『地域政策研究』（高崎経済大学地域政策学会） 第 17 巻　第 1 号　2014年 8 月　67頁～ 91頁

Is Blended Learning the Future of Higher Education?

A discussion of MOOCs, Gamers, 'Connectivists' and Sceptics

Simon MASON

Abstract

This article discusses some current conceptualizations of university course delivery possible in the age of affordable and available computer technology. Arguments for and against radical changes to faculty organisation will be discussed, as well as revisited epistemological ideas made more pertinent by such technology. Issues arising from concepts of 'gamified' and 'kinesthetic' education and 'connectivist' approaches, such as 'rhizomatic' learning, will also be referred to in terms of their potential applicability to new course design, with particular reference to more discursive subjects.

The possibility that new technology could help to centralize some forms of education away from the faculty and even away from the university itself will also be discussed. Analyses of study cost, learning benefits and the quality of learning outcomes will be compared in research conducted into online learning technologies and online courses.

Evaluations of new methodologies and forms of teaching practice will be considered along with a look at proposed enhancements to the learning experience for students through the use of new technologies. However, this article will go on to discuss how the introduction of new forms of educational delivery are open to criticisms of centralism, dogmatisms, unification, unemployment, and at an extreme level, totalitarianism.

Ⅰ. Introduction - Traditionalist vs. Progressives
Ⅱ. A brief review of some learning theories
Ⅲ. This time it is different
Ⅳ. Threats and reorganizations
Ⅴ. Precautions and problems of MOOCs
Ⅵ. Stimulations and motivations

Ⅶ. Problems with online learning
Ⅷ. A case for more drama
Ⅸ. Restructuring courses
Ⅹ. Conclusion - Towards the 'poly-logical'

Ⅰ. Introduction - Traditionalist vs. Progressives

It is often the case that when the use of new technology is discussed in the redesigning and delivery of university courses, two broad camps of opinion tend to emerge at faculty level. (1) Excited technology obsessed, 'progressive' thinkers, who have been waiting for a change to the establish order; and (2) the 'traditionalist', who believe that the best teaching outcomes emanate from a core set of face to face interactions that could be replicated in any environment with the minimal amount of tools and technical support. Principally, these would include text study, oral instructions, and limited but effective board work.

Historically, classroom teaching has developed in tandem with alternate ways of education delivery since the 1890s. Salesmen would offer correspondence courses door to door; universities started to broadcast courses on the radio; military lectures on equipment training were given via portable movie theatres to soldiers during World War II. Presently, many accredited university courses are offered through distance learning; notably the Open University established in the United Kingdom in 1969. Still, face to face instructive methods currently dominate in higher education.

The progressive versus traditionalist deliberations that exist within many faculty meetings centre on the effectiveness of learning outcomes. Are results consistently higher and justifiable through one form or method of delivery over any other? Does the measure of a successful outcome depend purely on a set of domestic criteria in a globalised world more interlinked through corporations and computer based networking? In respect to Japan, the need to hold on to notions of self and 'the other' mean much of its approaches to education remain in traditional methods of instructive learning. But as the increased use of technology and mediated images in daily life exists in tandem with students' passage through education, do modes of thinking and interaction with the world make traditional teaching methods less effective? Equally, are the techno-centric progressives dominating the debate in offering changes to education? In concepts

of gamification discussed in this article, much of the reimagining of course delivery seems to come from an increased role for technology. However, much of the way information is re-laid to young people is through narratives and images, entertainment and mass social networking. Therefore, could education methods just as effectively be delivered in the form of a 'dramatization'?

According to Professor Theo Hug in his article, 'Key Concepts of Psychosocial Intervention and Communication Studies', the definition of pedagogy as the science of practical philosophy and psychology endemic to a region has, in recent times, been challenged to include cybernetics, information technology, and an internationalization of media literacy. If some fundamental shifts in the definition of education are taking place, then a reorganisation of faculty is essential for courses to reflect the world students have come from and will go back into after study. Information mediated through images and sounds rather than just written text may well need to be taken into the epistemological considerations of course design. However, as this article will go on to discuss, the introduction of new forms of educational delivery are open to criticisms of centralism, dogmatisms, unification, unemployment, and at an extreme level, totalitarianism. Hug does offer a possible way to combat the current and on-going progressive versus traditionalist debate in his concept of a 'poly-logical' design for educational organisation.

As well as the epistemological debates, the economics of education has also urged some to contemplate cost reductions. Wireless technology and computer hardware has reduced substantially in price and increased in quality year on year; and the cost of education has risen exponentially. According to a study by the department of labour in the US, the cost of college education has increased by 538 percent in 28 years, outstripping medical care by a factor of two to one. This effect on the rise of student loans and debt has threated to reintroduce two-tier education as income equality either force down the quality of education available to the poorest students, or not allow the poorest people to be students at university level.

Ⅱ. A brief review of some learning theories

The 'instructivist' form of course delivery, the dominate form in Japan, is a linear path guided by the teacher with the purpose of putting knowledge in students' heads that was not there before, which is a replication of the teacher's vision. On the other hand, a connectivist form of course design involves multiple inputs and discussions from different sources on a topic, allowing

learning and mastery of a task to be gained from 'zones' of development. This kind of learning favours a system of multiple truths circulating around a topic that require a student to figure things out for themselves from various sources, and in turn to become a source of learning for those around or in the same zone. Logically, this means that the instructivist approach can never impart enough knowledge but just be a node or key point in the learning map.

French philosophers Giles Deleuze and Felix Guattari are credited with formulating a concept known as 'rhizomatic learning' wherein multiple perceptions, understandings and directions of an idea can exist at any one time and that any idea is itself not original. Also, multiple ideas are not reducible to one origin but rather an idea is a result of intersections of two or more other ideas. This concept is not the dominant educational philosophy in higher education, however increasing numbers of educators and teaching academics are revisiting this idea.

