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Stepping back and stepping in: Facilitating learner-centered experiences in MOOCs

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ABSTRACT

While the hype around Massive Open Online Courses (MOOCs) has subsided in the past few years, such environments provide a rich opportunity to explore ongoing questions at the intersection of teaching, learning, and technology. This paper explores how a set of facilitation teams described enacting their learner-centered pedagogical aspirations through MOOC platforms. Drawing on in-depth interviews, we present a set of six facilitator actions: “giving up control,” “distributing facilitation,” “being live,” “amplifying,” “modeling,” and “being explicit.” We discuss these actions as emerging from the negotiation between existing pedagogical aspirations and the realities of a new medium, highlighting how they involve facilitators both stepping back (making space for and foregrounding learner expertise and perspectives) and stepping in (intervening and directing as a facilitator). This research contributes to the ongoing work of articulating the substance and specificity of teaching in learner-centered pedagogy and the persistent challenges of enacting that pedagogy in massive, online spaces.

1. Introduction

In early 2020, the COVID-19 pandemic prompted school closings across the world. Educators from pre-school to college found themselves having to unexpectedly translate their teaching practice into online environments. But the challenges of supporting learner interest and understanding through online education are well-documented: feelings of disconnection (Choudhury & Pattnaik, 2020), the difficulty of responding to individual needs (Haavind & Sistek-Chandler, 2015), the need for learners to be self-directed (Beaven, Hauck, Comas-Quinn, Lewis, & de los Arcos, 2014). These challenges were exacerbated during the pandemic, where many educators and learners suddenly immersed in this setting were unfamiliar with its affordances. In this article, we look back to a moment in 2013 when groups of general educators were encountering similar challenges and unfamiliarity: educators exploring massive, open, online courses (MOOCs) as sites of learner-centeredness, helping learners to feel connected to one another, seen as individuals, and motivated to do work they find personally meaningful. While MOOCs had been gaining in popularity and momentum prior to 2013, this historical moment reflected the broader entry of educators focused on in-person experiences into this new medium.

The research described in this article was guided by the following question: How do facilitation teams describe enacting their learner-centered pedagogical aspirations through MOOC platforms? We identified and interviewed four teams of educators who were highly regarded as designers and facilitators of learner-centered, in-person educational experiences and who were experimenting with...
MOOCs as a way of fostering similar learning experiences in an online environment. Because these educators were both designers and facilitators of the courses with which they were involved they were well suited to speak to the process of negotiation between the aspirations that informed the design of their learning experiences and the specific enactment of those aspirations within MOOC environments. In addition, the courses in which these facilitators worked troubled the historical divide between connectivist and transmission-oriented MOOCs (Ebben & Murphy, 2014), seeking to create learner-centered spaces while still having explicit content goals and structures and sometimes using xMOOC platforms. In this article, we identify six facilitator actions that these educator teams described taking as they negotiated the affordances of the MOOC medium while guided by learner-centered design principles: “giving up control,” “distributing facilitation,” “being live,” “amplifying,” “modeling,” and “being explicit.”

Our study responds to recent calls for more in-depth qualitative research that foregrounds educators’ own thinking about their work with new technologies (Turvey & Pachler, 2020). While the actions we identify corroborate and extend existing research on online facilitation (Kop, 2011; Walji, Deacon, Small, & Czernewicz, 2016; Zhu, Bonk, & Sari, 2017), our central contribution is through exploring these actions as emerging from the negotiation between pedagogical aspirations and learning medium. In particular, by focusing on how these educators navigated the affordances of massive online settings in light of their learner-centered aspirations, we were able to show how the translation of learner-centered pedagogy into a new medium and scale prompted practices that were neither wholly continuous nor discontinuous with those of intimate, face-to-face experiences. Especially in times when educators confront sudden or unexpected changes in the media and tools of their work, it is valuable to consider MOOCs and other new technologies as neither passing fads nor loci of revolution, but rather as opportunities to reflect on ongoing questions in teaching and learning (Losh, 2017).

2. Literature review

2.1. Excitement and disappointment in new technologies for learning

An ongoing challenge in the field of educational technology is the cycle of excitement and disillusionment about new tools for teaching and learning (Corbeil, Khan, & Corbeil, 2018; Cuban, 1986, 2001). In addition to the well-documented ways in which this cycle positions teachers as the “problem” when new technologies fail to live up to their hype (Cassidy, 2004; Cuban, 1986, 2001; Schofield, 1995), it can crowd out considerations of what teaching with those technologies might look like in real-world contexts (Barab, Barnett, & Squire, 2002; Barab, Makinster, & Scheckler, 2003; Ottenbreit-Leftwich, Glazewski, Newby, & Ertmer, 2010; Selwyn, 2011). Both excitement and disillusionment can impede research from moving beyond assumptions about how things should or could work to investigations of the complex relationships between technology, teaching, and learning in real-world environments—what Selwyn and Facer (2013) have termed necessary attention to the “state of the actual” in educational technology research.

MOOCs offer a clear illustration of this cycle. The early 2010s saw the rise of aspirations for MOOCs as the solution to learning at scale (Haggard et al., 2013; Storme, Vansieleghem, Devleminck, Masschelein, & Simons, 2016). MOOC quickly became a more complex signifier, with the MOOC research differentiating cMOOCs, which are decentralized, open-ended, and not bound to a particular online space, and xMOOCs, which are characterized by relying on a single platform, a well-specified instructional sequence, and the use of lecture videos and assignments (Littlejohn & Hood, 2018). Over time, the differentiations between cMOOCs and xMOOCs have become less crisp. For example, recent research examined courses on xMOOC platforms that were attempting to foreground the building of community and connection amongst participants (Kovanović et al., 2018). MOOC providers have been moving away from massive, open courses and instead partnering with universities in offering more traditional online degree programs (Reich & Ruipérez-Valiente, 2019).

