

ENHANCED MOOCs FOR THE CONCEPTUAL AGE

A diversified lens on the MOOCiversity

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1 INTRODUCTION

Massive Open Online Courses (MOOCs) are becoming increasingly popular and have been attracting much attention from educational stakeholders. One reason for this hype can be found in their economic strength, as they open new ways for e-learning providers to reach out to a greater audience with relatively little costs, another one lies in their didactic, practical and innovative value that they appear to hold in store.

At the same time, MOOCs offer a vast set of possibilities and chances for learners. These include free and open access to learning materials of high quality university settings; video lectures and textual learning resources provided by experts and subsequent assessment in form of quizzes, surveys and exercises to test participants' knowledge base. So, on a positive note, MOOCs certainly make a valuable contribution to open educational resources (OER) as they are freely and openly accessible for all sorts of learners interested in a particular content with the intention to use, reuse, modify and share it with a larger community. On a more critical note, though, it was found that these learning materials are predominantly set up in accordance within the rather rigid confines of their providers' internalised socio-cultural backgrounds. While the Information Age was aiming at knowledge workers that acquire and share knowledge, often through online channels, the requirements for the upcoming Conceptual Age appear to challenge previous ways of knowledge distribution. This is reinforced by Generation Y (born after 1980) as the fastest growing segment of the workforce. These digital natives are described as creative, ambitious and difficult to manage (Sheahan, 2005) and consequently appear to require a fresh approach towards education in general, and e-learning in particular.

In the following, an outline of the MOOCiversity is given and the two major strands are presented. Then, key components of triological learning are identified and a micro-analytical lens on cultural features is adopted. By doing so, we claim that an additional form of MOOCs, one that we like to call "enhanced MOOCs" (in short eMOOCs) might be a promising avenue to better understand contemporary learners' needs in a more context-sensitive way where fresh and timely approaches for e-learning settings need to be on the daily agenda of an Age of increasingly adaptive expertise.

2 A SYNOPSIS OF THE MOOCiversity

For years face-to-face instruction has been successfully blended with online instructional modes, whereby MOOCs have been playing a crucial role for enhanced online education. In this regard, two major strands have been dominating the scene and their differences considerably impacted the roles taken on by facilitators of each type and also influenced the learning outcome of the participants to a large extent.

2.1. xMOOCs

The most traditional and dominant form of MOOCs are the so-called xMOOCs. They are characterised by holding on to a linear presentation of online classes, based on video lectures, readings, and quizzes while at the same time trying to break the traditional knowledge industry chain by introducing an Internet business mode and applying an operational mode for online education (Xubin et al, 2013). What is more, most of their learning materials are issued with proprietary licenses and within a relatively closed schedule. It seems that by clinging on to rather traditional structures of online courses, the teacher-centred "sage-on-the-stage" model (King, 1993) is still particularly dominant. xMOOCs are not pedagogically driven and hence in line with the cognitive-behaviorist perspective of learning where information transmission and content delivery are heavily foregrounded.

When taking a closer look at pedagogical models used at xMOOCs, former computer based-learning concepts such as drill and practice programs attract immediate attention. Not only are learning materials presented in video lectures, often followed by short quizzes, learners also immediately receive feedback on whether their provided answers are right and wrong. It is true that discussion boards exist, yet this way of learning reminds of more traditional lectures at University with teacher-centred approaches where the content authority traditionally has all the knowledge and transmits it to the students (see also Bates, 2012; Clarà & Barberà, 2013).

Despite certain limitations, xMOOCs are interesting and fruitful options to get some initial introduction into the respective field of interest or an overview of varying disciplines, especially for learners that draw on limited digital learning experiences. Consequently, xMOOC courses are particularly valuable if they are consciously designed for (digital) beginners with the aim to convey both instructional videos and short quizzes. For learners who seek to get more in-depth knowledge and to discuss relevant aspects with experts or other participants, it was found that the so-called cMOOCs are a more valuable learning resource.

