How much OOO in your MOOC?

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Abstract

Il formato MOOC (Massive Open Online Course) continua a creare numerose riflessioni, soprattutto in merito alla sua capacità di raggiungere tanti utenti contemporaneamente e all'uso innovativo delle nuove tecnologie. Questo articolo esamina il rapporto di simultanea attrazione e repulsione che la comunità educativa attualmente rivela verso i MOOC, un'ambivalenza che sembra sorgere a causa della qualità di apertura (openness). Le recenti implementazioni di MOOC divergono dalla radice connettivista. Un modo per comprendere le loro differenze può essere tramite l'osservazione di come vengano applicati i sette tipi di apertura. L'openness è ritenuta la dimensione più significativa perché è quella che definisce meglio la qualità dei MOOC, anche se, al contempo, è quella che crea le maggiori sfide.

Questo articolo esplora le tendenze attuali nelle offerte di MOOC, mettendo in discussione il valore pedagogico delle nuove implementazioni, ma anche apprezzando la loro rapida crescita e il loro potenziale impatto. L'articolo suggerisce che il formato MOOC debba essere adottato con un cosciente e deliberato intento di utilizzare l'apertura che offre, e non semplicemente perché aiuta a raggiungere un numero decisamente più ampio di studenti.

Parole chiave: MOOC; open education; educazione a distanza; connettivismo.

Abstract

The MOOC (Massive Open Online Couse) format continues to make waves due to the excitement that its reach and innovative use of new internet technologies generates. This article examines the love/hate relationship that the education community currently exhibits toward MOOCs, an ambivalence that seems to arise due to their qualities of openness. The recent implementations of MOOCs diverge from their connectivist roots. One way to understand their differences can be expressed by how they apply seven types of openness. Openness is chosen as the most significant dimension because it is the defining quality of MOOCs, and also the one that creates the most challenges.

This article explores current trends in MOOC offerings, questioning the pedagogical value of the new implementations, but also appreciating their rapid growth and potential impact. The article suggests that MOOCs should be adopted with conscious and deliberate intent to utilize the openness the form allows, and not simply because they reach more students.

Keywords: MOOC; open education; distance learning; connectivism.

When you first heard someone use the term "MOOC" what came to your mind? Did you think they were talking about a brand of candy, or maybe a new coffee concoction at Starbucks? The term is now so popular, it has perhaps become a catch-phrase for the future of online learning (Cuban, 2013). One has to suspect that part of the popularity is because people simply like to pronounce the word, which is fun to hear and fun to say. Perhaps the name is too much fun, detracting from the serious intentions at its roots. One of the authors of the original concept, George Siemens (2013b), has admitted that the name is unfortunate, that «there are many reasons to not like MOOCs (including the elite university models, poor pedagogy, blindness to decades of learning sciences research, and its entire identity: just a very bad name)». This article explores the love/hate relationship that the education community currently exhibits toward MOOCs, an ambivalence that seems to arise due to their qualities of openness.

Is my course a MOOC?

MOOC is an acronym for "Massive Open Online Course". The term suggests not only an educational delivery platform, but also links to contemporary learning theory, educational reform, social justice, and other key themes in education.

From a review of writings about and examples of courses labeled as MOOCs, it can be safely stated that, at a minimum, a course designed following the MOOC format has to

- be technically able to handle a large number of students (Massive);
- have an open enrollment, free to anyone with access and free from any prerequisites (Open, but see more on openness below);
- be offered via online distance learning technologies (Online);
- have a definable topic, a goal to stimulate learning, a pace, and a beginning and end (making it a Course).

While the concept generates excitement, it also receives a lot of criticism.

Roots

The "Connectivism and Connective Knowledge" course (also known as CCK08) is considered the first MOOC.

«September 2008 saw the launch of the first Massive Open Online Course of its kind (University of Manitoba, 2008). It was effectively a small credit-bearing course for 24 students, within an open-access network for over 2200 registered participants, of whom about 150 were actively interacting at various times. This course was unique in the number of participants it attracted, the use of distributed technologies for communication and because the course was used to present a new theory of learning - 'Connectivism'» (Mackness, Mak, & Williams, 2010, p. 266).