Given the heights of initial promise it is perhaps unsurprising that the hype around MOOCs (in any form)—and online education at scale more generally—has subsided since 2012, especially in the face of persistently low retention rates and the complex needs of learners in massive online settings (Losh, 2017). However, if we dismiss MOOCs and other technologies as “passing fads,” we miss out on opportunities to learn from situations in which pedagogical aspirations are negotiated in new contexts (Corbeil et al., 2018; Losh, 2017; Storme et al., 2016). While MOOCs themselves may no longer dominate attention, the affordances of this medium embodied in both cMOOC and xMOOC traditions-reaching learners on a massive scale (Hollands & Tirthali, 2014) and building connections among those learners (Mackness, Mak, & Williams, 2010)—remain preoccupations of educators across tools, structures, and formats for learning experiences (Bayne & Ross, 2015; Dede & Eisenkraft, 2016; Fishman, 2016; Knox, 2014; Littlejohn & Hood, 2018; Spector, 2017; Storme et al., 2016).

2.2. Affordances of MOOCs as learning experiences

For the past thirty years scholars have explored the online medium as a site for enacting learner-centered pedagogy. While online learning offers new opportunities for collaboration across diverse learners, research has demonstrated that teachers may be missing the environmental cues needed to support in-the-moment decision making and sustained engagement over time (Barab et al., 2003; Bonk & Dennen, 2003; Duffy & Kirkley, 2004). Research exploring the affordances of MOOCs for supporting learner-centered experiences has found that the massive scale and openness of MOOCs amplify both the opportunities and challenges facing teachers. There is empirical support for claims that the online medium can reach a greater number and diversity of learners (Walji et al., 2016), create increased space for learners to pursue their own goals and interests (Littlejohn & Hood, 2018), and facilitate participants learning from one another, with access to a greater diversity of experiences and perspectives (Ferguson & Sharples, 2014). But learners do not necessarily have the skills for self-determined progress in MOOCs (Beaven et al., 2014; Knox, 2014). This is exacerbated by the
considerable variation in design across MOOC settings, creating demands on the learner to navigate a myriad of options and to make the experience meaningful (Hew, 2018; Mackness, Waite, Roberts, & Lovegrove, 2013). The massive scale of MOOCs also makes it difficult to provide the individualized support and feedback possible in face-to-face settings, a frustration for both learners and teachers (Andersen & Ponti, 2014; Haavind & Sistek-Chandler, 2015; Hew & Cheung, 2014; Mackness et al., 2013). Finally, despite the potential for participatory and community-based experiences in MOOCs, learners themselves often have more traditional expectations for learning (Knox, 2014); for example, students desire that instructors tell them what to do, even when personalization and self-direction are explicit goals of the learning environment (Karlsson & Godhe, 2016).

Despite the proliferation of online facilitation in various forms, educators continue to struggle with the challenges of the massive online space (Evans & Myrick, 2015; Zhu et al., 2017). For example, educators used to responding to all students in in-person settings have struggled with not responding to each comment in MOOCs, which can be an overwhelming task and can limit the opportunities for student-to-student interaction (Ntourmas, Avouris, Daskalaki, & Dimitriadis, 2019; Sánchez-Vera, Leon Urrutia, & Davis, 2015). In response to these challenges, research has also identified new approaches to teaching that are better tailored to the affordances of MOOCs. One prominent area of research has explored how educators foster teaching, cognitive, and social presence in online courses as a way of ameliorating some of the frustrations students experience in online settings (Kop, 2011). Research has shown how MOOC instructors can enhance presence by recording and sharing videos that highlight key ideas and participant responses from the discussion board (Leon, White, White, & Dickens, 2015; Walji et al., 2016); intentionally communicating about affective topics and disclosing more about themselves as individuals (Ferguson & Sharples, 2014; Walji et al., 2016; Watson et al., 2016); being responsive to participant feedback (Ferguson & Sharples, 2014); utilizing peer reviews (Walji et al., 2016); and investing in mentors to help facilitate online conversations (Walji et al., 2016; Zhu et al., 2017).

2.3. Limitations of existing research on MOOCs

But the research on teaching in MOOC settings also suffers from a number of limitations. First, explorations of MOOC affordances have been focused predominantly on learner or participant experiences, rather than the perspectives of teachers (Ebben & Murphy, 2014; Jung & Lee, 2018; Liyanagunawardena, Adams, & Williams, 2013; Lowenthal, Snelson, & Perkins, 2018; Shapiro et al., 2017; Veletsianos & Shepherdson, 2016). Scholars are beginning to address this gap by conducting comprehensive interviews with MOOC instructors about all aspects of their role (Evans & Myrick, 2015; Haavind & Sistek-Chandler, 2015; Lowenthal et al., 2018; Zheng, Winniewski, Rosson, & Carroll, 2016). Although this research has helped to identify some of the emergent challenges facing teachers in MOOC settings, it is less well understood how teachers navigate these challenges in light of their pedagogical aspirations. As recent work has argued, lack of attention to how educators think about their work in online environments limits the value of research to inform future practice (Turvey & Pachler, 2020).

Others have noted that the cMOOC/xMOOC binary can limit understandings of the substance of teaching and learning in these spaces—and have argued for looking at shared pedagogical interests and commitments across categories (Bayne & Ross, 2015; Spector, 2017; Storme et al., 2016). Research has found that in both cMOOCs and xMOOCs it can be difficult for people to find meaningful ways to communicate, with learners desiring more direct feedback and feeling as though they are speaking into a vacuum (Haavind & Sistek-Chandler, 2015; Hew & Cheung, 2014). Ross, Sinclair, Knox, Bayne, and Macleod (2014) have argued that both cMOOCs and xMOOCs reinforce reductivist ways of looking at teachers in MOOCs—as either a dominant central force or merely a co-participant—again without offering educators tangible models and practices for their own work.

