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From Online Learning to Offline Action: Using MOOCs for Job-Embedded Teacher Professional Development

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ABSTRACT

Over two iterations of a Massive Open Online Course (MOOC) for school leaders, *Launching Innovation in Schools*, we developed and tested design elements to support the transfer of online learning into offline action. Effective professional learning is job-embedded: learners should employ new skills and knowledge at work. We aimed to get participants to both plan and actually launch new change efforts, and a subset of our most engaged participants were willing to do so during the course. Assessments, instructor calls to action, and exemplars supported student actions. We found that participants led change initiatives, held stakeholder meetings, collected new data about their contexts, and shared and used course materials collaboratively. Collecting data about participant learning and behavior outside the MOOC environment is essential for researchers and designers looking to create effective online environments for professional learning.

Author Keywords

MOOCs, online learning, professional learning

ACM Classification Keywords

K-12 education; Adult education

INTRODUCTION

Given that a substantial portion of MOOC learners identify as educators, MOOCs and other online and blended learning opportunities can play an important role in expanding opportunities for teacher learning around the world [7]. The central challenge of MOOCs for professional development (PD) is that most professionals do work that is collaborative, synchronous, and offline, while MOOCs are independent, asynchronous, and online. MOOCs that support effective professional learning help those learning alone and online develop proficiency in skills that are deployed collaboratively and offline.

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According to research on professional development for educators, effective PD is extended over time, relevant to the specific work of educators, and “job-embedded,” meaning new learning can be readily put to use in a participant’s current work setting [2]. Effective online professional learning “supports active rather than passive participation” [8], where students learn new principles and practices and then go on to rehearse and enact them. These findings cohere with findings from other professions [4]. Several recent MOOCs for educators have put these principles into practice. The Friday Institute has run a series of MOOCs for educators under the “MOOC-Ed” brand. They found that learners valued elements that provided tools, information and frameworks that were directly applicable to their practice [3].

If effective MOOCs for educators and other professionals are tightly aligned with work practice, then it becomes essential for MOOC researchers to study how MOOCs affect behavior and practice in workplace settings. In measuring the impact of our course on learner practice, we align ourselves with recent efforts in the MOOC literature to collect data about learner experiences beyond the courseware [1, 9].

In this paper, we report on the early stages of design research [6] in *Launching Innovation in Schools*, a MOOC on change leadership for educators. Over two iterations of this MOOC, we developed and tested three pairs of design elements that support participants in transferring learning into their work: “Learning Circles” with accompanying Facilitator’s Guide, action-oriented assignments with “Call to Action” videos, and theory-linked activities with “Take-Out Packages.” In our research, we explore ways participants have taken job-embedded actions supported by these design elements and as a result of their MOOC learning experiences.

In this paper, we give an overview of the course, then describe the design elements. We present our methods for collecting data to better understand the following research questions: 1) What types of actions did MOOC learners report taking within their own schools and settings? and 2) Which course design elements seem to have inspired or supported learner actions? We conclude by discussing how this early research has influenced our team’s subsequent MOOC design and plans for future data collection.

RESEARCH DESIGN

Overview of *Launching Innovation in Schools* MOOC

Targeted at K-12 educators, *Launching Innovation in Schools* is a 7-week, 6-unit MITx course that ran twice on edX (January and September, 2017). Assignments ask learners to define a problem of practice, identify key resources locally, and develop a plan to address their problem of practice. Assignments typically require reflective writing, posting in forums, and peer feedback.

Design Elements for Supporting Participant Action in Local Contexts

We designed or adapted three pairs of course elements to inspire and support learners in taking the ideas they were learning in the course and implementing those ideas in their own community during the run of the course.

Learning Circles and Learning Circle Facilitator's Guide

We encouraged registrants to invite colleagues in their school or organization to join them in taking the MOOC as part of a Learning Circle, a facilitated group of registered learners who meet in person during an online course. Learners were not required to join a Learning Circle, but instructors and course elements regularly suggested that working with colleagues provides a structure for support, accountability, and collaboration and allows learners to ground course content in their specific context. Our implementation of Learning Circles was based on work by Peer2Peer University (P2PU). Inspired by P2PU's Facilitator's Handbook [5], we created a Facilitator's Guide that provides resources for organizing a Learning Circle and sample agendas for weekly meetings.

