**Teaching at Scale:**
**Instructor Experiences with Massive Open Online Courses (MOOCs)**

by

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A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Higher Education)
in The University of Michigan
2018

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**Dedication**

This dissertation is dedicated to the memory of my mother, Barbara J. Wolfson, M.D., whose love and encouragement I carry in my heart.

# Table of Contents

## List of Tables

## List of Appendices

**Abstract**

MOOCs are large online courses in which any individual with access to the internet can enroll, usually for free. Distance and online education are not new, but the scale and scope of MOOCs raise novel questions about access to higher education, faculty work, and the adoption of new technologies for teaching and learning. There is little literature on the motivations, experiences and behaviors of faculty who teach MOOCs. This dissertation study seeks to illuminate this unexamined aspect of faculty work by answering the following research question: *Why do faculty teach MOOCs, and how do their beliefs and experiences inside and outside the university shape their MOOC experience?* I investigate the question of why university faculty decide to participate in a new and potentially risky form of online teaching, and how their beliefs, values, and experiences are connected with, and/or shape, their MOOC teaching practices.

I conducted a single-institution interview study of MOOC faculty at the University of Michigan. Michigan was an early partner of Coursera, a MOOC company, which announced its first set of offerings in April 2012. My methodology is derived from recent approaches to phenomenology (e.g. Seidman, 2005). I interviewed 16 U-M faculty and instructors who had taught at least one MOOC as of March, 2015. I also conducted observations at events where MOOC instructors were presenting as panelists and likely to be in attendance, and collected contextual information from publicly available videos, news coverage, and articles that involved the participants. Using a phenomenological approach to interviewing and analysis, I conducted

multiple interviews with each participant, focusing on their lived experience and meaning-making of the MOOC experience. The professional growth perspective outlined by O'Meara, Terosky, and Neumann (2008) provides a set of sensitizing concepts for my approach to understanding MOOC faculty.

The findings provide a set of profiles of the study participants as well as thematic analysis on participants' motivations for MOOC teaching, and their experiences. I identified four major reasons why instructors chose to teach a MOOC. There was rarely a single motivating factor, but rather several considerations that contributed to the decision. They were: Desire for a platform, interest in experimentation, altruism, and an aim to raise the profile of either themselves or their programs. Among the experiences of MOOC faculty, I note several themes, including: MOOC instructors' assertions that they learned a great deal about teaching from doing the MOOC; the contrast between participants who felt isolated in their MOOC work and those who made connections; the increased visibility that came with MOOC teaching, which was sometimes a source of awkwardness and discomfort; and the balancing act MOOC teaching required, because of the enormous time demands of producing a MOOC and the already busy lives of successful faculty.

This study makes several contributions to the research on faculty work lives. First, provides insight into the experiences of faculty adopting a new educational technology in the early stage of development; MOOCs are new learning technologies that affect the way faculty teach, learn, and interact with students and that thus deserve study. It also evaluates the faculty growth framework, which is relatively new, as an analytical lens, as well as suggest possible expansions to the framework based on the findings emerging from my study.

**CHAPTER 1: Introduction and significance of the study**

Since an early Massive Open Online Course (MOOC) unexpectedly enrolled 160,000 students when it launched at Stanford in 2011, MOOCs quickly emerged as a "rare phenomen[on]: an education innovation that captures the imagination of the public… while moving at the speed of an internet startup" (Haber, 2015, p. 1). MOOCs are very large online courses in which anyone with access to the internet can enroll, usually for free. Subject matter ranges from applied topics to the liberal arts, and courses are most often pitched at the college or graduate level. Individual college and university faculty began creating large, online, open enrollment courses in the late 2000's as experiments in connected, online learning (Marques, 2013). Some of those faculty members went on to launch their own MOOC platforms, either in partnership with their home institutions or independently. The three major MOOC companies, Coursera, Udacity, and edX, launched in 2012, each with a different business model. EdX originated with a partnership between MIT and Harvard, and runs as a non-profit, while Coursera and Udacity were founded by individual university faculty as for-profit corporations (Coursera, 2015; EdX, 2015; Udacity, 2015). The three companies quickly signed dozens of universities as partners and by 2013 the number of people enrolled in MOOCs had entered the millions (Shah, 2013).

Since the advent of the internet, a network of related movements such as Open Access, Open Education, and Open Science have arisen seeking to expand public access to university-produced information (Smith, 2014; Suber, 2012). In that context, the early MOOCs were heralded as a transformational and disruptive new tool for extending the reach of universities and

providing access to learning materials for a wider range of students (Kamenetz, 2012; Oremus, 2012). Though the initial hype quickly receded into the "trough of disillusionment" that often plagues new technologies, the number of institutions offering MOOCs, along with the total number of course offerings, continued to rise dramatically, until MOOCs reached their current "plateau of productivity," just one of many approaches to learning in the higher education ecosystem (Haber, 2015, p 9).

Distance and online education are not new, but the scale and scope of MOOCs raise novel questions about access to education, faculty work, and the role of universities in society. The research literature on MOOCs is expanding rapidly in several directions, with the vast majority focused on students who take MOOCs, using big data and learning analytics to examine questions involving demographics, persistence, learning outcomes, and goals (e.g. Breslow, Pritchard, DeBoer, Stump, Ho, & Seaton, 2013; Brooks, Thomson, & Teasley, 2014; Dillahunt, Chen, & Teasley, 2014). Another strain of research evaluates the technology itself, seeking to identify tools or aspects of the platforms that may influence how and whether learning takes place (e.g. Sadigh, Seshia, & Gupta, 2012; Coetzee, Fox, Hearst, & Hartmann, 2014). There are very few empirical studies that examine the experiences and behavior of the faculty who teach MOOCs (Ebben & Murphy, 2014). This dissertation study helps to illuminate an unexamined aspect of faculty work by providing insight into the experiences of faculty adopting a new educational technology in the early stage of development. MOOCs are new learning technologies that affect the way faculty teach, learn, and interact with students and that thus deserve study. I sought to answer the following research question: *Why do faculty teach MOOCs, and how do their beliefs and experiences inside and outside the university shape that experience?* The research described in the following chapters explores why faculty in a research university

participated in this new and potentially risky form of online teaching, and examines the experiences, benefits, and challenges of teaching a MOOC in the early stages of their development and adoption. I also explored questions about support – or lack of support – for the decision to teach MOOCs from colleagues, departments, and the university, as well as how MOOC instructors viewed their MOOC teaching in relation to their roles as researchers, teachers, and academic citizens.

Understanding what motivates faculty to teach MOOCs is important both for the broader research literature on faculty, and for higher education policy and practice. Online teaching in general, and MOOC teaching in particular, are an expanding component of faculty work at many colleges and universities (Allen, Seaman, Lederman, & Jaschik, 2012; Lack, 2013). However, very little is known about how faculty think about this new form of teaching in terms of their broader roles as researchers and instructors – and how such information might align with or expand existing theories of faculty work. Learning about the experiences and beliefs of faculty who teach MOOCs may help uncover strategies to improve support and resources for those instructors, and potentially for all faculty who use technology in their teaching. Furthermore, learning what it is about MOOC teaching that appeals to faculty could help administrators and policy makers identify levers to encourage other kinds of openness and sharing, and improve access to academic information for many more people around the globe.

**Online education and online sharing.** The literature on distance education, online education, and learning technology also support an investigation into the faculty perspective on MOOCs. Studies have revealed the role of demographic factors such as gender and age, as well as comfort level with technology, in affecting faculty use of technology (Ajjan & Hartshorne, 2008; Spotts, Bowman, & Mertz, 1997; Wilson, 2001). Others have identified ambivalence

among faculty engaged in traditional distance education, and sought methods for encouraging

online teaching (Maguire, 2005; Rockwell, Schauer, Fritz, & Marx, 1999). Research comparing

the instructor experience of face-to-face teaching with online teaching has found that while

online teaching does offer certain affordances, it comes with new constraints as well (e.g.

Bennett, 2014; Bergom, 2015). Two recent articles attempted to produce comprehensive reviews

of the literature on MOOCs, and found that while scholars are beginning to identify factors that

influence student participation, persistence, and success, the faculty perspective represents a

major gap; at the time of those articles there were no published peer reviewed studies of the

faculty who teach MOOCs, and as of early 2018 there were only a handful (Ebben & Murphy,

2014; Liyanagunawardena, Adams, & Williams, 2012).