CCK08 was launched by Stephen Downes and George Siemens, the originators of the learning theory called connectivism (Siemens, 2012a). This theory suggests that learning occurs through making connections between people and ideas. It states that groups of people working together stimulate new learning through a diversity of expertise, thoughts, and opinions.

The idea behind their course was not only to let people learn more about connectivism, but also to apply the theory in order to improve it and test the MOOC format itself. As Downes (2012) has stated, «the software and course design were the first to explicitly invoke the theory, and to focus on connections rather than content, which suggested the distributed and connected approach».

In this first connectivist MOOC, different techniques and course spaces, such as Twitter, Moodle's discussion forum, RSS feed, personal blogs, and social bookmarking, were used to enable the large number of students to connect to the facilitators and to each other. The course was seeded with content, but students contributed to the course resources as well (in the form of forum posts, blog posts, wikis, and links). Students also determined their own learning goals and level of involvement, and in this way they became an important part of the assessment process.

Siemens (2013a) points to the strong theoretical motivation behind the first MOOC when he says: «When we first started with CCK08 our interest was to model how we thought individuals learned through social network approaches in the digital era [...]. We wanted to really express complex integrated knowledge and how that gets acquired and it doesn't get acquired through step by step processes or through getting a certificate [...] it gets acquired through discussion, debate, critical reflection, creation, making things».

While Siemens and Downes are most frequently associated with the original concept of MOOCs, there were many other people involved in early experiments, like Couros, Cormier or Yeager (Hargadon, 2012). CCK08 was not the first attempt for a large open online course.

The history of MOOCs can be divided into three phases. The initial trials to use the openness of the internet in education include initiatives by Wiley (Wiley Wikis), started in 2004 (Wiley, 2008), and Couros' Open-Boundary Grad Course delivered for the first time at the University of Regina in 2007 (Hargadon, 2012).

The second phase, which brought connectivist thinking more prominently to the stage, added a significantly new approach towards the course structure by distributing the learning environment over various online spaces and giving control to the participants to create those spaces. In effect, the core technology, which was planned to be a CMS (Moodle), was suddenly assisted by Second Life groups, Google Groups, Facebook, Twitter and numerous personal blogs. In this way participants were given a great opportunity to shape the course. On the other hand, one of the momentous innovations of that model was the aggregation and later dissemination of these massive contributions from learners.

The most recent phase, which started in late 2011 with MITx and then was followed by Coursera, Udacity and others, returned the learning environment to one central meeting point and reinforced the concept of the content as the primary part of learning. However, even in these more controlled course structures, participants are finding ways to spread conversations into new online spaces. A reason for the diversion from the original MOOC trajectory might be a desire for centralized and formal assessment, which is required in most educational institutions (Hargadon, 2012).

Evolution of the Model

Are some courses currently called MOOCs missing the point and adopting the model for the wrong reasons? Perhaps the massive numbers of students who could potentially attend are attracting marketing departments, for example, rather than connectivist educators. While some MOOC providers may be ignoring challenges and learning opportunities built into the openness of the format, their intentions are probably not all entrepreneurial. Connectivist MOOCs like that of Siemens and Downes (sometimes called cMOOCs) lie at one end of a spectrum of openness. However, others have quickly seen the potential of the format and adapted it to serve more traditional models of education and more fundamental learning needs. Many MOOCs now offered are primarily instructor-centered or based on acquiring more standard skills, and therefore provide more well-defined course content. For these, the most significant portion of the content might come in the form of lectures or other pre-selected online resources. They may also use more traditional forms of assessment, such as standardized tests. These courses sometimes receive criticism for abandoning cMOOC principles (Stevens, 2012).

Coursera (https://www.coursera.org/), EdX (https://www.edx.org/school/mitx/allcourses), Codecademy (http://www.codecademy.com/), Udacity (https://www.udacity.com/) and FutureLearn (https://www.futurelearn.com/) are examples of services which adapt the MOOC format to more traditional approaches. These are called xMOOCs, for lack of a better term and to contrast with cMOOCs. When an academic organization is trying to adapt an innovative model, whether the reason is to gain more students or simply try out new ideas, it can be complex to make it fit within the existing, more conservative structure. This is most likely the reason xMOOCs are moving far from the connectivist roots. The evolution towards more open models is happening only modestly, and is initially focused on decisions about the number of students to accommodate and free admission versus cost, rather than developing a true open course architecture. Thus in services like Coursera, while content is made freely available to anyone who wants to register, it remains fixed and centralized rather than open to participant contributions. This is why supporters of cMOOCs are often not satisfied with other implementations, seeing more potential in courses that open adult learners' access to community of practice and peer interaction.

