the learning process that they will be disruptive, *eventually replacing traditional education methods?* (our emphasis)

The first sub-theme to be considered here is the international context. A key benefit perceived by most participants is the ability to access students from around the world to take New Zealand courses. Indeed, the original model of MOOCs was to provide “access to super-professors in top universities teaching their knowledge”. The notion here is that anyone can access the knowledge provided by MOOCs, and be transformed by it, overcoming previously impenetrable barriers of race, class, culture and nation.

This notion is transformative for MOOC institutions, because it dramatically widens the potential clientele to a global population. The discourse of global opportunity is fairly widespread among the governmental and philanthropic organisations that support MOOCs, and some seek to highlight the transformative moment. The following is one high profile case – there are a number of such stories in the literature:

Khadijah Niazi of Lahore, Pakistan, is an inspirational example of how online education is revolutionizing learning. She was only 10 years old when she first took the Artificial Intelligence online course on Udacity. She managed to finish the course and, the following year, Khadijah completed Udacity’s Physics course with highest distinction, being the youngest ever girl to complete it.

Now, Khadijah is 12-years old, and earlier this month she sat next to Udacity founder Sebastian Thrun, Bill Gates of Microsoft, Larry Summers of Harvard, Thomas L. Friedman of The New York Times, and other panellists at the Victor Pinchuk Foundation’s 6th Philanthropic Roundtable, which took place at Davos in conjunction with the World Economic Forum. The discussion aims to show how MOOCs are finding their way to young prodigies around the world and how they are potentially changing the game in educational access.

“I think that MOOCs may allow peace in the world,” she says<sup>3</sup>.

This extract raises some questions. First, Lahore is not rural Africa, but one of the richest cities in Asia (although with enormous social and economic inequalities). Khadijah may not suffer any particular social disadvantage, unless it derives from her status as a Muslim girl in an Islamic state. So why does scoring well in a short

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<sup>3</sup> <http://www.wiredacademic.com/2013/01/davos-12-year-old-pakistani-prodigy-girl-talks-about-her-online-learning/>



course in Physics get her the instant fame that came her way, as the poster girl for MOOCs (the world's media have taken up her story in numerous articles)?

Second, the way she has been plucked from Lahori obscurity into a roundtable with some of the most powerful men in the United States smacks of a form of cultural imperialism. For what is the core message? That MOOCs offer a transformative experience, even a trip to America, for participants around the world. And perhaps an even more exciting subtext: MOOCs can reach everyone, and transform their lives through education. Since Davos, Khadijah has continued to travel to various conferences.

One of the participants in this study refers to stories such as this as 'urban myths':

The evidence suggests ... people who succeed in MOOCs are predominantly people who have been successful previously. These are urban myths built around a few astonishing people (a tiny number out of millions). They are astonishing because it won't happen to most people. These myths misrepresent the likelihood of unlikely things to happen. It is human to be susceptible to plausible stories.

The implications of such 'game-changing' MOOCs have not been properly thought through. In New Zealand, tertiary institutions must sign up to a code of practice for pastoral care before taking on international students. Some have suggested that MOOC participants would be exempt, as MOOC 'learners' are not students. Does this mean, then, that New Zealand tertiary organisations that enrol international students in MOOCs have no duty of care towards them? The Ministry of Education has not, as yet, been asked to rule on this, but a preliminary view is that the trigger of a code of practice responsibility might be that money changes hands. Whether or not that is enough to protect vulnerable learners remains to be seen.

If there are no legal obligations under the code of practice, what are the ethical obligations to students taking NZ MOOCs? Several of the participants stressed the need for transparency. "You need to be able to say that MOOCs are designed for independent study and no pastoral care is offered". The terms of participation are outlined by another participant:

The MOOC learner is paying nothing, and is promised nothing. Any obligation comes from the principle of buyer beware. Basically, no harm can befall anyone in our courses. We can make our goals explicit, e.g. supporting prior capabilities. We are obliged to go in with a high ethical standpoint: people with the right capabilities can reach a successful conclusion. You have to spell this out.

One participant thought that if New Zealand MOOCs were offered through another country's platform, there would be some risk:

MOOCs are not New Zealand institutions. Also, New Zealand course providers are not necessarily trained in social capital issues or factors that might misrepresent the outcomes or ethical outcomes. If a MOOC is offered into another country, there is a real risk we will become exposed to others' legal, cultural and political expectations and legal obligations.

The second sub-theme is the context of 'place'. In the absence of a location, Portmess (2013) reports that the large platforms find themselves recreating 'place' within the digital, and sometimes earthbound, environment. In this evocative extract, she explores the implications of this:

As online learning communities, MOOCs promise prospective students the prospect of joining "a global community of thousands of students learning alongside you" (Coursera, 2013). Udacity invites students to become "Udacityans" who have the opportunity for real world "Udacity Meetups" in various cities such as Koyampattur, San Francisco, Delhi, Accra, New York, Barcelona and Bangalore (Udacity, 2013). Coursera has its own initiative to overcome geographical boundaries and create real world meetups in cities such as Moscow, London, Mumbai and Toronto. Yet paradoxically in courses with massive, diverse, distant, student bodies, Udacity affirms the promise that "at Udacity we put you, the student, at the centre of the universe" (Udacity, 2012). Such language coexists uneasily with the premise of meetups that offer real world connection in places where Udacityans happen to find themselves. The promise of being at the centre of the universe turns out to be empty - there is no such place. Udacity is no place.

There is an irony in attempts to recreate a sense of place within MOOC platforms, when the whole system is based on the eschewal of place in favour of a transcendent technology. Issues of place are also explored further below.

In summary, there are significant disruptive issues to be considered in the development and operation of MOOCs from New Zealand. Somewhere between the rhetoric of Barber's empire-building vision, and the potential that MOOCs will merely further empower the already-powerful, an engaging, democratic and effective approach to education exists through MOOCs. But the shape and form of this are yet to emerge by mid 2014.

## Open learning and technology

According to Daniel, the first MOOC, Siemens' Connectivism and Collective Knowledge, sought to follow Ivan Illich's (1971) injunction that education should:

...provide all who want to learn with access to available resources at any time in their lives; empower all who want to share what they know to find those who want to learn it from them; and, finally furnish all who want to present an issue to the public with the opportunity to make their challenge known.

However, Daniel charts the development of the xMOOC model and notes that:

Media frenzy surrounds [MOOCs] and commercial interests have moved in. Sober analysis is overwhelmed by apocalyptic predictions that ignore the history of earlier educational technology fads. ... While the hype about MOOCs presaging a revolution in higher education has focussed on their scale, the real revolution is that universities with scarcity at the heart of their business models are embracing openness (Daniel 2012, p. 1)

In short, the MOOC platforms and commercialisation are not seen as the key issue in terms of the online learning community. In fact, Sir John Daniel appears to be suggesting that, in an apparent search for status and new markets (the 'shop window' approach, as one commentator calls it), universities who join xMOOCs may be unwittingly importing the values and practices of cMOOCs. In his blog *The Reed Diaries*, Peter Reed of the University of Liverpool notes that the act of thinking about developing MOOCs necessarily leads to the question: what are we doing them for?<sup>4</sup>. One author provides a strong description of principles for open learning:

Finally, "sustainable" MOOCs should aim to promote pedagogical models based on multiculturalism, the diversity of contexts, multilingualism, the synthesis of local and global cultures (glocal), and commercial processes. However, this should be done without undue ambition or excessive commercial gain behind which we often find big companies and consortia (Agueded-Gomex, 2013 p. 8).