Faculty may share knowledge online in many forms. Some of the most common are

journal articles, data sets, and teaching materials. The literature on why they share, and what

might influence that sharing, is very limited. Most research has centered on the sharing of journal

articles or data, but the field of inquiry is still nascent and findings sometimes contradict each

other. For example, several studies on faculty who deposit their published articles in online

repositories found that disciplinary norms affect deposit rates (Kim 2011; Bell et al., 2005;

Antelman, 2007; Covey, 2009), while others found no relationship between disciplinary culture

and article sharing (Xia, 2007; Xia, 2008). Research into data sharing suggests policies like

funder and journal mandates may influence faculty behavior, and identifies certain individual

characteristics such as career experience and level of skill at data management that may increase

data sharing (Piwowar & Chapman, 2010; Sayogo & Pardo, 2013). Given that one of the central

features of MOOCs is that they are open to anyone with an internet connection, and MOOC

teaching is a kind of online sharing of course materials, this literature may offer factors to consider for why some faculty choose to teach MOOCs.

Overall, the research on research university faculty tells us that there are many competing demands on their time and attention, and that teaching in general, and teaching online in particular, is often perceived as a less valuable activity than research (Gibson, Harris, & Colaric, 2008; Maguire, 2005). MOOCs are a new and high-profile form of teaching, one that has garnered a great deal of publicity both for early adopter universities and for some of the faculty in front of the cameras (Hafner, 2010; Pappano, 2012). The uniqueness of MOOCS, coupled with the existing literature on faculty, prompts the study questions about why faculty choose to teach MOOCS, what they get out of the experience, and how they conceptualize MOOC teaching in the context of their identities as researchers and teachers.

**Faculty work and faculty growth.** According to O'Meara, Terosky, and Neumann (2008), over the last 30 years, much of the scholarly research on faculty work has produced a narrative of constraint. According to this narrative, the challenges of the promotion and tenure process constrain junior faculty who must produce the kind of work that "counts" for P&T, at the expense of everything else; the rising faculty workload constrains women and men who must balance their scholarship with the needs of their families; and the rising prevalence of adjunct appointments is constraining for young academics who must tailor all of their work for an audience of search committees (e.g. Blackburn & Lawrence, 1995; Fairweather, 2002; Feldman & Turnley, 2004; Perna, 2001a). This work tells important stories about the contemporary challenges facing faculty, but O'Meara and her colleagues argue that it risks overlooking aspects of faculty work that do not fit the constraint narrative. Instead, they propose a counternarrative that examines faculty lives through a more positive lens, one that emphasizes the many

opportunities for learning, agency, and growth that academia affords. The professional growth perspective that O'Meara, Terosky, and Neumann (2008) outline provides a set of sensitizing concepts for my approach to understanding MOOC faculty. It enumerates five ideas that offer a counternarrative to the literatures of constraint:

*Learning*. Faculty are constantly learning, both as researchers and as teachers; learning is central to the work of faculty.

*Agency*. Faculty are authors of their own experience, and they can use their sense of agency to overcome challenges and determine their work.

*Relationships and community*. Faculty learning and growth takes place in the context of interlocking sets of relationships and communities, from departments on campus to international networks of colleagues.

*Identity*. A faculty member's sense of herself, including her history, identity, and experiences, shapes her approach to her work, her contributions to academia, and the way she understands what she does and how she does it.

*Commitment*. Faculty have passions and vocations that can underpin a deep commitment to the work they do.

MOOCs have provided new opportunities for experimentation, learning, networking, and agency by the few faculty members who have taught them. In considering the question of why these faculty teach MOOCs, and what their experiences were teaching MOOCs, I sought to take a balanced approach that focused on the possibilities for faculty growth, while also remaining open to the realities of constraint.

**Overview of the dissertation**

This dissertation is organized into seven chapters. In this chapter, I provided a brief introduction to MOOCs, and to the literatures on online education and faculty growth that informed this study. In chapter 2, I review the existing literature about MOOCs and MOOC instructors, as well as related research on faculty experiences with online education and learning technology, and studies of why faculty members choose to share their work and ideas online. I also summarize the faculty growth perspective by O'Meara, Terosky, and Neumann (2008), from which this study drew framing concepts. In chapter 3, I describe the methods of data collection and analysis I used to study faculty experiences with MOOC teaching. In chapter 4, I offer brief profiles of the study participants that serve as a foundation for the thematic analysis in the subsequent chapters. In chapter 5, I present findings related to the question of why participants chose to teach MOOCs, and identify four major categories of motivation: desire for a platform, interest in experimentation, altruism, and an aim to raise the profile of either themselves or their programs. In chapter 6, I present findings related to the experiences of MOOC instructors, as well as the meanings that participants made from those experiences. In chapter 7, I summarize my findings and their implications, outline a possible elaboration of the faculty growth framework that provided sensitizing concepts for this study, and provide some ideas for future research.

**CHAPTER 2: Literature review**

At the time that I proposed this study, there was no research literature on faculty motivations and experiences with MOOC teaching. Since then, only a few articles and one dissertation have been published, which I review below. To find literature on MOOC faculty, I conducted searches for "MOOC faculty" and "MOOC instructors" in the Google Scholar, JStor, and ProQuest databases. I set Google alerts on the earliest published article about MOOC faculty (Kolowich & Newman, 2013), so that I would receive an email every time a new article was published that cited it. I reviewed the reference sections of every article about MOOC faculty to identify works cited in those articles that did not appear in the results of my searches. In total, I found six studies of MOOC faculty: four peer reviewed articles, one dissertation, and one trade press article. Consequently, most of the literature that informed this work was not directly about MOOC instructors: literature on institutional motivations for adopting MOOCs, research on faculty experiences with online education and learning technology, and studies of why faculty members choose to share their work and ideas online. In addition, this study drew framing concepts from the faculty growth perspective by O'Meara, Terosky, and Neumann (2008).

**Existing MOOC literature**

Two comprehensive literature reviews on MOOCs both noted that the existing research to date had focused almost exclusively on students enrolled in MOOCs (Ebben & Murphy, 2014; Liyanagunawardena, Adams, & Williams, 2012). Studies use a combination of demographic and survey data on enrolled students, as well as large analytics datasets generated by student

participation in courses, also called "clickstream" data (e.g. Breslow, Pritchard, DeBoer, Stump, Ho, & Seaton, 2013; Christensen, Steinmetz, Alcorn, Bennett, Woods, & Emanuel, 2013; Ho, Reich, Nesterko, Seaton, Mullaney, Waldo, & Chuang, 2014). Since those reviews, a small handful of studies have investigated various aspects of the experience for faculty who teach MOOCs (Comer, Baker, & Wang, 2015; Czerniewicz, Deacon, Glover, & Walji, 2016; Elmore, 2016; Evans & Myrick, 2015; Kolowich & Newman, 2013; Zheng, Wisniewski, Rosson, & Carroll, 2016). A few studies have examined institutional-level questions, such as why universities choose to offer MOOCs (Hollands & Tirthali, 2014; Kassabian, 2014; O'Connor, 2014). Below I provide a brief review of both the literature on faculty, which is directly relevant to the present study, as well as the institutional MOOC literature, because institutional-level decisions related to MOOCs are likely to influence the behavior and experiences of faculty in those institutions.

**MOOC Instructors**

To date, six studies have investigated aspects of faculty motivation to teach MOOCs and/or their experience with MOOC teaching. Two are mixed methods studies employing surveys and a small number of interviews (Evans & Myrick, 2015; Kolowich & Newman, 2013), two are interview studies (Elmore, 2016; Zheng, Wisniewski, Rosson, & Carroll, 2016), and two are case studies, each focusing on two cases (Comer, Baker, & Wang, 2015; Czerniewicz, Glover, Deacon, & Walji, 2016).

Kolowich and Newman (2013) conducted a survey of early MOOC faculty for the *Chronicle of Higher Education*. As the authors point out,

> The findings are not scientific, and perhaps the most enthusiastic of the MOOC professors were the likeliest complete the survey. These early adopters of MOOCs have overwhelmingly volunteered to try them—only 15 percent of respondents said they taught a MOOC at the behest of a superior—so the deck was somewhat stacked with true

believers. A few professors whose MOOCs have gone publicly awry did not respond to the survey.

