Learning design and feedback processes at scale

stocktaking emergent theory and practice

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Learning design and feedback processes at scale: stocktaking emergent theory and practice (workshop summary)

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ABSTRACT

Design for teaching in scaled courses is shifting away from replication of the traditional on-campus or online teaching-learning relationship towards exploiting the distinctive characteristic and potentials of that environment to transform both teaching and learning. This involves consideration of the distinctive aspects of how learners learn in scaled environments and how learning analytics can assist. This workshop will explore questions at the heart of this formulation, including: What is known about the learning behaviors of self-regulated learners in open scaled environments that can inform learning design and would benefit from learning analytics support? What is the character of analytics that can be deployed to help deliver good design of online learning platforms? What are the theoretical and pedagogical bases inherent in different analytics designs? These and other questions will be examined using a mixture of expert panelists and collaborative knowledge-building techniques, consolidated by experienced rapporteurs, to arrive at a stock-take of thinking.

Categories and Subject Descriptors

H.1: Models and Principles

General Terms

Management Performance, Design, Human Factors, Theory.

Keywords

learning analytics, learning design, scaled courses, feedback, crowd-sourced learning, learning at scale.

1. INTRODUCTION

Since the advent of MOOCs and other forms of learning at scale, attention has focused on how leaning occurs in these contexts, and how to improve it. Scaled courses lack the 'normal affordances' of the traditional higher education classroom. There is no collegiate

community of like-minded peers with similar backgrounds and aspirations known to the student with whom the experience is shared. Nor is there a teacher or tutor to whom a student can turn, who knows the student, and their capability, and monitors and guides their leaning over a period time, sometimes years. Learning in a MOOC is, at first glance, an individual task, tackled alone and apart from others. Some like it and prosper. For others it is difficult, even alienating. Some people generate high levels of learning, others can't or don't.

Early examination of success in MOOCs has focused on what works, both in terms of MOOC design and the characteristics of successful learners. This research suggests that people who prosper are a small proportion of learners who are highly self-regulated, and able to harness quality learner feedback from the crowd or generated by the platform [1-3].They have a set of 'learning skills', made up of a constellation of attitudes, values, beliefs, understanding and knowledge about leaning, and awareness of how these skills work for them. They create an environment for themselves that provides the social and pedagogical support they need.

Equally important is to understand the needs of learners whose learning skills in this environment are low, and how their learning skills can be improved and developed.

Even so, it is not sufficient to depend on the skill of the learner. Good quality pedagogy and assessment built into the learning design really matter. Learning design needs to maximize the quality of the feedback if full rein is to be given to the self-regulated learner. And, simultaneously, learning design needs to guide the dependent majority of learners to become more self-regulated.

A range of projects and studies are seeking insight into how to effect this transformation in scaled open courses [4-7], delving into what self-regulated learners need to generate higher order learning, and what teaching staff can to do provide and support it. The field is fast-moving and challenging and a range of scholars are making progress in the area.

That is not a simple matter. Feedback *that works* in learning is hard to generate, its effect impossible to predict. The utility of feedback can be marginal, its effects transient and negative. [8][9] Getting the *right* feedback to a student at the right time is the holy grail of most teachers, and in this, MOOCs have advantages: design teams can use learning analytics, aligned with quality assessment designs to provide a tireless, constant stream of quality, relevant feedback to the learner at the time they need it.

The combined power of good feedback, good assessment, good collaboration and learning analytics may well provide a step towards that holy grail of interest to all teachers, not just those designing MOOCs.

"Teaching' in scaled open courses is a design task, a team activity in which technology and analytics are central elements. Increasingly, the perspective of teachers working in the area is shifting away from replication of the traditional on-campus or online teaching-learning relationship towards exploiting the distinctive characteristics and potentials of that environment to transform both teaching and learning.

This workshop will explore the theory and practice of designing for learning in digital scaled courses, aimed to support the self-regulated learner to learn higher order skills in a domain.