2.2. cMOOCs

The second form of MOOCs, the so-called cMOOC, are underpinned by a connectivist learning approach adopted in a more dialogical environment. This new instructional model was identified as being more dispersed and learner-centred and by taking a more social perspective of learning, it puts greater emphasis on generating new knowledge. At the same time, cMOOCs were found to have a rather complex structure where frequent use of ad-hoc technology and educational resources is foregrounded. One of their main goals has been to allow learners to co-construct meaning through their interactions and hence positively impact the learning process.

The idea behind cMOOCs, in general, is to cope with the new possibilities offered by the Internet in a participatory and collaborative way. In view of the ever-increasing online information flow, the need for a lens that incorporates these dynamics has been pressing. Becoming increasingly aware of the complexity of the Information Age, Siemens (2004) proposed a fresh learning approach which he named connectivism. Siemens argued that it was important to know where information and data can be found and how it might be successfully gathered, used, reused, shared and connected through nodes of information sources. What appears to be crucial here is the way of connecting information and persons by keeping a vigilant eye on the impact of networks. The issue at stake, however, is that connectivism as it is proposed by Siemens, can hardly be labeled a learning theory as previously outlined by Clark and Barberà (2013) and Jadin and Gaisch (2014). Firstly because it does not address the "learning paradox" in terms of "how you recognize a pattern if you do not already know that a specific configuration of connections is a pattern?" (Clarà & Barberà, 2013, p.131). Secondly, it appears that interactions and connections are reduced to a rather static binary form which is contrary to the understanding of learning as a process. Such a process view regards the emergence of knowledge and the quality of interaction as predominant features and refrains from the simplistic perspective of an on/off interaction. Overall, it appears that connectivism is too vague a concept to explain concept development in its full complexity. On a more positive note, connectivism nevertheless points to relevant issues of learning in and through networks, to the significance of reusing existing knowledge, and to aggregate and transform it to other settings and practices.

Taking these aspects into account, cMOOCs can be regarded as an additional, valuable offer, especially for learners with more extensive Internet and Web 2.0 experiences and a previous knowledge base of the presented learning content. Consequently, heightened awareness of the usage of social media tools such as Twitter or Google+ appear to be a vital component for the success of cMOOC scenarios. By taking learners' abilities of using, reusing and discussing learning materials with other participants and experts into consideration, traditional MOOCs can truly be enriched and further extended beyond instructional videos and quizzes.

2.3 Conceptual Gap

Despite these two well-established forms of MOOC, this contribution suggests that further consideration about a more diversified look at online teaching is a pressing issue. One example for an alternative way of video lecturing is provided by Leuphana University Lüneburg with what they called "Community MOOCs". This form seeks to set the stage for students that are supposed to learn primarily from their peers. By placing particular emphasis on peer-to-peer and personalised learning, their focus is placed on quality rather than quantity, which is further translated in their efforts of getting rid of the adjective "massive" (Zuehlsdorff, 2013). Primarily being designing for a smaller number of participants, Community MOOCs tend to incorporate a more personalised and intensified interaction with the teachers.

This, in our mind, is a fruitful step to meet the changing demands of the emerging Conceptual Age where generation Y seems to be best prepared to navigate shifting spaces and take on multiple identities. It appears that by drawing "on networks that go well beyond group boundaries, not only in terms of societal cultures but also with regard to professions, class or gender" (Gaisch, 2014, p 50), teachers that are capable of dealing with the complexities of increasingly permeable boundaries recognise that "localised social practices are bound to give way to models of variations" (Gaisch, 2014, p 54).

Based on the premise that this approaching new era will require people with a non-linear, intuitive and holistic understanding of the world, it stands to reason that rigidly analytical knowledge workers of the “Information Age” are increasingly becoming obsolete. Hence, this societal evolution points to a number of challenges, many of which will have to be met by educators, also by those who conceptualise or deliver content for MOOCs. Pink (2004) claims that the prevailing left-brain domination of logic, linear and reasoned thinking will soon need to be complemented by a variety of key properties such as comprehensive, metaphorical and contextual thinking patterns.