In 2010, MOOC educators George Siemens and Dave Cormier offered a more holistic perspective on teaching in learner-centered MOOCs, articulating a range of actions for educators in online courses that included “amplifying, curating, wayfinding, aggregating, filtering, modeling, and staying present” (Cormier & Siemens, 2010, p. 36). Yet in the years since the publication of their article, there has continued to be a lack of research that investigates the work of teaching in MOOCs in greater depth and a lack of attention to how teaching might look different in the MOOC context. For example, a dominant segment of research on instructional quality in MOOCs focuses on the presence or absence of specific design elements or categorizes quality according to existing scales (Bali, 2014; Kasch, van Rosmalen, & Kalz, 2017; Lowenthal & Hodges, 2015). While scholars have noted similarities in the desires and needs of learners in face-to-face and online settings (Hew, 2016), research that transplants in-person criteria to MOOC settings may miss important insights about how teaching might be different in MOOCs given the unique affordances of the medium (Losh, 2017; Ross et al., 2014).

3. Methods

To answer the research question, How do facilitation teams describe enacting their learner-centered pedagogical aspirations through MOOC platforms? we drew upon methods of qualitative, in-depth interviewing (Kvale, 1996). Aligned with the growing methodological approach of talking directly with course designers and facilitators about their work in online learning environments (Cabrera & Ferrer, 2017; Watson et al., 2016; Zhu et al., 2017), we wanted to develop understandings of how educators envisioned their aspirations for learner-centered environments being enacted in the massive online space. We engaged in purposeful sampling (Maxwell, 2013), seeking out teams of educators who a) had developed reputations as leaders in the field of learner-centered instruction and b) were experimenting with supporting learning via a MOOC platform. While much facilitation of massive online courses takes place in teams, this element is usually not the focus of research. Studies have noted that the collective dimension of facilitation can be a source of struggle (León et al., 2015) as well as enriched support and meaning (Zhu et al., 2017).
3.1. Research context

We selected teams from four MOOCs with explicitly stated learner-centered aspirations (see Table 1). For the most part, the educators involved in these teams were designers and facilitators of the courses with which they were involved (in course B, one was a designer not involved in ongoing facilitation, and two were facilitators less involved in initial design). They were responsible for the definition and articulation of the values and purposes driving the courses and the planning of a structure to support those purposes, and they were the people who appeared in course videos and responded to participant communication, both synchronously and asynchronously. All four MOOCs had recently run or were currently running during the summer of 2014, and were in their first or second iteration at the time of research. The educators involved in courses A and C, which were in their second iteration, had been part of the first iteration as well. Table 1 below shows descriptions of the four courses in which the facilitation teams worked. This table includes quotes illustrating the learner-centered aspirations of the facilitation teams as well as examples of specific learner-centered design elements: systems for highlighting and sharing participant work; positioning of facilitators as co-learners; activities with multiple entry points; invitation to personalize activities for participants’ own context. These design elements were shared across all four courses but, in the interest of brevity, we have chosen to illustrate a single instance from each course.

All courses were conducted in English with facilitation teams based in the United States, although the courses’ participants were from a variety of countries and settings. With one exception (Course A), all courses had several thousand participants. All four courses were offered free and to the public. They were not offered for credit. The courses each were designed to run synchronously with participants, but the materials remained freely available online following the end of the synchronous run. Most had a similar schedule, with activities following a weekly structure, and common design elements, such as discussion forums where participants could offer questions and comments, live weekly hangouts where video-based technologies enabled participants and facilitators to interact synchronously, and suggested activities and reflection prompts. Other than Course D, which was structured around a progressive series of making activities, the MOOCs were designed for participants to begin at any time, and all encouraged engagement in a variety of ways and levels of depth. As noted previously, most of these courses do not fit neatly into the traditional cMOOC/xMOOC binary. The

| Course | Description | Iteration | Articulation of Learner-Centered Aspirations | Specific Example of Learner-Centered Design Elements |
|--------|-------------|-----------|---------------------------------------------|---------------------------------------------------|
| Course A | 3 facilitators from an adaptation of a university course about learning, with an emphasis on community-building. | Second | “A lot of the richest learning experiences come when people are actively engaged in designing and creating and expressing themselves in playful activities in collaboration with one another.” | Positioning facilitators as co-learners: “We basically said, ‘We consider this an experiment, and we hope you will help us design this and build it together’ … And they did design some tools that we ended up using. Like there was one person who created a map, and then everyone added themselves to the map. We liked the idea but we hadn’t created it.” |
| Course B | 3 facilitators from an introduction to student-centered educational ideas and principles, with an emphasis on the K-12 context. | First | “Having that intentional design around building community and wanting it to be learner driven as opposed to … there’s a whole group of MOOCs that are just really massive online courses and they are just about pushing content out. And that’s not my thing.” | Invitation to personalize activities for participants’ own context: “We tried to always have different options so that one was aimed at a more traditional teacher and a more traditional setting, it was more constrained. One was aimed at a teacher that was surrounded by peers [interested in learner-centered education]. And one, maybe that you could do if you were not actually a practicing educator yourself.” |
| Course C | 3 facilitators from a connectivist experience focused on creativity and educators more broadly. | Second | “We really wanted to create a space where educators themselves could bring their interests forward, their passions forward and be able to, in these constructivist and creative ways, explore some of those within a larger community of practice.” | Activities with multiple entry points: “Think about the person who has 20 min this week to do something and then think about the person who’s really going to go and do several projects and then meditate on it on their blog and post it. That has been a really productive conversation in thinking expansively about the invitation to participate.” |
| Course D | 3 facilitators from an adaptation of a museum-based experience focused on physical making. | First | “We’re saying we want to get you there through your own series of investigations, through your own pathway, and through your own past history with these things.” | Systems for highlighting and sharing participant work: “We’re really encouraging sharing what people are trying in a variety of ways. The [discussion] forum is the main one, for the purposes of the class, but it’s not the only one. We set up this all-media wall, kind of an aggregator of various social media channels so that people can just tweet a photo of their project or put it on Instagram and tag it and it will show up.” |
facilitators had explicitly learner-centered aspirations, but there were also clear content goals and structures. This blurring of category also played out technologically; for example, Course D took place on an xMOOC platform, and the facilitators spoke at length about the tension between the characteristics of the platform (elements such as quizzes and grading) and their pedagogical values.

