

Lessons Learned from Participating in a Connectivist Massive Online Open Course (MOOC)

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Abstract

This paper aims to shed light on an emergent kind of learning occurring as part of participating in global open online courses. Participants voluntarily jump into an ocean of complexity and fractal nature, yet are able to swim through and learn. The paper outlines Connectivism as the framework for such learning, and describes the structure of PLENK2010 course. Then, four lessons learned during the involvement of the author as a learner in the course are detailed, among them the different channels for learning in such an environment and the (no) need for direct assessment. As the course has still few weeks to go, the lessons learned so far will surely go under further consideration. However, those who consider participating in massive online open courses either as learners or as facilitators might benefit from this primary account.

Keywords: Personal Learning Environment (PLE), Personal Learning Network (PLN), Metaphors for Learning.

Introduction

The special date of 10.10.10 marked for me also the beginning of the fifth week of my participation in the unique experience titled PLENK2010: Personal Learning Environments, Networks and Knowledge (Siemens, Downes, Cormier, & Kop, 2010). Signing up for this massive online open course, with some hundreds of other participants from all over the world, took place out of curiosity per-se during the few (and rare) relaxed summer weeks. But as my own teaching in the fall semester was about to start, time didn't allow me to summarize in writing what I thought and what I learned during the last week of PLENK2010, as I used to do in my personal blog in the previous weeks. So instead, I captured the laptop screen and recorded the ten tabs opened in my browser, as one way of remembering what I was doing and what I was thinking. Among the tabs were my own blog (in editing mode) and two blogposts of other PLENK2010 participants (in a response mode); Week 4 general discussion in the course Moodle (in reading mode); The Tweeter entries containing the course label; slideshow presentations, Web3.0 videos and the last recorded Elluminate session.

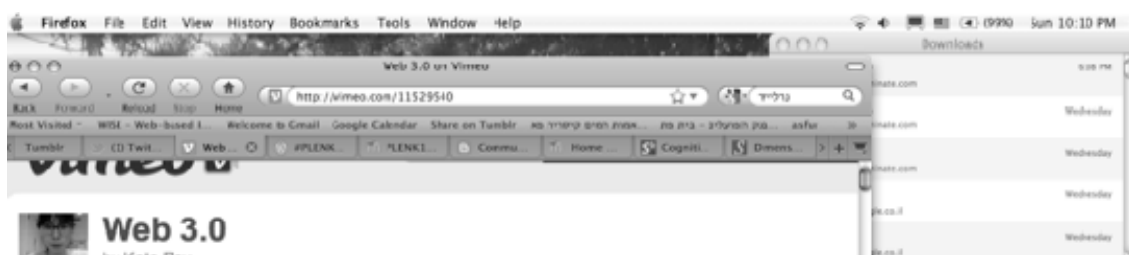


Figure 1. The Complexity of a Personal Learning Environment (PLE)

These ten concurrently opened windows represent only one fraction of the complexity of my own personal learning environment on the day of 10.10.10. Citing Marshal McLuhan, Arina (2009) terms this kind of complexity “all-at-once-ness” and refers to the fractal nature of learning in the age of real time. Indeed, the fractal nature of PLEs emerged as a main theme during the PLENK2010 course and discourse, taking me personally back in time to studies conducted in order to understand how learners develop understanding of recursive phenomena like fractals.

This paper aims to share with the readers four lessons learned during my personal involvement as a learner in a massive online open course (MOOC). But first, Connectivism is outlined as the framework for MOOCs, and the structure of the PLENK2010 course is described. As the course has still few weeks to go, the lessons learned will surely go under further consideration. However, those who consider participating in online open courses either as learners or as facilitators might benefit from this primary account even at this early stage.

Connectivism

Dawnes (2007) describes connectivism as the idea that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks. Distributed knowledge is referred to as a third type of knowledge, in addition to the qualitative (ancient Greek philosophy) and the quantitative (renaissance philosophy) types of knowledge.

George Siemens, who coined the term, regards connectivism as a model of learning that reflects the network-like structure evident in online interactions (Siemens, 2009). Siemens’ theory of connectivism is the combined effect of three different components: chaos theory, importance of networks, and the interplay of complexity and self-organization. Table 1 below is based on the comparison Siemens suggests between the different learning theories.

Table 1. How Prominent Learning Theories Differ from Connectivism

	Behaviourism	Cognitivism	Constructivism	Connectivism
How learning occurs?	Black box—observable behaviour main focus	Structured, computational	Social, meaning created by each learner (personal)	Distributed within a network, social, technologically enhanced, recognizing patterns
What are the influencing factors?	Nature of reward, punishment, stimuli	Existing schema, previous experiences	Engagement, participation, social, cultural	Diversity of network, strength of ties, context of occurrence
What is the role of memory?	Hardwiring of repeated experiences	Encoding, storage, retrieval	Prior knowledge remixed to current context	Adaptive patterns, representative of current state, existing in networks
How transfer occurs?	Stimulus, response	Duplicating knowledge constructs of “knower”	Socialization	Connecting to (adding) nodes and growing the network (social/ conceptual/ biological)
Which types of learning are best explained by the theory?	Task-based learning	Reasoning, clear objectives, problem solving	Social, vague (“ill defined”)	Complex learning, rapid changing core, diverse knowledge sources

As new technology enables – and even forces - the 21st century learner to learn in a very different way and at a very different pace from any other time in history, the need arises for new learning structures, networks, and tools. These structures should fit complex learning of distributed knowledge – the type of learning that is best explained by connectivism. A Massive Online Open Course (MOOC) is one such learning structure, as further described in the next session.