The authors propose that it is too early to create a definitive classification system of MOOCs, although some have tried (Stevens, 2012). The cMOOC, which proposes just one theoretical perspective, should probably not be the measure for all MOOCs. But even if one doesn't trust connectivist learning theory, it is valuable to draw inspiration from the cMOOC model, finding ways to benefit from reaching large numbers of students with wide varieties of needs, and at the same time encouraging the independence and self-directedness that the format demands. The connectivist model provides a philosophical ideal that forces us to consider techniques outside traditional models, but we need to evaluate to what degree its novelty and experimental approach can be accepted in public institutions and private organizations. The authors prefer to focus on levels of openness allowed in MOOCs instead of drawing hard distinctions between implementations of the model.

How Much OOO in your MOOC?

The controversy about MOOCs does not have to stop educators from using its original emphasis on openness to improve courses. The originators of the MOOC concept would perhaps stress the importance of openness more strongly than this. Downes (2013, 26'01"), for example, emphasizes that, "if we are offering people access to the content part of education, we are really offering only half access to the education and not even to the important half". Nevertheless the authors suggest that, within limits, it is up to course designers to plan for as much openness as they think will benefit the effort and make their course efficient and their organization comfortable. There is no one recipe, but the authors would agree that without a strong emphasis on openness, it is inappropriate for an instructional effort to be labelled a MOOC. The following are seven ways of being open that we think should be considered when creating a MOOC, even though each of them is likely to create anxiety for those used to traditional educational practices:

1. Open registration: the concept of a MOOC requires that it is open and scalable to any number of interested participants. While this can be a frightening prospect, it is one of the fundamental principles of MOOCs;
2. Open level of participation: learners are free to decide at what level they want to participate. They may engage in every project and discussion and use all available learning resources, or they may engage in just a portion. Limited participation is not discouraged as long as it is a conscious choice of the learner;
3. Open course structure: in many MOOCs, the topic of the course is like a flag marking the territory around which learning should occur, but it does not determine the path everybody has to take in exploring the topic;
4. Open treatment of roles: MOOCs empower participants and relies on their contributions and initiatives. The traditional distinction between teacher and student sometimes fades;
5. Open educational resources (OER): MOOCs are usually built around access to resources that give the participants a common frame of reference. However, with the internet as the classroom, the resources are intended to expand well beyond the starting point defined by instructors. The contributions of learners create an enhanced body of learning resources that add to the richness of the experience;
6. Open assessment: MOOCs give more responsibility for success to learners. There are always guidelines about course objectives, but often learners must set personal goals as well. In keeping with the open model, peer- or self-evaluation may be important, and the quality of a contribution to a project or online discussion may have equal or higher value than a score in a final test;
7. Open technology: MOOCs usually have one central environment where learners and facilitators meet, but often they provide many alternatives for connections as well. Moreover, they may allow participants to bring their own favorite tools into the course and take a lead in creating additional learning spaces. To ensure accessibility, the tools used are primarily, if not exclusively, chosen from free and open-source applications.

Choosing Openness

"Openness" sounds intuitively like a good thing, but why should we give up the control that more closed educational forms offer? There are several responses to this question:

- Humanitarian goals: by offering completely open enrollment, we give equal opportunity, regardless of location, educational preparation, and economic means, to develop knowledge and skills formerly available only to those able to travel to courses or pay university tuition;

- Community of practice (Wenger, 1998): traditional content-based courses can help a student develop core knowledge, but they are unlikely to help a student develop an identity as a professional. The social part of education, so prominent in MOOCs, provides an opportunity to discover and share the tacit knowledge that cannot be transmitted through the standard content. «What open access means [...] is not just access to the content but also to the community itself [...], access to the teaching, access to the interaction of the participants among each other and with the instructors and guests in the course»" (Downes, 2013, 26'22").