While much of the attention given to MOOCs recently has been around the large and prestigious platforms, this has tended to divert attention away from the basic characteristics of MOOCs as *massive* (numbers unlimited), *open* and *online* courses.

### Open learning in New Zealand

A group of New Zealanders have been trailblazers in the developers of open learning and, latterly a cMOOC platform.

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<sup>4</sup> <http://thereeddiaries.blogspot.co.nz/>

WikiEducator is an international collaborative enterprise aimed at providing free versions of education curricula. It has four areas of focus:

- **building capacity** in the use of Mediawiki and related free software technologies for mass-collaboration in the authoring of free content;
- developing **free content** for use in schools, polytechnics, universities, vocational education institutions and informal education settings;
- facilitating the establishment of **community networks** and collaboration with existing free content initiatives in education;
- fostering **new technologies** that will widen access, improve quality and reduce the cost associated with providing education, primarily through the use of free content<sup>5</sup>.

Associated with the WikiEducator network, and launched on November 1, 2013, is the OERu. The OERu has the look of a MOOC platform, with courses listed, enrolments taken and dates scheduled. On the surface there is little difference. However, the intention of the OERu is to mirror fee-paying courses in schools and tertiary organisations and offer them openly at no cost, allowing the student to subsequently get credit through the RPL (recognition of prior learning) process. The purpose is not to replace existing educational models, but to offer the means to lower the cost and fill in resource gaps.

## How OERu works

Are you working towards a formal qualification? OERu courses can help you get there! Our courses are developed by recognised universities, polytechnics and community colleges and designed for formal academic credit.

- Our partner institutes offer qualifications through the OERu network of the same academic standing as traditional courses offered on-campus.
- Some of our partners provide optional assessment services towards formal academic credit.
- You'll receive your credential from the OERu partner institute you choose for your studies.
- The first qualification that our network of academic institutes offers is the Bachelor of General Studies (or equivalent).
- Individual courses may also be recognised as transfer credit for a wide range of qualifications offered by our partners.
- You may also study towards the [Diploma in Tertiary Education](#) offered by Otago Polytechnic, which includes a number of undergraduate courses.

Source: <http://oeruniversitas.org/how-it-works/>

Other parts of this report examine these initiatives in terms of participant organisations and the growth of open learning options, but it is acknowledged that further work needs to be done on these initiatives: a process evaluation or similar project. See Marshall (2013) for a discussion on strategic issues in NZ organisations.

<sup>5</sup> [http://wikieducator.org/Main\\_Page](http://wikieducator.org/Main_Page)

## **A New Zealand MOOC?**

The participants in this study were asked whether there was potential for opening a MOOC platform in this country, perhaps copying the UK FutureLearn to include institutions such as Te Papa, the National Library and potentially even the Te Aho o Te Kura Pounamu – The Correspondence School (school sector MOOCs are an under-explored area beyond the scope of this project). Other potential industry links might include agriculture, tourism, the information technology (IT) sector and a range of others.

It was felt by most that the KAREN network provided an adequate basis for the venture: networking, cloud storage and knowledge repositories were potentially readily available for further development. The major problem identified was the habit of competition between tertiary organisations, which was perceived to hinder development in the sector:

Conceptually I think that would be wonderful. Practically, it would be very hard. Hard to get collaborations going, as the profit motive is very strong and so ingrained. We have been working internally to encourage more staff to operate in the OER space. Our message is that you can't complain about being overworked if you insist on the self-inflicted pain of teaching the same stuff over and over.

There is no space for open learning in New Zealand unless there is some kind of collaboration first. There will need to be a financial incentive.

Good idea. VCs would need to embrace it.

Apart from the habits of competition, participants were generally positive about developing a MOOC platform in New Zealand. One respondent thought that there would need to be a robust planning process first, to ensure that (a) organisations gain real benefits from their collaboration and (b) an enduring model can be developed: “there is only room to fund one MOOC platform here”. An official from the Ministry of Education noted that no work had yet been done on such a model.

Some commented that they would very much like to see a collaborative model develop in this space, and that it may be wider than just a MOOC model. One person thought a strong national focus within wider subject topics would be very useful. However, one person did oppose this idea, stating that there seemed little clear purpose to such a platform: who would it target and what would it have to offer?

### **The role of MOOC platforms**

The MOOC platform, as discussed above, plays a number of important roles. For New Zealand institutions, being asked to participate in an international MOOC

platform has an element of status. For example, there might be a stipulation of exclusivity that no other university in New Zealand be allowed to join during a specified period. While Massey University had been actively looking for a MOOC platform, as a logical extension of its extramural work, the University of Auckland “responded to an invitation to join FutureLearn because it advanced our strategic objectives and involved a partnership with benchmark universities”.

Both universities are of the view that their involvement in the platforms is a good fit. For Massey, being involved in a consortium underpinned by Open Universities Australia, and working with a wide range of other institutions, enhances its role as New Zealand’s primary extramural university.

Auckland’s decision to join FutureLearn involved a number of issues:

We were invited to join FutureLearn. It was an opportunity to work with Australasian partners and to engage with MOOCs. We were particularly keen on working on an experimental basis as partners. The key decision factor was the quality of membership and status issues. The offer was attractive as an experiment. As a result, we are committed to developing and placing two MOOCs. The ones we will be offering will both appeal to large audiences, they are not niche courses.

Neither organisation had to invest any funds in the platforms. The Australian Open2Study is wholly funded by OUA, and appears to be well-resourced. For example, Massey did not have to produce the three courses it is offering on its own; supported by OUA the filming was engineered in Melbourne. These courses very much play to Massey’s strengths in agriculture and emergency management. A third course, to be offered later in 2014, will focus on indigenous culture.

The University of Auckland has developed and assembled its own courses. FutureLearn provided guidance on presentation and length and on the general focus of proposals; it did not prescribe content. UoA lists the additional costs as being advertising and staff time, as staff need to be relieved of existing duties to develop the courses. However, it is pointed out that the university works on innovative programmes all the time, all of which have a cost.

Another participant noted that developing courses for xMOOCs is: “very expensive and technologically complicated. The courses will need to be scripted at times and teachers have to be much more 'on' than in a lecture theatre. There is no immediate feedback and the presentation must be polished. The design of assessment tools is another difficulty: in MOOCs it is based on peer assessment, but the effectiveness of that depends on a range of factors. Honours students might have the skills to co-assess, but do more junior or beginning students have the knowledge or experience of how tertiary assessment works?”