Action-Oriented Assignments with Calls to Action

Instead of assessing declarative knowledge, course assignments were designed to support learners in engaging with their community, reflecting on leadership, planning change initiatives, and evaluating impact.

Each assignment is accompanied by a Call to Action video, in which the lead instructor suggests ways for participants to bring the course into their practice. We hypothesized that personable video appeals from the lead instructor would be more powerful in promoting participant action than a written prompt in the assignment text.

Theory-Linked Activities and Take-Out Packages

As participants learn abstract ideas and frameworks about change leadership (i.e. developing a common vision for improvement), these theories are paired with specific activities. For example, with presentations on the importance of reflecting on collaborative conversation, we also offer participants an activity called the Left-Hand Column Case, a specific protocol for debugging tough conversations.

To help participants lead online activities in-person, we provide Take-Out Packages, meaning instructions for facilitating and debriefing four activities from the course with colleagues who may or may not have taken the MOOC.

Data Collection and Analysis

In this study, we took initial steps in collecting data about what actions participants took in their home environments as a result of the course. Most of this data is qualitative and self-reported, so we are cautious about using the data to estimate distributions of activity or to generalize beyond the case of this MOOC. We are primarily interested in mapping the possibility space of participant actions and laying the foundation for future research about possible connections between student actions and course elements.

In order to address our first research question about the type of actions that participants took in their local contexts, we looked at select activity and assignment responses and other relevant threads in the discussion forums, replies to the Call to Action open-response questions, and responses to post-course surveys. Across these sources, we looked for descriptions of actions that participants took in their local context. To address our second research question about which design elements inspired and supported these local actions, we used the same sources and looked for which course resources participants described as helpful in their offline context. In addition, we examined the correlations between instructions embedded in course elements and then what actions learners reported doing outside of the course.

Discussion Forums

In discussion forums, learners submit assignment and activity work, provide peer feedback, respond to video discussion questions and readings, and form virtual groups. Across both runs, we looked at a total of 2769 participant posts, examining forum categories associated with video discussion, responses to activities with and without analogous Take-Out Packages, and assignment submissions. We targeted our data collection toward the forum categories where learners were most likely to report actions taken.

Surveys

The post-course survey in Unit 6 (final unit) received 226 responses in the first run and 81 in the second. We coded responses to two prompts, "How will this course or its materials impact you in the future?" and "What were your favorite aspects of this course?" Two months after the first run of the course ended, we sent another survey that received 80 responses. We coded three prompts: 1) "Briefly tell us about the impact, both personal and on your community, from actions taken so far and your aspirations for the future," 2) "Describe how participation in a Learning Circle shaped your experience in the *Launching Innovation in Schools* course," and 3) "Describe how participation in a Learning Circle shaped the change leadership efforts that you have taken on since the start of the course."

Call to Action Open-Responses

Learners tracked their work by filling out Completion Checklists at the end of each unit, an honor-based self-check system where participants selected "yes" or "no" to confirm completion of each assignment and activity.

In the second course run, we added an ungraded, open response prompt in each Completion Checklist, asking: “If you would like to tell us more about responding to this unit's Call to Action, please submit your response in the text box below. Any response you write will register as correct, but this will not count toward your graded progress.”

Out of 3340 total survey responses, forum posts, and Call to Action open responses, we identified 257 participant responses where participants described some action that they took in their local community. We used an iterative coding process, where researchers coded a subset of items and developed a typology of action items.

FINDINGS

What Types of Actions Did MOOC Learners Report Taking Within Their Own Settings?

We identified six types of actions that participants took in their local contexts (Table 1). These frequencies may be sensitive to how we asked participants to report behaviors in ways that bias their responses, so we do not claim this is an accurate measure of the distribution of participant actions. Instead, these actions map a possibility space. We observe enough differences in the reported frequency of activity to identify four more commonly reported actions: initiating an experiment in practice, sharing course content, meeting to launch change, and collecting data; and two less commonly reported actions: using or facilitating course content, doing course assignments with others, and collecting data. We describe the six action types below.

Initiating an Experiment in Practice

A primary course goal was that participants would both plan and begin new initiatives during the run of the course. One of the most important findings from our work is that a subset of learners in an online course for professionals will indeed take their learning and begin to implement change locally. Participants reported starting a range of new experiments, including providing scholarships for students to take edX courses and earn verified certificates, improving teacher collaboration across grade levels and subjects, and developing a program to help students to communicate further about bullying.