- For the common good: equal opportunity lifts us all to higher levels. Everyone benefits when learning opportunities are expanded, because knowledgeable people challenge us toward further improvement and help us to function more effectively in a complex, highly interconnected world;

- Empowerment of learners: while learning guidance is important, too much guidance and too few choices fail to prepare learners for the independence they need in the real world. Learners need to develop creative and critical thinking skills to survive in today's fast-changing work environments. They need to become self-directed, life-long learners able to find useful resources and motivated to seek learning challenges throughout their careers. Open forms of learning provide opportunities to develop these skills. Connectivist learning (Siemens, 2004): for those who are guided by connectivist learning theory, the MOOC model is especially attractive, if not the best possible. The massive diversity called for by the theory to provide sufficient opportunities for creating unique and inspiring learning nodes can occur only in such environments. Quality learning is more likely to occur with open access to interactions with a broad community of fellow learners.

"Open" is an adjective heard often in an educational contexts these days. Even if we used this term when talking about different artefacts, for example "open content or open educational resources or open textbooks, the operationalizing actions that go with each of those uses of word "open" are the same. It's really about sharing and about being generous with other people" (Wiley, 2013, 00'48"). Moreover Wiley emphasizes strongly that «[we] can't talk about education without talking about openness. If there's no sharing, if I am not sharing what I know, if I'm not giving you feedback, if I'm not engaging in this give and take with you, there is no education» (ivi, 02'46").

Challenges

Creating a MOOC challenges instructional designers, instructional technologists, and teachers to adopt different mind sets. Traditional approaches to course planning for content development, student moderation and support, prerequisites, credentials, tools, and cost models no longer apply.

- Content

The course designers exercise less control over the content because it is partly created by contributions of the numerous participants (or at least there should be space for these contributions according to the connectivist roots). Expertise in the topic area is still critical, however, but not so much for producing resources as for evaluating and guiding the ones produced by participants.

- Moderation

Facilitating the learning processes of a thousand students sounds overwhelming if we think of the instructor as needing to lead all course activities. However leadership for learning moderation can be shared with participants who help guide their peers. Giving up a degree of control allows facilitators to focus more on moderating the course activities at a higher level – guiding, filtering, redirecting, aggregating, and summarizing.

- Support

The administration of anything that is massive is challenging, and creates more opportunities for oversights, loss of control, and frustration. However, one has to ask why massive online courses cannot be as successful as popular web services that support massive numbers of users by at least partially relying on peer support?

- Prerequisites

MOOC critics emphasize that the format is appropriate for self-motivated students only. Critics may suspect that reduced instructor presence limits motivation, but perhaps MOOCs inspire students in a different way – fellow learners passionate about the topic, pushing you to learn more, and the opportunity to choose one's own learning goals. Secondly, some believe that novice students are not ready for the independence required by MOOCs. That may be true, but universities have to overcome similar challenges in traditional courses with large numbers of students. Institutions have come up with solutions to make lecture hall courses more engaging – clickers, alternative lecture styles and demonstrations, study groups, smaller adjoint labs, online activities, etc. These approaches are already evident in MOOCs.

- Credentials

Demonstration of academic rigor and evidence of learning are required by most institutions. If we consider that MOOCs are more appropriate for certain types of courses, where thinking collaboratively, creatively, and critically are also key learning outcomes, then we will be more willing to accept that evidence of learning can be gained through peer evaluation and participation in a learning community. However, some new implementations of MOOCs ignore this value and are proceeding with course architectures that follow traditional approaches towards controlled assessment. While they might offer the opportunity of peer and self-assessment for free, they are also interested in providing certification that requires a payment (https://www.futurelearn.com/about/how-it-works).

- Course delivery tool

The MOOC format definitely requires technological resourcefulness. But best practices are increasing, and new tools are becoming available to aid those who want to create their own MOOCs (Colman, 2013b). However keeping in mind the original MOOC intent that not everything depends on the course designer, but that the technology choices instead can be partly made by the participants, the weight of responsibility for successful delivery becomes more balanced.