Many pro-technology theoreticians of education cite computer networks as a way of allowing a large interaction of people to occupy the same space on a particular topic at a particular time. While it is true that computer networks allow for an interconnectedness that was previously difficult to achieve, Dave Cormier writes in his article, 'Rhizomatic Learning - Why we teach?', that comparing networking to a rhizomatic form of learning may still not allow the complete freedom of direction of thought proposed by Deleuze and Guattari.

One such development in online education that is thought to possess both instructive and connectivist approaches are MOOCs. A MOOC is the abbreviation for Massive Open Online Course, which is a method of delivering, principally, an academic university course over the Internet to an unlimited number of students. Through the use of online tools, such as video conferencing, interactive document submission, interactive white boarding participation, peer assessment and quiz solutions.

MOOCs have been categorized into broadly three types: cMOOCs, xMOOC and aMOOCs. The first based on a connectivist approach to learning, similar to Vygotsky's "zone of proximal development" theories and Engeström's 'Activity Theory'. Much like Deleuze and Guattari, they state that learning is transmitted through shared experiences and differences of opinion rather than only learnt from one position of instruction. The second form of MOOCs are instructivist guided types of lecturing delivered mainly via video; much like a 'traditional' lecture based course, the student's experience is linear and the outcomes tested at various stages. The third,

aMOOCs, are an adaptive form of MOOCs that are usually tailored to a specific area within a course or subject base that can be studied as a unit in itself.

So the difference between cMOOCs and xMOOCs raises interesting questions on the most effective way for students to acquire knowledge. Do online tools such as cMOOCs replicate a more accurate model of internalising knowledge that reflects modern life better and the decline in the authority of the teacher? Not unsurprisingly, most institutions have adopted the xMOOC model over the cMOOC peer learning in order to justify the involvement of MOOCs into a university course curriculum. Could a mature MOOC include both of these types of methodologies?

According to Anant Agarwal of the Massachusetts Institute of Technology (MIT), the concept of MOOCs are more than simple extensions of distance learning environments, such as, the Open University in the United Kingdom, founded in 1969. Moreover, MOOCs present a radical 'gamification' of the higher education sector to the extent as to restructure the existing format of all course delivery, and not just to students remote from universities. Agarwal defines gamification as the use of game thinking and game mechanics in non-game contexts to engage users to solve problems. He goes on to say that MOOCs are threating the very existing model of higher education in respect to their quality of teaching verses the cost of delivery. Potentially, a wider base of students can be tutored from one institution in a given academic year than actually attend the campus.

He does qualify the likelihood of MOOCs dominating academic course delivery by saying that they could form part of an academic four year course in which the first and forth years are taught remotely through the use of MOOCs and on-campus study only for the middle two years. This form of 'blended learning', he argues, has benefits for learning outcomes and benefits in terms of the cost to students and to the universities.

Nevertheless, some have argued that the predicted demise of classroom teaching has a long history of being thwarted. As far back as the 1920s, when New York University, Harvard, Columbia and many other universities transposed complete courses into radio versions for broadcasts, journalist Bruce Biven wrote:

> "Is radio to become a chief arm of education? Will the classroom be abolished and the

> child of the future stuffed with facts as he sits at home or even as he walks about the streets with his portable receiving-set in his pocket?" (Biven 1922)

The completion rates of courses administered this way was as low is 3%, much as the completion rates of MOOCs today, according to The Economist journalist Mathew Bishop.

Ⅲ. This time it is different

For those who are pushing for a restructuring of university courses, they offer data that supports the introduction of MOOCs and others forms of online and distance learning as fundamentally better methods for raising test scores and learning outcomes. In her lecture, 'What we're learning from online education', Daphne Koller claims that her research shows university learning outcomes fall into three categories of performance: 1) individual tutoring, 2) technologically assisted lecturing, 3) traditional style lecture hall delivery. She concedes that individual tutoring on a one to one basis produces the best results but that the traditional lecture style approaches have the weakest results. She asserts that participation and incentives are key to more effective learning through lectures.

She uses the example of a bright student siting at the front of the lecture hall asking a question and learning more from the answer, as will any other student listening. However, at the back of the lecture hall it is not clear if students heard the question or the lecturer clearly, or have been following the lecture, or care at all about the subject they are studying. Koller and Agarwal both state that a recorded lecture with a pause function allows a concept question to be asked on the screen before the lecture can continue. Therefore checking the student has understood the content so far and offers immediate feedback on their learning. They argue that this mastery of the lecture transports everyone into the smart student sitting at the front, who understands more and is asking questions. Also, this form of delivery can be used as a credit based system to incentivize students.

In 2011, Stanford University in California started to offer credits for some of its online courses. While not complete degree courses, these units were popular mainly with students not enrolled at the university on full degrees. The Economist magazine cites over one hundred universities following suit, with five hundred MOOCs being offered. One trend this has produced is that many people are taking courses for pleasure, for employment training, for their resumes, or for help

with university entrance applications. This new trend, known as aMOOCs, allow a more 'adaptive' personalized course design that can fit an individual career path, untethered to units on a more traditional course. An example of how these discreet units would work is of a film student requiring knowledge of hydraulics to build equipment for a specific type of camera angle or a development worker who needs bridge building skills for third world country projects.

The key factor to the future success of courses with MOOC designs and adaptive approaches to learning will be in the potential employability of job applicants. A job requiring a certain list of course units passed rather than full degrees completed could favour an approach to studying that involves aMOOCs.

This adaptive form of MOOCs is perhaps the most significant appeal to the re-imagining of education. Other labels, such as WBDL — Work based distance learning, started by the British Study Group and the University of Lincoln among others, have approached courses as problem-solving 'skilling-up' activities for working people. The online nature of these courses make some study possible during work time and at the work location. The 'roll in and roll out' aspect of this type of course makes studying flexible to workloads as it is relevant to the work required. This will go some way to convincing companies to pay for courses as they are tailored to the requirements of the job. Professor Scott Davidson of the University of Lincoln refers to engineering management, logistics and business management as currently popular courses.