Against this background, we think it is timely to conceptualise an enhanced form of MOOC - the so-called eMOOC - to stay abreast of societal changes of an increasingly interconnected and globalised world. In this context, the question arises how content should be prepared and presented to accommodate the variety of challenges that awaits current providers. What appears to be certain is that generation Y is very likely to require different, even more context-sensitive approaches. This generation, also referred to as the “Digital Generation” or “Generation www” (Martin, 2005, p 40) is increasingly bringing its values to educational and professional practices and as such is constantly modifying the educational landscape. The answer has yet to be given and in order to give adequate responses to those future conceptual workers, it will be crucial to identify what factors play a decisive role in fulfilling this task.

We are far from grasping the full extent of this new phenomenon. Nevertheless, in the following, it is attempted to present a conceptual approach that synthesises ideas of trialogical learning and micro lenses to culture, hence offering a fresh way to look at MOOCs.

3 CONCEPTUALISATION OF eMOOCS

It is argued here that enhanced MOOCs appear to be a promising avenue for online learning settings that are particularly fruitful for the requirements of creative learners. Such adaptable expert thinkers were found to have the ability to detect patterns in highly conceptual ways, and by doing so, they are capable of relating seemingly unrelated concepts into a holistic narrative.

With this knowledge in mind, we suggest a form of MOOC that not only appears enhanced in terms of context-sensitive teaching and learning approaches by enriching it with the concept of trialogical learning, it also seeks to adopt a micro approach to cultures. For the purposes of a clearer understanding of how learning theories can be implemented into an e-learning scenario that is both student-centred and context-sensitive, the following approach seeks to shed light on how the MOOCversity may be diversified by taking account of an enhanced MOOC enriched by a trialogical learning approach.

3.2 eMOOCS enriched by trialogical learning

Based on cultural-historical activity theory (in short CHAT) (Vygotsky, 1978; Roth & Lee, 2007), the expansive learning approach (Engeström, 2001), Nonaka and Takeuchi's model of knowledge creation (1995) and theoretical considerations of knowledge building (Scardamalia and Bereiter, 1996), the concept of trialogical learning sets out for new ways to conceptualise teaching and learning theory in e-learning settings. Introduced by Paavola, Lipponen and Hakkarainen (2004), this learning approach associates modern knowledge work with the process of unfolding objects or knowledge artefacts to make collaborative processes more explicit.

In Hakkarainen & Paavola (2007), the following approaches to learning and cognition are distinguished: 1) it concentrates on processes which aim at developing shared objects; 2) it takes place across long timescales; 3) it involves interaction between individual and collective processes; 4) it relies on cross-fertilization of knowledge practices; 5) it relies on collaborative technologies designed to elicit object-oriented activities; and 6) it develops through transformations and reflections across forms of knowledge.

By drawing a distinctive line between three metaphors of learning, namely the acquisition metaphor, the participation metaphor and the knowledge-creation metaphor, they contrast monological, dialogical and trialogical models of learning. While the acquisition metaphor refers to the monological approach which corresponds to individual learning that emphasises conceptual knowledge, the participation metaphor draws on dialogical theory that foregrounds collaboration and interaction with other social actors laying a particular focus on situated cognition. The knowledge-creation metaphor as the third approach brought forward is defined by „interaction through these common objects (or artifacts) of activity, is not just applicable between people, or between people and environment” (Paavola et al., 2004, S. 545). This implies that interaction between social agents is extended beyond its rigid boundaries; it is interaction through shared objects; be they conceptual or

material artifacts, practices or ideas. What they have in common though is that they are mainly developed collaboratively (Paavola & Hakkarainen, 2009).

In other words, the triological learning approach tends to facilitate the development of “something new collaboratively, not repeating existing knowledge” (Paavola & Hakkarainen, 2009, p.84). As a result, triological learning takes place in situations of knowledge-centered work that are more open-ended, dynamic, reflective and creative (Paavola & Hakkarainen, 2009).

