Christian M. Stracke

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Contact:

Dr. Christian M. Stracke
ICDE Chair in OER
Associate Professor for Open Education and Innovation
Open University of the Netherlands
Adjunct Professor, Korean National Open University
Advisory Professor, East China Normal University
http://www.ou.nl/web/welten-institute
Christian.Stracke@OU.NL

http://www.opening-up.education
http://www.learning-innovations.eu
http://www.ICORE-online.org

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Why we need High Drop-out Rates in MOOCs: New Evaluation and Personalization Strategies for the Quality of Open Education

Christian M. Stracke
ICDE Chair in OER, Welten Institute
Open University of the Netherlands
Heerlen, The Netherlands
christian.stracke@ou.nl

Department of e-Learning
Korean National Open University
Seoul, Republic of Korea

Advisory Professor of ECNU
East China Normal University
Shanghai, People's Republic of China

***Abstract*— This paper presents the current status of Open Education and MOOCs and discusses their quality following the main question: How can we introduce new design and evaluation methods and personalization strategies to improve the learning quality of Open Education? First, the dimensions of Open Education are differentiated. Then the dimensions of holistic quality development are transferred to Open Education and discussed for the design of MOOCs leading to recommendations for personalization. A new quality indicator for evaluating the quality of MOOCs is introduced: It is proposed not to measure the traditional drop-out rates but the completion of individual goals and intentions by the MOOC learner. Consequently high drop-out rates are preferable in MOOCs as they show the diversity of personal objectives by the MOOC learners. It is concluded that Open Education and MOOCs have got the potential for the next revolution in learning experiences.**

Keywords- Open Education, MOOCs, learning quality, design, personalization, evaluation, learners, designers, intention, personal goal, quality indicator

I. INTRODUCTION

This paper presents the current status of Open Education and MOOCs and discusses their quality following the main question: How can we introduce new evaluation methods and personalization strategies to improve the learning quality of Open Education?

II. OPEN EDUCATION: WHAT IS THE CURRENT SITUATION?

The concepts “open” and “openness” are becoming more and more in vogue [1]. However, it is not a fad but an increasing requirement due to dramatic changes in societies [2]. Therefore, Open Education is garnering interest as well as spurring adaptations, implementations, and success. While these developments were taking root, another phenomenon suddenly appeared and changed the public discussion on open courses: Massive Open Online Courses (MOOCs). Discussions of Open Education and e-Learning revealed their historical development and interdependences [3] [4]. Currently the quality of MOOCs is questioned based on the high drop-out rates while the concept of quality development is not (yet) introduced in MOOC design [3] that is still ignoring the long-term analysis of its relevance for learning processes in general [5].

III. QUALITY IN OPEN EDUCATION

We could conclude in earlier studies that (learning) quality is most important for learning, education and training [4] [6]. The debates on holistic quality management and on learning quality are very old [7] [8] [9], but discussions and theories on quality development in learning and education only began a few years ago [5]. The concept and philosophy of holistic quality development with a continuous improvement cycle were first introduced in Japan and quickly gained recognition, acceptance, and inspire implementations worldwide [10] [11]: A long-term debate has focused on quality development in general regarding the different quality issues, aspects and approaches [5]. In its broadest sense, quality development can be defined as covering 'every kind of strategy, analysis, design, realization, evaluation, and continuous improvement of the quality within given systems' [6]. Thus, quality development is described formally by the chosen paradigm. Quality is not a fixed characteristic belonging to subjects or systems but depends on adapting to specific situations.

Due to the dramatic changes in societies, openness and Open Education are becoming not only more and more in vogue, but also vital: It is not a fashion but an increasing requirement [2]. To address and meet the societal challenges, we have transferred and applied the three generic quality dimensions (potential, processes and results) [12] to learning, education, and training, and in particular, to Open Education [3] as illustrated in Figure 1:

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Figure 1. Quality dimensions in Open Education [3]

The different requirements by MOOC learners in the three quality dimensions have to be addressed also in Open Education and MOOCs.

