The Learning Design Studio in a 5-weeks MOOC format

Proceedings of the workshop

Design for Learning in Practice

EC-TEL, Toledo, Sept. 18, 2015

edited by Muriel Garreta-Domingo, Peter Sloep, Slavi Stoyanov, Davinia Hernández-Leo & Yishay Mor

The Learning Design Studio in a 5-weeks MOOC format

Muriel Garreta-Domingo[1], Davinia Hernández-Leo[2], Yishay Mor[3], Peter Sloep[4]
[1]Universitat Oberta de Catalunya, Barcelona, Spain
murielgd@uoc.edu
[2] Serra Hunter Fellow, ICT Department, Universitat Pompeu Fabra, Barcelona, Spain
davinia.hernandez@upf.edu
[3]P.A.U. Education
yishaym@gmail.com
[4]OUNL, Netherlands
Peter.Sloep@ou.nl

Abstract. The present paper reports on a Massive Open Online Courses (MOOCs) for teacher professional development that uses the Learning Design Studio methodology as a pedagogical framework. It explains the training activities and supporting technologies used and discusses the findings obtained weekly from the analysis of participants' opinions. MOOCs appear to serve the professional development needs of teachers quite well and the action-based process based on a set of design activities are perceived as a useful by educators.

Keywords: learning design, MOOC, online learning, teacher communities, continuous professional development, digital competences, peer-mentoring

1 Introduction

Recognizing the value of MOOCs' for the Continuous Professional Development of educators [1, 2], the HANDSON project aimed at engaging teachers in a massively collaborative design inquiry of learning. The primary focus was on improving the professional practice of teachers, by guiding them in developing their competences as designers of learning and as innovators in the educational use of ICT. To this effect, the project adopted a pragmatic view of learning design based on the Learning Design Studio (LDS) approach [3]. As [4] argue, engaging teachers in design not only enhances their practical skills, but also solidifies their theoretical and pedagogical knowledge. The LDS methodology leads participants through a design inquiry cycle in which they identify an educational challenge they wish to address, investigate the context in which it is situated and the relevant pedagogical and theoretical approaches, review examples of past innovations, conceptualise a solution, prototype and evaluate it, and reflect on the process and its outcomes.

An initial analysis of the preferences and constraints of prospective MOOC participants led the HANDSON team to develop a condensed version of the LDS. This version was designed to engage participants in five weeks of activity; with an estimate of four to eight hours work a week.

1.1 The design activities and ILDE

The activities rooted in the LDS 'walk' educators through the design process of an ICT-based learning activity that, at the end of the course, is ready to be used in their classrooms (see Table 1). Two pilots or editions of the MOOCs were delivered, both using ILDE as the learning design environment. The HANDSON MOOC activities involved the use of the ILDE conceptualization templates together with additional tools for prototyping (participants were free to choose any tool). For the second one of these pilots, ILDE was extended with additional learning design tools as required by the LDS activities proposed for the MOOC.

Table 1. LDS activities, course and tools

Goal for each week's activity	Activities
INITIATE (week 1)	Design Studio Journal (ILDE, Canvas) Dream Bazaar (ILDE) Convergence session (Google Hangouts)
INVESTIGATE (week 2)	Get familiar with persona concept (Moodle, Canvas) Create your own persona (ILDE) Analyzing context (ILDE) Objective of your learning activities (ILDE) Revisit your dream (ILDE) Convergence session (Google Hangouts
INSIRE & IDEATE (week 3)	Search for other learning activities (Moodle, repositories) Define the heuristics (ILDE) Learn about scenarios (Moodle, Canvas) Create scenario (ILDE) Convergence session (Google Hangouts)
PROTOTYPE (week 4)	Prototype your artefact (Web 2.0 tools) Test your prototype (Web 2.0 tools) Consolidate your prototype (Web 2.0 tools) Convergence session (Google Hangouts)
EVALUATE & REFLECT (week 5)	Publish your learning activity (ILDE) Peer feedback (Moodle, ILDE, Canvas) Convergence session (Google Hangouts

2 Results from two HANDSON MOOC pilots

The focus of the study is on the perceived usefulness of the MOOC approach as a mechanism to understand its probability for adoption and as indicators to assess its value [5]. It is a complement to the paper on the perceived usefulness the MOOC tools [6]. Data was collected by weekly surveys that used a five item Likert scale. Additional global questions about the approach were included in a post-survey after the completion. The 2nd used a traceability system that allows analysing and comparing the responses from participants that finished against those that did not.

To frame the analysis and interpretation of the data and to offer some first insights, we outline the impact of the MOOCs in terms of the number of participants in both pilots and the level of learning design activity originating in ILDE.

2.2 Key figures and level of activity reached

Between both pilots, over 4500 educators registered in the MOOC platform (1690 for 2nd LDS pilot, 743 for 1st LDS pilot), out of them over 1000 registered in ILDE (396 and 323 respectively) and created over 3700 design artefacts and over 1400 peer-review comments (889 and 603 respectively) to the designs. Overall, there was more activity going on in the second pilot than in the first one, both in terms of number active participants in ILDE, the number of comments added, and especially the number of designs created (more data is available in [6]). In the second pilot, the activity was also more stable as the weeks went by (e.g. 288 Design Narratives created the fifth week). All the produced designs are available in the ILDE installations for both pilots (links at http://ilde.upf.edu/about/).