The popularity of MOOCs can be viewed as another example of higher and further education moving away from the state non-profit sector to the cost-effective for-profit sector that is concerned with business models, market forces and survival strategies. In his article, 'Can the current model of higher education survive MOOCs and online learning', Henry C. Lucas Jr compares universities and colleges to recently failed businesses that did not see the digital revolution coming, such as Blockbuster Video, Borders Bookstore, and Kodak. He states that some, but not all, universities might disappear in the same way if new technologies are not adopted. The growth of online learning organizations such as *Udacity* and *Coursera* may help to eclipse some universities and colleges, turning their buildings into proctoring centres for final examinations only.

He states that adaption to new technologies is better than denial or a complete redesign of universities approaches to course delivery. He cites eight reasons why change has been and may

be slow in the near future: the denial of the effectiveness of MOOCS; the history of best practice connected to the traditions of an institution, a fear of change, an inability to change faculty mind-sets, familiarity of brand names, building investments; profit models, and a lack of imagination. Notwithstanding, Lucas describes four ways in which institutions might try to adapt their operations to use technology.

1. Traditional Classrooms: Limited use of technology with a lecturer present in the room.
2. Online Classes — Asynchronous: purely online courses that include video lectures, numerical grading, less or no direct lecturer involvement.
3. Online Classes — Synchronous: live video lecturers and discussions conducted via web camera and digital drawing boards and PowerPoint slides.
4. Blended Classes: Lectures are produced on video and watched at the student's convenience, with classroom time used only for discussion and problem-solving.

1. Example of synchronous xMOOC

For running an xMOOC, Coursera offers some guidelines to aid lecturers creating their own materials. Assuming a university grade server and internet connection, the lecturer should be producing a ten to fifteen minutes video lecture using a desktop, PowerPoint software, a drawing tablet, such as a Wacom product, video capture software, such as Camtasia and some video editing software, live message board software and webcam chatting software. In addition, a technical assistant is recommended to monitor equipment and live message boards. Much like a radio producer on a talk radio show, the technician can filter interesting questions to submit to the lecturer live as he or she is giving the lecture and invite interesting students to participate in follow up web chat seminars for each topic. Lucas writes that this method could substitute for some credit courses at undergraduate level if followed up by a proctored examination.

Ⅳ. Threats and reorganizations

The threat to traditional methods of course delivery in the manner described above could be two-fold. Students start to view universities not as holistic places for education and life experience but in terms of the best individual courses. For example, a medical student might which to study about the brain at Cambridge University but then about the heart at Oxford University, depending on the reputation of the lecturer or department in this particular field. Furthermore, the cost of attending a university might become so high that a MOOC based degree is the only best option for a quality education. Either way some universities in their current thinking will not survive

these changes if they start to become more widespread. If state funded education continues to decline, so customer choice will come to dictate the market more. Compounding this, for-profit institutions are more open and willing to adopt cost saving practices.

As Lucas points out, universities and colleges would be better to amalgamate online learning more into their course structures as to not be left prey to take overs or loss of market share. Offering a blend of MOOCs and regular type courses could fit a wider profile of possible student needs and budgets. How would this affect some universities in Japan who advertise themselves as life experiences and social centres for personal growth as much as they do for quality education? In a world where MOOCs and online forms of accreditation are available and relatively cheap, how does this match to the debt servicing requirements of expanded sport facilities, expensive dormitories, social club buildings, etc.?

For faculties, changes are inescapable and potentially frightening for faculty members. The need for redesigning courses, retraining staff, overtime work, new staff job specifications and layoffs are inevitable, according to Lucas. Teachers and lecturers would be required to combine and facilitate different types of MOOC content as much or instead of teaching. Taking the lead in certain specific areas is key for Lucas if institutions are to survive, offering a mixture of blended and regular courses, offering incentives to faculty members to retrain and develop online materials, employ support staff to handle technical issues and layoff administrators who do not have teaching qualifications. Lucas also says that infrastructure, such as classrooms, dorm rooms and sports centres could be changed into spaces needed to support MOOCs, particularly for proctoring. Additionally, all marginal or cross subsidized courses should be cut or incorporated into MOOC events.

Ⅴ. Precautions and problems of MOOCs

With the advent of courses being provided online and for no cost, the established model of higher education is indeed under a microscope if not under threat. Nonetheless, some in the educational community are starting to highlight some of the potential problems that could affect the wider adoption of MOOC-type courses taking a greater role in higher education. Stated earlier in this article, the rising cost of higher education and the exponential rise in affordable technology and computer networking has pushed online learning back into the forefront of political discussions on state and private education. However, initial large changes to university

structures will not come cheaply. As William G Bowen points out in this article 'The Potential for Online Learning: Promises and Pitfalls', the preliminary funding to administer large-scale MOOC-based learning as recognized qualifications in all strata of universities and colleges would be an outlay far higher than the current cost. However, he does go on to argue that once in place the infrastructure would not cost the same in each round of spending. Nevertheless, the need for new and updated content and delivery would be a new cost to universities; whether these were in-sourced or out-sourced.

The question of what types of MOOCs were offered could also change the type of university that offered them. For example, aMOOCs are consumer driven while xMOOCs are institution driven. The possible massive choice of MOOCs to certification might have a negative effect on students who do not really understand what career path they should design, especially with the absence of committed professionals to guide, particularly, undergraduates. Bowen continues that currently the popularity of MOOCs from 'elite' institutions give the misimpression that the student taking them is the same as a traditionally accepted undergraduate to elite schools. These are typically privileged and wealthier students. In fact the majority of higher education student bodies do not attend so-called 'elite' universities and colleges. It is far from obvious how MOOCs will be able to adapt to the educational demands of colleges that accept diverse cohorts of students.

In addition to this glaring problem, how can MOOCs adapt to various types of disciplines. As discussed, science based courses — from where MOOCs originated - can offer effective tutor lead MOOCs that explain and test the mastery of certain technical content. However, in the more discursive disciplines, less work has been done. A possible approach to this problem could be a further customization of courses at a local level to incorporate more discussion based lessons.