2. WORKSHOP OBJECTIVES

The objective of this workshop is to distill the emergent principles guiding best practice in use of learning analytics in learning design for scaled courses. Questions at the heart of this are: What is known about the learning behaviors of self-regulated learners in open scaled environments that can inform learning design and would benefit from learning analytics support? What learning skills are required by learners and how can they be developed? What are the key features of 'good design' in scaled open courses into which analytics needs to fit? What is the character of analytics that can be deployed to help deliver good design of online learning platforms? What emergent analytic-based means are being used to improve the effectiveness of feedback and assessment? Do scaled methods translate to face-to-face environments? What are the theoretical and pedagogical bases inherent in different analytics designs?

3. PARTICIPATION, LEAD-UP ORGANISATION

This workshop will be a full-day workshop.

It is designed for researchers and teaching practitioners interested and/or expert in the process of teaching, learning and assessment in MOOCs and other forms of learning at scale. It will attract those interested in using collaborative knowledge building approaches to improving their own and other's expertise in the area. It aims to synthesis views about learning analytics, feedback, assessment and its role from researchers and practitioners in areas of learning analytics in MOOCs, self-regulation and learning skills, learning design, and online learning platform design.

Participation will be both by invitation, as well as open to those who are working in the area.

In the three months leading up to the workshop, a range of digital means will be deployed to build participation, and distill key themes (including via twitter, and a web-based means of canvassing themes a priori).

Expert panelists will be selected to provide brief inputs from leading thinkers in the area.

Rapporteurs will be selected in the key areas (including, for example, online learning platform design to support assessment and feedback analytics for self-regulation; developing the learning skills of participants, and so on).

The workshop will be structure around several elements:

In an *Introductory Panel* invited representatives from a number of research teams working in the area will give a brief overviews of their work, to frame the debate.

A range of *Working sessions* will be organized, in which participants will focus on emergent areas of interest. The particular areas of interest will be determined in the lead-up to the workshop, shaped by participant interest and level of expertise in the group, but are likely to include examination of: the nature of 'teaching' in scaled learning, designing for the creation of the self-regulated learner; feedback design in learning analytics, assessment design for scaled learning, identification of best practice sites, and so on.

Participants will be expected to actively input their own experience and insights via a fast-moving, participative, knowledge-building process, such as the world café, (http://www.theworldcafe.com). Such processes are designed to capitalise on knowledge and understanding of a diverse range of participants from different disciplines and experiential backgrounds, different nationalities and different sectors. The process will build on various groupings that emerge from the participant base, and ensure that each individual has an opportunity to interact at some depth with people from similar backgrounds, and people from different backgrounds as well. The process is effective in knowledge building and also effective for building networks and connections, and promoting cross-disciplinary and cross-contextual understanding, It is usually considered to be energetic, engaging and fun as well.

In a Final Panel, rapporteurs will feed back to the groups some of the key ideas that emerged. Each rapporteur will also produce a brief report synthesizing the key themes in their area after the workshop for distribution to participants and publication in the workshop proceedings*.*

3. ABOUT THE ORGANISERS

Ulla Ringtved is organizer of the Learning Analytics Summer Institute 2013 and 2015 at Aalborg University, Denmark. Her research focuses on automation of feedback and assessment in Technology Enhanced Learning (TEL), and on the implementation of open educational resources in learning and teaching in Higher Education, including in MOOCs. She teaches at UCN and AAU in the areas of technology and learning, and professional development for learning professionals, focusing on feedback, assessment and learning analytics. She is an experienced workshop facilitator and teaches and researches in a diversity of TEL environments.

Sandra Milligan is a member of the Learning Analytics Research Group at the University of Melbourne; is Convener of a University of Melbourne MOOC targeting professional learning and research engagement of teachers; and is conducting research on new approaches to assessment and certification in MOOCs. She works under the auspices of the Science of Learning Research Centre and the Assessment Research Centre. She is a publisher, has taken to market three of her own technology start-up companies, worked at senior levels in large multi-national companies and in government, and served as director for a range of organisations. She is an experienced presenter, and writer.

Linda Corrin has been involved in educational technology-related research, curriculum development, and academic development in higher education for the past 12 years. Linda's research interests include examining students' engagement with technology,

learning analytics, student feedback, and learning design. Her current research includes a cross–institutional study which aims to develop a better understanding of the ways in which learning analytics can be interpreted, applied and actioned by teachers to improve teaching and learning practices. Linda was a founding member of the Victorian and Tasmanian Learning Analytics Network in Australia.

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