Chapter 1
Mining a MOOC: What Our MOOC Taught Us about Professional Learning, Teaching, and Assessment

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ABSTRACT

In July 2014, a massive open online course (MOOC) entitled The Assessment and Teaching of 21st Century Skills (ATC21S) was offered within the University of Melbourne’s programme. Designed as a research engagement and dissemination initiative, the ATC21S MOOC enrolled 18,000 education practitioners, predominantly interested in teaching and assessment of complex 21st century skills. This chapter describes the experience of developing and teaching in the MOOC, and of learning through it. The authors suggest areas for ongoing research, and highlight areas in which MOOCs may stimulate broader change. This chapter commences the dialogue for the opening book section – policy issues in MOOCs Design, and responds to the topic of ‘emerging technology and change management issues for eLearning in the MOOCs environment.’

INTRODUCTION

This chapter examines aspects of teaching, learning and assessment in a massive, open, online course (MOOC) aimed at supporting the professional learning of teachers. It arises principally from the experience of running the MOOC as a research engagement initiative at the University of Melbourne (UM) in 2014. It also draws on research on massive open online courses (MOOCs) being conducted under the joint auspices of the Science of Learning Research Centre, the Assessment Research Centre (ARC) and the Learning Analytics Research Group at UM.

Nearly two years after the decision to use a MOOC as a form of research dissemination and engagement, we have developed improved conceptual lenses through which to interpret what
we observed. We learned much about MOOCs and their capacities and limitations as a means of supporting professional learning of education professionals. We came to understand how little is known about learning in MOOCs. We developed a greater appreciation of the nature of teaching and assessment in the MOOC, of the skills required of participants to learn in a MOOC, and of how to judge the performance of a MOOC. We developed optimism about the potential for MOOCs as incubators for new and improved approaches to assessment and learning. This chapter explains what we saw, and what we made of it, and avenues we have identified for future inquiry and development, with particular reference to our developing understanding of how MOOCs might contribute to professional learning.

BACKGROUND

The Decision to Run a MOOC

A flagship research programme coordinated by UM’s ARC (Griffin & Care, 2015) completed its initial three-year stage in mid-2012. The project focused on the assessment and teaching of ‘21st century skills,’ a shorthand expression for a set of complex generic learning skills required for living and working in a digitally-rich, knowledge-based era, but not currently formalised in school curricula. The Assessment and Teaching of 21 Century Skills (ATC21S) research project involved 250 scholars worldwide in the work of skills definition. It was sponsored by three companies – Cisco, Intel and Microsoft – and involved the cooperation and support of six national governments (USA, Costa Rica, Australia, Singapore, Finland and Netherlands).

The project’s products were delivered in July of 2012, and launched at the 2012 conference of the International Testing Commission in Amsterdam. The project conceptualised the skills in a form useful to teachers and curriculum writers, and explored how they could be assessed and taught. The project team devised and explored two exemplar complex skills (collaborative problem-solving, and learning through digital networks), generating a substantial academic publication programme (Griffin et al., 2012; Griffin & Care, 2015), a set of developmental progressions to guide teacher interpretation of skills growth, a prototype set of online assessment tasks for use in classrooms, and a series of professional development modules. Since 2012 the Assessment Research Centre (ARC) has redeveloped the tasks and the associated coding, scoring, interpreting and reporting protocols, and generated considerable interest from educational policy makers, teachers and schools.

By happy coincidence, just as the project was turning its attention to disseminating its findings, UM invited applications to run MOOCs in 2014. This was regarded by the ARC as an opportunity for engagement with the profession on an international stage. UM’s characteristically high expectations carried through to its MOOC programme: the courses would not to be edutainment. The project’s work would be designed to both challenge and engage professionals. It seemed particularly apt that MOOCs, a 21st century digital phenomenon, should be employed to disseminate knowledge about a global 21st century research project on learning in the digital era. The MOOC provided an excellent vehicle for the project’s substantial store of digital resources, reports, and videos.

There were doubts, of course. Participants in MOOCs drop out in large numbers. Would the results be worth the investment of resources? MOOC platforms are in their infancy. Could they support the deep engagement with the collegial practice needed for effective professional learning by teachers and central to UM’s ‘clinical’ approach to teacher education? There was also a question of fit with the other courses in UM’s MOOC programme. Most UM MOOCs tend towards a didactic pedagogy, emphasising summative assessment and grading. The ATC21S project, by contrast, advocated a developmental approach to teaching, emphasising assessment as formative feedback.

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