Though the study has clear limitations, it was the first attempt to gather information about MOOC faculty systematically, and the only one that was published before I began my study.

The authors present information on 103 professors who had taught or were teaching a MOOC at the time of the survey, and also interviewed a handful of survey respondents, who are quoted by name in the article. Their survey included one question about participants' motivations for teaching a MOOC, and respondents could select more than one answer. The most popular responses were "increase access to higher education" (71.8%), "increase my influence as an instructor" (40.8%), "increase my visibility/reputation w/in my discipline" (37.9%), and "pick up tips to improve my classroom teaching" (36.9%). In addition, 47.6% selected "Other," but the article does not report if these respondents gave any indication as to what their other motivations were. In terms of experiences, the article quotes instructors who describe the tremendous amount of time they devoted to their MOOCs; up to 100 hours for creation, and then 8-10 hours a week while the courses were running. Most (65%) reported that they had no prior experience teaching online. When asked whether teaching the MOOC had "inspired you to change the way you teach the traditional classroom version of the course," and 74% said yes; however, the article does not report how participants have changed their teaching as a result of the MOOC.

A study by Evans and Myrick (2015) offered a more rigorous analysis, as well as more detail about its methods. The authors gathered the names and email addresses of all faculty listed on the Coursera and edX websites as teaching or having taught a MOOC by July of 2014, and sent the survey to the resulting list of 707 instructors. The survey contained two open-ended questions in addition to the closed-response items; these open-ended questions were coded and analyzed, and the authors also conducted qualitative interviews with a theoretical sample of five

participants chosen for their range of academic roles. A total of 162 people completed the survey, which provided information on the demographics of MOOC faculty, grading methods, MOOC instructors' perceptions about the purpose of MOOCs in higher education, their perceptions of student learning experiences, and their satisfaction with the overall experience of teaching a MOOC. Unlike the *Chronicle* article, Evans and Myrick conducted some basic statistical tests of the validity of their quantitative data (paired-samples t-tests).

Evans and Myrick found that, as in the *Chronicle* study, while their population had many years of experience in higher education, most had no prior experience with online education (67%). Most participants reported a high level of satisfaction with the experience of doing a MOOC, and 66% said they would consider teaching another one. From their analysis of the open-ended questions and individual interviews, Evans and Myrick found that "the most frequently invoked benefit was the ability to reach enormous numbers of students from around the world. Professors were able to 'teach more eager-to-learn students in a single course than you'll get to do in a lifetime at the university'"(p. 304). In their discussion, they noted that "The amplifying effects for a single professor's reach appears to be the single largest drawing factor of MOOCs for faculty, a finding that was revealed more by the qualitative analysis than the Likert-type scale that asked the same question" (p. 306), an argument for using a qualitative or mixed methods approach in future research on MOOC faculty. I would point out, however, that the Likert-type questions they asked, all of which were about "the purpose of MOOCs," were not structured in such a way as to capture instructors' *motivations* for teaching a MOOC. Asking "What is the purpose of MOOCs?" is very different from "Why did you teach a MOOC?"

The survey included five possible responses to the question of the "purpose" of teaching MOOCs, which I list here in the order that participants ranked them: 1) Giving intellectually

curious adults ways to learn new things in free time. 2) Democratize higher ed. 3) Professional development. 4) Showcase university 5) Promote myself and work. The ratings for answers four and five, "To showcase my university or college's most popular classes" and "To get more exposure for myself as a professor" (p. 302) appeared to demonstrate more ambivalence than those for the other three purposes. Though the authors frame these "purposes" as reflecting faculty motivations for teaching a MOOC, a more accurate description could be to call these responses evidence of MOOC instructors' perceptions of institutional goals for MOOCs. The fact that different motivations emerged in the qualitative portion of their study reinforces this interpretation.

The interview study by Zheng et al. (2016) is the closest in method to the study I conducted, though the research questions were somewhat different; while they were interested faculty in motivations for teaching a MOOC, they were also investigating the question of how MOOC teaching differs from non-MOOC online teaching, as well as challenges and support structures to enhance the faculty experience. Given that the authors all come from the field of computer-supported cooperative work and social computing, a sub-discipline of computer science, this emphasis on the technical aspects make sense. They recruited 14 participants, some from their home institution, a large public university in the Northeast, and others through professional contacts and public listings of MOOC instructors. Their inclusion criteria required participants both to have taught at least two sessions of MOOCs, and to have experience with non-MOOC online teaching and traditional classroom teaching as well.

A useful contribution of this study is a process model for administering a MOOC that identifies three phases of MOOC creation and teaching, and connects some of the observed challenges to each phase. Stage 1, Preparation, is characterized by what the authors call the crisis

of time management, and the enormous amount of time required to prepare a MOOC. Stage 2, Implementation, requires less time, but produces "mental pressure because [instructors] fear that their MOOC may fail if they do not deal with problems in a timely and appropriate manner" (p. 209). In Stage 3, Feedback, instructors were diligent in collecting and processing the feedback they received from students in order to improve subsequent iterations of the course. This process model provides structure to some of the experiences that other studies identified as well, especially the extreme time demands of MOOC production and the emotional stress of teaching in such a public format.

In their analysis Zheng et al. identified four main motivations to teach a MOOC: "worldwide impact on students, professional growth, research opportunities, and enhanced name recognition" as well as five major challenges associated with MOOC teaching, "logistical complexities of collaborative work, crises of time management, scaling to meet expectations, extreme criticism and reputation risk, and insufficient support" (p. 207). Instructors generally underestimated the amount of time it would take them to make their MOOCs, which was in part the result of challenges dealing with curriculum designers, videographers, and other support staff tasked with helping them create the MOOC.

Elmore's (2016) dissertation study of faculty and MOOCs is not actually about faculty who have taught MOOCs; rather it examines arts faculty members' beliefs and choices regarding MOOCs. Of the sixteen arts faculty she interviewed, only four had actually taught MOOCs. The rest had not and said they would not teach a MOOC. Many were skeptical of MOOCs' usefulness or applicability in the context of teaching future artists (including dancers, performers, directors, and visual artists); most were also concerned about the amount of time a MOOC would take, and did not see that kind of teaching as a priority. Early career faculty did not feel they had

13

the flexibility to do something so new and untested, while later career faculty believed it was up to the younger generation to adopt and experiment with new things. The few participants in Elmore's study who had taught MOOCs reported motivations that aligned with the findings of the studies described above. They "wanted to challenge themselves toward 'new kind of teaching' by creating 'a whole new model' that breaks away from the 'traditional language of the artist that believes in the sort of sanctity of being present in the world and often with other people.' They wanted to do this for the purpose of reaching new learners" (p. 82).

Czerniewicz et al. (2016) used a case study approach to examine whether and how two MOOC instructors at an African university chose to use Open Educational Resources (OER)[1] in the creation of their MOOCs. The authors try to track changes in practices and attitudes related to openness over time. They used an assortment of data collection methods, including direct observation of the course design process, semi-structured interviews, and focus groups. Two of the article's authors were members of the design team that worked with the two educators under study. Czerniewicz et al. found that the primary motivation for both of the educators in the study was to help develop their respective interdisciplinary fields using the MOOC in different ways. One used the MOOC to explore their new field by bringing in many different speakers to contribute, while the other hoped to increase the visibility of their field. This was not the primary focus of the study, however. The central findings about the use of OER were that instructors increased their understanding and knowledge of open practices and legal issues affecting access to information, increased their usage of open content, and became interested in promoting open content to a broader audience.

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[1] OER are educational resources that are free from copyright restrictions, so that educators may use, adapt, and build on them without asking for permission or paying a fee.

Comer, Baker, and Wang (2015) focused on the various forms of negativity that MOOC instructors are exposed to while doing a MOOC. The authors present two cases, and the instructors for each of those MOOCs are also authors on the article. Analyzing comments in the MOOC forums, they observed that students made negative comments directed toward the course, the instructor, the discipline, peers in the forums, and even the instructors' clothing choices. The study also noted that a small number of frequently negative student commenters could change the tenor of the whole course; in one of the courses, the authors identified only nine students who were responsible for the bulk of the negative comments. In one of the cases, the instructor of a writing MOOC also experienced a great deal of negativity about the MOOC outside of the forums, on a professional listserv for writing program administrators, where a heated discussion of the suitability of using a MOOC to teach writing left the instructor "feeling largely alienated from her discipline and its members" (p. 100). Coupled with the fear of failure that Zheng et al. identified, the negative experiences of the instructors in these case studies suggests that despite generally high satisfaction levels, teaching a MOOC can take an emotional toll.