IV. Drop-out rates in MOOCs

In Open Education, the new term MOOC has immediately attracted the masses, despite the fact that it is just another label for a diversity of different online learning scenarios and methodologies that were already developed and implemented many years before [13]. MOOCs can be considered and defined as a special type of e-learning, piquing interest anew and offering opportunities to once again reach learners that are attracted to e-learning solutions for many reasons [14]. Thus, MOOCs can be the facilitators for a renaissance of e-learning even though their completion rates are very low and their general quality is questionable and currently under lively debate [15]. Nowadays, different types of MOOCs (mainly cMOOCs and xMOOCs plus many others) are discussed, but the focus is still on the masses, on technology, and on promised innovations that are not easy to discover: Most MOOCs lack continuous tutoring and support for all learners who are expected to teach themselves [2] [13]. The high drop-out rates of MOOCs raised the question of their quality that currently is discussed heavily [16]. We believe that high drop-out rates are the wrong measure for the success of MOOCs and are only demonstrating the diversity of motivations and personal goals that MOOC learners are bringing with them: In common understanding the drop-out rates are measured against the completion of the MOOC, i.e., the fulfillment of all assigned tasks and examinations as well as of all learning objectives that were intended and defined by the MOOC designer. But many MOOC learners do not share the intentions of the MOOC designer and have got their own personal goals like simple download of all available materials for their further self-regulated learning and review outside the MOOC as a small online pre-survey has revealed (n=45): In many cases the MOOC learners has fulfilled their own personal goals and should be considered as successful MOOC completers but they are counted as drop-outs as they have not finished the MOOC and all its assigned tasks and examinations. Consequently traditional drop-out rates and personalization should be high in MOOCs so that MOOCs can pave a path for the diversity and future opening-up of education to improve the learning quality [3]. Or alternatively the concept of drop-out rates should be defined differently what we prefer and propose. To research and analyse the details how to improve, evaluate and personalize MOOCs including their alternative assessment, we have established the European initiative MOOQ for the quality of MOOCs: MOOQ aims at the development of a common Quality Reference Framework with quality indicators and related online tools for improving, assessing and comparing the quality of MOOCs in close cooperation with all interested MOOC designers, learners, providers and policy makers in Europe and worldwide [17]: First activity was the launch of the Global MOOC Survey (www.survey.mooc-quality.eu) for the quality of MOOCs addressing the three different target groups of MOOC learners, designers and facilitators.

V. Is Open Education the Next Revolution?

According to Marx, a revolution is the complete change of the production relations and means and their new ownership and direction towards changed production power [18]. In relation to Open Education, the current question is whether Open Education is indeed a social revolution for individual learners, educational institutions, and the global society, or whether MOOCs, the most prominent method of Open Learning, are only marketing instruments by the traditional educational providers with high reputation. This paper will spark the debate and ensuing research will provide further cases for future discussion. It can only initiate the discussion on the impact of Open Education. It is necessary for upcoming research and publications to focus on these challenges and to provide more cases and set up and analyse related experiments.

We believe in education as a human right and public good as defined in the Sustainable Development Goal no. 4 by the United Nations [19] and that learning and education need to be changed to keep this status due to major global challenges [2]. Our previous in-depth research on the quality and future of Open Education and MOOCs [3] has presented the needs and potential approaches to satisfy these requirements, along with methods how we can achieve higher learning quality by opening-up education and introducing Open Learning innovations. Current main movements in Open Education such as the global Open Educational Resources (OER) initiative launched (already in 2002) through the UNESCO OER Forum [20] and its OER Declaration [21], the International Community for Open Research and Open Education (ICORE) [22] and Opening Up Education by the European Commission [23] are

addressing the demand how to change future education. First evaluation frameworks and instruments are developed to assess the importance of Open Learning and Open Education for our future and the positive impact on our personal lives and developments as well as on all societies worldwide [24]. In addition design recommendations are provided based on the different requirements of MOOC learners related to the three quality dimensions of Open Education [25]. Future research should address and investigate the validation of Open Education and its effects and impact by innovating learning experiences and quality education and by improving personal development and societies.

VI. Conclusions and Future Work

Open Education and in particular MOOCs have the potential to change and improve future learning experiences. This paper identifies the need for new quality strategies, quality measures beyond misleading drop-out rates and for looking into all three dimensions of Open Education to meet the learners' requirements and intentions. We can conclude that high drop-out rates in their traditional assessment are preferable in MOOCs as they show the diversity of personal intentions and objectives by the MOOC learners and reflect their different requirements related to the three quality dimensions of Open Education. Further research is needed to investigate how the different groups of MOOC learners with their specific intentions can be addressed by providing personalized learning experiences in MOOCs as well as to assess the impact of Open Education in our society.

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