Two Types of MOOCs: An Overview

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The term MOOC stands for Massive Open Online Course. The idea behind the term is described by its originators as simple and idealistic as creating an open and distributed learning experience, which reflects, rather than fights, the internet. Within less than four years, this educational ideal has been adopted by elite universities and is currently heavily promoted by mainstream and social media. The paper aims to review the grounds from which the idea has emerged and the distinct paths it has taken, through the eyes of an active participant in several MOOCs as a learner, developer, and researcher alike.

Introduction

"MOOCs have been around for a few years as collaborative techie learning events, but this is the year everyone wants in", says a recent New York Times article.1 "MOOCs (Massive Open Online Courses) are the educational buzzword of 2012", adds Sir John Daniel (2012), who also acknowledges the fact that the MOOC phenomena became intensively reported in the international press during 2012 only after elite US educational institutions stepped in. The media hype about MOOCs in higher education has focused on their massive scale; however, the real revolution – as Daniel puts it - is that "universities with scarcity at the heart of their business models are embracing openness" (Daniel, 2012). From a pedagogical point of view, the MOOC phenomena redefines what is meant by “learning,” “teaching,” and “assessment,” and at the same time blurs the boundaries between them.

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1 "The Year of the MOOC" http://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html?pagewanted=1&_r=1
The first MOOC took place in 2008 as an open online course at the University of Manitoba, Canada. The course, Connectivism and Connective Knowledge (CCK08) was facilitated by George Siemens and Stephan Downes, who have been developing the pedagogical theory of Connectivism and have regarded MOOCs as practical implementations of their theory (Siemens, 2012). The term itself was coined by Dave Cormier who joined in facilitating several other MOOCs, including PLENK2010 (Siemens, Downes Cormier, & Kop, 2010) that has been described as “a conglomerate consisting of various layers: live sessions…recordings…a complexity of discussion forum… the course Wiki and Blog…and the unique course aggregator named the Daily” (Levy, 2011). MOOCs of that type were later labeled “Connectivist MOOCs”, to distinguish them from the current wave of MOOC offerings that share a little with Connectivist pedagogy. It is the purpose of this paper to make this distinction clearer by (a) presenting Connectivism as pedagogical model for the 21st century; and (b) elaborating on Downes (2012) terminology of c-MOOCs versus x-MOOCs. The rise of the MOOC is relatively young; hence studying how these free, top-quality education efforts might change the world is also in its infancy. The presentation aims to contribute to this research-in-progress some definitions and observations, as well as to suggest additional research questions.

20th Century Pedagogical Models

Information and communication technologies (ICTs) have been integrated into teaching and learning to support a variety of pedagogies during the last three decades of the 20th century. Behaviorist models underlie the “drill and practice” computer programs that dominated CAI from the late 1960s through to the beginning of the 1980s. Yet, Dede (2008) observes that the underlying pedagogy in many current learning management systems (LMSs) closely resembles CAI. Their obvious
disadvantage is that they are usually based on a paradigm of learning that encourages “reaching the correct answer” rather than on the generation of new questions.

Cognitivist theories, which emphasize the mental models actively created by the learner in his/her interaction with the environment, are still based on the premise that a knowledge object can be well defined and that a task has a few possible correct ways of being approached. They do not provide answers regarding the learning of ill-defined content, which is what is increasingly presenting itself to the 21st century learner. Constructivist theories better explain learning occurring in vague contexts. To the view of thinking and learning as an individual process of restructuring, Sfard (2008) adds the communicative facet, coining the term ‘Commognition’. In constructivist pedagogies, both the restructuring and the communicating aspects are enhanced by ICT. However, even pedagogies which have as their central focus the knowledge that is constructed by people communicating or working together on given tasks (Schrire, 2004), are not sufficient to explain the processes whereby people will learn and act in the knowledge society of the 21st century. Moreover, both technological and social networks thin (Siemens, 2010) and might even remove classroom walls, thus inevitably subverting the classroom-based roles of the teacher as these have been “taken-as-shared” (Cobb, Yackel & Wood, 1992) in Behaviorism, Cognitivism and Constructivism alike.

21st Century Pedagogical Models

Aiming to consider the broad and wide effects of the network society on learning and teaching, George Siemens has developed Connectivism as a learning theory for the digital age (Siemens, 2005). Connectivism is based on the idea that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse
Connectivist MOOCs (c-MOOCs)

Learning in Connectivist-based MOOCs reflects processes necessary for life and work in the 21st century, in which information is characterized by rapid change and renewal, is collectivized, poorly organized, and incompletely evaluated (Kop & Hill, 2008). The challenge is for each learner to construct a personal learning network (PLN), by eliciting what is personally meaningful from the network of information and interactions. Such learning is “…highly social. The learning comes from
content presented by a lecturer, and then dialog via social media, where the contributions of the participants are shared” (Quinn, 2012). Table 1 lists the most noteworthy c-MOOCs\(^2\) that have taken place in the last four years.