This limited literature on MOOC faculty is not sufficient to draw any conclusions, but it offers some directions for future research. There appears to be consensus that creating MOOCs, at least in the early days, required an enormous amount of time, something that surprised many early MOOC instructors. MOOCs seem to provide an opportunity for learning. Though a few studies have attempted to understand motivations for faculty to teach a MOOC, there appear to be a range of possibilities, including altruism, reach, and experimentation.

**Institutions that offer MOOCS**

Three studies have explored the reasons why higher education institutions choose to offer MOOCS, compare those reasons to the public discourse around MOOCs, and evaluate whether

institutions are meeting their stated goals. O'Connor (2014) frames her examination of MOOC

adoption in the context of the "disruption" narrative prevalent in descriptions of and arguments

for MOOCs. She notes that while many in the media tout MOOCs as change agents that will

restructure higher education and improve access for all, the stories administrators tell within

MOOC-adopting universities tend to focus on the implications of MOOCS to bring about desired

strategic changes for their particular institutional contexts.

In interviews with administrators at three Australian universities that had launched or

were in the process of launching MOOCs, O'Connor identified four commonalities in the way

institutions were constructing MOOC initiatives: 1) Using e-learning policy, including MOOC

adoption, as a tool to drive residential curriculum redesign; 2) Emphasizing residential

curriculum redesign as a central rationale for MOOC adoption; 3) A tension between the desire

to capitalize on promotional opportunities that MOOCs afford and a discomfort with

wholeheartedly embracing the controversial technology; and 4) An absence of access-driven

concerns or discussion, despite the emphasis on access in the broader public conversation about

MOOCs.

Kassabian's (2014) dissertation on three American early-adopter universities found a

similar disconnect between institutional framings of MOOC benefits and the media's assertions

about their potential value. Unlike O'Connor, Kassabian observed that all three universities in

his study named enhanced educational access as a goal for their MOOC programs, however, he

noted that popular assertions that MOOCs could lower the costs of higher education and improve

completion rates did not emerge in the institutional discourse around MOOC adoption. The

findings of Kassabian's study echoed O'Connor's in that all three institutions wanted to use

MOOCs to serve residential curricular needs on their home campuses, as well as to advance publicity or reputational goals.

As Kassabian interviewed several faculty at each site, he identified a substantial disconnect between the administrators and the faculty with regard to their stated goals for MOOCs. Faculty at all three sites emphasized access and outreach above other motivating factors for their university's participation in MOOCs, while administrators favored "improvement for residential education, the ability to motivate campus discussions on teaching and learning, reputation enhancement value, and brand protection and competition within peer institution groups" (p. 141). Kassabian observed that the formally stated goals for MOOC adoption at the universities aligned more closely with the goals of higher-level administrators than they did with the rank and file faculty. This observation raises questions about the experience of faculty who may choose to teach MOOCs based on one set of goals, only to find that their institutions expect them to achieve a different set, one that the faculty may not find as compelling.

Rather than focus on a few cases, Hollands and Tirthali (2014) interviewed a range of administrators, faculty, executives, and researchers across 62 different institutions, including public and private universities, community colleges, research organizations, for-profit education companies, and platform providers both to identify institutional goals for engaging with MOOCs, as well as to determine whether and how institutions were achieving these goals. They found that goals tended to fall into one of six categories: "extending the reach of the institution and access to education, building and maintaining brand, improving economics by lowering costs or increasing revenues, improving educational outcomes for MOOC participants and on-campus students, innovation in teaching and learning, [and] conducting research on teaching and

learning" (p. 5). The authors assert that there is evidence to suggest that MOOC institutions are at least partially achieving all of these goals except for improving economics by lowering costs and increasing revenues. They observe that while it is true that some universities are experimenting with ways to monetize MOOCs, the income they generate is limited. Furthermore, while MOOCs extend the global reach of a university, they do not appear to be reaching students with limited access to formal higher education.

The research on MOOC universities is too new and too contradictory to draw any major conclusions about institutional level behavior related to MOOCs. However, in identifying the goals that university administrators have for MOOCs, these studies open the door to valuable conversations with faculty about their own goals, and a consideration of the interplay between faculty and administration desires in this new space.

## Online education and learning technology

The long legacy of research on faculty has investigated many elements of faculty life, work, and experience, including their motivations to teach and conduct research (Austin, 1990; Blackburn & Lawrence, 1995; Visser-Wijnveen, Stes, & Van Petegem, 2012), their demographics and identity (Austin, 1990; Baez, 2000; Perna, 2005), and their reasons for adopting new technologies (Ertmer, 2005; Windschitl & Sahl, 2002). Understanding the factors that influence faculty behavior and experience is widely perceived to be an important pursuit for higher education research (Blackburn & Lawrence, 1995; Thelin, 2011). While there are few peer-reviewed journal articles that focus specifically on the attitudes and behaviors of MOOC faculty, there are related literatures on various aspects of faculty experience with online/distance education and technology adoption that support the conduct of this study.

**Attitudes toward online education**

Surveys on faculty attitudes towards online and other forms of distance education have consistently observed a great deal of ambivalence, which is mirrored in the media depictions of faculty attitudes towards MOOCs (Pope, 2014). There are aspects of online education that are exciting or appealing to faculty interested in learning and innovating, accompanied by many barriers and potential constraints. Multiple studies have noted persistent concerns about the quality and effectiveness of online education, along with perceived lack of support of one kind or another, including lack of time, lack of financial support, and lack of training and technical support (Allen & Seaman, 2012; Maguire, 2005). Despite those concerns, these studies often identify common motivators for engaging in online education that included personal interest in using new technology, the desire to innovate, and the perception of recognition in the tenure and promotion process.

It appears that faculty are more likely to have a positive view of distance or online education at institutions where they also perceive high levels of institutional support for such teaching. A large multi-institutional faculty survey asked respondents about whether they believed that their home institution was supportive of a range of activities related to distance instruction, and also attempted to measure the respondents' feelings of motivation, commitment, and satisfaction with distance education (Lee, 2001). It revealed that faculty who believed their universities supported distance education also felt significantly higher levels of motivation, commitment, and satisfaction related to distance teaching, but it did not offer a theoretical or conceptual grounding to explain the results.

Gibson, Harris, & Colaric (2008) used a technology acceptance model to frame a survey of faculty attitudes toward online teaching in business and education at a single regional

institution, in which acceptance of a technology is defined by a potential user's positive attitude towards the technology, her intention to use the technology, and whether or not she actually uses the technology. A series of questions measured perceived usefulness of online teaching, perceived ease of use of the online teaching platform, and the analysis attempted to predict responses to a question about willingness to teach online. The researchers found that while perceived usefulness and effectiveness of online education predicted an increased willingness to teach online among faculty respondents, perceived ease of use of the technology did not influence willingness to engage in online teaching. These findings are limited in their ability to reflect the attitudes of faculty more generally, but they add support to the notion that some faculty are genuinely concerned about the effect of online education on learning outcomes for their students.

Some research has sought to compare and contrast the experience of teaching face-to-face classes and the experience of teaching online. As Bergom (2015) points out, this work tends to take a normative approach, in which face-to-face is the standard to which online teaching ought to be measured (e.g. Allen, Seaman, Lederman, & Jaschik, 2012; Xu & Smith Jaggars, 2011). In her qualitative study of instructors of online business classes, Bergom resists the equivalency framing, instead emphasizing the ways that online teaching is fundamentally different from teaching in person, with its own set of affordances and limitations. Affordances included a predictable structure for students that helped them stay engaged, and flexibility that arises from asynchrony and the ability of students to complete their work on their own schedules, while limitations included difficulty in making changes partway through the course, and feeling constrained by the online teaching platform.

