

WANTED: MOOC PEDAGOGY

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Abstract

Have you had enough of the MOOC learning processes with their videos and questionnaires? In the modern world, the MOOCs form an important way of learning and of acknowledging learning. But does a specific MOOC pedagogy even exist? If it does, which learning theory is it based on?

During the recent years, we have been concerned about the quality of education. For several years now we have worked in the field of online teaching – something that requires collaborative work. During those years it has become apparent to us that the pedagogy involved in MOOCs has certain distinct features. These often include watching videos and answering one questionnaire after another. A week's process can include a number of small, disconnected tasks. Our extensive experience as online teachers has revealed to us this indisputable fact: the learning results and the degree to which the studies are considered meaningful are connected to collaborative work and knowledge creation.

HAMK Professional Teacher Education Unit in cooperation with Coleg Cambria has created and implemented a MOOC that is based on dialogic and collaborative learning. The course is titled "Making Learning Personal: How to develop individualised approaches in Vocational Education and Training". This pedagogical innovation was developed in a Mapping project (Leonardo Da Vinci, TOI). After careful consideration, we chose the Canvas learning environment (Canvas.net) for the course. This environment has been used in MOOCs for years by dozens of universities all over the world. The key element in our course is formed by study groups and the sense of community that they emphasise. Learning and knowledge are created collaboratively by focusing on a certain theme. Facilitation is multinational. The learning process was created by following the principles of the DIANA model (Dialogical Authentic Netlearning Activity), a pedagogical model developed in Finland.

MOOCs challenge our pedagogical thinking. The DIANA model was chosen as the cornerstone of the learning process, because the key point of departure in the birth of the said model was to clarify how network learning becomes a reality. Implementation of the model requires a genuine dialogical learning community, commitment on the part of learners and the teacher, and a solid presence in the net. [1], [2].

Keywords: MOOC, collaborative learning, dialogical learning, teacher education.

1 INTRODUCTION

The ways in which we work and learn are changing rapidly. These changes require research and competence that are not only new but that also respond to the requirements of the digital age. The more extensive social phenomenon and pressure that are a result of digitalisation call for a more careful consideration. Digitalisation requires us to renew educational structures. It changes our understanding regarding learning environments. At the same time, these changes create new possibilities. Massive open online courses and their pedagogical decisions can promote the development of digitalisation both on a national and an international level. Open online courses necessitate a stricter pedagogical structure that enables authentic learning and dialogue based on collaboration.

According to Wheeler [3], when we consider the digital learning of the future, pedagogy ought to come first and technology only second. To foster development, we need digital wisdom. It is said that information has become more democratic, for learning has become more open and communal. Wheeler further states that blogging is one of the most effective ways of informal learning, especially when it includes dialogic knowledge creation. Sangran and Wheeler [4] state that every college ought to offer MOOCs. However, the possibilities of open study materials have not been properly utilised, nor have the quality criteria of open online courses been recorded. In addition, the content of such courses has not been evaluated from the perspective of learning. Learning is becoming more informal, and this change is enabled by MOOCs.

In this article we discuss the definition of MOOCs that have their foundations on collaboration and connectivism. We present a model of dialogical learning, which is also the pedagogical model used in the course that was launched in spring 2015. In addition, the article focuses on the realisation of a practical pedagogical process.

2 THE OVERALL CONCEPT OF MOOCS

The MOOCs originate from American universities where the first such course was launched in 2008. The words describing the new form of online courses have specific meanings. *Open* means that there are no entry requirements or tuition fees. *Massive* means that the number of participants is unlimited. The courses function entirely as online courses and are structured into the form of goal-directed teaching. [5.] Massive open online courses are defined by various prefixes whose purpose is to describe the realisation/methods or the pedagogical approach of the particular online course.

In the cMOOCs based on connectivism [5], [6], learning is viewed as a social learning event enabled by technology. Connectivism is a theory of learning which emphasises the extent to which knowledge and skills emerge from connections experienced between different domains of activity such as experience, learning and knowledge, as well as between individuals in a social network. For example, the lectures and exercises are traditionally presented in the form of videos or text, but the learners are expected to create communities, to engage in discussions, and to give each other feedback on the exercises. In practice, the learning processes described in the model often include both online and contact teaching [7].