2.3 Teachers' perceived utility and usability of MOOC approach

Teachers' answers to the weekly questions about the utility of MOOCs activities show a stable trend (Fig. 1): the proposed activities are valued as useful both by participants that finished and those who did not. The 2nd pilot obtained more neutral responses, decreasing the number of positive perceptions but not increasing the quantity of negative perceptions. Interestingly, in the 1st pilot the activities related to context and scenarios were the best valued as compared to the 2nd LDS pilot, in which the activity found more useful was to prototype the artefact.

These data show that the activities devised to guide educators through a design process were considered useful by them. A perception of utility of the approach is also supported by teachers' answer to the global question "Will you use in your classroom the learning activity you have created during the MOOC. In the 1st LDS MOOC, 88.5 % of respondents answered positively; 10.3% responded "not yet". For the 2nd LDS MOOC, 95.5% of the respondents answered affirmatively; 9 said "not yet" and only 2 said "no".

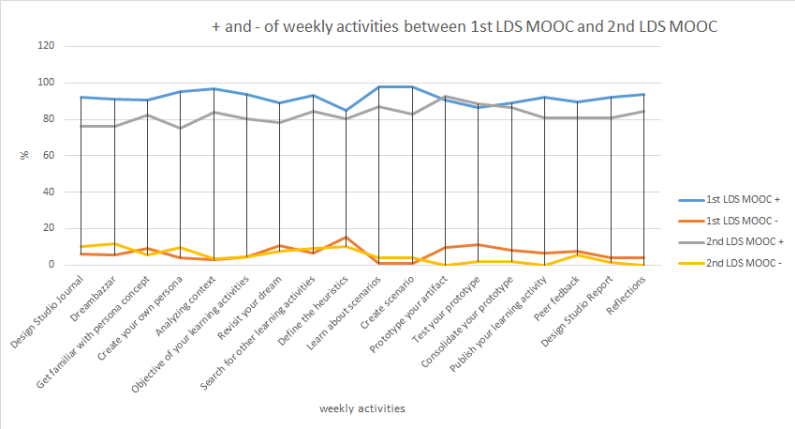

Fig. 1. Percentage of positive (+) and negative (-) perceptions of LDS activities

In both editions of the MOOC, the comfort level with LDS, as the methodology behind the proposed activities, started at a similar level - around 40% - and again increased more for participants in the 2nd LDS pilot. This tallies with the previous results and the fact that the originated activity in the 2nd LDS pilot was higher (more designs created, more comments). The post-survey used in the 2nd LDS pilot also confirms this positive level of perceived usability and utility of Learning Design Studio and technological support as a whole approach: 78.1% of respondents agreed with "The Learning Design Studio is a valuable resource to include ICT in education", 74.4% agreed that "The tools and templates provided to work with Learning Design Studio were appropriate" and 73.1% said that "Using Learning Design Studio can help me improve my educational practices".

4 Conclusions

The results show that teachers perceive the HANDSON MOOC as a useful opportunity to develop their design skills for the inclusion of ICT in their teaching practices. The LDS approach broken down in a set of learning activities for each of the five weeks ending in a ready-to-use ICT-based learning activity has proved to be a useful and meaningful way to help educators decide what are the best activities that will permit students to learn, and which ICT tools and resources can adequately support those activities.

Acknowledgments. This work has been partially funded by EACEA, Hands-On ICT Project 531086-LLP-1-2012-1-ES-KA3-KA3MP, with the collaboration of the LLP METIS Project 531262-LLP-2012-ES-KA3-KA3MP. HANDSON course is available as a package from the project website (http://www.handsonict.eu).

References

1. Margaryan, A., Bianco, M., Littlejohn, A.: Instructional Quality of Massive Open Online Courses (MOOCs). Comput. Educ. 80, 77–83 (2015).
2. Lawless, K.A., Pellegrino, J.W.: Professional Development in Integrating Technology Into Teaching and Learning: Knowns, Unknowns, and Ways to Pursue Better Questions and Answers. Rev. Educ. Res. 77, 575–614 (2007).
3. Mor, Y., Mogilevsky, O.: The learning design studio: collaborative design inquiry as teachers' professional development. Res. Learn. Technol. 21, 1–15 (2013).
4. Voogt, J., Erstad, O., Dede, C., Mishra, P.: Challenges to learning and schooling in the digital networked world of the 21st century. J. Comput. Assist. Learn. 29, 403–413 (2013).
5. Venkatesh, V., Morris, M., Davis, G., Davis, F.: User Acceptance of Information Technology: Toward a Unified View. MIS Q. 27, 425–478 (2003).
6. Garreta, M., Hernández-Leo, D., Mor, Y., Sloep, P., (2015) Teachers' perceptions about the HANDSON MOOC: A Learning Design Studio case. In: Proceedings of 10th European Conference on Technology Enhanced Learning, EC-TEL 2015, Toledo, Spain, September 2015.