While one might expect faculty attitudes to have shifted in favor of distance education as personal computers, mobile devices, and the Internet have all grown ubiquitous on American campuses, recent studies suggest that many faculty remain skeptical of the value of online courses. A large, nationally representative survey of over 4,000 faculty noted that nearly two thirds of respondents said they believed that learning outcomes in online courses are inferior or somewhat inferior to those in a comparable face-to-face course (Allen & Seaman, 2012). However, the authors note that these numbers vary substantially depending on the faculty members' level of familiarity with online courses. Faculty who have never taught online express more fear of online education, and more concerns about learning outcomes, than faculty who have taught online or blended courses. In addition, faculty who have taught online are much more likely to recommend online classes to their students than faculty who have never taught online. These findings suggest that a study of MOOC faculty in particular is warranted; MOOCs started at elite universities, where online education is much less prevalent, and the early MOOC faculty may not have had prior experience teaching online.

Findings on instructors making the transition to online teaching for the first time have been mixed. One case study of a literacy education professor adapting an existing class to an online format concluded that the structure of the online course enabled all the students to participate more fully, giving the instructor a pedagogical advantage and a stronger sense of connection with her students (Peterson & Slotta, 2009). Meanwhile, an interview study of faculty at a Canadian university who had recently developed and taught their first online courses found that new online instructors struggled with the new medium, especially the loss of face-to-face interactions and the difficulty in creating a sense of community in their courses (Conrad, 2004). A case study of a graduate program making the transition to an online curriculum found that

online teaching brings a new layer of complexity, and results in additional responsibilities for the instructor (Bennett & Lockyer, 2004). The online courses required instructors to learn new modes of teaching and manage the technology, while also making them more dependent on others in the institution for tech support, curriculum development, and course administration.

**Adoption of technology**

Allen and Seaman's (2012) findings dovetail with another body of literature examining faculty willingness to adopt new forms of classroom technology other than online teaching. Familiarity and comfort with technology tends to encourage more engagement with other forms of technology (Ertmer, 2005). Through surveys and interviews, these studies have found that, across genders and generations, there are some faculty who are curious about technology, interested in experimenting with new ways of teaching, and willing to try novel approaches in the absence of organized support (Ajjan & Hartshorne, 2008; Spotts, 1999). However, for faculty who are not already comfortable with technology, the barriers to technology adoption appear to be similar to barriers to online education, namely, concern about pedagogical effectiveness and lack of institutional support (Ajjan & Hartshorne, 2008; Buckenmeyer, 2008; Spotts, Bowman, & Mertz, 1997).

Much of this research often seems targeted at administrators interested in encouraging recalcitrant faculty to adopt more educational technology, but there are a handful of studies that take a different approach. Bennett's (2014) paper on early adopters of Web 2.0 technologies focuses on the emotional labor necessary to integrate technology into teaching practice. She interviewed 16 lecturers at a single institution in the UK (where the title of "lecturer" includes permanent faculty). Her interviews with faculty from a range of disciplines and levels of experience revealed a set of positive emotions arising from lecturers' experience, including a

strong sense of professional identity, as well as joy, pleasure, and pride in response to student accomplishments with the new technologies. Negative emotions ranged from low levels of anxiety to powerful feelings of fear, humiliation, and anger, and often arose from concerns about making mistakes or failing in front of their students. The study suggests that adopting a new technology before it has become the norm requires a great deal of emotional work on the part of faculty, something that much of the research on attitudes to online education has tended to ignore. In the case of MOOC faculty, there may be less direct engagement with students, but because MOOCs are both highly visible and very large, they may require a similar kind of emotional work on the part of the instructors who teach them.

A series of case studies of faculty at a single university who were early adopters of a new learning management system (LMS) sought to understand why instructors chose to use a new technology (Samararickwema & Stacey, 2007). The study found that while some participants adopted the new LMS because they felt pressure from top-down directives, student demand, and threats of departmental closings, others were motivated by supportive environments, extensive social networks that reached beyond their home departments, and a desire to improve pedagogy. Unlike much of the literature on technology adoption, which often lacks theoretical grounding, this study applied both Rogers' (2003) theory of diffusion of innovations and actor-network theory to interpret the factors influencing the study participants' reactions to the new learning technology.

Another study, based on interviews with forty-two faculty in anthropology, biology, chemistry, and chemical engineering at three research universities, argues that the growing position of technology in education is threatening the professional autonomy of faculty by excluding them from decision making processes, increasing their workloads, and separating

teaching and research work. Johnson (2012) found markedly more negative faculty attitudes toward online education than other studies that tend to show a mixed response to technology adoption. The professors interviewed found technology to be of limited value and detrimental to student learning, and chafed against what they viewed as incursions by their administrations on their autonomy and academic freedom. At the same time, those who did want to use technology felt unsupported and unrewarded. Johnson advances the point of view that learning technology increases workload, threatens research productivity, and reduces faculty autonomy; his thoroughly negative findings suggest the need for further investigation of faculty responses to online educational opportunities, and serves as a reminder to listen for the bad experiences among MOOC faculty as well as the good.

**Online sharing**

In much the same way that there is a longer history of online and distance education that predates MOOCs, there is a similar history of university faculty choosing to share the products and processes of their academic work outside of the traditional venues of classroom teaching and peer reviewed publication. In a handful of disciplines, such as mathematics and high energy physics, widespread sharing dates back to the early days of the World Wide Web (Jackson, 2002; Vence, 2014). While this phenomenon is understudied, there have been a few investigations of article sharing and data sharing. Unfortunately, the sharing of educational resources, which would be most directly relevant to a study on MOOCs, has been largely ignored by the research community.[2] It is possible, however, that some of the motivators to share scholarly work online might also motivate faculty to teach MOOCs.

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[2] There is a larger literature around "knowledge sharing" (e.g. Bock & Kim, 2002; Bok, Zmud, Kim, & Lee, 2005; Chiu, Hsu, & Wang, 2006; Constant, Kiesler, & Sproull, 1994), but it tends to focus on professional and organizational contexts rather than academia, and is not relevant here.

**Article sharing**

Academic librarians have shown a particular interest in faculty article sharing practices, in part because they have borne much of the responsibility for building and maintaining the institutional repositories (IRs) faculty use to deposit their work. In addition, they have been some of the primary advocates for public access policies at both the funder and institutional level, which require faculty to share their peer reviewed articles for free online (e.g. SPARC, 2015). Studies tend to focus on "faculty self-archiving" practices, in which an author publishes an article in a traditional journal and posts a copy on a publicly available online repository or website, often maintained by a university library, and most of this literature comes from the information science and library science fields.

*Differences between sharers and non-sharers.* Several studies investigated the difference between faculty who self-archive and those who do not. Gadd, Oppenheim, and Probets (2003) conducted an international author survey as a part of the UK-based RoMEO Project, which sought to develop a comprehensive understanding of the legal and technical requirements for establishing a successful open access infrastructure. The survey focused heavily on the impact of copyright and plagiarism concerns on faculty attitudes toward archiving. It found that confusion about what rights belong to the author and what rights belong to the publisher prevented faculty from archiving. Non-archivers were concerned about the ability to find a publisher if they shared their work online, and both archivers and non-archivers worried about violating agreements with publishers. Participants were recruited using websites and listservs, and 58 percent of the participants had self-archived, a high number that strongly suggests a selection bias (Gadd, Oppenheim, and Probets, 2003).

Jihyun Kim conducted a series of studies that focused on the differences in attitudes between faculty who self-archive and those who do not to develop a set of consistent factors that influence self-archiving behavior (Kim 2007; Kim 2010; Kim 2011). These three articles include detailed methods sections, thoughtful application of theoretical frameworks, and rigorous use of statistical analysis, all of which set them apart from many of the studies on self-archiving. The first study involved a pilot survey of 31 faculty at a single research institution, while the latter two used the same large set of survey and interview data collected from 17 Carnegie doctorate-granting universities in the United States. The survey and interview instruments for the multi-institutional studies were developed based on a literature review and on findings from the first study, and the final study refines the factor analysis initiated in the second study.

Using this iterative approach, Kim has developed a seemingly robust and compelling set of seven factors that significantly influence faculty attitudes towards self-archiving. Four of these factors – academic reward, altruism, self-archiving culture, and technical skills – were positively related to self-archiving, while copyright concerns, age, and additional time and effort were negatively related. Based on my pilot interviews, some of these factors, especially altruism, technical skills, and additional time and effort, also appear to be relevant in the context of MOOC teaching.