In addition to MOOCs, there are so-called micro MOOCs (**mOOC**, Micro Open Online Course), which are based on the same principles as the actual massive open online courses but the number of participants is limited. Instead of tens of thousands of participants, only, for example, 500 participants can enrol in the course. The reason for this may be, among other things, that the methods of discussion and feedback on the course simply are not feasible for a massive course. In addition, the percentage of those participants who pass the course tends to be higher when the number of participants is limited. [8.]

According to some researchers, the MOOC pedagogy is based on the principle of learner centrality. The learners decide, for instance, what, when and where they study and to what extent they commit themselves to the learning community [7]. However, our experience shows that online learning that is based on collaborative knowledge creation requires carefully planned structures and a guiding process, i.e. facilitation of learning. Only when a learning community has learned to learn together, can helping other learners, giving them advice and interacting in an online environment take place naturally.

3 AUTHENTIC DIALOGICAL ONLINE LEARNING

The concept of authenticity is extensive and complicated. The term authenticity is generally used to refer to something real, true, genuine or something that is not fake or forgery. A learner's commitment and the feeling that they "own" their learning is strongly linked to how the feeling of authenticity is born and maintained during a learning process. According to Resnick [9], personal authenticity arises when an activity is seen as meaningful and when the learning target is defined and interpreted from the point of view of the students. Authentic learning becomes deeply meaningful, inspiring and energising when the learners ask the questions and when the learning process is shared. In their study, Kim and Bonk [10] predict that when it comes to teaching, the elements of authentic learning will gain more significance in the future.

According to Aarnio & Enqvist [1], [11], the key concept in online learning is dialogue. They further specify that in everyday speech, the term dialogue is used to refer to a discussion or a conversation. As a phenomenon, however, dialogue is more extensive and complex than that. Dialogue means equal participation, which is based on thinking together and on familiarising oneself with a particular topic, matter or activity. Authentic, dialogical online learning and collaboratively constructed professional expertise can be described in a model which clarifies the components of learning and the dynamics of the model. The DIANA model (Dialogical Authentic Netlearning Activity) is comprised of four cornerstones that promote authentic, dialogical learning. [1.], [11.], [2.]

Authentic dialogical learning on the net and community-based, constructive professional expertise can be segmented into an operational model that makes it easy to discern the components of learning as

well as the dynamics of the model. The DIANA model consists of four cornerstones (Fig. 1), which support authentic, dialogical learning. [1.] The developers of the model [1], [11], [2] refer to net-based teaching, but the model is equally well-suited to modern, flexible and mobile learning environments. The peer learning groups have an important role. Moreover, there was a desire to link the dialogical learning process to collaborative thinking and knowledge creation.

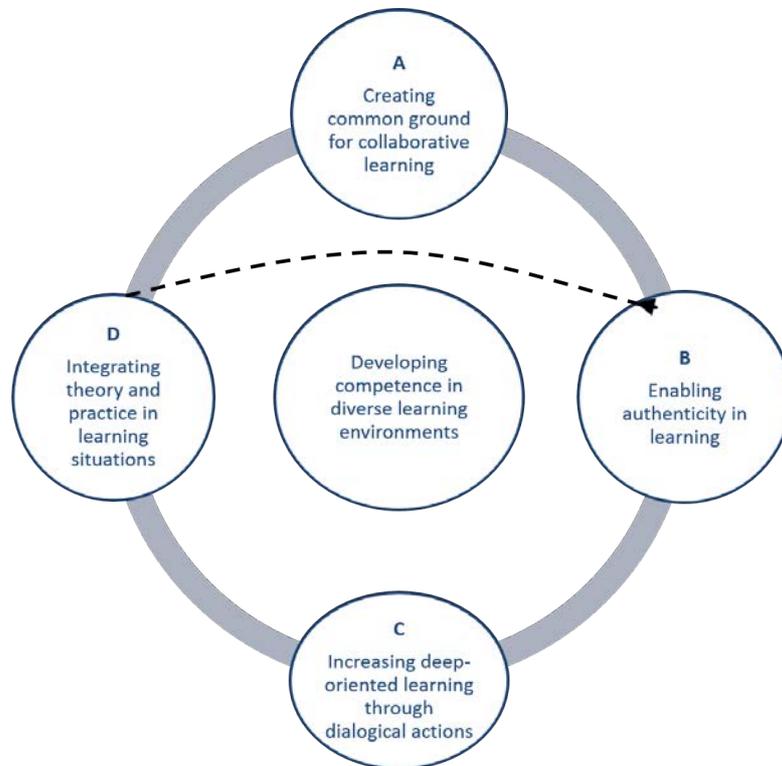


Fig. 1 The four cornerstones of the DIANA model [2].

