

Editorial for the special issue on advancing research on open education

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Introduction

The more attention a topic receives, the fuzzier the underlying assumptions and premises often become. Open education is generally an open attitude about teaching and learning practices, it has also become a catch-term that unites contradictory developments, including: the open licensing of learning resources, the provision of open access to courses from higher education, and the development of scalable platforms (often under a commercial umbrella). Looking historically at the development of open education, it appears we are currently in a similar situation to the end of the 1960s when Barth criticized that “accounts of open education have been anecdotal and descriptive...[and] few accounts have attempted anything approaching a systematic analysis of the important assumptions upon which these practices are built” (Barth 1969, p. 29).

Research on open education is currently developing in two different directions, namely open educational resources (OER) and open educational practices (OEP). For both, the underlying vision is to increase accessibility to education on a global scale. While OER research has focused for a long time on production and publication of learning resources under open licenses, little attention has been given to actual research about adaptation and embedding of OER in new contexts including psycho-social factors influencing OER reuse. For MOOCs and open courses, the most prominent research challenges are related to scalability of feedback and support, educational design of open courses, and integration of new

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technologies into open learning environments. These challenges also lead to many unresolved questions about interfaces between formal and informal learning, certification and recognition, and the wider societal responsibilities for higher education.

At the same time, the field is still “too often tended towards optimism, advocacy, and conviction” (Bayne et al. 2015, p. 248) and, consequently, we believe that research is the only way forward to advance the field as a whole and to help clarify assumptions, effects, and implications of open education as well as the role of higher education institutions play in the wider political discourse. We would like to see a future integrative perspective in which all actors are united towards the common goal to make higher education more accessible, affordable, and effective and working together to explore the hidden assumptions and unintended consequences towards what van Mourik Broekman et al. (2015) called a “radically different model of the university” (p. 21).

Some of the articles of this special issue are invited and extended papers from the Fifth European Stakeholder Summit on Massive Open Online Courses (eMOOCs 2016) that was held from 22 to 24 February 2016 in Graz (Austria) (Khalil et al. 2016).

We have received 36 submissions for this special issue which have been reviewed in a double-blind mode by external reviewers. Ten papers have been included in the special issue.

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We can cluster the 10 articles of the special issue in four different categories: Two articles focus on *background factors* like self-regulated learning skills or digital competence and occupational setting. Two articles explore *the inward versus the outward* perspective of MOOCs. Two articles deal with *instructors' practices*

for OER use and MOOC development and, last but not least, four articles deal with *diversity and learning success*.

Special issue articles

Background factors

The study by Jansen et al. (2017) deals with self-regulated learning skills in MOOCs. Based on a summary of existing literature the authors conclude that no reliable instrument is currently available to measure self-regulated learning skills in MOOCs. The development and evaluation of a new instrument to measure SRL-skills is introduced in the study (Self-regulated Online Learning Questionnaire, SOL-Q).

The study by Castaño-Muñoz et al. (2017) deals with the use of MOOCs for professional development of employees. Based on survey-data of five MOOCs, the results reveal that MOOCs are a promising instrument for career development of unemployed people and that interaction skills are the most important factor for participating in the MOOC context.

Inward versus outward perspective

The paper by Pérez-Sanagustín et al. (2017) introduces a framework to integrate MOOCs into an existing curriculum. The authors describe different options for MOOC integration based on the two dimensions of curricular content alignment and institutional support leading to 4 different directions of hybrid MOOCs and connected indicators.

Social media are often proposed as an alternative communication and discussion channel alongside the more formal communication tools available in MOOCs. Veletsianos (2017) introduces a study that deals with the analysis of a large-scale Twitter data set from 116 MOOCs. Findings reveal that only a small fraction of course participants contributed to the Twitter channel of the courses and only a small portion of those users contributed the majority of the messages.

Instructors practices

The study by Czerniewicz et al. (2017) explores whether lecturers who are involved in developing MOOCs also become more open in their thinking. With the help of activity theory, the authors analysed activities of two groups of designers of MOOCs. Results show that the confrontation with the obstacles of designing open education increases the awareness of designers about open educational practices.

The article by Ozdemir and Hendricks (2017) reports on a qualitative study that deals with the ePortfolios of instructors who have adopted open textbooks in their teaching practice. The study deals with accessibility, quality of content, repurposing practices, and student's attitude towards open textbooks and delivers interesting insights into the perception of lecturers dealing with open textbooks.

Engagement and study behavior

The study by Khalil and Ebner (2017) deals with engagement clusters of learners in MOOCs. Based on a short overview of related clustering approaches in MOOCs, the researchers introduce results of an explorative study conducted on a MOOC that was offered to a local student population and was, at the same time, available to the whole world. The results showed that a k-means clustering approach is beneficial when comparing combined data from analytics and survey data to differentiate engagement clusters in MOOCs.

Eriksson et al. (2017) report on their qualitative study exploring the reasons that learners stop engaging with MOOCs. Based in interviews with 34 learners with different degrees of course completion, the results showed that the non-formal character of MOOCs and the unclear outcomes can easily lead to non-committal behavior. This, combined with misaligned expectations and problems in the design of tasks and assignments, can be the source of learners deciding not to continue the courses.

Leach and Hadi (2017) focused their study on exploring new categories for learning behavior and the use of badges to visualize sub-achievements in MOOCs. The study points to the important role of micro-learning in MOOCs and the application of achievement models on a lower aggregation level than it is currently practiced in most courses.

The study by Pappas et al. (2017) explores the evaluation of with-video assignments. According to the study, this type of assignment is specifically relevant outside of exam periods. In addition, the study sheds light on the role of emotions with regard to adoption of the assignments. These findings can inform future alternative design practices for embedding video content into open courses and MOOCs.

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Martin Ebner is currently head of the Department for Educational Technology at Graz University of Technology and therefore responsible for all university wide e-learning activities. He holds an Adjunct Prof. on media informatics and works also at the Institute for Interactive Systems and Data Science as senior researcher. His research focuses strongly on e-learning, mobile learning, learning analytics, social media and Open Educational Resources. Martin has given a number of lectures in this area as well as workshops and keynotes at international conferences. For publications as well as further research activities, please visit his website: <http://martinebner.at>.