### Table 1. Connectivist MOOCs offered since the 1st MOOC in 2008 (from mooc.ca)

<table>
<thead>
<tr>
<th>Year</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>Connectivism (Fall 2008) - the first MOOC</td>
</tr>
</tbody>
</table>
| 2009 | Connectivism (Fall 2009)  
Connect! Your PLN Lab (Fall 2009) |
| 2010 | PLENK - Personal Learning Environments  
Networks and Knowledge (Fall 2010) |
| 2011 | Change11 MOOC - Change: Education, Learning, and Technology! (Fall 2011)  
eduMOOC - Online Learning Today and Tomorrow (Summer 2011)  
DS106 - Digital Storytelling (Summer 2011)  
MobiMOOC - Mobile Learning (Spring 2011)  
LAK11 - Learning and Knowledge Analytics (Spring 2011)  
CCK11 - Connectivism and Connective Knowledge (Spring 2011) |
| 2012 | Mobi-MOOC  
Games Based Learning MOOC  
MOOC MOOC: a mini-MOOC, a meta-MOOC, a MOOC about MOOCs. |

These c-MOOCs are revolutionary in that they erase existing boundaries between the institution and the world “outside” it. Such Connectivist-based MOOCs call into question academic responsibility

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2 Others are also using the terms c-MOOCs, rhizomatic MOOCs, and participatory MOOCs to define MOOCs based on Connectivist theory.
and institutional accountability. However, the seeds of the MOOC that were first spread as practical implementations of Connectivist theory have been supplanted by others, which have developed into a different "flower" entirely, as the next section details.

**Other types of MOOCs (x-MOOCs)**

Interestingly, while preparing this paper, the “language of MOOCs” (Watters, 2012) has taken an unexpected turn. Right until the fall of 2011, the term “MOOC” was not used much by educational technology scholars and was not acknowledged at all in the mainstream public discourse. Those who did mention the term unequivocally denoted a practical application of Connectivism, as has been discussed above.

The turning point seems to be with the Artificial Intelligence experimental open online course offered in the fall semester of 2011 by two well-known computer scientists from Stanford. The first wide publication of this course in the New York Times (August 15, 2011) didn’t even mention the term “MOOC”, but the title – “virtual and artificial, but 58,000 want course” (Markof, 2011) – ignited a new wave of educational initiatives aiming to reach massive audiences of (mainly college-level and up) participants. The first to couple the Stanford AI course with the term MOOC was Stephen Downes himself. With sarcasm, but - in retrospect - also as a self-fulfilling prophecy, Downes writes: “The Stanford 'open' AI course has attracted some 58,000 students and an article in the New York Times. So now the MOOC will be deemed to have been officially 'invented' by Peter Norvig and Sebastian Thrun. Credit? No, not a chance.”

The experimental AI course ran for 10 weeks. Out of more than 60,000 preregistered participants, about 1500 completed the course in

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3 Published in Downes's OLDaily newsletter on August 17, 2011. [http://www.downes.ca/archive/11/08_17_news_OLDaily.htm](http://www.downes.ca/archive/11/08_17_news_OLDaily.htm)
December 2011. Sebastian Thrun himself left Stanford in January 2012 to form the new open online learning venture Udacity, commenting that after reaching out to such mass numbers of students he could not go back to teach in a traditional class. In a blog post from February 29, 2012, Quinn first distinguished between two types of MOOCs: the Stanford model and the Connectivist model. The goal of both types, writes Quinn, is to enable a free and “high quality learning experience to anyone with sufficient technical ability and access to the Internet”, but as opposed to the social nature of the Connectivist model, in the Stanford model “the experience is, effectively, solo” (Quinn, 2012).

During the spring of 2012 the wave turned into a Tsunami. Numerous news articles, blog posts, media interviews, and social networks posts flooded the Internet with new MOOC announcements, calls for participation, and critiques. Within a few weeks, MIT announced MITx; a consortium of Ivy League universities including Stanford and Penn State established Coursera; and Harvard University joined forces with MIT to create EDx – to name only a few. In March, Hill (2012) wrote that “there are really two variations of MOOCs with quite different approaches – witness the Stanford and MITx version vs. the rhizomatic version”. While the “O” that stands for “open” is thought to be the dominant letter in the original Connectivist branch of MOOCs, “M” seems to be the dominant letter in the Stanford branch. The most press cover, however, has been based on the Stanford model of MOOCs. In May, Martin Weller – a professor at the Open University of the UK – wrote in his Ed-Techie blog: “with the Stanford AI course, then the announcement of Udacity, EdX, coursera, and Curtis Bonk’s course, it seems that barely a week has gone by without some major new announcement” (Weller, 2012). In a blog post in July 2012, Downes (2012) therefore proposed a new terminology: x-MOOCs like Udacity, EdX, Coursera providing open online content, practice and activities in the domain in question;
and c-MOOCs – Connectivist MOOCs – providing not only open online content in a domain but also immersion into a community of practitioners associated with that domain.

**Summary**

Today, as a new cycle of MOOCs have started for the Fall semester of 2013, the media and the blogosphere are still full with MOOC reviews and calls for participation. While x-MOOCs clearly dominate and are even regarded as "the most important educational technology in 200 years" (Regalado, 2012), c-MOOCs are also spreading around the globe and the variety of subjects they deal with. As Siemens (2012) reminds us, "Thrun, Udacity, Coursera, and Stanford did not invent MOOCs. They did run them on a much larger scale… Our own MOOCs, in turn, borrowed heavily from online learning research … and experiences … that are at least 20 years old". Both types provide a new models for learning at a time when traditional school learning is widening the rift between learners’ experiences in and of the world and their experiences in formal school settings. Whether the two models will eventually merge, how the MOOC phenomena will develop, how such innovations influence higher education globally, and how it will be accepted by local institutions - these are yet open questions calling for much broader and wider investigation efforts.
References