According to Aarnio [12], operations compliant with the four cornerstones (Fig. 1) organise and structure the learning process. Cornerstone A creates the common ground for collaborative and dialogical learning. Cornerstone B deepens the process of finding and formulating authentic questions that are connected to the learning objectives of the study module. Deep-oriented learning through dialogical actions takes place in the next cornerstone, C. Students work together and create knowledge about the subject being studied. Cornerstone D links theory to practice. The students weave a synthesis collaboratively and search for missing pieces (new questions) vs the learning goals of the study module.

4 MAKING LEARNING PERSONAL - MOOC

The starting point of the MOOC discussed in this paper was the pedagogical applicability of the course to a dialogical and authentic learning process and the building of a collaborative learning community. The course was a combination of a mOOC and cMOOC. The course was designed for VET/FE educators who wish to deepen their knowledge of individualization and individual study plans.

The topics of the course were 1) Basics of individualisation, 2) Dialogical guidance and scaffolding, 3) Synthesis of ISP practices and 4) Sharing the new ideas and ways to embed them into practice. HAMK School of Professional Teacher Education (Finland) in cooperation with Coleg Cambria (UK) created and implemented the course. The 2 ECTS course proceeded from one module to the next according to the course topics. The pedagogical script was structured into modules on the basis of the learning objectives and the guidelines of the DIANA model. The first week was used for bonding in study groups. The students were divided into study circles, each of which had 3-10 participants.

4.1 DIANA model in practise

The following learning objectives were set:

Module 1 focused on the basics of individualisation: what do individualised and personalised learning approaches mean in terms of pedagogical practice in vocational teaching and learning. Another objective was to understand the context of this approach, including technological aids for individual study plan.

Module 2 focused on dialogical guidance and scaffolding. The learners familiarized themselves with dialogical reflection and with the process of consciously observing their own actions. Each learner created a situation plan for dialogical guidance.

Module 3 weaved a synthesis of the best practices of ISP (individual study plan) and the map [13]. The learning objective was to guide the students to consider the best practices and what makes them successful in terms of factors relating to pedagogical approaches, learning environment, infrastructure and management systems.

The idea of Module 4 was to share the new ideas and the ways they can be embedded into practice: The learning objectives were to share one's findings regarding the best practices in individualised learning, to share ideas and best ISP practices and to develop more informed approaches for embedding these ideas into practice.

Each module progressed according to the DIANA model. The first step included individual assignments where authentic questions were generated. After this, the authentic questions were gathered on the collaborative platform of each study group and arranged thematically. This was followed by collaborative knowledge creation that focused on these themes. Studying and data acquisition were done on the basis of the learning materials handed out to the students. In addition, they required the learners to actively examine things in practice. The answers were used to create a synthesis of the topic in question by combining theory and practice.

The seven-week course was carried out in the Canvas.net (Learning Management System). The same environment was also used as the course platform, but in addition, the study groups were free to choose among various environments that foster dialogical and collaborative knowledge creation (e.g. Facebook, Google Drive, Padlet, Hackpad). Throughout the process, the facilitators and the expert teachers could be contacted through the learning environment and at a Facebook clinic. The course required the students to participate actively and collaboratively.

4.2 Acknowledging the competence

After the course, Mozilla Open Badge Factory was used to acknowledge the acquired competence. A learner could apply for a digital badge when they had passed the course. In the application form, students were asked to demonstrate their competence by including a synthesis of the ISP model (link) that their study group had created. In addition, the students had to add an explanation for using the model in practice. They were also asked to briefly describe their dialogic participation and knowledge creation in their study group.