One person thought that the Australian model is more likely than the US venture capital approach to work in the long term:

Udacity is running out of money. EdX has accepted that its model doesn't work. This kind of venture capital grouping does not have the experience or background, educationally speaking. The Open2Study model in Australia is different. They do have a background in online learning and distance education. They have the pedagogical knowledge to make it work.

FutureLearn, which is hosted by the UK Open University, is also driven by educational values rather than the demands of investment. So it is likely that the two xMOOC platforms that New Zealand universities are involved in contain the seeds for success.

The OERu is a platform for cMOOCs, linked to WikiEducator, and several of the participants in this study are involved in that network as developers and users. This project was introduced above under open learning. The aims are as follows:

The OERu aims to provide free learning opportunities to all students worldwide using OER learning materials with pathways to gain credible qualifications from recognised education institutions. It is based on the community service and outreach mission to develop a parallel learning universe to augment and add value to traditional delivery systems in post-secondary education. Through the community service mission of participating institutions we will open pathways for OER learners to earn formal academic credit and pay reduced fees for assessment and credit<sup>6</sup>.

One senior administrator involved with the OERu noted that there were few additional staff costs "as long as I don't overwork my staff". OERu systems are cloud-based and require no budget, and development takes place "as a normal redevelopment of the course. There is always a need to take great care when dealing with digital technologies, but we do not have the big cost issues that face, for example, Coursera".

### **Institutional capability**

One potential barrier to participation in MOOCs is the cost of setting up and developing courses, even assuming there is a platform on which to run and assess them. As noted above, the University of Auckland has not noted any specific or unusual costs to date, although it directed funding earmarked for development to the FutureLearn projects. Massey University, on the other hand, is planning for significant investment in hardware to facilitate online learning in the future:

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<sup>6</sup> <http://wikieducator.org/OERu/Home>



We are investing in a major rich media learning project on a distributive model. The aim is to have digital recording capability on staff desks, so that online material can be produced at quite a local level. At the same time, we will use a teaching consultant to assist in development. The Massey model is to do all this in-house, rather than outsource.

Others report significant interest from IT Departments in things like the audio-visual educational design of MOOCs, and ensuring a good online presence. "What is not being talked about," one participant noted, "is what is good teaching? What can people gain from a MOOC model? Is the pedagogy engaging? Do learners have the opportunity to ask questions?"

One participant who had taken "three, really useful, challenging courses", had a vision for education around technology:

My vision is that education will be able to be treated like live music - produced, licensed, shared and uploaded. MOOCs have great potential. There is a big debate about pedagogy, around issues of quality teaching and the effects of personal experience on the ability to take MOOCs. But random controlled trials have found the effectiveness of online education is as good as face to face education.

There are a variety of course-related challenges to open learning and the effective use of technology. Issues such as cost, resources, technology, the ability to adapt pedagogy to the online mode and the problem of knowing your audience are only a few. At the moment, with little collaboration, each tertiary organisation is having to re-invent its own approaches to these issues. It appears from the outside that more networking between organisations would facilitate better outcomes.

## The political economy of higher education

Much of the attention given to MOOCs in the media comes from the source of many courses in highly elite universities, especially in the United States (Haggard, 2013 p. 4). There is a significant paradox that those universities, whose reputation and status is founded almost completely on their exclusivity, have been the first to offer massified courses online. One of the respondents in the primary research stated that his interest in MOOCs had been sparked by MIT's early involvement in free online courses, and the development of the Coursera platform which hosts many of the world's most prestigious universities. Coursera specifically emphasises the prestigious nature of the organisations with which it 'partners':

Coursera is an education company that partners with the top universities and organizations in the world to offer courses online for anyone to take, for free. Our technology enables our partners to teach millions of students rather than hundreds.

We envision a future where everyone has access to a world-class education that has so far been available to a select few. We aim to empower people with education that will improve their lives, the lives of their families, and the communities they live in. <https://www.coursera.org/about>.

Another respondent noted the paradox, and argued that it will never be in the interests of these universities to provide credentials for MOOCs that are in any way equivalent to those earned by traditional students. So any debates around credentialling MOOCs is not about providing the opportunity for degree-level courses from elite institutions to be freely available through the internet. It is about finding ways to leverage value from MOOCs. One of the study participants understood the Stanford experience as follows:

Stanford, the aim is to offer teaching and learning to a wider audience. This is not based on an elitist view. They have a brand they want to protect, but what they are offering via MOOC is a taste of what students could get at Stanford. So it's a bit of both - sharing learning in the community and enhancing the brand.

Various authors have identified the benefits to these elite institutions in participating in MOOCs. These include the opportunity for brand enhancement (with the associated risk of overuse); the ability to experiment with new online forms pedagogically, without risk to existing fee-paying students; the potential to use MOOCs as a recruiting tool internationally; and, especially with the emergence of the MOOC platforms, the exploration of models of business innovation.

Daniel also notes that the Stanford model seems to be about experimenting with different models of online teaching and learning (2012 p. 4). He notes that the Coursera model is somewhat different, as "MOOCs are a sideline rather than core

business" (ibid). The implications of this are that the courses have not been thought through, and are simply mini-lectures like a typical college lecture and a weekly assessment. He quotes Armstrong (2012) as saying: "it seems pretty obvious that no one who had any working knowledge of research in pedagogy was deeply involved in the creation of the course".

A further question is to what extent the status of MOOC courses may lie in their source in a prestige, elite, university. One participant in this study concludes:

At graduate level, there may be some advantage in the level of specialisation a prestige university can carry. Or possibly in a qualification structure (such as the North American mixed model PhDs). But is there an advantage in a standard, taught graduate qualification? It seems to me that much of the prestige of the prestige universities relies on two factors: one is the prestige of the individual staff who work there and the other is the value of the on-campus experience (the Harvard MBA, the Harvard experience, the Oxbridge college system and tutor system)... If you are a research student and your supervisor won the Nobel or has a phenomenal H factor [this refers to a system of calculating the impact of a scholar's work], that's great, MOOC or not. But it's a bit hard for the MOOC to give the Oxbridge college experience. A rational analysis would suggest that the focus on 'prestige' universities is entirely wrong. The market should look for the quality MOOC. The quality MOOC may well not align at all with the prestige university.

This view is backed up by Daniel:

Several of the myths and paradoxes in the xMOOC universe relate to quality and pedagogy. A first myth is that university brand is a surrogate for teaching quality. It isn't. The so-called elite universities that are rushing into xMOOCs gained their reputations in research. Nothing suggests that they are particularly talented in teaching, especially teaching online (Daniel, 2012 p10).

It is important to consider why elite universities are interested in offering MOOCs, if in fact there is no intention to join their campus experience with courses for the masses. The literature suggests the drivers include an element of experimentation with online models, a fear of being left behind in the online revolution, a feeling that MOOCs should be part of the core business, especially of universities with histories of extramural courses and, to an extent, a search for status, especially in the crucial international education market.

In New Zealand, both Otago and Victoria have decided not to participate in MOOCs at the present time. Victoria has recently developed a strategic plan which specifies the main use of technology in the learning field to support on-campus learning: "adding value to face to face experience". This does not preclude MOOC models,

but means that in general individual staff will be making the decisions about MOOC courses, which in turn would tend to presume cMOOC rather than xMOOC models.