At a broader level, MOOCs are still not part of most universities course curriculums and according to the article by Albert J. Sumell, 'I Don't Want to Be Mooc'd', in 2013 only 14 percent of University and College presidents in the USA strongly agreed with the adoption of MOOCs in their curriculum programs; 31 percent remaining strongly against; and the rest in-between. Paramount among the misgivings were the issues of educational quality, initial cost, a lack of research, changes in college ethos, staff commitment, and employment issues for staff.

The potential for the transference of power is also present in the adoption of more online

education. One trend that could force more institutions to opt in to online courses is the political support for low-cost education at a state level. Streamlining work forces and shortening time-to-degree completion rates could prove popular with trustees and fee paying students but at the same time be unpopular with faculty heads, tenured lectures and part-time lecturers. Additionally, Bowen cites examples of 'common core' elements of educational fundamentals being out-sourced through the use of MOOCs. For example, students without prerequisite passes in Mathematics or English might follow the same courses during the first semesters or at a 'year-zero' pre-course semester or two. Practice for university entrance examinations could also be administered using MOOCs, particularly in countries like Japan where entry to university requires much testing.

This poses a further dilemma of university status. As more prestigious universities could become producers of content and the larger community of colleges and universities become consumers of types of uniform content, moving away from faculty and even institutional control. The economies of scale at a higher level university do give them an advantage over others in respect to online learning development. Full authority over teaching methods and learning outcomes could be threatened by an increase in online learning. The idea that all lecturers can lay claim to teach 'their course' to students may disappear.

One solution is to think of the access to technology and online learning as merely tools to be utilized locally and not to go beyond faculty, in effect a reverse MOOC, in which institutions invest in their own content creation through the expansion of media and IT departments. The main goal here is to increase learning outcomes and preparing students for a world where technology plays a greater part.

More critical are some academics of the loss of engagement with an academic subject if only learnt via a MOOC. The lack of accountability by everyone involved in degrees acquired through online education render the experience less meaningful and lowers outcomes. Sumell writes that along with the large gap between MOOC completion rates and face to face attendance courses, at a ratio of 1:8, the commitment of lecturers to respond to students' needs if interacting only via a message board is reduced. There is also a lack of effective evaluation of lecturers performance, being hard to tract and indeed non-existent is the case of outsourced MOOCs. Grading through MOOC courses is rarely more than automated numerical recording of inputted responses. Discussions and personal evaluation are essential parts of courses and should be expected as

part of the payment. Paying for committed staff to help students learn and administer all their needs, both academic and social is part of a successful study environment. MOOCs then should not be considered as a high quality education in itself, rather forming support and additional reference for students studying in a holistic atmosphere. In fact, the popularity of online education generally has grown in countries that do not have free university education for its citizens.

In a recent report, the MIT Technology Review, a journal at the forefront of publishing reports on the development of MOOCs, published research done by the University of Boston into cMOOCs. They found that the peer-to-peer discussion forums, so championed by MIT's own Anant Agarwal, showed that 30% of some course discussion was on small talk and chit-chat and other 20% on course logistics, such as when an assessment was due. Peer-to-peer discussion and peer monitoring and grading was found to be low and discussion threads of quality were buried in too much small talk and other discussions. They also found that when course leaders entered the discussion forums the participation of many student when down. This infers a master/pupil dynamic was at play rather than a co-operative forum for debate and discussion, thus undermining the fundamental idea of cMOOCs.

A cynical view of MOOC development, particularly done at a top-down level, was proposed by Jonathan Rees in his article, 'The MOOC Racket'. Here he refers to those pushing for the adoption of MOOCs to replace other forms of course delivery as wanting to be one of the new rock stars of online education. Whether being paid or done for free, Rees says that chasing the 'super-professor' status has meant a higher concentration on the information dissemination of courses over the necessary concept checking of understanding. He goes on to comment that the popularity of MOOCs as a cost cutting mechanism could cause two-fold damage to faculties, in that the terms and conditions of employment of lecturers not involved in MOOC production could be downgraded to a moderator's role and that mentoring and seminar discussion duties could prove demotivating as lecturers would not be proctoring their own work. In tackling the proposition that MOOCs offer more access to higher education for many who would otherwise not have the opportunity, Rees says that a bigger problem is that one-third of college undergraduates never finish courses taught on campuses in the US. For whatever reasons, Rees sees that future of MOOC led higher education as being at a cost to educational standards and an unknown cost to students and universities as they move from being free experiments to a privatised form of education delivery. He is concerned that some of the MOOC providers have

had large private donations and funding. Udacity, a popular MOOC site, is funded by venture capital with a profit motive incorporated into the structure, thus making it a product of sorts.

One concern is a lack of data on learning outcomes, according to Andrew Lewis in his article, 'Are MOOCs really failing to meet the grade?', he writes on the need to define engagement in lessons, both in a classroom setting and through online learning. With this data, instructors and moderators would know more about when and how to participate with discussions in MOOC sessions. He believes that in viewing success rates, classroom comparisons are misleading, and MOOCs will invariably come up short by contrast to small classes. He states that more analysis is needed into effective proctoring as one way to fairly compare MOOCs as a viable alternative to the classroom.

In respect to teaching more discursive courses, Ken Romeo's article, 'Language Learning MOOCs', is more critical of MOOC usage and cites that long and tireless work done in the field of language teaching has still not produced a world fluent in two languages, and that an increase in 'passive' learning techniques over small face-to-face interaction is not the way forward. He uses the example of China as a large area to research the effectiveness of passive learning methods and that rather than adopt online technologies in favour of direct teaching, they have by-and-large stuck to classroom based methods. He says:

> A comprehensive review of the many teaching methods used to teach English around the world will surely reveal that even the most conscientious efforts of expert teachers with abundant resources has not yet made the majority of their students fluent speakers. (Romeo 2013)

He believes more in the parallel development of online teaching techniques, he compares the rise of mp3 music distribution with the increase in the number of live music concerts. Rather than destroying the activity, iTunes and other facilities have supported that growth in live music. At its best, online technologies help to speed up learning preparation and provide platforms for revision of concepts.