The course ends in June 2015, and final results are not available at this point. One of the first challenges we faced was the number of those who had enrolled in the course and those who actually started their studies. Even though we believed that we had assigned a sufficient number of participants to each study group, only 10 out of 15 study groups started their studies according to the syllabus. Even in the active study groups, not all participants ever started their studies. The study groups needed a considerable amount of support and advice before they were able to start studying.

5 CONCLUSIONS

As promising as they are, MOOCs are only as strong as their design. The planning process of such courses requires a considerable amount of didactic and technological knowledge.

Our objective was to design and implement a MOOC that would be based on collaborative and dialogical learning and that would be suitable for further education of teachers. The research questions pertained to how the principles of collaboration and dialogue, as specified in the learning objectives, were realised in the course. During the planning phase, teaching was structured according to the DIANA model and from the perspective of dialogical learning. The objective was to design an

online course that was self-directing and that was built on the principles of collaborative learning. It was interesting to be involved in implementing an online course that was not only interdisciplinary but also multinational. This, also, meant learning something new every day and creating new knowledge collaboratively. Advanced planning and clear division of duties made it all possible.

Where can we find a high-quality MOOC pedagogy that is learner-centred and focuses on learning objectives? How do we make students enthusiastic about learning in a MOOC course? Even though we chose a pedagogy based on collaborative learning, it did not motivate and encourage all students to study in the course. When offering MOOC courses in the future, we should bear in mind the demand for such courses. In addition, the competence acquired on such a course must be acknowledged.

REFERENCES

- [1] Aarnio, H. ja Enqvist, J. (2001). Dialoginen oppiminen verkossa: Diana-malli ammatillisen osaamisen rakentamiseen. Helsinki: Opetushallitus.
- [2] Aarnio, H. & Enqvist, J. (2015). DIANA-mallistako ajanmukaisen oppimisen kehys. [DIANA model an up-to-date framework for learning?] [In Finnish] Manuscript submitted for publication.
- [3] Wheeler, S. (2014). Learning with “e”s. Gomer Press. Llandysul.
- [4] Sangra, A. & Wheeler, S. (2013). New Informal Ways of Learning: Or Are We Formalising the Informal? Available online at: <http://rusc.uoc.edu/index.php/rusc/article/view/v10n1-sangra-wheeler/v10n1-sangra-wheeler-en>
- [5] McAulay, A., Stewart, B. & Siemens, G. (2010). The MOOC model for digital practice. University of Prince Edward Island. Available online at: http://www.elearnspace.org/Articles/MOOC_Final.pdf
- [6] O’Toole, R. (2013). Pedagogical strategies and technologies for peer assessment in Massively Open Online Courses (MOOCs). Discussion Paper. University of Warwick, Coventry, UK: University of Warwick.
- [7] Grünewald, F., Mazandarani E., Meinel, C., Teusner, R., Totschnig, M., Willems, C. (2013). openHPI - a Case-Study on the Emergence of two Learning Communities. Available online at: <http://www.hpi.uni-potsdam.de/fileadmin/hpi/FG ITS/papers/Web-University/2013 Gruenewald EDUCON.pdf>
- [8] Hiidenmaa, P. (2013). Jos vastaus on MOOC, mikä on kysymys? Koulutus- ja kehittämiskeskus Palmenia.
- [9] Resnick, L.B. (1987). Learning in school and out. Educational Researcher 16, pp. 13-20.
- [10] Kim, K.-J., & Bonk, C. J. (2006). The Future of Online Teaching and Learning in Higher Education. Available online at: <https://net.educause.edu/ir/library/pdf/eqm0644.pdf>
- [11] Aarnio, H. & Enqvist, J. (2002). Development and Application of the DIANA Model (in Finnish). In H. Aarnio, J. Enqvist, & M. Helenius (eds.) Developing net pedagogy for vocational education and for on-the-job learning: The DIANA model. (pp. 9-272). National Board of Education in Finland.
- [12] Aarnio, H. (2014). Principal lecturer. [In Finnish] HAMK Professional Teacher Education Unit. Interview, 6 February 2014.
- [13] Mapping- project. Quality map on individualized learning. Available online at: <http://quality-map.eu/>