The content of all courses was, in some way, related to issues of learning. Consequently, educators spoke about the content of the course (what participants might be learning) and the experience of the course (how participants were learning) as meaningfully interconnected, and the descriptions of their work presented in the findings reflect these parallel concerns. Educators used a variety of terms to describe their learner-centered pedagogical commitments, including “constructionism,” “connected learning,” and “progressive education.” For the purposes of our investigations, the distinctions between these terms are less important than the shared aspirations for participants in their course to engage actively in doing things, make choices about what they wanted to do in the context of their own needs, desires, and experiences, share what they were doing with others, and reflect upon how experiences in the course impacted their ongoing work and thinking.

Throughout the rest of this article, we will use the word “facilitator” to refer to the interview participants. While multiple other signifiers (teacher, instructor) can be used to describe those who take similar roles in MOOCs, “facilitator” was the word that the people we spoke with used most frequently to describe their own work.

3.2. Data collection and analysis

We conducted semi-structured interviews with all teams. We designed an interview protocol informed by our desire to understand how educators were thinking about designing for learner-centered experiences in the MOOC space (see Appendix A for complete interview protocol). We were guided by this protocol in all interviews but were responsive to how participants engaged with the questions differently and pursued lines of inquiry and discussion as they seemed relevant and meaningful. Interviews were conducted by one or two members of the research team, either in-person or over Skype. Interviews lasted from 1 to 2 hours. While we initially reached out to individuals connected to each course, those individuals responded by emphasizing the importance of the team nature of

| Quote where action is named | Description of action | Frequency of action across sample |
|-----------------------------|-----------------------|----------------------------------|
| Giving up control          | “We said there are a lot of things that happen that we can’t control, and we’re comfortable kind of giving up control, and seeing things evolve.” [Course A] | Facilitators described allowing participants to respond to each other around questions and concerns, and acknowledged that things would happen in the course that they hadn’t planned for or intended. | Total: 9 | Course A: 6 | Course B: 0 | Course C: 1 | Course D: 2 |
| Distributing facilitation  | “As we moved forward to distribute the facilitation more broadly, our facilitators were jumping into the learning community and acting as learners, and even when they were facilitating they were experimenting. And we would also call participants out to act as informal ad hoc facilitators whether it was in a Google hangout or whether it was participating in a Twitter chat in a more active way.” [Course C] | Facilitators described inviting participants to take on leadership roles in the course and share their own expertise, and positioning themselves as learners involved in shared exploration. | Total: 20 | Course A: 9 | Course B: 4 | Course C: 4 | Course D: 3 |
| Being live                 | “People had this feeling that they wanted to be there; there’s something about an event that we felt was still important to keep. People liked this idea that everyone at the same time is meeting. So there’s just a feeling about something being live.” [Course A] | Facilitators described being present in synchronous hangouts, making reference to events as they were happening, being responsive to participants, and making in-time changes because of feedback. | Total: 17 | Course A: 10 | Course B: 4 | Course C: 0 | Course D: 3 |
| Amplifying                 | “As things emerge you really amplify them. When you see things you reinforce it, you help support it, and that’s been really, really important. It is less planning and it’s more tinkering and responsiveness to what’s happening. But we still had clear ideas about how technology should be used and what the ideas in the course were, so it’s not just, ‘What do you guys want?’” [Course A] | Facilitators described surfacing and curating the work that participants were doing both to recognize contributions and also give others entry points into the activities and permission to experiment. | Total: 16 | Course A: 7 | Course B: 2 | Course C: 3 | Course D: 4 |
| Modeling                   | “I think a lot of teachers teach how they have learned and I think seeing a different model [is important]. Some people will totally change their classroom and some people, it might be just a little thing they do to have kids ask more questions or something. But I think a lot about doing things where I can model what we are talking about.” [Course B] | Facilitators described providing models of learning for participants through videos and examples as well their own behavior, including how they responded to people and the way they used technology in the course. | Total: 15 | Course A: 6 | Course B: 4 | Course C: 1 | Course D: 4 |
| Being explicit             | “I think that there is a flavor to what we do that is not ‘business as usual’ and I wanted it to be out there in some form that was explicit instead of just being something that people get to experience when they come to a workshop here but otherwise it’s sort of in the ether and it’s not very well articulated.” [Course D] | Facilitators described times where, either verbally or in written communication, they explicitly stated ideas that were important to them about ways to engage with the course or ideas about learning that they valued. | Total: 12 | Course A: 4 | Course B: 5 | Course C: 2 | Course D: 1 |
design and facilitation and expressing a desire to be interviewed as teams. In the analysis that follows, we take the team as our unit of analysis, rather than individual facilitators. Facilitation teams were asked questions about the motivation for their MOOC (i.e., the problems or concerns to which it responded), their intentions for learners in the course (i.e., both what the experience would be like and what they might take away), the design choices they made in light of these intentions, how they thought about the effectiveness of their MOOC as a learning experience, and their thoughts on the affordances and challenges of the online medium for learner-centered educational experiences. The findings presented here focus on facilitator actions (rather than course design or ideas about effectiveness) but draw on data from throughout the interviews as teams often spoke about these issues in interconnected ways. In preparation for interviews, members of the research team reviewed examples of course discussion forums, facilitator communications, course videos, and participant work.