In Australia, the launch of the first MOOEC, a MOOC for English language learning, designed by a consortium of universities in Queensland, aims to promote university enrolment through the use of a MOOC to encourage participation in face-to-face instruction after trying a 'taster' course

offered online for free. The idea of taking the course is as much a guide to what profile a serious student needs to have at university level as much as it does help learners to improve their study skills. It helps to improve the performance needed to study side by side on courses other than English with native speaking students.

Ⅵ. Stimulations and motivations

The growth and development of MOOCs discussed above has come about because certain needs are not being met; access to education for all is limited, work life makes course attendance difficult, the cost of education is too high, education in specific topic areas should be more adaptive. However, what are the theoretical justifications for increasing the use of learning via new media formats? This section will discuss some of the ideas that new technologies could unlock under-utilized notions of what learning is and how it can be experienced.

Some important work in the field of blended learning has come from Stephen Downes and George Siemens. They have provided some theoretical analysis for the promotion of connectivist MOOCs (cMOOCs). They have run courses in which the content of the course is the catalyst for discussions and interactions. The learning outcomes are less predetermined from one source but rather produced from the connections made as people interact. The outcomes for the individual are partly based on outside input and past experiences and therefore cannot be measured objectively or stated as existing at all. Downes argues that through discussions and connections students and lecturers become first more tacitly connected through a circulation of ideas connecting students and lecturers together in the subject without actually ever sharing the exact same knowledge. He and Siemens argue that a widely participated MOOC can help to add possible connections with those involved without demanding any strong participation if someone does not want to share.

Sharing research and ideas through online journal archiving software, such as Evernote, helps members of the group to form associations with whichever topic or sub-topic area they are currently working on. As a course runner rather than a leader, Downes maintains in his article, ‘The Rise of MOOCs’, that associations of ideas should be free to be made by all those connected. His job to encourage participation is more important than directing that participation. He prefers to call learning in this way a ‘repurposing’ of ideas rather than a creation of ideas, as no idea is truly created but rather re-posited.

According to Downes, internet connections over networks offers greater interconnectedness so this approach allows for greater practicing of ideas and techniques, much as an apprentice must learn techniques and in time pass them on with their own modifications as time goes by.

This notion of sharing over ownership is very important in the evolution of online learning. As discussed elsewhere in this article, many supporters of MOOCs, blended learning and online techniques believe that to engage students, short achievement goals with badges and rewards are required. However, Downes believes that rewards in themselves narrow the focus and limit the connections that people can make, leading to an ending of thought rather than a continued expansion of ideas.

Downes and Siemens are implicitly referring to ways of learning that have been described as rhizomatic in nature, referred to earlier in this article as proposed by French Philosophers Gilles Deleuze and Felix Guattari. They claim that ideas are multiple and interconnected and ideas from ideas form even more ideas as a rhizomatic plant reproduces roots and shoots that reproduce more roots and shoots. Therefore, it is impossible for a teacher to design and teach a course that can be exactly replicated in the mind of a student. If it does so, then the student is behaving in a passive way and is not trying to make connections other than that of the teacher's.

It is here that some advocates believe that the stimulation and motivation of students to make new understandings and interpretations of ideas planned by the teacher are best served by methods using new technology. One method of increasing student motivation with the use of new technology is that of gamification, that has become popular among some educationalist and derided by others.

Damasceno claims in her article, 'Paying Attention to the Chocolate-Covered Broccoli: How Video Games Can Change the Ways You Understand Teaching, Learning, and Knowledge,' that course design and teaching approaches are shaped by socioeconomic and cultural necessities. Education that serves the future work force mirrors strongly the current environment of the work force. Therefore, schooling in the times of industrialization and post-industrialization are reflections of those times. She states that the mandatory and compulsory nature of late nineteenth and twentieth century education values explicit knowledge that is repeatable and testable. These values are more likely to stay fixed and change less over time, and have remained the main

approach in justifying learning outcomes.

However, according to Damasceno, digitally mediated life requires much more tacit forms of knowledge in which practice and experience produces a more assumptive form of learning. Tacit learning is harder to explain in explicit terms but it is easier to recognise among those who share its cultural formation. The simplistic way to term this is 'child's play' and that gamification is more about child's play than coating hard knowledge acquisition with games and tasks that are easy to digest. Task-based activities with equipment such as video games, networked communications, 'facebooking', allow for new forms of learning to be cultivated, based as much on tacit understandings of the media as much as the content. Books and lectures are the best way to impart explicit knowledge but then it is only at best repeatable. Other forms of communication, interaction and tacit learning are served better through other forms. Damasceno makes the point that using new media to re-package past models of education is no real advance, merely chocolate covering broccoli to make it more palatable.

What many developers of blended learning argue is that traditional forms of education do not promote or facilitate autonomous learning and flexible applications for explicitly learnt information. Creating personal goals, new perspectives from collaborations, and a feeling of an authentic purpose to studying can all be helped through utilizing forms of new media, developers claim. Choice of how study is organised is seen as key, however this does not solve problems of basic motivation. Some have championed the use of badges to achieve level completion as a way to motivate students.

Performance badges, 'power-meters', fitness goals, are all ways daily life routines and work have had gamified elements attached to them. Game play and reaching fun targets is being seen as a way to motivate people to find a meaning in what they are doing. Education is the logical next step to be gamified. Joey Lee and Jessica Hammer offer some ways in which education could use some of these techniques. In their article, 'Gamification in Education: What, How, Why Bother?', they explore some possibilities in attempting to motivate students through game mechanics.

They believe that gaming tasks in education can help all students and not just the ones that get high grades. Grades in themselves are part of gaming but intrinsically are only available at the top of the class. Lower grades only motivate certain types of personalities imbued with a sense of competition. Moreover, gamifying every aspect of school life could help with a sense of

identity and improve social positioning, much as Koller hopes MOOCs will help those deprived of education in poorer areas of the world. The key for Lee and Hammer is for students to have cognitive, emotional, and social responses to study and work as much as acquiring explicit knowledge. However, the danger here is that an emotionally based approach could be applied to learning in the same way as fear was for a long time in school education, or religion in the case of faith-based universities and schools. Cognitively, games provide step-by-step increments of success through trial and error, achieving levels and badges as they go. Socially, games or role playing allows students to make decisions in character and see some distance between themselves and the game, thus developing their own identity.