Since Paavola & Hakkarainen (2009) draw heavily on cultural-historical activity theory (Vygotsky, 1980), some more detailed considerations on CHAT may be useful at this place. By linking elements of connectivism with major principles of CHAT, Clarà and Barberà point to “visualization of objects and the enabling of dialogic and sustained joint activity” (2013, p. 134) as two key principles that require particular attention in an online environment. Representations, i.e. knowledge, as psychological tools that mediate between the subject and the object are distributed in communities. Moreover they are used, reused and transformed by the social agents involved in the teaching and learning process. Such psychological tools in the sense of Vygotsky can either be maps or mathematical signs (Kaptelinin & Nardi, 2006).

In addition, such a setting presupposes that learning takes place in ways in which learners internalise representation in relation to a specific object. Consequently, Clarà and Barberà (2013) suggest visualising an object to guide and focus on what should be learned to enable opportunities for joint activity and collaboration to use a representation as a common object for internalisation.

Hence, for the above-mentioned reasons, the triological learning approach appears to be a particularly promising concept for an extension of the MOOCversity, even more so as it pinpoints major aspects that are becoming increasingly prevalent for our times. Although triological learning refers to cultural aspects in the collaborative development around shared artifacts, micro-approaches to culture have so far been hardly incorporated. Consequently, the next section seeks to focus more on the relevance of a culturally sensitive conceptualisation on MOOCs.

3.3 Micro-approaches to culture

The second aspect that we seek to incorporate into the conceptualisation of an enhanced MOOC concept is a culture-sensitive lens predominantly adopted on a micro level. To our mind, such a perspective has not received the level of attention that it ought to deserve. On the contrary, it was found that the development of digital learning scenarios have largely been driven by dominant societal and lingua-cultural values of the stakeholders. This is particularly striking in view of the fact that nowadays online participants come from increasingly different geographical parts. Corners of the world that have had access to the Internet for just a short time are starting to contribute to online learning processes. It has yet to be found out how such users contribute to the learning experience of the entire online community. Even more so in view of the fact that they are shaped by different societal backgrounds, lingua-cultural socialisations and learning expectations.

While the quantitatively approached macro-level paradigm is concerned with cultural dimensions (see House, 2004, Trompenaars, 1998, Hall & Hall, 1990; 1969, Hofstede, 2001; 1997) and, more recently, with cultural standards (Utler & Thomas, 2013, Thomas, 2005; Kinast et al, 2001; Schroll-Machl, 2002), micro-level studies deal with particular settings in which social actors create cultures on the basis of their emic cultural understanding. The argument being made here is that macro approaches to culture seem to have reached their limits while at the same time paving the way for more interpretive micro studies that leave room for adopting a contextualised and dynamic cultural lens that not only takes societal, but also organisational and professional cultures into considerations (Gaisch 2014, p 45).

Strikingly, when looking at the MOOCversity it becomes apparent that cultures appear to only play a marginal role and that neither cultural dimensions nor cultural standards are incorporated in ways that might account for a culture-sensitive lens. What is equally obvious is that micro approaches to culture are also missing on a large scale and therefore need to be addressed on a much more prominent level. For this purpose, we propose to extend the MOOCversity and suggest an additional label that is intended to spur scholarly discourse.

4 A possible MOOC SETTING

Based on the previously mentioned considerations, we would like to propose a MOOC scenario that blends in elements of xMOOCs, cMOOCs and eMOOCs to more holistically integrate the multiplicity of factors involved in online learning. For a better understanding, a contextual MOOC scenario is presented through the example of a course entitled “qualitative research methods for the social sciences”. In table 1, such a course outline is sketched in more detail by both drawing on different MOOC elements and learning metaphors. In doing so, the

visualisation of the learning resources makes no claim for completeness. What it underlines, however, are the dynamic overlaps between the different forms of MOOCs and the smooth transition between them.

The MOOC course consists of eight chapters. To begin with, it starts with an introduction and an overview of different methods, which can be presented by means of video lectures and subsequent quizzes. Additionally, a number of video lectures are provided throughout the participation phase in the form of tasks to share participants' previously acquired experiences made with qualitative research methods. At the beginning of chapter 2, learners are asked to work in small groups and to elaborate on the tasks at hand. The challenge is designed in such a way that learners should make use of and reflect on the knowledge presented in the video lectures and engage in some extended project work. The tasks are typical examples for the knowledge participation phase and much in line with the connectivistic idea of reusing, remixing and sharing knowledge. The challenge is conceived as a typical scenario where knowledge creation takes centre stage, and work on shared artifacts such as a common research plan or the implementation of concrete methods is foregrounded.