We analyzed interviews through an iterative process of emic coding and thematic organization (Boyatzis, 1998). Informed by both emic and etic analysis, our initial coding resulted in the thematic categories “design features” (e.g., modular structure, multiple points of entry), “elements of learner-centered aspirations” (e.g., making, sharing), and “MOOC” (coding for discussion of the role of elements of MOOCs, including massiveness and online). We then tried a different conceptual organization, looking at the MOOC elements of the courses alongside learner-centered pedagogical aspirations. These coding iterations reflected themes around designer intentions, course structures and systems, and facilitator actions. As part of reflecting on this coding we realized that the data most relevant to our research question were the facilitator actions, and engaged in a final round of coding focused just on these actions, as presented in the findings section of this article. The names of these actions were taken directly from language used by the facilitators themselves. See Table 2 below for illustrative examples and descriptions of the final codes. Throughout this process each member of the research team (the three authors) would code individually and then meet to discuss our coding, coming to agreement through discussion. We wrote and shared reflective memos and engaged in collective visual mapping (Luttrell, 2010) to organize our thinking and returned repeatedly to the raw data to check the validity of our emerging categorizations as we wrote multiple iterations of analysis (Maxwell, 2010).

3.3. Limitations

There are two central limitations to our research approach. First, the data presented here are based solely on facilitators’ descriptions of their own thinking and action, which we did not directly observe. Relatedly, we do not have data regarding whether participants experienced these facilitator actions as helpful or meaningful, or whether the MOOCs overall could be considered successful learning experiences. While our methodological approach did not allow for this kind of external validation of the learning experiences, the purposeful sampling did enable us to seek out individuals with long-standing expertise and experience in the realm of designing learner-centered environments. We believe their reflections are an important contribution to understandings of MOOCs as sites of learner-centered experiences.

4. Findings

Our study investigated how this group of educators described the specific actions they took as they sought to realize their aspirations for learner-centered experiences in MOOCs. We present a set of six facilitator actions—actions that facilitators described as central to their teaching in these courses: “giving up control,” “distributing facilitation,” “being live,” “amplifying,” “modeling,” and “being explicit.” The language of these actions is taken directly from language that the teams of facilitators used to talk about their work. We introduce these actions in a progressive order from those that center on facilitators stepping back (i.e., actions that involve a choice not to act or intervene, as well as actions that involve enabling others to act) to those that center on facilitators stepping in (i.e., actions characterized by direct involvement, responding, and making changes).

Facilitators described the translation of their aspirations for learning into a new medium as neither simple nor straightforward. As people who had long been engaged in the work of designing for learner-centered environments they were committed to particular values about what makes for meaningful teaching and learning. However, all of the teams were relatively new to designing learner-centered experiences in MOOC contexts. Consequently, their certainty about learning principles was balanced by a sense of experimentation and embrace of the unknown regarding how these principles would play out in a MOOC. As reflected in the facilitators’ articulations of this work, we consider the set of actions presented here not as the inevitable outcome of learner-centered pedagogical aspirations, but rather as a set of actions that emerged through the negotiation of those aspirations in a new learning environment.

4.1. Facilitator action #1: “Giving up control”

Facilitators described how supporting learner-centered experiences in face-to-face environments involved careful design of the physical environment. The work of designing learning environments so that learners have opportunities to encounter and explore ideas is one of the ways that the role of the teacher in learner-centered education has long been understood (Dewey, 1902; Froebel, 1899; Kay, 2008). In support of aspirations for learners to actively make things, the facilitators of courses A and D specifically noted how in-person iterations of their course involved the purposeful curation and arrangement of physical materials with which participants could engage, something they were not able to do in an online course. As one facilitator from Course A described,
As much as we wanted to make it more project-based... it was still difficult to make it as project-based as we would with an in-person class. Everything from being able to provide the materials, to being able to give constant, more iterative feedback throughout the process of making projects. So I think there’s still some, you know, challenges.

In response to these challenges, facilitators embraced what one from Course A described as “giving up control.” That is, they accepted that there were many elements of the learning environment that they would not be able to directly manage. While, as the quote above reflects, giving up control was challenging, facilitators also noted the opportunities that came with it. They described how participants offered support to one another through communication on course forums, such as helping find materials, encouraging different ways to approach their work, and celebrating persistence. These sorts of interactions were in keeping with learner-centered aspirations—namely, encouraging learners to share ideas with each other. One facilitator from Course A described how the realization that they were giving up control came with an embrace of the powerful ways in which the community could step in as centralized facilitators stepped back. One of the most common ways in which facilitators across courses referenced this action was in relation to the interactions and communication on course forums and discussion boards. In a description of those interactions, a member of the facilitation team from Course D reflected that,

The most powerful tool you can have when you’re leading a conversation is to actually pause, and let somebody else answer the question ... I think we found that because we can’t be on this thing 24 hours a day, we’re letting ourselves give some time [before responding]. And that’s not something we designed for, it’s just something we’re comfortable with.

As this facilitator articulates, while this move was in part an unplanned response to the realities of the large number of participants and unbounded time of the MOOC context, it was also aligned with an overall pedagogical approach that valued learners responding to each other.