Otago's position is based on a strong support for place-based learning. In an article in a university magazine, the Vice Chancellor noted that the low completion rates of MOOCs, a need for regular "high level human contact", the importance of access to laboratory-based learning and high quality assessment systems made MOOCs incompatible with Otago's systems:

As the only truly residential university in New Zealand, we will continue to deploy our resources, including our human capital, to ensure that current and future generations of Otago students have the opportunity to learn directly from teachers and directly from peers. We will also continue to enhance the other opportunities that also shape the young people who study with us – sporting, social, cultural and musical activities are vitally important to their growth and development (Hayne, 2013)

Several of the participants commented on Otago's stance. Some saw the distinction drawn between place-based courses and MOOCs as a branding tool rather than a philosophical statement of position. It was noted that Otago already offers a number of distance courses, so a defence of place-based learning is a little late. On the other hand, Otago has done well in terms of importing students by emphasising a community focus, and has also invested heavily in this approach.

One participant agreed that "the benefits of the tacit learning that goes along with coursework in institutions cannot easily be replaced". Others thought that the difference between MOOCs and place-based courses should not be seen as an argument for separation of the models, but for strategic integration:

The introduction of MOOCs into the mix expands and augments opportunities for different approaches and to meet the needs of different learning styles. It imports a new level of flexibility.

The general view among participants was that MOOCs and place-based or traditional learning approaches could co-exist together, and "innovation does not take away from place-based learning".

### **Advantage, open learning and/or free education?**

We sought to understand the reasons, the drivers, for organisational participation in either xMOOCs or cMOOCs. At times, it was simply there was a person or persons in the organisation with a strong vision, who promoted it to the organisation as a whole. This was particularly true of those advocating cMOOCs or open learning approaches. Such a philosophy is compelling as it has the virtue of supporting the role of *public* education, at a time when access and cost issues are to the fore. With two specific exceptions, a Chief Executive of a polytechnic and a university-wide

commitment to the cMOOC, the open learning discourse tends to be more compelling at the level of expert academic staff (education or IT specialists) and less so at the senior management level, as one participant explained:

Senior management will only be persuaded by the expectation of a competitive advantage, but development at lower levels of the institution is OK. However, by the time a business case gets to senior management, it will need to be pretty much about competition. I hope this could be different, but it seems to be a vain hope.

One participant thought that part of the attraction of MOOCs was that organisations could use MOOCs simultaneously to try out open learning and to test the market:

I think we're seeing both. I think people are attracted to MOOCs both by their openness and by their need to adopt a place in the marketplace. For example, Harvard University wanted to explore the value of open education without compromising the value of a Harvard degree.

The OERu network, led by Otago Polytechnic, focuses on an open learning with a strong social responsibility platform and a strong sustainability platform<sup>7</sup>. A range of courses are already being offered, and more are planned. Partners include Lincoln University, the University of Canterbury and Ako Aotearoa, as well as several polytechnics: NorthTec, BOP Polytechnic, EIT, UCol, Nelson Marlborough Institute of Technology and CPIT. Open education is highly attractive, but one participant warns it comes at a cost:

We do have an open IP policy around partnerships. Not a problem to be open, but you have to have a resource to draw from, as costs can be high. The balance would be in that.

The question of market advantage, the xMOOC model, is also of interest as tertiary organisations struggle to decrease their costs and increase their income:

I think our institutions will look at anything that will give them a competitive advantage. But what IS the advantage?

There is room for both (cMOOCs and xMOOCs) - more than one type of MOOC.

One participant sees the field as being quite complex, and that people are attempting to deal with a number of unknown factors

Not really - what we have going on is a work in progress. What I understand with my frame of reference is that at the macro level we have some seriously

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<sup>7</sup> <http://www.idealogue.co.nz/blog/2013/11/otago-polytechnic-launches-global-open-educational-resources-university>

big questions to answer around the nature and purposes of education. But you don't have to stand on the sidelines - if you want to change things you have to do it from within - promoting access, development, opportunities etc. are not mutually exclusive but powerful forces can win though behind MOOC movement.

Another person was less interested in cost issues, but was engaged in both open learning and market share:

...probably not to reduce costs. The other two - we are interested in market share, we are interested in community engagement. In particular we want to communicate to a wider audience about what we do. It is not all about altruism. You have got to have those passionate people to front the change, but in order to protect those altruistic goals, you have to generate an income.

An enduring theme, mentioned in other parts of this report, is the potential use of MOOCs or other models of online programmes to fill in educational gaps, especially in continuing education, lifelong learning, options for older, credentialled, persons, plus:

..workplace learning, apprenticeships, vocational education - perhaps online learning rather than MOOCs. Online resources do play a crucial role in expanding the knowledge base.

Finally, two participants spoke about the wider national context, noting that not everything can be achieved by individual organisations pursuing their own goals:

At present it is a very confused and cluttered landscape. The OERu is framed around open learning. There are a number of polytechnics involved, who are speculating that it will have some reputational benefits, as it is supported by UNESCO. The two regimes (fee paying and free and open) will come into conflict eventually. If, ultimately, traditional qualifications are not seriously threatened by MOOCs, then the reputational value still remains in the old regime.

All of those things (free education, open learning and market advantage) are important. Those who are engaged in these processes are looking for a bit of everything. Obviously there is some concern over whether organisations will gain or lose market share, and both will happen. This means that we need to think about who we market to and how we market. At present, we are not thinking about that as a country - not thinking of it together.

The call for a more strategic approach echoes Marshall's (2013) focus on the need for strategic engagement by organisations, governments (who, he notes, have been investing in tertiary education for many years) and practitioners. However, he also warns against the paralysis that strategic thinking may bring. He urges all sectors

“...above all, to act, to innovate, and to use that experience to stimulate and sustain change”.

### **Academic staff making MOOCs and the ‘real cost’ and benefits of courses**

The general view is that academic staff have an interest in making MOOCs. Some see this as an “ego thing”, but others view it as an opportunity for academic staff to try new modes of teaching, using new technologies and reaching new audiences. For some, there is a strong reliance on the goodwill of academic staff, but fortunately that goodwill is present in abundance. This is particularly true at Massey University, which has been teaching courses in dual mode for many years:

We haven't got a problem in the willingness of our staff. When we weighed up part of the decision - either do it or not [i.e. join a MOOC platform] - we found out that if we did not join, it is highly likely that individual academics would want to participate. We then established a special interest group and over 60 staff expressed their interest. As we didn't have very strong strategy at the time, we tried to use that group to develop criteria for the future management of MOOCs. We were pleasantly surprised by the number of staff.

Otago Polytechnic is known as an organisation that promotes open learning, and staff are eager to promote “community based open learning” as part of their role. Another university noted that staff seek to “do things differently all the time”.

Some are wary of this kind of model, concerned that what begins as an enthusiasm by staff may end up either as an expensive millstone around their necks, or, alternatively, as a very expensive strategy for producing courses. Organisations have responded in a variety of ways. One participant notes that “we are building courses from existing open course materials, and aim to construct them in ways that cover the salaries of academics”.