In this context, it needs to be highlighted that the participants' societal and epistemological backgrounds represent a major challenge for MOOC designers. To ensure sufficient common ground as to the understanding of the tasks, prior familiarisation of the group, their special needs and frames of reference appears to be a valuable asset for each MOOC designer. Once this awareness is internalised, the portfolio of tasks can be assigned in a customised and context-sensitive way. By taking account of the interplay of culture, learning preferences and prior knowledge base, learners can be gradually made familiar with the content. In doing so, the designer can draw on a variety of tools with the ultimate goal to allow learners to acquire knowledge, participate in the knowledge process and create knowledge by themselves.

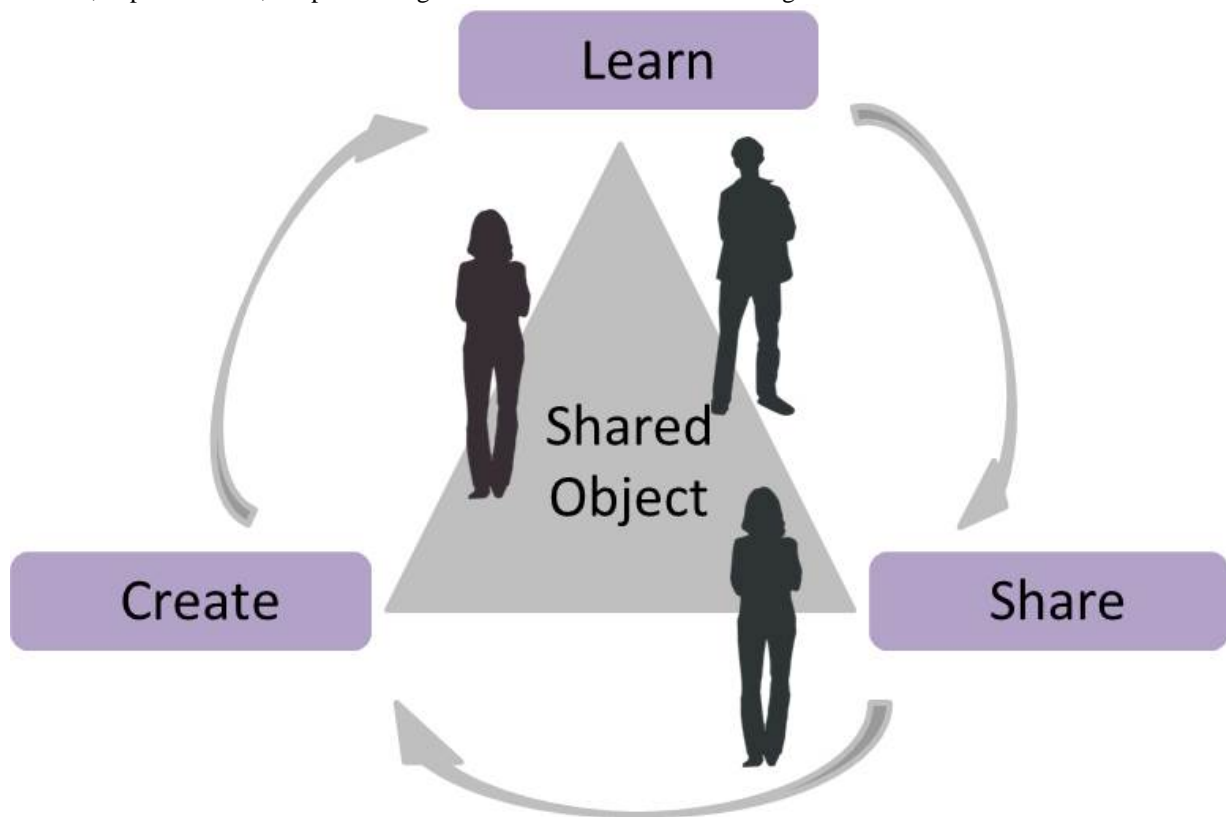
To outline the importance of a culture-sensitive lens, we wish to further zoom in on our course of "qualitative research methods for the social sciences" by asking the participants to conduct an ethnographic study where observational techniques play a crucial role to "discern ongoing behaviour as it occurs" (Cohen et al, 2011, p 298). Undoubtedly, internalised patterns of communication styles and a good portion of reflectiveness are vital in the way salient features of the setting at hand are grasped. At this point, it needs to be added that differences in low-context and high-context communication, and as a result, the underlying cultural knowledge of such messages, are likely to impact the results of the ethnographic account. For a MOOC designer, lingua-cultural expertise appears to be a key ingredient in a successful MOOC course, one that goes beyond sheer knowledge acquisition but requires joint knowledge creation of a diverse participant community that does not draw on a common cultural socialisation. Rather, it seems that they fall back on their internalised frames of reference which, in the worst case, might lead to a talk at cross-purposes and biased findings.