4.2. Facilitator action #2: “Distributing facilitation”

While “giving up control” was one way that facilitators reactively created space for participants to support one another’s learning, facilitators also proactively created opportunities for participants to learn with and from each other. Many facilitators reflected that the massive and online nature of MOOCs potentially afforded more opportunities for people to connect to others who might enrich their learning; as a Course A facilitator noted, it can be difficult to find “kindred spirits” when a learner is restricted by their own geographic location. But facilitators noted the difficulties of making those connections around shared interests happen in practice. As one facilitator from Course B reflected,

We are trying to have people subgroup around interest areas ... the challenge is to have a really effective group. In my mind, somebody has to facilitate it. And it doesn’t have to be a lot but somebody has to keep it going and set up some infrastructure. And we knew that for whatever it was—2,000 plus people—we didn’t feel like we could facilitate all those groups so we gave them some infrastructure. And there is a post on this somewhere, but we basically said we know everybody has the things that they are really interested in and we would love to have you get together with other people who are interested in what you are interested in and have subgroup discussions, so here are some ways you might do this.

Facilitators described how these connections between participants were essential for helping participants see each other, rather than the facilitators exclusively, as supports for their learning. But cultivating these connections depended on facilitator action, what the team from Course C described as “distributing facilitation.” As they explained,

It’s less a hierarchical model of some expert who descends from his or her throne to lay upon you. Actually we’re co-constructing knowledge. And that has always been our ethos. And so the MOOC ... is very much open to this notion that we are experimenting together, we are trying out things together, we are learning from those making experiences together, we are reflecting together.

This action repositions the participants as “teachers” and the facilitators as “learners.” Across the courses, facilitators described how they invited participants to take on leadership roles in interactive sessions or serve as mentors for other learners. Facilitators reflected on the importance of promoting the idea that participants had valuable experiences and expertise to contribute, while simultaneously destabilizing the conception of facilitators as the sole source of expertise. As one facilitator from Course A said, “It really was turning around the MOOC thing from people thinking of it as like, ‘I’m going to get the experts.’ And it was more like, ‘Well, we’re here being playful with you, but we want to know about your experience from the beginning, and your ideas.’” This destabilization of traditional learning hierarchies was well aligned with the theoretical frameworks underlying and motivating the facilitators’ aspirations for learning (Brown et al., 1993; Lave & Wenger, 1991; Papert, 1980).

4.3. Facilitator action #3: “Being live”

Within learner-centered conceptions of education, a sense of belonging to a community is essential for supporting meaningful peer interaction and resultant learning (Kafai & Resnick, 1996; Papert, 1980; Resnick, 2017). That is, to learn from others we must feel some sense of connection to them. All facilitators expressed concern with the potential to lose this connection in the MOOC environment, where a community of individuals might instead feel like an anonymous mass. To help participants feel more connected, facilitators described the importance of “being live.”

Being live often involved taking advantage of synchronous or semi-synchronous events, such as Google Hangouts or discussion boards, to create a sense of presence. One facilitator from Course A noted that there was an intense demand for synchronous events...
among participants, commenting that “there’s just a feeling about something being live.” The live hangouts were also spaces where facilitators could comment on things that were happening in the course, to show that they had not merely prepared materials and then set the course off to run on its own. As one facilitator from Course D described, “the idea is to let people know, look, we’re actually participating and paying attention and wanting to respond.” One of the facilitators from Course B spoke about how important it was that the facilitators were a constant presence on discussion boards, continually responding to people, even with simple affirmations and encouragements. As she noted, “That’s what makes community happen.” Here, this facilitator drew a connection between the responsiveness signaled by “being live” and the creation of a sense of togetherness and connectedness amongst participants in the course.

Facilitators also aimed to communicate a sense of presence by directly taking feedback from participants. This feedback came through formal mechanisms (e.g., direct solicitation of feedback, course forums dedicated to course errors) as well as more informal means of communication (e.g., on course discussion boards, as part of synchronous chats and interactive sessions). For example, Course B had included K–12 student voices as part of the course content and participants in the course expressed so much enthusiasm for the opportunity to hear from students that facilitators decided to include more of this element as the course continued. In Course D, the facilitators described rewriting future discussion prompts after reviewing the discussion boards and seeing that ideas they were planning to address had already emerged organically. Further, taking in feedback sometimes involved actually integrating emergent ideas from participants into the substance of the course. In Course D, facilitators took up the language of a “design notebook,” suggested by one of the participants based on a reflective learning tool from another MOOC experience. Whether these changes were big or small, they were all connected to the shared theme of demonstrating responsiveness to participant needs, interests, and desires through dynamic course changes.

4.4. Facilitator action #4: “Amplifying”

The next action—“amplifying”—emerged from facilitators’ descriptions of how they connected their course participants to one another. Facilitators described amplifying as the work of highlighting and calling attention to specific things that were going on within the course community, including specific examples of participant work, ideas that emerged in discussion boards, or broader themes reflected by an aggregate of examples. A central motivation for amplifying was to highlight potential sources of support for their course participants’ learning. Facilitators saw, and in turn wanted their participants to see, the ideas and actions emerging from within the course community that were central to the learning experience. Yet the wealth of those ideas and actions within the massive space could potentially be experienced as just so much noise, making it harder for participants to find examples that might be meaningful or important to them. Facilitators used their more visible position within the courses to bring specific examples of participant work and thinking to the fore, while doing so in a way that was consistent with the desire to decentralize their expertise and control described earlier.

Facilitators noted the opportunities afforded by MOOCs, especially being online, to make participant work visible as inspiration or scaffolding for others. As one facilitator from Course A described, there could be “remnants” that remained online for others to access, and that facilitators could help others to discover. Facilitators might amplify ideas that emerged on discussion boards or examples of participants’ projects. This amplification could take place in course communications such as emails or live hangouts. As one facilitator from Course C described,

> We want to surface work that was inspiring, and also surface work that showed evidence of engaged participation … Then, to whatever degree, when we are watching those spaces, we see that piece surface, [and then] we would surface it in the newsletter knowing that not everyone is watching as closely as we are … We are highlighting work that is taking advantage of the possibilities and the open nature of the work we are engaged in, and it’s sort of highlighting what’s possible that is still adhering to the goals and norms of our learning space.

