

Preliminary Version, finally published as:

Ebner, Martin & Schön, Sandra (2020). Future Teacher Training of Several Universities with MOOCs as OER. In: R.E. Ferdig, E. Baumgartner, E., R. Hartshorne, E. Kaplan-Rakowski, & C. Mouza, C. (Ed). Teaching, Technology, and Teacher Education during the COVID-19 Pandemic: Stories from the Field. Association for the Advancement of Computing in Education (AACE), pp. 493-497.

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Future Teacher Training of Several Universities with MOOCs as OER

Abstract

To train future Austrian teachers in using digital media, a novel didactic design was implemented at several universities in Austria in summer semester 2019: The course includes the participation in a MOOC (massive open online course) on the topic, an accompanying group work at the universities and multiple-choice tests conducted at the universities. In the summer semester of 2020, due to the COVID-19 crisis, the group work and exams had to be switched to virtual space as well. Because the course materials are available under an open license, i.e. as open educational resources, further use is possible and offered.

Rationale

A fitting implementation of a training on technology-enhanced learning is the use of online learning. In 2019, seven Austrian universities have developed a concept integrating digital media into teacher education and successfully implemented it: A Massive Open Online Course (in short MOOC) was developed and combined with exercises at the participating universities for teacher education (Ebner et al., 2020). Therefore, we build upon our experiences that MOOCs can be implemented in diverse different learning designs beside the pure online course participation: In Ebner et al. (2020) we describe seven different scenarios that we have implemented and supported within the last years as provider of Austria's first MOOC platform (iMooX.at). One scenario is to "blend" a MOOC with parallel activities in additional, interactive, typically real-life face-to-face activities such as a local learner club or parallel workshops. We call this approach of blending a former pure online course with face-to-face learning as "inverse blended learning" (Ebner et al., 2017, Ebner & Schön, 2019). If whole MOOCs get real-live and interactive add ons, we call this "inverse blended MOOC" or, if a MOOC gets implemented as a lecture "lecture-based MOOC" (Ebner et al., 2020).

Process

In summer semester 2019, the lecture and exercise "Teaching and learning with new media" was implemented as a MOOC accompanied by assignments in the learning management systems of the partner universities and three face-to-face appointments to support the group work, where learning videos were developed. The exam was an online multiple-choice test

which was taken in person at the partner universities (see Figure 1). The assessment for the course comprises a successful MOOC participation, the video production (the result of the group work) and the exam.

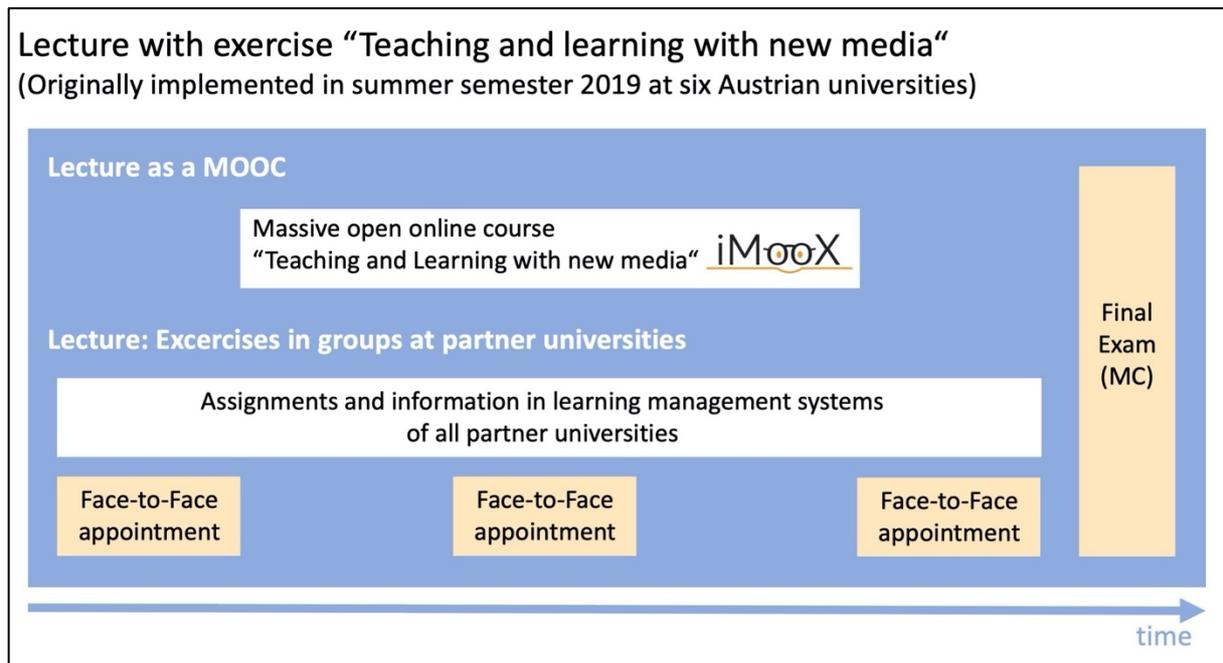


Figure 1: Design of lecture and exercise „Learning with new media” in 2019. Note: Online Implementation parts in white.