Kolowich's (2013) survey of academic staff who produced MOOCs revealed that around 79% had a positive attitude to their courses. But it also told another story - of the development of a MOOC being a “full time job”. Beyond the enthusiasms of staff, proper planning reveals the true costs:

MOOCs are easy to cope with until you add them to a business plan. It has not been cheap to do. We have funded our MOOC development through a strategic investment fund - part of extending our portfolio of offerings and engagement strategy. It is important to look closely at the pedagogy. We do rely on the goodwill of staff, but staff to have to pick up other duties, so it does require other engagement, if a department is going to do it. From a business model perspective, we need to look at online learning as a long term issue, and ask the question: is this the way to go?



The need to be clear about staffing pressures and costs is underlined by a recent article in the Australian Campus Review (Bastian, 2014), which notes that the expansion of MOOCs in that country is leading to over-burdened staff and the need to employ more casual workers.

One view was that tertiary teachers should be expected to support MOOC development as part of their public good role, and even their critic and conscience role. This participant noted that, as taxpayers partially fund universities, people “should be able to learn for free, if they want to.... It behoves us to look for ways to provide education free, despite the limitations of the current tertiary system”.

There are costs and benefits to producing MOOCs. Benefits included status and reputational components as well as internal benefits. Downside issues include:

... the amount of time it takes to produce a MOOC and design an effective learning experience. Also, MOOCs might not always be the best way of learning. It takes a *great deal* of time, and there are opportunity costs in that. On the other hand, investigating MOOCs has brought to the forefront conversations around the real costs of making courses.

Another participant made the same comment, that the MOOC model allowed the real costs of course development to be calculated, and especially “time is a cost as well”.

Other benefits noted by participants included to be part of an international network, the widening of philanthropic activities, third party business opportunities, outreach activities, better profile, preparation for university studies and the ability to experiment with different modes of teaching and learning that may lead to change.

Most of the participants did not think that there was likelihood that course developers /instructors would become alienated from their courses, once they were completed. But in the US, there is already evidence that “more than a third of universities claim complete control over courses and materials for themselves and another 41 percent allow for joint ownership”<sup>8</sup>. Only 10% leave ownership in the hands of the course creator. This is an interesting indicator of the extent to which the xMOOC model has taken hold in that country; the cMOOC model generally operates on a ‘creative commons’ licence.

### **Re-stating the main tensions**

Much of the international MOOC literature over the past year has been focused on the problem of how to turn what is, by definition, open learning, into a set of technologies that allow for the “process of monetization, the authenticity of participants and the certification of courses” (Aguaded-Gomez, 2013 p. 7). The open/market discourse impacts heavily on MOOC development in New Zealand.

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<sup>8</sup> <http://nation.time.com/2014/03/01/online-courses-moocs-ownership/>, 1 March 2014.

## Learners and learning

Much of the literature around MOOCs has a focus on the providers and platforms, the economics and politics, rather than learners, learning and pedagogy. The literature that does exist on the implications for learners focus on two elements: the reach of MOOCs (size of courses, number of countries from which enrolments come) and the completion rates, which tend to be very low. Most now have adopted Hill's schema<sup>9</sup> that characterises MOOC enrollees into four categories:

**Lurkers** – These students are the majority of xMOOC participants, where people enrol but just observe or sample a few items at the most. Many of these students do not even get beyond registering for the MOOC or perhaps watching part of a video.

**Drop-Ins** – These are students who become partially or fully active participants for a select topic within the course, but do not attempt to complete the entire course. Some of these students are focused participants who use MOOCs informally to find content that help them meet course goals elsewhere.

**Passive Participants** – These are students who view a course as content to consume and expect to be taught. These students typically watch videos, perhaps take quizzes, but tend to not participate in activities or class discussions.

**Active Participants** – These are the students who fully intend to participate in the MOOC, including consuming content, taking quizzes and exams, taking part in activities such as writing assignments and peer grading, and actively participate in discussions via discussion forums, blogs, twitter, Google+, or other forms of social media.

However, one of the participants cautioned against too quick a classification of types of learner or their motivations. Very little research has been done on MOOC learners, with the result that:

The student voice is missing. I haven't seen resources being planned with student experiences in their own voice.

Some of the participants questioned what would constitute good quality MOOC courses for learners. One thought that MOOCs would be unable to deliver on good quality higher education:

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<sup>9</sup> <http://edf.stanford.edu/readings/emerging-student-patterns-moocs-graphical-view>

Quality? The educational experience that students value is engagement with their peers, lecturers etc. Mass courses cannot do this.

Another participant quoted George Siemens: “MOOCs embody what people outside of university think happens in them”. She goes on:

There are many things that happen in a face to face environment that are not specifically acknowledged. [A university’s strategy] expresses that we see technology as supporting the campus experience - not as a stand-alone system.

By design or not, MOOCs constitute a change in teaching and learning relationships. In some cases, where there are “evangelists and advocates”, change in institutions might be ‘lightning fast’, as one participant put it. A more distant teacher relationship might signal a closer peer relationship. Some participants were interested in transformative teaching/learning relationships, such as the flipped classroom<sup>10</sup> and new forms of assessment. Others seek a larger, more international transformation:

For better and worse, digital learning promotes a new global form of higher education. The agenda is about access to education. It can also be used to promote for-profit models, or development models, working out what it is we think the developing world needs. I feel comfortable with this approach to transnational education. Work locally, make a contribution, raise some funding in the future, find a mix of online and blended form – customise programmes to meet needs.

Three main questions are currently being worked through by New Zealand organisations (and others) in relation to MOOCs: completion rates, free and paid-for models and issues around place-based learning.

### **Do low course completion rates matter?**

As noted above, the completion rate in xMOOCs is very low, averaging between 10 and 20 percent of total enrollees. There is a debate about whether this matters. One participant thought that this was “entirely a red herring”:

The notion of completions has relevance for people who are paying for stuff. This is a different model and what relevance is completions? The focus on completions comes from government in regard to the payment of fees and the associated moral obligation to ensure that students have best chance of passing.

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<sup>10</sup> [http://en.wikipedia.org/wiki/Flip\\_teaching](http://en.wikipedia.org/wiki/Flip_teaching)

Another participant agrees that course completions are not very relevant in the MOOC context:

What are you measuring? Some interesting papers have tried to unpack the nature of students and continuation in courses. This approach fails to account for the large number of people who just browse. If you don't have to do the 'purchase' step, there is a different mindset. Another factor is in operating at a distance. The number of users doesn't really have meaning. It is meaningless to try and attribute meaning to those numbers.

One source of open educators' understanding about how MOOCs operate is the concept developed by Martin Trow (2010) that we are moving from elite to mass and now to universal education forms. It is argued that each form has its own specific benchmarks and ways of measuring. The measure of completion rates is very much located in the mission of mass education, where such numbers mark the health of the institution and of the society. In a move to universal education, completion rate is a blunt and misleading tool. One participant notes that there is a need to start using "big data tools" to analyse models of use.