Facilitators thought about this amplification of participant work in relation to both the people whose work was being amplified and those who were, through that amplification, having greater opportunity to see the work of others. The facilitator from Course A who used the phrase “amplifying” noted that it was “very exciting” for participants, describing that it “encouraged people to put up more but also to understand who was out there.” Facilitators saw this as a way for them to acknowledge participants, but also to help participants see each other, in both cases responding to a need to help people feel seen in the massive online space.

4.5. Facilitator action #5: “Modeling”

Beyond “amplifying” to showcase participants’ work and ideas, facilitators also discussed different ways they modeled learning activities and behaviors for participants. In keeping with their learner-centered commitments, facilitators emphasized the importance of self-directed work. They tended to describe their in-person learning experiences as environments where they would facilitate self-directed learning by providing curated materials and responsive support. In MOOC environments, the pursuit of self-directed work was complicated by the number and diversity of learners, as well as the lack of co-presence in space and time. These complications prompted some facilitators to think about different ways to scaffold self-directed learning, including by modeling. Modeling often took the form of video examples, offered so that people could engage with learning activities even if they were not quite ready to do it themselves. This modeling served both cognitive and affective functions, making people feel as though they could try things, but also giving them tangible entry points into an open-ended, learner-directed process. As one facilitator from Course D described,
Even though we couldn’t require everybody to buy the materials and to do these activities for themselves, one of the surprising elements for us has been sort of theunnarrated sections of video where it just shows you what this activity looks like in action. It’s where the kids and the adults, the teachers and the learners, are sort of, in the moment, making breakthroughs and having struggles and interacting with each other. And I guess we shouldn’t be surprised but I think those have been some of the more powerful moments that actually get the [course] viewers to become practitioners, and start to discuss with each other the things that they noticed.

Facilitators also described the importance of modeling values around experimentation and comfort with failure—values that they saw as critical to learning but sometimes difficult for participants to embrace because of a dominant educational culture pulling in the opposite direction (Papert, 1996; Resnick & Rosenbaum, 2013). A facilitator from Course B reflected on this in the context of her focus on K–12 educators, expressing that, I think a lot of teachers teach how they have learned and I think seeing a different model—some people will totally change their classroom and some people, it might be just a little thing to have kids ask more questions or something. But I think a lot about doing things [where] I can model what we are talking about.

As this quote highlights, facilitators were conscious of how they were, both explicitly and implicitly, serving as model educators for participants. This was particularly relevant as the courses in our sample were all in some way connected to broader issues about learning. Many of the facilitators reflected on the parallel nature of the content of the course (the big ideas about learning with which they hoped participants would engage) and the experience of the course. These reflections were consistent with research from within the field of teacher learning that emphasizes the importance of teachers experiencing the kind of learning they might hope to facilitate for others, especially if that learning differs from traditional forms (Ball & Cohen, 1999; Borko, 2004; Putnam & Borko, 2000).

While acknowledging the value of providing participants with meaningful examples of new ways of being and doing, facilitators were also conscious of the need to avoid diminishing opportunities for participants to express their own ideas. This tension around how to model learning in ways that open up, rather than close off, individual expression and meaning-making has long been recognized as a central tension in learner-centered pedagogy (Froebel, 1899; Kafai, 2006). The team from Course C analogized this balance to the role of mentor texts in learning about writing. As one facilitator described, How do you take something that exists in the world and use it to support your thinking and expand your thinking, but also not get stuck in the mentor text as something to copy and replicate? And, so, I think that in a similar way we are trying to think about these spaces and the work we’re doing in them as mentor texts for each other that are constantly expansive, and not codifying anything.

This theme was also seen in the description of amplifying, as facilitators spoke about making choices about what to highlight and when, providing examples as a potential way into making for participants but also wanting to expand their view of what was possible.

4.6. Facilitator action #6: “Being explicit”

Lastly, beyond modeling values about learning through their own behavior and interactions, facilitators sometimes engaged more directly by “being explicit” about what they thought was important and why. In their descriptions of in-person settings, facilitators described talking to learners (both individually and collectively) about their learning and learning processes, and helping learners connect these concrete experiences to broader principles that could inform future learning. Facilitators described this work of helping participants construct these connections for themselves as an important goal of in-person facilitation, involving a careful balance of stepping back and stepping in. Because supporting learner reflection in an emergent and personalized way was so challenging in the MOOC environment, facilitators noted shifting towards a more directed strategy for encouraging reflection on participants’ concrete experiences. As one facilitator from Course D described, Essentially, in a workshop, the points that we value, the design principles that we want to share with everybody, those come out in discussions. We don’t lead with those. So we do an activity, we have discussion, and when people mention certain things, we pull those out and say “Ah, actually what you just mentioned is a very important element to what we do,” and we get to talk about it. Of course with [the MOOC] it’s completely different. It was the first time that we were forced to actually sit down and articulate ahead of time what our design principles were, how they were impactful, and how we designed for them. And I think, more than anything, we were nervous that by saying those things, we were going to take away from the learners all of those “Ah-ha” moments. But I think we’ve found that, in this medium, it hasn’t had that detrimental effect.

Other facilitators expressed greater comfort with the need to be more explicit in MOOCs. The team from Course C noted that being explicit in written emails that went out in the middle of that week about some of the big ideas emerging from course activities and discussions seemed to prompt richer reflection and meaning-making towards the end of the week.