Gaming education could however prove to have a negative effect on students understanding of their role in society once they leave education, if the wider world is not itself already gamified. If companies and life in general increase its use of game based targets then education is sure to be part of this process, however life itself could then become only a simulation of life.

Gamified tasks are offered as models for constant learning. Eugene Sheely writes in his article, 'What critics not understand about gamified education', that gamification is the best approach for learning using new technologies in a so called 'information age'. He uses the theories of explicit knowledge as merely repeatable in a linear fashion, for example, from a lecture or book. While being more transferable to others, he sees explicit learning as less deep and less applicable than 'tacit' learning, which comes through trial and error, practice and improvement in skills. He goes on to posit that a fun task is more important to build learning than one that has a sense of duty. And that explicit knowledge is a platform level from where to start a task-based tacit learning activity. Once mastered, the explicit knowledge for a higher level task starts the next stage.

He cites the university lecture as the least effective way to retain knowledge but the active participation in a task where a swapping of ideas occurs as the best way to retain skills. What he does not address is where and why attention rates are lower because of the lecture method. Have top universities adopted play tasks and rejected all forms of so called 'traditional lectures'? Should play be given only to lower level institutions as a way to increase motivation?

Motivation through incentives has a long history of research connected to basic human needs. BF Skinner proposed the system of operant conditioning in 1937, wherein a continued lever

pressing releases food pellet to rats as a reward. More socially, Abraham Maslow put forward a theory of needs based on a sense of belonging, self-esteem and a realisation of potential. In western cultures, the need for self-determination and autonomy has grown as personal drives to develop have overtaken stronger group identities present in eastern cultures.

In more recent times, incentivizing activities through the application of technology has started to appear in every form of life from supermarket lottery points gathering to air miles to eco-points on white goods have produced large catalogues of data on human behaviour. Applied to a work environment, attaining badges and points have been used to increase a company's productivity and profits as a primary goal. Game mechanics in education would need to be more subtle than mere points gathering. The value for education would be that once motivation has been ignited, then good quality teaching techniques could step-in and continue the learning process. Merely reaching a target could give a false sense of achievement and be de-motivating and not therefore spark a new direction of thought but rather stamp it out. This point was also made by Downes.

Some societal frameworks put a limit on the potential to incentivise students. In Japan, for example, the appearance of democracy and freedom belies a stricter ordering of work roles. The name of a university graduated from carries as much if not more weight in job hunting as the student's actual achievements, therefore leaving certain doors open to certain job hunters and these doors closed to others. Being allowed to study what and how you want could make you unemployable in this area if you do not fit other profiles.

Equally, if a badge system is applied to a top university, where motivation is points based, will that undermine the seriousness of purpose that is needed for the graduates to achieve in a job designated for those who graduate from a top level university? Indeed, should any university want to be thought of as a game centre?

Ⅶ. Problems with online learning

Many critics of the online learning and information technology used in education have not been persuaded by its arguments. Kentaro Toyama writes in his article, 'There are no technology shortcuts to good education', that the use of technology only benefits good schools that already have high quality education. He argues that technology can 'amplify' learning and add an extra layer of interest but reduces that quality of the learning experience if applied as a substitute for

teaching in lower graded institutions. The appeal of using computer technology in the classroom is exactly its real appeal. There is no intrinsic improvement in teaching quality, especially if it is integrated poorly into a curriculum. He cites the use of television as an educational tool from the 1960s. Studies from extreme cases, such as those tried in American Samoa, found that after using telecasts to educate students, 80 % of their lessons resulted in lower motivation rates. Subsequently, the Board of Education returned to 100% teacher led lessons. Comparative studies in Peru also found that in 2010 a laptop for every child program failed after three months, with teachers finding that computers did not meet their needs and no significant improvement in achievement occurred. This was surprising as the active nature of laptop use was hoped to be less passive as in telecast usage.

The Programme for International Assessment (PISA) publishes annual reports into educational standards globally on a number of criteria. There is no mention of computer technology as a factor in the top ten achieving countries for mathematics and English. Rather, countries with universal education policies and high teacher training rates, particularly in Asia, top the charts.

With this evidence in mind, will universities fare any better than schools if the majority of instruction is done via new media networks?

On the question of cost, Toyama writes that replacing teachers with computers might seem like a cost saving exercise, and therefore attractive to university managers, however, the real costs are hidden. Initial outlays of capital will be high to add more hardware, with a view that this cost if over. However, the obsolescence of computer technology is fast and the licensing of software is on a specific time scale.

He goes on to say that even if costs are reduced and a larger audience for education can be found in poorer countries, the fundamentals of good education remain unchanged, it is only the number of people wanting good education that is rising. According to Toyama, all of the benefits espoused by the use of online learning techniques, such as interactivity, 'adaptivity', student-centred learning, connectivity in learning, are all present in a teacher-led classroom, with a concentration on maintaining student motivation and directly monitoring that motivation.

For Toyama, the belief that computer technologies can replace human teachers is not backed up by enough research. It is ludicrous to substitute a parent for a computer. YouTube has not

produced more directors and playing sports video games has not produced better athletes, so why do advocates believe education is the exception? If poorer performing institutions require changes, why are computer-led solutions always the only direction that many institutions are facing?

Ⅷ. A case for more drama

One question that has not been asked in the search for engaging and motivating students through better course design is why new media and technology is the only answer. As much as modern life in mediated through tacitly learnt technologies so it is experienced through dramatic events, media narratives and drama itself. Surprisingly, drama is rarely used to explore themes and perspectives. In his article 'Drama as a form of Critical Pedagogy', Jase Teoh discusses the benefits of drama as a kinesthetic way to deepen students understanding of decision-making processes in international relations, themes in social justice and, cultural differences between countries. Key here to the use of drama is to empathise with important figures and those present at events of social impact rather than to make study more relevant and autonomous to the individual studying. Autonomous learning and choice may not maximize class participation, enlightening and empathizing with the subject might do better.

