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Design-Based Elements to Sustain Participant Activity in Massive Open Online Courses: A Case Study

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Abstract : Massive Open Online Courses (MOOCs) are increasingly popular learning hubs that are boasting considerable participant numbers, innovative technical features, and a multitude of instructional resources. Still, there is a high level of evidence showing that almost all MOOCs suffer from a declining frequency of participant activity and fairly low completion rates. In this paper, we would like to share the lessons learned in implementing several design patterns that have been suggested in order to foster participant activity. Our conclusions are based on experiences with the 'Dr. Internet' MOOC, which was created as an xMOOC to raise awareness for a more critical approach to online health information: participants had to diagnose medical case studies. There is a growing body of recommendations (based on Learning Analytics results from earlier xMOOCs) as to how the decline in participant activity can be alleviated. One promising focus in this regard is instructional design patterns, since they have a tremendous influence on the learner's motivation, which in turn is a crucial trigger of learning processes. Since Medieval Age storytelling, micro-learning units and specific comprehensible, narrative structures were chosen to animate the audience to follow narration. Hence, MOOC participants are not likely to abandon a course or information channel when their curiosity is kept at a continuously high level. Critical aspects that warrant consideration in this regard include shorter course duration, a narrative structure with suspense peaks (according to the 'storytelling' approach), and a course schedule that is diversified and stimulating, yet easy to follow. All of these criteria have been observed within the design of the Dr. Internet MOOC: 1) the standard eight week course duration was shortened down to six weeks, 2) all six case studies had a special quiz format and a corresponding resolution video which was made available in the subsequent week, 3) two out of six case studies were split up in serial video sequences to be presented over the span of two weeks, and 4) the videos were generally scheduled in a less predictable sequence. However, the statistical results from the first run of the MOOC do not indicate any strong influences on the retention rate, so we conclude with some suggestions as to why this might be and what aspects need further consideration.

Keywords : case study, Dr. internet, experience, MOOCs, design patterns
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