The PLENK2010 Course

PLENK stands for Personal Learning Environments, Networks, and Knowledge. The twin concepts of the personal learning environment (PLE) and personal learning network (PLN) have emerged during the last five years as alternatives to more traditional environments such as the learning management system (LMS) and institutionally-based courses, and a developing body of research has been produced around these alternative learning structures.

PLENK2010 has started in September 2010 as a ten-weeks-long online open course, jointly organized by the National Research Council of Canada, The Technology Enhanced Knowledge Research Institute (TEKRI) at Athabasca University, and the University of Prince Edward Island. It has four facilitators (Siemens, Downes Cormier, & Kop, 2010), and a numerous number of participants from all over the world, as Figure 2 illustrates.



Figure 2. PLENK 2010 (Partial) Participants Map

This massive online open course (MOOC) is not conducted in a single place or environment, but is rather distributed across the web. It is a connectivist course, aiming to clarify the ideas of personal learning environments and networks. For that aim, the course facilitators and participants analyze the research literature and evaluate it against their own experience. The learning in this unusual course results from the activities each participant chooses to undertake, and is therefore different for each person. Four types of activities are recommended for the participants: Aggregate – read, watch and play with various resources each week; Remix – keep track of it all, offline or better online, using various web technologies of one's choice; Repurpose – constructing personal accounts, composing own thoughts, creating new understandings of the course subject; and Feed Forward – share the learning with others, when and where each person chooses to do so.

PLENK2010, like any other MOOC, is a conglomerate consisting of various layers: weekly live sessions, attracting a few dozens of participants twice a week; recordings of all these sessions; a complexity of discussion forums within the course Moodle; the course Wiki and the course Blog;

and the unique course aggregator named the Daily, a newsletter which summarizes participants blogs, Twitter posts, and discussion posts from the last 24 hours. Each Daily newsletter contains about twenty links to blog and discussion posts containing the course tag, and as twice the number of Twitter posts. Indeed, an overwhelming collection of ideas, stories, recommendations, questions, and representations, expressed using a huge variety of tools and technologies, and widely distributed across the web. Managing all of this is challenging, as has been reflected by the question one participant posted in the discussion forum: “*I am reviewing new additions to these discussions at least once a day. I get them in my email. I read THE DAILY. How do you keep up with all that stuff and all those sources?*” (posted on Sep 19, 2010 in PLENK2010 general discussion forum). But as it turns out, the course participants have not only voluntarily jumped into this ocean of complexity, many of them have contributed to making the learning network even more complex, more connected, and more rewarding (Alsagoff 2010, twitted Nov 6, 2010, see Figure 3).

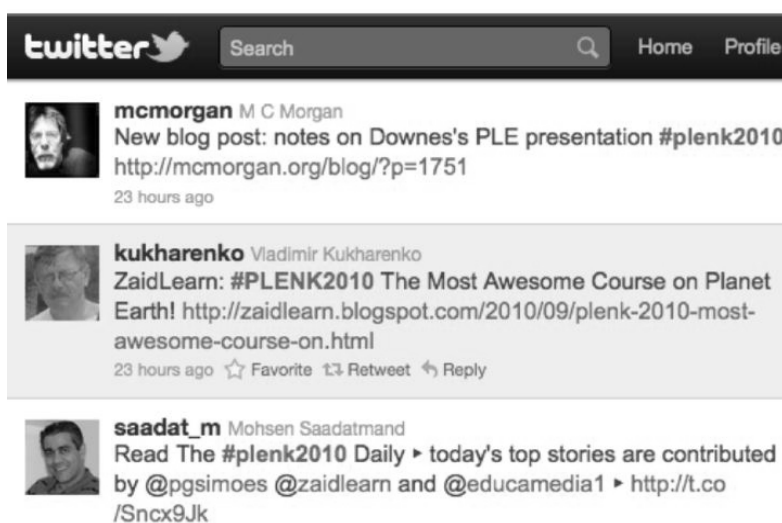


Figure 3. #PLENK2010 The Most Awesome Course on Planet

Lessons Learned

While preparing this paper, the massive online open course (MOOC) has entered into its last weeks. The following four considerations have emerged from the author in-action reflection throughout the involvement with the course, and should therefore be regarded as a primary account whose aim is to raise questions rather than provide answers. Still, the audience of this conference and especially those who have been involved or consider their participation in online open courses might benefit from this primary account.