Gamification seeks only to fit study into a competitive world that must be fun to be bearable, rather the use of drama in otherwise non-drama classes seeks to improve human connections over digital ones. Equally, gamifying levels of achievement does not humanise education but instead trivializes it to a palatable goal. On drama in higher education, Teoh writes:

> Utilizing educational drama raises the stakes for students, making the thoughts and events more meaningful through their kinesthetic involvement. Drama gives the illusion of being there rather than observing from a distance. (Teoh 2012)

He also makes the point that a session on reflection and discussion is needed to explain issues that may have arisen in the dramatization of historical or political events.

Role-playing and acting out scenes introduces an emotional dimension to the understanding of issues and topics. If this kinesthetic experience adds to deeper learning, is it not academically valid? Play often involves non-verbal communication skills not normally associated with

academic studying. However, Teoh states that students' own views and preconceptions may be involved in the explicit study of issues and go unchallenged in a more traditional classroom lesson. Becoming another character could help to remove these subconscious feelings and give students a different mind-set, Teoh claims.

For many looking to develop a more tacit base for learning experiences, drama could be a way to develop new forms of deeper understanding more than new forms of digitally mediated learning approaches. Stories and narratives, either true or imaginary, have come to form a lot for our opinions about the world through media formats as much as the mediums themselves.

Ⅸ. Restructuring courses

Much of the investigations into online learning technologies and their effect on the structure of higher education have been from the science community. MIT professors and computing lecturers from many other prestigious universities are at the vanguard of the research and trial stages of such innovation. However, less sure of the effectiveness of such changes are the lecturers and department heads of more discursive disciplines. If the question is asked, 'Would you give up face to face teaching in favour of online instruction'? The response is almost certainly no. In his article, 'A Mediated Way: A discussion of the potential and potential problems for teachers and technology in the Japanese classroom', Simon Mason researches the opinions of teachers of discursive courses from both public and private universities on the effect that new technology has had on their teaching. Much of the responses detailed the lack of training and increases in preparation time that has been required to use new technology, particularly when students are using their own hardware in the classroom. Other responses included teachers who felt that technology provided no real improvement to the standard of their teaching. Daphne Koller concedes in her lecturer on MOOCs that one to one teaching instruction, and therefore not a mediated form of teaching, still produces that best results for students.

Moreover, MOOCs, online materials, and cheaper high quality equipment should be at the disposal of discursive course in a way that can support the lecturer or teacher. Most teachers would agree that the Internet helps to speed up time spent looking for material and so helps focus more on teaching. Similarity, using video linking for speech testing is now much more accurate and possible to validate. A face to face video conference call test is difficult for a student to cheat on or plagiarize.

The following is a transcript of an interview with Kevin Ryan, a lecturer at Showa Women's University and the University of Tokyo. He is currently participating in a number MOOC courses and is involved in planning and designing online resources for his current courses. He responded to the following questions on blended learning and some topic areas discussed in this article.

What would you see as a realistic use of online education in university curriculum design, giving ideas for locations and equipment?

"The way the university is set up does not learn itself to online learning very well. [The best way] would be to let students operate by themselves… [with]wifi almost anywhere and support for students to use their own technology which ever technology they choose."

Some have claimed that the gamification in forms of online learning is a threat to the fundamentals of higher education. What is your view?

"…gamification can be done without seeming like a game. …It is one of the directions that are really really necessary for learning to go, but I have not sure if universities will follow that path as much as corporations."

Many pro-technology advocates have said that this time it's different in respect to online education at university and college level. However, correspondence courses have been around since the 1890s. Is the rate of change too slow or at the right pace?

"[Rather than in universities] what I think there is going to be a parallel development in different kinds of institutions.… some parts of the university will be outsourced to these new institutions.… But I think it will be primarily in competition with universities. [Over decades] as the systems improve, online learning will overtake the university.… face to face contact would be outsourced to universities. [Socialization] and clubs will take place at the university but most of the learning will take place online."

Do you see a need for faculties to change their employment policies and staff roles in respect to an increased use of online learning technologies been utilized?

"[With reference to Stephen Downs] what may happen is to break the professor's role into 17 different

parts then deconstructing and adapting some of those roles to technology.… There will be a lot resistance to that, primarily among those with a large investment.… To bridge over to the new system will require years and years, especially here in Japan where the pace of change is glacial until all of a sudden it'll be quite rapid."

X. Conclusion - Towards the 'poly-logical'

For those who follow a connectivist approach to learning, the more potential connections possible, whether face-to-face or via networked communications, the better. For them, the relative value of these connections are less important than the number of connections made. Those involved in a community will eventually find a zone or series of higher level connections that they can learn from. The multiplicity of digitalised communication and the transfer of information at high speeds can reduce the slower and alienating forms of books and print media, conveying patterns of human interaction akin to the primitive age where all communications were immediate and relevant to a community.

For Rees, Romeo and others, the quality of that interaction is questionable, especially if universities restrict or curtail types of communities that are allowed to operate as part of a curriculum. If courses are out-sourced from other institutions, the larger network could produce the kind of 'multiplicitous' learning experience desired by Downs and Siemens. However, at the same time it may not have any of the local and specific learning required for the area students are living in.

The use of new technology as merely a useful tool to help established forms of pedagogy is as naïve as to claim that new forms of online education can produce new and radical epistemology. There is not an omnipotent tool for all teachers to use such as there is not a completely individualistic approach to teaching. New found freedoms for some may appear and feel like attacks on core values to others. Theo Hug tries to apply a philosophical aegis of the 'polylogue' to ease concerns facing the rapid adoption of new technology in higher education. He sees the benefit of openness in discussing different problems of course design as well as an understanding of cultural conditioning and ways of thinking, and encourages stimulating debate on the history of pedagogy.

What is necessary for Hug is a discussion on the 'educationability' of students. He questions if

notions of practical philosophy and psychology have shifted away from culturally specific modes of learning significantly enough to warrant a radical rethink of course delivery. He talks about cybernetics, internationalized images and communicative formats as shaping a new philosophy and psychology and wants to look beyond the hype of new media literacy that neglects the true needs of a changing society for the post-graduation citizen.