Kim grounded her studies in two related conceptual frameworks: the socio-technical interaction network (STIN) model and social exchange theory. The STIN framework was designed to explain the interactions between the social and technical elements of networked communications forums (Kling, 2003); in the case of institutional repositories, Kim applied it to develop an understanding of the relationship between the faculty who deposit their work into a repository, and the database and other technical infrastructure that makes the repository work

(2007). Social exchange theory describes actions that elicit rewards from others, and is intended to encompass a broad array of exchanges beyond the monetary (Emerson, 1976). Kim used social exchange theory to examine the sharing of information through an economic lens, and to address the issue of incentives, perceived costs and benefits, and contextual factors that influence information sharing behavior (2010). Both of these frameworks have potential relevance to MOOCs, which are also mediated by technology and involve information sharing.

*Influence of disciplines.* There is conflicting evidence about whether discipline affects article sharing. Several studies found that disciplinary norms do influence faculty self-archiving practice (Bell et al., 2005; Antelman, 2007; Covey, 2009), although one study designed to test that result found no relationship between disciplinary culture and self-archiving (Xia, 2007), and another found that one's academic discipline alone was not a predictor of positive attitudes toward self-archiving. This study, by Kim (2011), used factor analysis of a large faculty survey and found that attitudes toward self-archiving were correlated with the subject's perception of the archiving culture in her discipline (Kim, 2011).

Xia's (2007) study used collection and deposit data from the IRs of seven universities in Australia in four disciplines – physics, chemistry, economics, and sociology – to produce weighted deposit rates based on the size of the departments. The analysis yielded no clear patterns within disciplines across multiple institutions. However, using the depositor field, Xia found that for some departments a single individual such as an administrative assistant or librarian made dozens of deposits on behalf of several authors, and that the presence of mediated support helped explain some of the variation across institutions.

The question of disciplinary influence is interesting in the context of MOOCs, because there has been debate about whether certain subjects, namely STEM and business, are better

suited to the format (Reichard, 2013). Some MOOC providers, such as Coursera, are making

explicit attempts offer courses from diverse disciplines, including humanities and the arts, while

others like Udacity are taking a more focused approach (Marques & McGuire, 2014). At

Michigan, MOOC subjects run the gamut from science fiction to cataract surgery, and though it

is small scale, this study is an opportunity to explore whether there might be disciplinary patterns

in the way faculty conceptualize or experience MOOC teaching.

**Data sharing**

Several conditions have driven the recent surge in data sharing policies from funders,

journals, and institutions, including concerns about the replicability of scientific research, and

interest in facilitating the reuse of old data for new studies (Fecher, Friesike, & Hebing, 2014).

Some of this push towards open data is related to the open access and open education

movements, but data has some special features that distinguish it from articles and course

materials. The first is that there are significant technical challenges associated with sharing the

petabytes of data associated with some kinds of scientific research, whereas the size and format

of journal articles, syllabi, and other course materials are standard and easily managed by people

with limited technical skills (Borgman, 2012). The second is that historically, raw data were not

made public in the way that journal articles are public, or teaching in a classroom is public.

Many faculty have real discomfort in making raw data publicly available, as well as legitimate

privacy concerns in the case of research on human subjects (Kaye, 2015; Mennes, Biswal,

Castellanos, & Milham, 2013). As a result, data sharing is not a perfect analog for MOOC

teaching. However, several of the factors identified in the literature on article sharing also appear

in data sharing, which suggests that the literature may still be of some value.

*Researcher and study characteristics.* The limited research into data sharing has identified certain characteristics of both researchers and their studies that may increase data sharing – although the findings are somewhat mixed. A survey of 361 social scientists found that deposit requirements from funding agencies and journals were not significant factors influencing data sharing (Kim & Adler, 2015). Rather, they found that personal attitudes and motivations such as perceived career benefit and risk, perceived effort, and attitude toward data sharing, as well as perceived normative pressure within a researchers' field, were the factors affecting data sharing behavior. While the statistical methods in this study were sophisticated, using a survey to measure data sharing behavior is at risk of self-reporting bias.

A pair of articles on biomedical microarray research, which produce large sets of genetic data, used bibliometric methods to study actual data sharing behavior, by identifying patterns in the rates at which investigators archive their raw gene expression microarray datasets after study publication (Piwowar, 2011; Piwowar & Chapman, 2010). The first study examined 397 biomedical microarray studies, and after analyzing variables related to the investigators, the journals in which the studies were published, and the funding of the studies, observed that authors were more likely to share data when they have high levels of career experience and impact, as well as when the study was published in a high-impact journal (Piwowar & Chapman, 2010). This suggests that researchers who are already successful and visible are more likely to share; similarly; in the early stages of MOOC adoption, it was often high-profile faculty who were invited to teach.

The second study queried several databases of health science research and identified 11,603 articles that describe the creation of gene expression microarray data published between 2000 and 2009 (Piwowar, 2011). The author then searched in best-practice data repositories and

found associated datasets for 25% of these articles, increasing from less than 5% in 2001 to 30%–35% in 2007–2009. Using multivariate regression and factor analysis, Piwowar found characteristics of both authors and studies that increased the likelihood of sharing data. Authors who had prior experience sharing or reusing data were more likely to deposit microarray data in an open repository, and studies funded by a large number of NIH grants were more likely to have data deposited publicly. In addition, data sharing was more likely if the associated article was published in an open access journal or a journal with a strong data sharing policy. The prior experience factor seems likely to translate to MOOC teaching, in that faculty who have taught online or experimented with recording lectures for flipped classrooms may be more comfortable with the MOOC model than those who have not. For this reason, research on MOOC teaching should include information about MOOC faculty members' previous use of technology for teaching.

While many data sharing studies focus on a single discipline (Kim & Adler, 2015; Piwowar, 2011; Piwowar & Chapman, 2010), some have searched for variation across disciplines. One study of faculty data management practices at Emory University found statistically significant differences between researchers in the basic sciences, medical sciences, social sciences, and arts and humanities (Akers & Doty, 2013). The study asked about a range of different data sharing methods rather than focusing only on public data repositories. It found that among all fields, the most common method of sharing data was by emailing it to colleagues outside of their research group, but that overall, preferences for method of sharing varied by discipline. Basic scientists were more likely to deposit in an online data repository or share supplementary data connected with a journal article, while humanists never used online repositories and used personal or departmental websites if they shared at all.

Meanwhile, an interview study of data sharing among STEM faculty found that faculty in some disciplines believed that data sharing was a professional responsibility (Kim & Stanton, 2012). Faculty in those fields tended to feel that they were expected to share their data, and believed that there was pressure from their colleagues to do so. This study also identified several factors influencing sharing that may also be relevant to MOOC teaching, including perceived costs and benefits, technical capability, and altruism. The researchers report that they were surprised by the frequency with which study participants mentioned altruism, which surprises me because it is often raised as an argument in favor of sharing educational resources. Participants described a desire to help their colleagues, stated that sharing data could help advance their fields, and expressed a sense of personal satisfaction that came from sharing data. My pilot interviews revealed similar feelings in MOOC faculty.

*Data sharing policies.* With many government agencies, particularly the NIH, and other funders requiring data management plans in grant applications, and a growing number of journals offering platforms to share supplemental data with articles, there has been interest in determining whether and how data sharing policies work. Research on policies is still preliminary, and frequently contradictory. A government working group tasked with building a large repository for earth science data conducted a survey of stakeholders including research scientists, citizen scientists, librarians, students, policymakers, and teachers, to understand their willingness to share data sets (Sayogo & Pardo, 2013). The study treated all respondents as researchers with data to share, which is problematic, but it found that a significant factor influencing willingness to share was having a funder that requires it. Far more important, however, was institutional support for data sharing, in terms of both expertise and infrastructure.

Similarly, Piwowar (2011) found that gene expression microarray studies with large amounts of NIH funding were more likely to share their data than studies little or no NIH funding.