Some reported that their own courses have not had such high levels of attrition, for a variety of reasons. One participant thought the high failure rate was deliberate, about exclusivity: "only the cream complete".

Finally, several participants called for better measures of success in MOOCs "completion rates need to measure something useful".

### **Free education**

A theme emerging from most of the literature on MOOCs is the potential of the model to offer free or low-cost meaningful education to people all around the world. The New Zealand participants generally did not see this as a key motivator for involvement in MOOCs. Some participants see a hybrid model emerging that has the potential to bring down cost without sacrificing quality:

This seems to me to be one of the great values of MOOCs - the ability to supplement on-campus teaching, covering extra topics, providing material that we can't do in an economic way because it's too expensive given our student volumes, providing alternatives that complement conventional teaching. The smart teacher will appropriate some MOOC elements, just as most e-learning that is done currently is done as a complement to standard teaching.

Another participant explains how MOOCs can benefit stretched tertiary organisations:

As tertiary institutions come under greater financial pressure, what we will see is the ability to be able to offer low enrolment courses via the MOOC format. Those institutions that do put effective protocols in place will be able to provide a better quality product at a lower price.

Some participants do not see 'free' education as being a key issue generally:

However, it might be in relation to older students. The return on educational investment for older students is very low, thus offering 'free' courses mitigates the risk associated with further study for that group. It also meets the learning needs of that group better. "Free to learn, cost to credential". People will make money from MOOCs or they will not survive. But this may be indirectly through advertising or credentialing, while maintaining free courses.

The notion that MOOCs might be free for some groups is taken up by another participant, whose university is developing a course available to full fee registered students as an internal course and available through a MOOC for free.

Most suggest that MOOCs will generally be free, but agree that there needs to be a way to generate income to keep them going. Suggestions include charging a fee for credentialing, for other add-ons, for advertising or for data-mining (the use of data collected through MOOCs for other purposes).

There is acknowledgement that free courses are attractive for potential learners, but most do not see this as a threat to existing fee-paying courses. The main reason provided is that the average new student does not have the skills to navigate the wide range of MOOC offerings and assemble a useful programme of courses for use by employers. One participant thought that this might happen in the future:

What's happening is that it is possible for you to teach yourself but we are now getting an acknowledgement that this is hard. We already acknowledge prior learning in workplaces and other experiential activities, but not through non-accredited courses. In the future, perhaps we will recognise prior learning via theoretical learning. After all, learning is learning, and MOOCs are providing a vehicle for theoretical learning. So it is likely that assessment services, and even support services too, will develop to support MOOCs.

### **MOOCs as an alternative to place based learning**

Part of the 'disruption' theme in the MOOCs literature refers to the ability of MOOCs to replace what is currently taught in the universities. Most participants were sceptical about MOOCs replacing a degree:

In theory, that will be possible. The test is how the market views such a portfolio. I think I said that (assuming rational employers) there may be a

difference between the reaction at undergraduate and graduate level. The prestige of the university is not especially relevant at undergraduate level – a first degree is a qualification that develops a range of generic skills that equips a graduate for a range of jobs or for further study. The difference between the MOOC portfolio and the conventional degree is in what it says about the tacit learning each implies. The MOOC portfolio may be held to say something about the generic skills people have shown – it takes independence and organisation and self-efficacy to work successfully through multiple years in the MOOC world. The on-campus qualification should have provided the framework for coherence (which might be lacking in the MOOC portfolio) and it will almost certainly have required (nowadays anyway) experience of the kind of soft skills employers say they want – teamwork from group study, the confidence to be articulate, directed research skills etc.

While this participant noted the different skills and qualities required to navigate MOOC courses as well as campus-based learning, another agrees there is tacit learning that takes place in universities that is absent in MOOCs, and goes on to discuss ways that MOOCs might be used within the on-campus model:

If it's just about completions, I don't think that MOOCs can replace universities. The person has to be assessed as having met learning networks. If we get assessed courses coming from MOOCs, then yes, but they are a long way away from that position. There might be scope to introduce a MOOC element - say one or two courses - to many qualifications - primarily learner driven, no teacher online. The MOOC could be used as a mechanism for keeping costs lower. It is about \$750 per course now. Well-designed learning could be a way to get a less expensive education. Online and other forms of open learning will develop further. As well, new models of work based learning might also be developed. But we would need to be concerned about the impact of these moves at the margins. All of our TEOs are small, and even a 3% drop in enrolment might be a threat to our viability.

Another saw major barriers to MOOCs meeting the needs of first time learners. Issues noted include a lack of full accreditation, the integrity and security of information, the need for a social experience of learning.

One participant thought that the point might be to broaden the university experience, rather than use MOOCs as an alternative. Another thought that the status of the institution might make a difference: “If you can do a course at Harvard, then why would you do it at Otago Polytechnic?” In other words, in the MOOC world, status is likely to trump other factors.

The concept of brokerage was raised by several of the participants. The idea of a brokerage was that students might pay a small amount to get advice on how to assemble a series of MOOCs into a coherent programme that might be recognised by employers. The brokerage may then facilitate the student's programme, document

completions and make further suggestions for study. Brokers might even solve the problem of isolation, perhaps setting up either online or place-based student groups to support learners. Such a model does not exist at present. There are problems with such a model, as one participant pointed out, with host institutions “making an absolutely clear distinction between certificates (for MOOC completion) and qualifications”. This means that even a general claim to be qualified in an area as a result of taking MOOCs, especially xMOOCs, might be contested.

Finally, there is the question of the relevance of MOOC learning to New Zealanders. Most courses have elements of national specificity, taught within New Zealand’s legal, cultural, moral and socio-economic frameworks. Subjects like law, commerce, engineering or the social sciences specifically draw on such knowledge. Only the ‘pure’ subjects, such as philosophy, physics or (partially) English literature could be sourced internationally without impunity. Here is also the problem, raised above, of potential cultural imperialism deriving, in particular, from some US courses.

### **MOOCs and access to tertiary education**

Most of the participants had a strong view about how MOOC courses could be used to enhance educational opportunities for New Zealanders. Some see them as an opportunity to offer cheaper courses; “an efficient use of taxpayer dollars”. Another person explains:

We want to have equality of opportunity in education, but universities are not responsible for educating everybody. MOOCs are, by definition, free. Thus MOOCs could be part of a strategy of opening up access to qualifications for those who can’t get to university. But the important thing to know is how far to take this before fee-paying university education breaks down.

Yet another person sees that MOOCs offer a solution to the “cost issue – universities are expensive”.

Some thought that MOOCs had the potential to fill the perceived ‘preparation for university’ gap. This might include offering MOOCs alongside school courses, developing MOOC taster courses for those intending to enrol in higher learning or engaging second-chance learners. But there is a reasonable consensus that studying MOOC courses requires pre-existing knowledge of the senior school or tertiary system, and thus is probably unlikely to meet the needs of disengaged learners.

Because of all the above, a number of people thought that MOOCs may be most useful for (a) older learners with qualifications who wish to study further, and (b) those wishing to engage in community education courses. Other potential courses might assist community organisations, for example, with accreditation of volunteers. The participants could not agree on whether MOOCs could be used for vocational programmes.