Tab.1.: Example of a MOOC course that draws on different elements of xMOOCs, cMOOCs and eMOOCs.

Learning Metaphor	Learning Resources	Learning Environment	MOOC Element
Knowledge Acquisition	1) Introduction in quantitative vs. qualitative research methods 2) Overview of different methods 3) Method of Interview 4) Focus groups 5) Different methods of observation, 6) Ethical and intercultural aspects 7) Designing qualitative research 8) Analysis of qualitative research	Video Lecture, Quizzes, Discussion Board	xMOOC
Knowledge Participation	Follow-up task 1): think of your experiences with qualitative research methods and share your thoughts Follow-up task 6): discuss with other participants about ethical and socio-cultural aspects of qualitative research	Blogs, Microblogs, Social Media	cMOOC
Knowledge Creation	Challenge: You want to find out how students benefit from using a tablet during a project-based learning setting? Conceive a qualitative research scenario, develop your methods, do a small-scale ethnographic	e.g. Social Media, Collaborative Writing, Mindmapping Tool, Video Conference	eMOOC

	study and compile a report that comprises your data analysis		
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To illustrate this process, figure 1 seeks to visualise the three central elements involved in the learning process. Learners work on one or more shared objects and learn, share and create knowledge. Learning in a MOOC setting that embraces elements of xMOOCs, cMOOCs and eMOOCs represents an iterative cycle where online learning affordances need to be perceived, reacted to and acted upon by both designers and participants. Such a view then calls for learning, sharing and knowledge creation in a customised and context-sensitive way in which societal, professional, epistemological and institutional backgrounds are taken into account.



5 CONCLUSION

This position paper has argued for a fresh conceptualisation of MOOCs, one that adopts a more comprehensive lens that allows for new interculturalities to emerge and for a cross-fertilization of knowledge practices to unfold by adopting a dialogical learning approach. It is argued that institutional, professional, structural and societal boundaries need to be identified and acted upon to explore online learning affordances that all stakeholders can capitalise on. Through an in-depth reflection of cultural differences on a micro-level but also through the dynamic cycle of learning, sharing and knowledge creation, it is hoped that in future teachers will become increasingly capable of navigating the Conceptual Age and meet the demands of an increasingly diverse learner body.

The capacity to investigate a social agent's ability to act adequately and in a context-sensitive way when being confronted with representatives of foreign cultures, be it face-to-face or via an online medium, appears to be a much more timely approach than a generalist and broad sketch of how cultures differ.

Although this new form of eMOOC is clearly work in progress, we feel that this approach might be a promising alley of research for the future and contribute to the MOOCiversity in a positive way. The focus on an additional MOOC concept has been guided by the researchers' desire to add and incorporate elements that have so far been sidelined by the existing MOOC forms. Such a perspective then may allow gaining a deeper and more comprehensive understanding of how the future MOOCiversity might look like.

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