Lesson 1: Learning in a MOOC is Possible

The “M” in MOOC stands for “massive”, and PLENK2010 has indeed been massive in many aspects: the number of participants, their diversity, the kinds of backgrounds and experiences exhibited and built upon, the communication tools, the web technologies, the amount of distributed knowledge and the complexity of the distribution, the overwhelming width and depth of discourse among the participants, the multi-modal nature of this discourse, and of course the massive amount of time needed to manage and organize all of this. Yet, as a determined and motivated participant, I have personally managed to “swim through” and learn. If anyone has questions, PLENK2010 offers avenues to ask them and a community of practitioners who are willing to respond; when anyone comes with an insight or original idea, there are numerous opportunities to post it and get feedback from the course facilitators and the other participants alike. The massive participation and involvement of many contributors, as can

be seen all around the various PLENK2010 layers, serves as an evidence for the lesson I have personally learned: learning in a MOOC is indeed possible.

Lesson 2: Learning Often Occurs Through the Back Channels

Central to PLENK2010 are its twice-a-week synchronous live sessions, powered by Elluminate (a web collaboration technology, see www.illuminate.com). At the main channel of these online sessions, a knowledgeable expert verbally presents her or his ideas for about half an hour, with the aid of some visualization techniques. The main channel is often accompanied by a variety of additional attention and communication channels, termed “back channels”. One of these back channels is the chat space, in which all those who connect to the live session on time can participate, and many of them indeed participate by posting thoughts, ideas, and links as these arise while listening to the main channel speaker.

At first, the chat window might seem too distracting – especially for those participants who are not native English speakers: first, the chat discourse scrolls fast, and utterances might disappear before one has the chance to read even the first word; and secondly, following the chat discourse - acting mainly as a reader, and sometimes as a writer - might interfere with being an attentive listener to the presenter. However, after participating in the first few live sessions, the needed type of multi-tasking becomes much more possible. It was in the third week of the course that I noticed the importance of participating in the chat discourse for my own learning. Over and over again I have found myself thinking about the best way to put my emerging ideas into short sentences, as chat windows allow for limited and focused type of communication. Shortly after managing to put ideas into words, an immediate feedback from other participants might appear in the chat room, and the skilled presenters might even note what is going on in this back channel and refer to it. Therefore, as an active participant in the chat discourse one exposes herself/himself to new and rewarding learning opportunities in the back channel.

Lesson 3: Learning Without Being Assessed

Formal learning is thought to be very closely related to assessment, and the dominant point of view in education asserts that learning outcomes, teaching, and evaluation must be aligned. This model indeed works in regular schools, universities and colleges, but participation in the irregular MOOC put some question marks on this model. A very small percentage among the participants takes such courses for credit, and most of them – some hundreds – are learning without any standardized test, or any other type of formal assessment.

“Learning without being assessed” will probably not work for any learner, at any learning environment, or for achieving all learning goals. However, PLENK2010 might serve as a model for an environment in which learning occurs regardless of a rigid assessment plan.

Lesson 4: Learning Needs a Daily Reminder

The last lesson at this early stage of participating in the Massive Online Open Course (MOOC) signifies The Daily: a daily newsletter, which aggregates student blogs, Twitter posts, and discussion posts, arriving on a daily basis by email (see Figure 4. the whole archive is also available through the course site). The Daily is automatically produced by a special technology developed by Stephen Downes (2010), and delivered to all those who have registered to receive it. Due to space limitations, the idea of using The Daily cannot be further detailed here, apart from pointing to one significant feature: The Daily assists both in setting the boundaries of the virtual learning community (by aggregating content from the community itself) and in enabling the integration of content into one’s PLE (by distributing the community content on a daily basis).

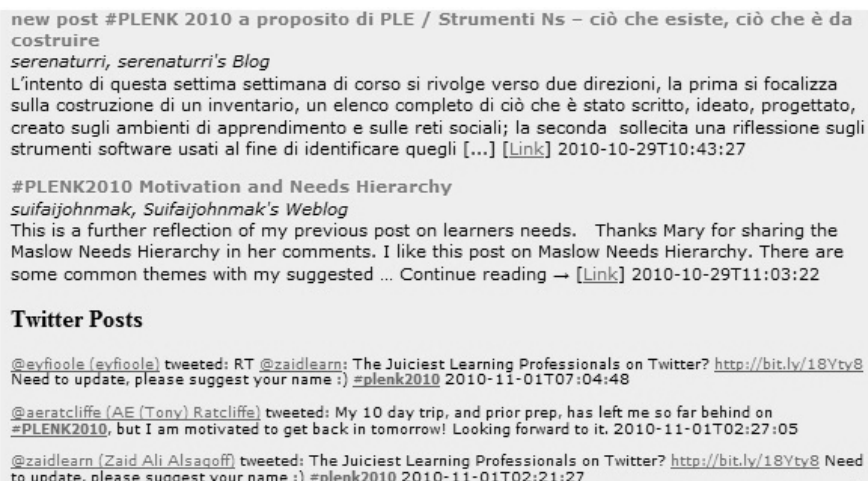


Figure 4. Some Blogs and Twitter Posts in The Daily of Nov. 1, 2010

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