In addition to being explicit about course content and goals, facilitators also noted being explicit about course processes and structures. Specifically, facilitators described needing to speak back to participants’ fear of failure and preoccupation with “doing it wrong” or “being behind.” Fear of failure was an issue in both in-person and MOOC settings, but many facilitators noted that in MOOCs it is especially easy for participants to drop out when experiencing feelings of fear, difficulty, or discomfort. Facilitators described the importance of being explicit about the many different ways to participate. As one facilitator from Course B described, We tried to really message this idea that hey, it is no problem, join us when you can. If you get behind, get caught up or don’t, just come, just join in, leave week three behind and just join in for week four. By being explicit with participants about taking ownership over their learning, facilitators were actively addressing some of the
expectations their participants had about being in a “course” or other learning experience. While being explicit about learner-centered aspirations often took the form of impromptu interactions and class-wide communications, some facilitators included it as part of the learning objectives of the course itself. For example, the team from Course A offered readings and a discussion of educational theory and research on learning and performance goals as a way of communicating how they hoped participants would engage in the ideas and activities of the course.

5. Discussion and conclusions

In the findings, we presented six facilitator actions—“giving up control,” “distributing facilitation,” “being live,” “amplifying,” “modeling,” and “being explicit”—that answered the research questions of how facilitation teams described enacting their learner-centered pedagogical aspirations through MOOC platforms. These actions corroborate and extend existing research on teaching in MOOC settings. The importance of “being live” aligns closely with the existing literature on fostering presence in MOOCs (Ferguson & Sharples, 2014; Kop, 2011; Walji et al., 2016; Watson et al., 2016), and the actions of “amplifying” and “modeling” also directly match with two of the elements of Cormier and Siemens’ (2010) typology. The actions of “giving up control” and “distributing facilitation” serve as a potentially useful way of negotiating some of the most common challenges described in the literature, namely the overwhelming size of MOOCs and the near impossibility of interacting with each participant as you would in an in-person setting (Ntourmas et al., 2019; Orcutt & Dringus, 2017; Sánchez-Vera et al., 2015). Lastly, by presenting these facilitator actions not in isolation but as the result of a constant negotiation between pedagogical aspirations and the affordances of the MOOC medium, these findings respond to a need for more expansive conceptions of what teaching and learning in MOOCs can look like (e.g. Turvey & Pachler, 2020). This is particularly true in light of the destabilization of MOOC as a category and the proliferation of online learning experiences (Littlejohn & Hood, 2018; Spector, 2017; Watson et al., 2016).

The actions that resulted from this process of negotiation involved facilitators stepping back—creating opportunities for participants to explore, to lead, to personalize their work—and stepping in—productively bounding, supporting, and modeling participant learning. Debates about the methods of learner-centered pedagogies can be understood as conversations about when and to what extent educators need to step back and step in (e.g., Hmelo-Silver, Duncan, & Chinn, 2007; Kirschner, Sweller, & Clark, 2006), and we offer these findings as part of the work of understanding how educators engage in those different stances in online settings. Facilitators found themselves stepping back more in the MOOC context when they could not provide the kind of direct, iterative feedback to learners that they would in smaller, face-to-face settings. But as they did so—through the actions of “giving up control” and “distributing facilitation”—they found value in how participants responded to one another. Participants’ responses enabled the type of feedback that facilitators were concerned was missing and created new learning pathways through participants sharing their experiences and expertise with others. Facilitators found themselves stepping in more when those same massive and online elements made it harder to surface and explore key ideas organically. They chose to be more explicit about identifying and discussing those ideas in course communications and synchronous events, and found that this explicitness supported participant reflection. Lastly, facilitators found themselves both stepping in and stepping back when they were unable to carefully curate materials to support activities. They relied on videos and other visual representations of work as a form of modeling, and found that these videos provided participants with unexpected opportunities to engage in the process and make it meaningful for themselves.

The complexity of designing and facilitating learner-centered experiences, both in-person and online, is such that simply identifying a set of practices or strategies is not enough; educators will inevitably have to engage in ongoing negotiation between the pedagogical aspirations that inform their practices and the enactment of those practices within the affordances of different learning environments (Schon, 1983). The actions described in this study reflected moments where educators were driven more by their commitment to a particular vision of teaching and learning, and others where the affordances of the medium took precedence in determining what they could or could not do. This perspective supports calls to approach educational technologies like MOOCs neither as a fundamental break with existing ideas of teaching and learning nor as a passing fad to be dismissed, but instead an opportunity to explore ongoing questions in education (Corbeil et al., 2018; Losh, 2017; Storme et al., 2016). As educators across the globe find themselves suddenly having to negotiate new media, tools, and settings for learning, we encourage them to not lose sight of the aspirations most important to them. Such aspirations, whatever the language we use to define them, are the beginning, rather than the end, of figuring out what the work of education can look like.

Declaration of competing interest

None.

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Appendix A. Interview Protocol

1. How did this course come about? (e.g. what problems were you trying to solve, had you done this before, who were the stakeholders, etc.)
2. What were your goals for teachers in terms of their experience and what they would take away?
3. What was your anticipated audience in terms of their needs, characteristics, competencies, goals, constraints?
4. What specific design choices did you make in light of your intended learning goals, experiential goals, and audience needs?
5. For each of these choices, what were the gaps—both positive and negative (or lack of gaps)—between how you hoped teachers would interact with the course and how they actually interacted?
6. How did you think about trying to figure out whether or not the course was effective in meeting the goals you set? How important was that to your sense of the success or value of the course?
   - Did you/how did you/how would you measure or operationalize the success of these goals for particular teachers and for your course as a whole, and to what extent were you satisfied with each these measures?
   - To what extent was that process (or potential process) of identifying measurable outcomes meaningful/importer to your sense/understanding of the success or value of the learning experience?
7. What did you experience as the challenges and affordances of the online medium in meeting the learning goals you set?
8. Were you to launch a new version of this course, what would you do differently?

Credit author statement

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