Piwowar and Chapman (2010) found that whether or not a journal has a data sharing policy was not correlated with actual data sharing. Even for journals with the strictest policies, those requiring proof of data deposit, only 51 percent of articles were in compliance, suggesting both that journals do not enforce their own data sharing policies, and that authors do not find them very influential. However, a large study of ecology and evolution literature, which also often includes genetic data, found the opposite (Vines, Andrew, Bock, Franklin, Gilbert, Kane, Moore… & Yeaman, 2013). The study examined four approaches to data archiving, from no stated archiving policy, recommending but not requiring archiving, and two versions of mandating data deposit at the time of article acceptance. The authors found that mandated data archiving policies that require evidence of data availability in the manuscript improve the odds of finding the data online almost 1000-fold compared to having no data archiving policy. However, archiving rates at journals that recommended but did not require sharing were only slightly higher than those with no policy at all.

Given the high level of investment required to produce MOOCs, it is unlikely that there would ever be university-wide policies requiring faculty to teach them. However, it appears that policy levers do influence online resource sharing among faculty, and some of that influence could possibly extend to educational resources of various kinds.

**Framing concepts: Professional growth perspective**

In their book on faculty careers and work lives, O'Meara, Terosky, and Neumann (2008) argue that most recent literature on faculty focuses on the constraints that impede faculty work, and that this focus emphasizes some aspects of faculty life while obscuring others. They claim

that the narrative of constraint highlights factors that hold faculty back and limit their potential, portrays faculty as isolated lone rangers, and frames them as victims of narrowly defined productivity, poor climates, absent mentors, and perverse reward systems. While the constraint approach to faculty research has helped improve certain aspects of academic work life, particularly in relation to increasing equity for all faculty, it overlooks the many ways in which faculty can thrive. Absent in the constraint narrative is any examination of catalysts and inspirations for faculty work, professional networks of colleagues and friends, meaning making in faculty research and teaching, and opportunities for learning and growth.

To broaden our understanding of faculty work, O'Meara, Terosky and Neumann argue for a professional growth perspective, which proposes five themes that offer a positive lens on faculty careers: learning, agency, relationships and community, identity, and commitment.

- Learning is at the center of faculty work and their contributions.
- Faculty have and can develop a sense of agency to navigate barriers and put effort, will, intent, and talent into their work.
- Faculty learn, grow, and make contributions through professional relationships that are embedded in communities.
- Who a faculty member is - her identity, history, and experiences - shapes what and how she learns, the types and quality of contributions she makes to academe, and the ways in which she makes them.
- Faculty are professionals with capacities for deep commitment and vocation. (O'Meara, Terosky, & Neumann, p. 165-6).

These five themes are still in the early stages of theory development and are thus not well-defined constructs. They are, instead, grounded in the authors' extensive review of the existing literature on college and university faculty. Moreover, in their 2008 discussion of their framework, O'Meara et al. did not conceptualize a theory of "growth" for faculty but rather used "growth" to describe this group of five positive aspects of faculty work life that they have observed in their research on faculty. In a later article, however, O'Meara and Terosky (2010) defined growth as "change that allows professionals to bring new and diverse knowledge, skills,

values, and professional orientation to their work" (p. 45).  The five themes in the faculty growth framework provided a set of sensitizing concepts for my study of faculty who teach MOOCs.

**Relevance to the present study**

Though this dissertation is not a faculty development study, there are several aspects of it that support the use of a faculty growth perspective as a set of sensitizing concepts in my examination of the motivations and experiences of faculty who teach MOOCs. First, for the population of faculty in this study, teaching a MOOC was a voluntary decision. Faculty who chose to teach early MOOCs at U-M either received an invitation to do so from administrators, or they proposed a course and subsequently received time, resources, and institutional support to develop and create their courses. This did not appear to be situation of constrained resources. Rather, MOOCs appear to have presented opportunities for growth, a chance to develop and use new skills in areas such as teaching and mentoring, creative endeavors, and public engagement – which align with the growth areas O'Meara, Terosky, and Neumann identify in their framework.

In laying out their conceptual framework, O'Meara et al. assert that the absence of research on faculty growth represents a substantial gap in the literature. Although there is some literature, particularly on faculty development, that appears to assume that faculty grow and learn, there have been few systematic examinations of that growth, how and why it happens, or its positive effects. One could argue that the lack of research on faculty who teach MOOCs is related to this neglect of faculty growth as an aspect of faculty work. There may be a bias in faculty research towards the constraint narrative, and stories about faculty that do not fit the constraint narrative are easily overlooked. As a result, despite tremendous popular and scholarly interest in MOOCs from the student perspective, researchers have largely ignored the people

who produce those MOOCs. Taking a faculty growth perspective allows me to address not only a gap in MOOC literature, but also a gap in the larger literature on faculty.

**Roots in the literature**

To develop their framework for faculty professional growth, O'Meara, Terosky, & Neumann reviewed and synthesized the past twenty years of research literature on higher education faculty. Emerging trends in faculty work comprise one of the themes of their review. Because MOOCs sit at the intersection of many of these trends, such as the growing influence of technology and the diversification of the study body, I focus here on the growth framework's roots in the literature on the changing nature of faculty work.

The authors use two recent book-length studies of faculty (Gappa, Austin, & Trice, 2007; Schuster & Finkelstein, 2006) as a foundation for the development of their faculty growth perspective. Both books use several large national data sets to identify shifts and trends in the nature of faculty work. Schuster and Finkelstein assert that higher education is undergoing revolutionary changes that are resulting in a total restructuring of academic work. These changes have arisen from several major forces, including an increased presence of the market in higher education (Slaughter & Rhoades, 2004), and a slew of technological innovations. The expansion of higher education in the United States, and the concomitant rise in the number of faculty, especially in adjunct and non-tenure track positions, have had a destabilizing effect, while demographic shifts in the faculty population itself are also reshaping the nature of academia. More women, people of color, and people of diverse social class backgrounds have entered the professoriate, disciplines have fractured and multiplied, and the workforce has internationalized.

The impacts of these changes on faculty work are manifold. Across the board, faculty are working more hours than they did 40 years ago, and their focus has narrowed on research and

teaching at the expense of administration and service. Collectively, today's faculty publish earlier and more often than their predecessors, while they simultaneously expend more effort on teaching, particularly at the undergraduate level. At the same time, Schuster and Finkelstein observed a stratification of the faculty into specialized roles, especially in administration, such that fewer individuals embodied the traditional "three-legged stool" of teaching, research, and service.

More than Finkelstein and Schuster, Gappa, Austin, and Trice (2007) focus on the contexts in which faculty do their work, examining shifts in academic workplaces at both the institutional and national level. In addition to using large national datasets, the authors also conducted an extensive literature review, examined cases of innovative practices at individual colleges and universities, and convened multiple advisory groups composed of scholars who study higher education, and administrators such as department chairs, deans, provosts, and presidents. They identified several forces altering the nature of faculty work, some of which match those identified by Schuster and Finkelstein, such as growing enrollments, the increasing diversity of students, and the rise of information technology. In addition, however, Gappa et al. note the impact on faculty work of fiscal constraints, increased competition between both individual faculty and institutions, shifts in control to career administrators and political appointees, and calls for public accountability.

According to Gappa et al., the impacts on faculty resulting from these forces largely mirror those in Schuster and Finkelstein, such as a higher number of non-tenured faculty positions, expanding workloads, and fragmentation of faculty work. In addition, Gappa, Austin, and Trice observe that environmental pressures have created a need for faculty to engage in professional development and growth almost continuously, in order to keep up with the changes

among students and technology, to participate in entrepreneurial endeavors, and to collaborate across disciplines. The authors frame this need for development and growth in a manner consistent with O'Meara et al.'s description of the constraint narrative, in which professional development is one more hurdle facing overburdened and stressed out faculty.

Gappa, Austin, and Trice also examine the outcome of job satisfaction surveys, including some that found faculty respondents overall are more satisfied with their work lives than they were 25 years earlier. The reasons for the high levels of satisfaction include a sense of autonomy, a love of the work, an appreciation for the community, and an enjoyment of teaching. However, satisfaction levels vary significantly across demographic and appointment lines; not surprisingly, women and faculty of color are generally less satisfied than white men, due to several factors including dissatisfaction with salary, poor work life balance, and high levels of stress. In reviewing several theories to explain how to increase job satisfaction for all faculty, Gappa, Austin, and Trice identified needs that mesh with the five elements of the faculty growth framework, including meaningful relationships with coworkers, opportunities for creativity, and ownership of, or a sense of responsibility over, one's work.