## Is the MOOC revolution over before it even got started?

During the process of doing this small study the clock ticked from 2013, a year of enormous MOOC development and significant scholarship around it, to 2014. Others writing at the same time have concluded:

The invasion of the MOOCs seemed inevitable: for better or worse, massive online open courses in one form or another were going to be a part of the future of higher education, and the question that most of the writers in this collection consider is what is that inevitable future likely to look like. But as we go to press in 2014, that future is a little less certain (Krause and Lowe, 2014).

Commenting about the Online Learning Summit held at the beginning of March 2014 in Cambridge, Mass., Carl Straumsheim<sup>11</sup> noted that, in the past year, “everything has changed”. He was talking about how representatives from the MOOC platforms, front and centre last year, sat in the audience and listened to people outline a range of alternative technical models for online learning.

There were, for example, DOCCs, which “had put aside the desire to be massive, arguing instead for the importance of creating a critical mass of learners rather than aspiring to reach an undifferentiated mass of students”.

In the Summit’s closing session, a speaker discussed how online education could meet the needs of the educationally underserved. She noted that to “make online education work for these students, we do actually have to spend far more than we currently do on them, and far more than you would on a typical Stanford or MIT student”. In short, MOOCs would not provide a short-cut or cheap option for educating the masses.

The implied critique of MOOCs seems to refer, in particular, to the xMOOC models. This report has made it clear that there are many unresolved issues around the xMOOC model, and especially the three ‘big ones’: how can MOOCs offer a return on investment; how can MOOCs offer effective teaching using high quality models of teaching and learning; and beyond ‘dipping a toe in the water’, can institutions of higher education and MOOCs work effectively in integrated ways, and what would that look like?

The picture on the front of Krause and Lowe’s book is of an alien spaceship landing. This is an apt analogy for the rise of the xMOOC model, and the associated excitement and attention that its platforms generated. One of the participants in this study noted somewhat ruefully that he had been attracted to MOOCs by the status

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<sup>11</sup> Work in progress, by Carl Straumsheim, Inside Higher Education, retrieved at <http://www.insidehighered.com/news/2014/03/10/much-change-some-progress-dominate-second-annual-online-learning-summit>

and prestige of the named universities involved: Stanford, MIT, and other Ivy League organisations famous in New Zealand, and normally somewhat inaccessible to most learners here. But those key initial MOOC platforms, in particular Coursera and Udacity, borrowed heavily on the venture capital market. This has remained as a shadow on MOOC development. The discourse has become one of 'how can we make money from MOOCs', rather than 'how can we take advantage of new and exciting open and collaborative models of online education'. One author noted in November 2012, that:

The funding's still fresh, and so it's too early to tell not only what these companies' business models will be or if their VCs will have to step in at some point down the road and insist that, in order to increase revenue, that "free and open" become "commercialized and closed."<sup>12</sup>

A year and a bit later, this is still not clear, although there are indications that these organisations are more intent now on getting a return on their investment, through advertising revenue and charging for credentials.

Some universities, including at least one of the New Zealand organisations involved in an xMOOC, have seen MOOCs as a source of recruitment for international students, either directly through course 'capture' (a person takes a MOOC, likes it, and enrolls at the university to do a degree), or indirectly through the university's name being published as the author of interesting courses.

The University of London's international programmes section ran four courses through Coursera in the 2012-13 academic year, and later published a very open and revealing evaluation of these. The key features were that the development of MOOC courses were "resource intensive both in terms of staff working hours and (potential) video production costs" (Grainger, 2013 p. 34), and that the "general demographic of MOOC users: [is] employed, well-qualified professionals in their 20s-30s who may be more interested in browsing the subject content rather than completing the course".

The University of London was clear that the aim of its participation in Coursera was to provide new avenues into enrolment into university programmes. The report is optimistic about this, but the figures show that, of the 93,000 learners 'active' in the first week of the MOOCs, about 30 people subsequently enrolled at the university. It is also not clear whether these were 'caught' by the MOOC courses or were taking them simply to prepare for study already planned.

An assessment at the beginning of 2014 of the xMOOC model must conclude that it is potentially in difficulties, not because of a lack of enthusiasm from universities (they are joining MOOC platforms in their droves), nor because of the low completion rates (huge numbers still complete), and not entirely because these

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<sup>12</sup> <http://www.insidehighered.com/blogs/hack-higher-education/venture-capital-and-future-open-education-fwk-and-moocs#ixzz2ve1lkNg1>

courses have not generally exhibited exciting new pedagogies for the online age. They are potentially in trouble because the costs of the programmes are not being balanced by an income stream. The economics of xMOOCs are not impressive, especially those that have borrowed from venture capitalists to fund their development. On the other hand, FutureLearn and Open2Study, which appear to have no debt and to be working from the existing resources of partner organisations, may provide a sustainable model.

If the xMOOC revolution is like a space ship, it landed on a terrain already occupied by a wide range of online services, and involved in a revolution of their own. Our interviews have revealed that New Zealand is a hotspot of the open learning movement, which is committed to bringing learning out from the institutions and to the masses. This is a much more fertile and less troubled source of the online learning revolution for the future. The opening, at the end of last year, of the OERu international network to deliver online MOOCs, provides a sustainable alternative model to those xMOOCs that have been set up with substantial venture capital investments.

The OERu partners in Australasia include Canterbury and Lincoln Universities in New Zealand, plus several Australian universities, plus a number of leading polytechnics/ITPs, plus Ako Aotearoa. To date, the organisation is strongest in the Oceania region, but even so is building quickly in other parts of the world. The involvement of UNESCO through the funding of a Chair of open education resources is also significant. While this organisation has not been the recipient of the hype that has accompanied the xMOOCs, it is also free from many of their problems. Moreover, the drive to open learning up to anyone who wants it, evident in both kinds of MOOCs, is more likely to be achieved in this kind of model, where innovative pedagogy is also part of the mix.

This report contains the first study of the development of MOOCs in New Zealand. It will not be the last. In particular, a report focussed more closely on the teaching and learning issues around MOOCs in New Zealand is needed, as this report has only scraped the surface of these issues. Most of the projects discussed, most of the people involved, are still feeling their way. There is a long way to go.

Unresolved issues include content sharing to improve education at school and tertiary level, how to develop a pedagogy that really engages all learners in online learning and what will happen if and when higher education truly becomes freely available online. As print media has lost resources to free online reporting, and banking has progressively shut down local services in favour of the internet (although not at a loss of profitability), how will existing institutional forms weather the online learning storm?

xMOOCs are still largely a US-based phenomena but one that is becoming increasingly global and growing quickly offshore, supporting regional concentrations and actively recruiting foreign students. Coursera, for instance,

currently has 182 partners, 666 courses and 6.8 million students from 162 countries. While the first round of hyped expectations has subsided, and university leaders have become a little more sceptical, it is clear that MOOCs will not go away.