Meeting to Launch Change

Learners reported that the course inspired them to schedule or host meetings to start change initiatives. Learners met with colleagues, supervisors, heads of schools, superintendents, leadership teams, and students. In some ways, this represents a less risky or time-consuming start of a change initiative compared to experimenting in practice.

Sharing Course Content

Course resources are designed to be shared and to support change processes outside of the course. Participants reported sharing course videos, readings, activities, assignments, and other resources to foster discussion in offline environments. One learner described, “I'm already working with a few teachers who are excited about redefining their teaching... I have collected all of the course materials, and have already

Action Taken	Number of Responses
More commonly reported actions	
Initiating an experiment in practice	56
Sharing course content	73
Meeting to launch change	55
Collecting data	49
Less commonly reported action	
Using or facilitating course content	13
Doing course assignments with others	11

Table 1. Self-reported actions in learners' work environments.

started using them in my teaching, as well as sharing them with my colleagues.”

Collecting Data

Throughout the course, we encourage students to collect data to provide new insights into their context. In an optional Unit 1 activity, we directly suggest that participants interview or shadow a student. The bulk of responses reporting data collection is from this activity's corresponding forum.

Doing Course Assignments with Others

One of the less commonly reported actions was doing course assignments with others, which typically happened within the context of Learning Circles. One learner shared the benefits of working with a colleague on the course: “Since there are two of us taking this class, we have had the opportunity for reflection at each step of the way... We have used each other's feedback to deepen our understanding of and commitment to working together to help solve our problem of practice.”

Using or Facilitating Course Content

Learners reported leveraging course content individually, such as using the Left-Hand Column Case to work through a difficult conversation. Some learners also reported facilitating a course activity with others. Even with Take-Out Packages, this requires significant organizing commitment.

Which Design Elements Inspired and Supported Learner Actions?

Several participant actions are linked to specific elements of the course, giving us some indication of how these elements inspire and support learner actions. For example, when participants report doing assignment work together, they are typically doing so as part of Learning Circles. When participants report using course content, such as the Four Corners activity, they are often referring to using the facilitation scripts in the Take-Out Packages.

We then looked for correlations between the suggested actions embedded in assignments and Call to Action videos and the actions reported. Throughout the videos, our lead instructor suggested participants take four actions: sharing course content, meeting to launch change, initiating an experiment in practice, and collecting data. Generally, the

responses suggest that when participants self-report the kinds of actions taken, they are aligned with the suggestions in the Call to Action videos.

The strongest correlations between course design and self-reported actions involved assignments where we directly asked participants to act. The optional Unit 1 activity “Interview/Shadow a Student” asked learners to engage in a specific data collection activity, and many did so. In the second run of the course, the final assignment in Unit 6 required students to share their work with a colleague for feedback and discussion. Of the 65 learners who submitted final assignments in the forums, 38 learners (58%) reported sharing. This is the only point in the course where taking action is required (but not verified) for credit, and it was successful at encouraging participants to take action.

We were reticent to assign students to take action directly, since we did not want to make the requirements of the course so onerous as to make it impractical. But putting instructions to take action in schools within an assignment and assessment framework (even one without any consequences or verification) appears to be an effective way of inspiring learners to take job-embedded actions.

DISCUSSION AND FUTURE WORK

If effective professional learning in education and other professions is “job-embedded” [2], professional online learning must support meaningful transfer of new ideas and practices from courseware to the workplace. Through analyzing learner responses, we found evidence that a subset of the most engaged participants in *Launching Innovation in Schools* took various course-related actions in local contexts. Our most important finding is that participants are able to go beyond the planning stage and will actually experiment in their practice, share course materials, initiate meetings, collect data, facilitate course activities, and do coursework collaboratively. Our evidence also suggests that an effective way to inspire learners to take real-world actions is to embed actions directly into activity and assignment prompts.

In subsequent research, we need new strategies to collect data about actions learners have taken and how the course has supported or inspired those actions. The ideal way to measure the impact of our course and specific design elements would be to collect data about what kinds of leadership practices participants engaged in before the course, what new practices they engaged in during and after the course, and how course design elements support and inspire participants to take action. This kind of data collection is complex and difficult, but essential for MOOC research to make meaningful contributions to pedagogical and instructional design research.

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