- Costs

There is an ongoing debate about the expenses involved in producing a MOOC, because even if a MOOC is accessible for free, it does not mean it can be produced for free. Different models and business strategies are being tried, but this remains one of the most significant challenges to whether MOOCs can continue (Colman, 2013a).

Signs of success?

If we can use the Sloan Foundation survey about trends in online education conducted with US higher educational institutions as one piece of evidence (Allen & Seaman, 2012; 2013), it tells us that while there is tremendous interest in MOOCs, there is also substantial doubt and willingness to wait-and-see. It also tells us that institutions are more interested in the massive qualities of MOOCs than their openness.

While the use of online learning in general continued its steady upward trend with a growth rate of 6.1% in 2013, the new MOOC approach nearly doubled in the same year. Of course, as a new platform, MOOCs do have more room for growth. MOOCs were used by only 5% of US higher education institutions in 2013, but like last year, nearly 10% of institutions reported being in planning stages to offer them. While not explosive, the growth should not be underestimated. Soon we can expect many more ideas about how to offer them and more evidence about what works. Perhaps the growth will continue and MOOCs will become a more mainstream educational delivery option.

But the data collected about the motivations behind MOOC offerings cast doubts about such a development. The two top primary objectives cited for offering a MOOC are to "increase institutional visibility" (27%) and to "drive student recruitment" (20%). Only 18% cited "innovative pedagogy" and 17% cited "flexible learning opportunities" as primary objectives. One has to lament the limited influence of the potential of increased learning as a driver. However, if it is marketing departments that drive learning innovation and opportunity, even if only as a by-product, should this be condemned?

A majority of academic leaders feel that credentials received for MOOC completions will create confusion about the status of higher education degrees (ibidem). So one might see the greatest potential for MOOCs in professional training, where the audience is often more dispersed and better able to benefit from social contact with colleagues working in similar situations anyway. But with the continuing movement towards professional competencies, the concern about credentialing does not go away. Will this be a limiting factor in the growth of MOOCs, or will attitudes towards credentialing change?

How much do students like MOOCs? The results are mixed at best. Because it is so easy to change level of involvement, many students do just that – and they change it downward. Dropout rates soar above 50% in most cases. In a recent course evaluation by the Open University for a course on Learning Design (Cross, 2013), it was found that even though students indicated they had existing content expertise (67%) and high level knowledge about online tools (53%), approximately 75% of the 2420 registered students stopped participating by Week 3. While only 1169 of registered students planned to participate fully at the start, only about 30 remained active contributors in Week 3.

Will students continue this high level of dropping out? Or are they merely still experimenting with the new format and getting used to it and its unique demands? Will MOOC facilitators become more skillful and better able to prevent such dropout rates?

The statistics show that they appear eager to try. And, perhaps a new generation of digital natives will come to MOOCs more accustomed to its approaches, and will collaborate with facilitators to improve offerings.

The signs of success of MOOCs are at once obvious and elusive.

Conclusion

George Siemens, one of the originators of connectivism and MOOCs, has argued that one of the most important by-products of MOOCs is simply the visibility they give to online learning.

«I am not sure that [MOOCs will be] half as disruptive as some claim. They are, however, significant in that they are a large public experiment exploring the impact of the internet on education. Even if the current generation of MOOCs spectacularly crash and fade into oblivion, the legacy of top tier university research and growing public awareness of online learning will be dramatic» (Siemens, 2012b).

Indeed, the Sloan Foundation survey (Allen & Seaman, 2013) shows that at least 50% of academic officers see MOOCs as an important way for institutions to learn about online pedagogy.

The MOOC format will continue to make waves due to the excitement that its reach and innovative use of new internet technologies generates. Quickly rising new initiatives, including FutureLearn, Canvas Network, and especially the upcoming MOOC platform supported by business giant, Google, prove that the model is still very attractive. But to get beyond excitement to results, education providers need to consider more carefully what the form offers and what ends it can serve. More research should be dedicated to understanding and improving the experience of learning in MOOCs to help make them more than a short experiment for learners who quickly drop out (Parrish, Wilson, & Dunlap, 2011).

We should adopt MOOCs with conscious and deliberate intent to utilize the openness it allows and not simply adopt them to reach more students. Let's take from the MOOC format what has proven most beneficial to serve learners.

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