Late last year the European Commission launched 'Opening up Education' to boost innovation and digital skills in schools and universities with MOOCs as a strategic focus<sup>13</sup>. Open Education Europa has an emphasis on “innovative learning” and is an example of a strategic response to US consortia that comprises universities, companies, public institutions and NGOs that aims to foster the link between digital learning, digital jobs and innovation. MOOCs are now a permanent feature of the social media and social learning landscape with strong links to other developing issues like social learning analytics, big data, open science, open educational resources, mobile learning, social innovation, creative economy and so on. MOOCs must be seen within an emerging global digital ecosystem that supports the growing ubiquity of social media, the rise of big data and learning analytics, and the shift from students as consumers to students as co-creators within collaborative, interactive and open learning environments. The extent to which MOOCs support these megatrends will determine their ultimate success in New Zealand or elsewhere.

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<sup>13</sup> <http://www.openeducationeuropa.eu/>

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## Appendix 1. Interview questions

### MOOCS NZ

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Massive Open Online Courses - the next big thing or a flash in the pan? Unrivalled opportunity for quality collaboration or an expensive burden? And what about an opportunity to extend open learning to all New Zealanders? This questionnaire schedule provides the opportunity for everyone with an interest in MOOCs to have their say - as stakeholders, teachers, students or policymakers.

We have received a small grant from Ako Aotearoa to document the current status of thinking and action around MOOCs in New Zealand. The intention is to write a 'baseline' report that will be available to everyone. We hope that this project will facilitate good decision-making around MOOCs.

First the important ethical guidelines. Because we are engaging with you as professionals in the field, we have not found it necessary to go through a formal ethics procedure. HOWEVER, we do understand that some of you will have plans that you might want to keep confidential. But we have one opportunity to document the baseline thinking of NZ organisations in the fast-moving world of MOOCs, so as far as possible we would encourage you to be frank and open about your ideas and plans. Openness is, after all, part of the philosophy of MOOCs.

In order to ensure that we meet your requirements for privacy and confidentiality, and also encourage openness in responses to this interview. We commit to ensuring that, before we use any material that can identify your organisation, we will send it to you for specific permission to use such material. On that basis, do you agree to be interviewed and for your interview to form part of this report?

- I do agree on that basis
- I do not agree and wish to terminate the interview

What do you think are the main characteristics of MOOCs?

Here are some other views on what they are - what do you think of these?

They are tertiary quality free courses offered online to all

They have significant potential to disrupt current forms of learning

They might be used to offer paid courses nationally and internationally

They offer unique approaches to learning  
Some people might want to replace teachers with online courses  
They have a different philosophy - open learning - than ordinary tertiary courses  
There is the opportunity to reach new audiences  
MOOCs provide the potential for New Zealand tertiary organisations to work collaboratively together  
They are the beginning of the end for place-based learning

What work, if any, has your organisation done on MOOCs?

In your organisation, where will/do decisions about MOOC development take place? Board, CEO, senior staff, IT staff, committed teachers, students, other?

Do you currently have any MOOC relationships or courses?

- Yes
- No

Have you, or are you intending to, develop a relationship with one of the international collaborative MOOCs (e.g. Coursera etc)? If so, how did that come about?

If the answer to the previous question was yes, what is the nature of the agreement you have made with that organisation?

*Issues include whether it is an exclusive deal, whether any funding is provided to develop courses, whether there is a binding contract etc.*

Again, if yes, have you provided any courses for the organisation as yet? Are they easy and cheap to develop, or difficult, or expensive?

*Please note any funding or resources provided to support the development of courses.*

How reliant is your organisation on the goodwill of course teachers to develop and provide courses? Is this part of existing job descriptions or a contracted 'extra'? Does the need for significant set-up work limit the range of courses that will be offered?

What benefits do you expect that MOOCs might bring to your organisation?  
Are these benefits about marketing, collaborative relationships, status, new skills, technical knowledge, research material, other?

If you are not involved in a collaborative venture with one of the big organisations, what is your involvement in MOOC development?

Many commentators have claimed that MOOCs are potentially disruptive of existing tertiary institutions, and indeed that place-based learning will disappear in the future. Do you agree with that?

It may be possible, in the future, for job seekers to assemble a portfolio of course completions via MOOC, from the world's most prestigious institutions, rather than completing a NZ qualification. Is there a potential threat to NZs provision of tertiary qualifications for its citizens in this?

To date, course completion rates are around 10-20% in most MOOC courses. Is this of concern or a natural attrition? Is it an argument against MOOCs generally? In any courses your organisation was offering, would you be looking for better rates? If not, what changes do you see globalised learning bringing to NZ?  
If so, how?

Some staff are concerned that MOOC courses will be complex and time-consuming to develop, and / or that once developed these courses will no longer be controlled by the staff concerned - that they will be alienated from decisions about their courses.

What are your views on these concerns? Can they be mitigated?

Do you have IT and/or education and/or film faculty in your institution that are keen to develop MOOCs to be offered by your organisation? If so, what discussion and debates takes place across different aspects of the organisation about such developments?

What do you think the impact on current tertiary students will be of MOOC courses? Will there be more online learning in general? Will students do MOOCs while they are studying degree courses? Any other thoughts?

Following on from that, will MOOCs affect/ transform teaching and learning relationships within tertiary institutions? If so, how quickly will this happen?

It is very likely that people from other countries will enrol in MOOCs offered by NZ organisations. What obligations will be created under the pastoral care code of practice for these people?

Is there a risk that high status institutions offering open degree-level programmes might divert NZ students from attending NZ tertiary institutions?

*Please tick as many boxes as apply.*

- Probably not at present, but this may be a risk in the future
- This will never be a risk
- It is already happening
- This is a significant part of our decision to join an international consortium or offer MOOCs.
- Other, please specify... \_\_\_\_\_

What opportunities do you think exist to increase access to tertiary courses WITHIN NEW ZEALAND through the use of MOOCs?

*Tick all the boxes that apply*

- Offering free, open courses can act as a launching pad to get people into tertiary learning, or to attract people to higher or professional qualifications.
- Our goal is to offer opportunities to those people who would not otherwise have access to tertiary learning in NZ.
- There is an opportunity to increase enrolment by lowering cost for some groups
- We have the opportunity to get a lot more people learning useful knowledge
- Other, please specify... \_\_\_\_\_

What do you think about the possibility of a 'New Zealand MOOC' - a consortium of local institutions banking together to provide open learning with a NZ flavour? Are any groups talking cross-institutionally about this? What about working with Archives, Te Papa and other libraries, museums and learning spaces?

What opportunities do you think exist to increase access to tertiary courses for overseas students through the use of MOOCs?

- Access to international markets is an important driver for us.
- There is an opportunity to improve education in under-served nations, especially in Africa and Asia
- The whole model is about education without borders, and as such we welcome

international enrolments

- They might begin their qualifications overseas then come to NZ to finish
- Other, please specify... \_\_\_\_\_

In your opinion, is the development of MOOCs in NZ being driven primarily by a concern for open learning, by reducing the cost of tertiary education or by attempts to increase market share (i.e. for competitive reasons)?

Thanks for your participation. Are there any other points you would like to make about MOOCs?