The polylogue model of planning sees all basic concepts, assumptions, starting points and teaching methods as debatable. What is important is to establish a crystallization of key issues and concepts that all participants in the design of courses think are important. Hug claims that:

> [If the] scopes of thought and action are not needlessly limited by permanently established design patterns, and the participants are actively involved in the processes of reasonably and iteratively re-designing the rooms for manoeuvre.… poly-logical forms of knowledge organisation can support a mutual understanding beyond marketing hypes and short-lived fashions, and promote context-sensitive webs and networks of interconnections. [We should move forward to a place where] the opposition between technophobic humanities and techno-euphoric engineering and natural sciences appears to have become obsolete (Hug 2013).

For Hug, the educator must still be the centre of the design and fear of foreign conquests of educational governance should be repelled. However, the foreign and the global may now be part of the local and therefore unavoidable in practical educational philosophy.

（サイモン　メイソン・高崎経済大学地域政策学部非常勤講師）

References

Hug, T. (2013) 'Key Concepts of Psychosocial Intervention and Communication Studies', *International Journal of Media, Technology and Life Long Learning,* vol. 3, Issue 2, pp.43-58.

Deleuze, G & Guattari, F. (1987) *A Thousand Plateaus,* Minnesota: University of Minnesota Press.

Cormier, D. (2011) Rhizomatic Learning — Why we teach, Available at: http://davecormier.com/edblog/2011/11/05/rhizomatic-learning-why-learn. [Accessed: 11 Feb 2014].

Vygotsky, L. (1978) Interactions between learning and development, *Mind and Society,* 2nd Edition, pp.79-91, Cambridge, MA: Harvard University Press.

J.J. Clark, (1906) The Correspondence School—Its Relation to Technical Education and Some of Its Results, Science, pp. 327-334, Available at: http://www. jstor.org/stable/1633383. [Accessed: 10 Jan 2014].

Agarwal, A. (2013) Why massively open online courses (still) matter, *TEDTalks*, Available at: http://www.ted.com/talks/anant_

agarwal_why_massively_open_online_courses_still_matter.html. [Accessed: 4 Dec 2013].

Koller, D. (2012) What we're learning from online education, *TEDTalks*, Available at: http://www.ted.com/talks/daphne_koller_what_we_re_learning_from_online_education.html. [Accessed: 6 Dec 2013].

Bishop, M. (2013) MOOCs: The fall of the ivory tower? *Schumpeter: The Economist,* Available at: http://www.economist.com/blogs/schumpeter/2013/08/moocs-fall-ivory-tower. [Accessed: 14 Dec 2013].

Lucas Jr, H. (2013) Can the current Model of Higher Education Survive MOOCs and Online Learning, *Educause Review,* Available at: http://www.educause.edu/ero/article/can-current-model-higher-education-survive-moocs-and-online-learning. [Accessed: 2 Feb 2014].

Bowen, W. (2013) The Potential for Online Learning: Promises and Pitfalls, *Educause Review,* Available at: http://www.educause.edu/ero/article/potential-online-learning-promises-and-pitfalls. [Accessed: 23 Feb 2014].

Sumell, A. (2013) I Don't Want to Be Mooc'd, *Chronicle Review,* Available at: http://chronicle.com/article/I-Dont-Want-to-Be-Moocd/138013. [Accessed: 13 Mar 2014]

Rees, J. (2013) The MOOC Racket, *Slate.com,* Available at: http://www.slate.com/articles/technology/future_tense/2013/07/moocs_could_be_disastrous_for_students_and_professors.html. [Accessed: 7 Mar 2014]

Lewis, A. (2014) Are MOOCs really failing to meet the grade?, *Recode.net,* Available at: http://recode.net/2014/03/10/are-moocs-really-failing-to-make-the-grade. [Accessed: 25 Mar 2014]

Romeo, K. (2013) Language Learning MOOCs?, *Stanford.edu,* Available at: https://www.stanford.edu/group/ats/cgi-bin/hivetalkin/?p=3011. [Accessed: 20 Feb 2014]

Evason, C. (2014). 'Massive Open Online English Course' Available at: http://www.mooec.com. [Accessed: 6 Mar 2014]

Downes, S. (2012) The Rise of MOOCs, Downes.ca, Available at: http://www.downes.ca/post/57911. [Accessed: 24 Feb 2014]

Sheely, E. (2013). What critics don't Unterstand about Gamified Education, *Gamification Corp,* Available at: http://www.gamification.co/2013/08/28/what-critics-dont-understand-about-gamified-education. [Accessed: 9 Mar 2014]

Toyama, K. (2011). There are no Technology Shortcuts to Good Education, *Educational Technology Debate,* Available at: http://edutechdebate.org/ict-in-schools/there-are-no-technology-shortcuts-to-good-education. [Accessed: 17 Mar 2014]

Lee, J. J. & Hammer, J. (2011) Gamification in Education: What, How, Why Bother? *Academic Exchange Quarterly,* Issue 15. pp. 1-5, New York: Columbia University.

Damasceno, C. (2013) Paying Attention to the Chocolate-Covered Broccoli: How Video Games Can Change the Ways You Understand Teaching, Learning, and Knowledge, *Field Notes for 21st Century Literacies*. Durham, NC: Duke University.

Teoh, J. (2012) Drama as a form of Critical Pedagogy: Empowerment of Justice, *Pedagogy and Theatre of the Oppressed Journal,* Vol. 1 Issue 1, pp.1-27, Omaha: University of Nebraska.

Mason, S. (2014) A Mediated Way: A discussion of the potential and potential problems for teachers and technology in the Japanese classroom, *Maebashi Kyoai Gakuen College Journal,* Issue 14, pp.171-189, Maebashi: Maebashi Kyoai University.

Ryan, K. (2014) Recorded discussion on MOOCs, blended learning, course design and faculty reorganization, Tokyo: Showa Women's University.