Several hundred students in the partner universities took part in the first implementation, and external learners could also participate in the MOOC: At all the universities in the network, 605 successfully passed the final examination including the corresponding exercise and successful MOOC (Ebner et al., 2020, p. 73, see Table 1).

Table 1: Number of participants at the distinct parts of the MOOC “Learning with new media” in 2019 and lecture and exercise together. Source: Ebner et al. 2020, Table 1, p. 73

Activity	Participants
Registered participants in MOOC (6 weeks)	1,482
Performed self-check test (one per week) in MOOC	4,767
Certification for successful MOOC participation	731
Successful participation at lecture and exercise (MOOC, group work, exam)	605

Because of the closure of the universities at the beginning of the COVID19 measures mid of March 2020 and the relocation of the complete classroom teaching to the virtual room, the design of this course also had to be adapted. Compared to other lectures and exercises, the transformation was rather simple: Group learning needed to be implemented online and the final exam will be an online test at the end of the current semester, which is available for a short time frame (see Figure 2).

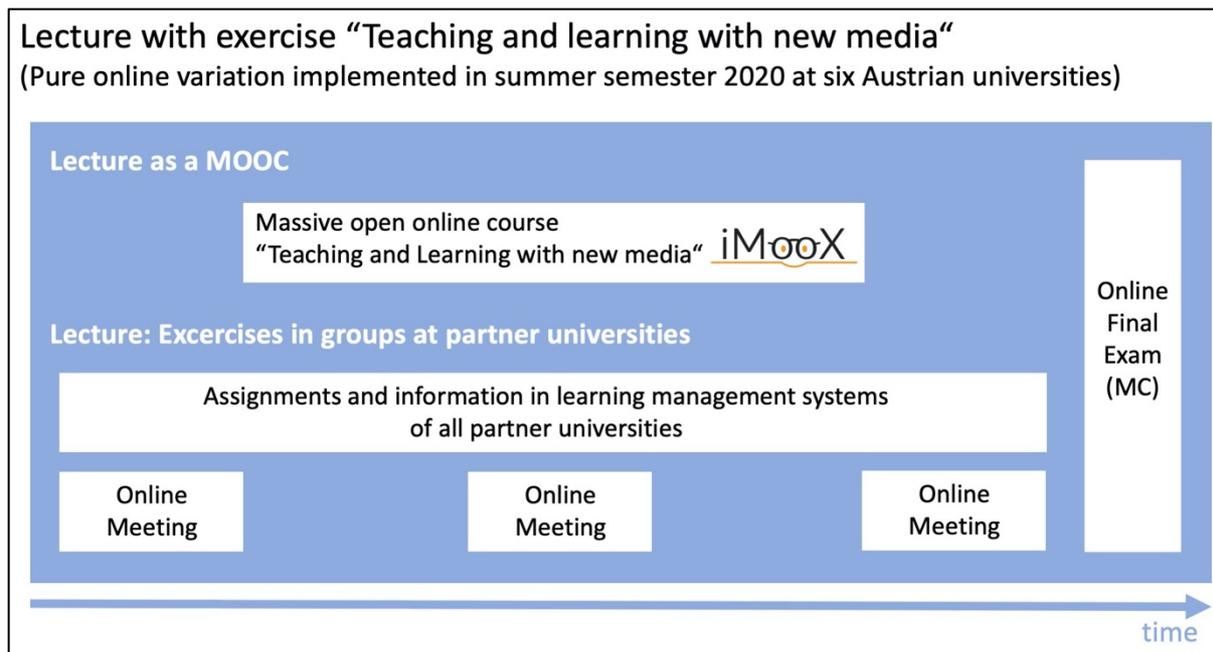


Figure 2: Design of lecture and exercise “Learning with new media” in 2020 in a pure online design.

Early Results

The students have evaluated the design positively in the first round and also accepted the changes in the current round well so far. The MOOC started on 2nd of March 2020 and counts 1,511 registered participants today (end of April 2020). Currently, the students in the exercises are asked to produce learning videos, which might be a bit more complicated concerning group management and collaboration.

Outcomes

Not only within this original course design of 2019 and now adapted design of 2020, we experienced that implementation of a MOOC can be helpful, especially to reach a large group of students. Nevertheless, also the transfer from the former face-to-face group works and multiple-choice tests to a digital variant works quite well. So, the “inverse blended MOOC” (Ebner, Schön & Braun, 2020) can be extended to a pure online scenario combining a MOOC as lecture with an online exercise and online exam.

Replication

Concerning the rules of MOOC providers and copyright regulations, they typically limit the external usage of a MOOC. In our case, all MOOCs at our platform iMooX.at are available under open licenses as open educational resources (in short OER, see Schaffert & Geser, 2008, Ebner et al., 2014). iMooX.at provides several MOOCs, not only, but several for teachers, most of them in German language, some in English and other languages, for

example “Informatik Fit” (bilingual), an introduction into computer science (<https://imoox.at/mooc/course/view.php?id=71&lang=en>). The open license allows not only free usage of the MOOCs and its materials at the platform iMooX.at, but as well allows modification and re-publication (the license text describes details, we use different Creative Commons licenses). So, all materials at our platform can be copied, modified, for example translated.

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