Building on the findings reported by Finkelstein and Schuster and Gappa et al., as well as their own review of the literature, O'Meara, et al. emphasize five central trends reshaping faculty work lives: the redefinition of the meaning of scholarship and what "counts" as faculty work (e.g. Huber, 2004; Hutchings & Shulman, 1999; O'Meara & Rice, 2005; Terosky, 2005), integrating roles and responsibilities across the triad of faculty functions and between work and family (e.g. Bloomgarden & O'Meara, 2007; Colbeck 1998; Colbeck & Drago, 2005; Perna, 2001b), rising workloads (e.g. Creamer, 1998; Schuster & Finkelstein, 2006), interdisciplinarity

(e.g. Lattuca, 2001; Trower, 2008), and, in opposition to the integrated scholar, a narrowing focus on a single role (e.g. Gappa, 2000; Schuster & Finkelstein, 2006).

Many of these trends may be affecting MOOC faculty. MOOC instruction pushes the boundaries of what should count as part of a teaching load, and an argument could be made that MOOC teaching is actually a form of service. In my interviews, I learned that faculty who teach MOOCs are simultaneously engaged in research around MOOC teaching and the experiences of their students, even when their primary field is not education, blurring the lines between teaching and research. Moreover, a MOOC instructor's peers are not usually colleagues in their home departments, but rather an interdisciplinary group of fellow MOOC instructors from across a range of disciplines.

Likewise, O'Meara, Neumann, and Terosky argue that a number of contextual factors are shaping faculty work: measures of accountability, the rise of competition and entrepreneurism, changes in the student body, and new forms of technology. These same trends are relevant to understanding MOOCs. MOOC platforms are designed to track every minute piece of information about the way students are using and engaging with the material, potentially enabling a unique kind of accountability for student engagement and learning, as well as faculty performance. While we typically think of entrepreneurship as arising out of the research role (e.g. Azoulay, Ding, & Stuart, 2009; Etkowitz, 1983), MOOC teaching enables faculty to be entrepreneurial in their teaching, experimenting with new models and in some cases earning a profit when a course does well (C. Severance, personal communication, September 18, 2015). The population of MOOC students differs across every dimension from students at a typical residential campus, with wider age ranges, class backgrounds, countries of residence or origin,

and educational experiences. And of course, MOOCs are an excellent example of the kinds of technological shifts that are altering faculty work and workplaces.

## Conclusion

In the spectrum of research on teaching, the study of MOOC teaching is a specific case of online teaching, within the broader category of college teaching. Some elements of the MOOC teaching experience mirror those of regular online college courses, such as the need to prepare the entire course in advance, and the often asynchronous nature of the course, while other elements are unique, such creating assessments that can work on a very large scale, and the lack of direct interaction with students. The limited existing research on MOOC instructors suggests that their motivations for teaching a MOOC are connected to the features of MOOCs that make them distinctive, such as their broad audience, and their potential use as marketing tools. Meanwhile, aspects of their experiences, such as their surprise about the amount of (often unrecognized) labor that teaching a MOOC requires, seems to align more closely with findings on other kinds of online teaching (e.g. Bennett, 2014).

Though the literature on MOOCS is nascent, both the existing research on MOOC instructors and related work on faculty experiences with online education, learning technology, and online education support an exploratory, qualitative investigation of the experiences of the faculty who teach MOOCs. More research is needed to understand faculty motivations to teach MOOCs, as well as their experiences with MOOC teaching, and how they view their MOOC teaching in relation to their roles as researchers, teachers, and academic citizens. In addition to grounding my study in the existing literature in online education and online sharing, without an established theory base to draw from, the faculty growth perspective outlined by O'Meara, Terosky, and Neumann offers a clear and research-based set of sensitizing concepts. I

incorporated questions about each of the elements of their framework in the guides that I used

when I interviewed faculty, included the elements as *a priori* codes in my codebook, and

examined the way the concepts did and did not fit with my data during analysis.  In the next

chapter, I outline my methodological approach to exploring faculty motivations and experiences

with MOOC teaching.

**CHAPTER 3: Methods**

The phenomenon of MOOCs is relatively new and there is little literature on, and even less study of, the faculty members who teach MOOCs; thus, by necessity, this study was exploratory in nature. I conducted a single-institution interview study of MOOC faculty at the University of Michigan. Michigan was among the first partner institutions of the MOOC company Coursera, which announced its first set of course offerings in April 2012. My methodology is derived from recent approaches to phenomenology (e.g. Seidman, 2005), which emphasizes the lived experience and meaning making of participants. To ground the study, I have used sensitizing concepts from in the faculty growth framework outlined by O'Meara, Terosky, and Neumann (2008). Because this study was exploratory in nature, the analysis leads to a set of propositions that can provide directions for future study, which I discuss in Chapter 7.

**Methodological approach**

My methodological orientation is rooted in contemporary approaches to phenomenological research. Early phenomenologists believed in the existence of a single "essence," understood to be the invariant experience that was at the heart of a set of experiences. Phenomenological philosophy asserted that "because the descriptions of natural objects are derived from experience, experience itself must be clearly understood before a firm foundation can be established for the sciences studying the natural world" (Polkinghorne, 1989, p. 42). Any scientific data that is collected or analyzed is filtered through the lens of human experience of that data. The empirical phenomenological approach that emerged from this

philosophy focused on the interpretation of individual experiences "in order to obtain comprehensive descriptions that provide the basis for a reflective structural analysis that portrays the essences of the experience" (Moustakas, 1994, p. 13). This approach argued that experiences encompass both "particular occurrences" and "meanings"; rather treating each subjective experience as singular, early phenomenologists argued that "a meaning remains constant in spite of factual variations in the experience of its particular manifestations" (Polkinghorne, 1989, p. 42). For example, in a study of MOOC teaching, a phenomenological approach that adhered to these philosophical understandings would assume that through interpretation, the researcher would discover a single meaning that all MOOC instructors would share, regardless of the fact that they had different, even contrasting, experiences in teaching their MOOCs.

Though there are several strands of phenomenology, they share a philosophical belief that "The reality of an object is only perceived within the meaning of the experience of an individual" (Creswell, 2013, p. 59). While researchers who have conducted recent phenomenological studies have not necessarily adhered to the notion of a single invariant experience, they continue to emphasize the lived experiences of individuals, and seek to identify themes in those experiences. Creswell (2013) suggests that the type of research problem best suited to a phenomenological approach "is one in which it is important to understand several individuals' common or shared experiences of a phenomenon. It would be important to understand these common experiences in order to develop practices or policies, or to develop a deeper understanding about the features of the phenomenon" (p. 60). Seidman, whose approach is closest to my own, identified four phenomenological themes that underpin his approach to qualitative interviewing: the temporal and transitory nature of human experience, subjective understanding, lived experience as the foundation of "phenomena," and the emphasis on meaning in context. Together, these four

themes highlight the importance of the meaning that individuals make of their experience, and suggest an approach to interviewing that uses open-ended questions and encourages story-telling from the participants.

## Research question

This study sought to answer the following research question: *Why do university faculty teach MOOCs, and how do their beliefs and experiences inside and outside the university shape their MOOC experience?* With this in mind, the study also addressed the following sub-questions:

1) How do university faculty members view their MOOC teaching in relation to their roles as researchers, teachers, and academic citizens? How do they believe MOOC teaching aligns (or not) with these conceptions?

2) How do university faculty believe their colleagues, departments, and institutions respond to their MOOC teaching?

3) What do university faculty experience as the benefits and challenges of MOOC teaching?

## Research Setting

I conducted the study at the University of Michigan-Ann Arbor, a public, Midwestern, Research 1 institution.[3] Michigan prides itself on its position as a leader and innovator in a range of academic pursuits, including the use of technology in teaching and learning (University of Michigan, 2014b). The University has a long history of experimentation and engagement with

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[3] Michigan is both a state flagship university and a leading research university. Though publicly elected regents provide oversight, state support accounted for only 16 percent of the general fund budget in 2013. At the level of schools, colleges, and departments its governance structure is decentralized, with high levels of autonomy for deans, department heads, and faculty (Duderstadt, 2007). When Michigan identifies its peer institutions, the list includes top private universities such as Stanford, Harvard, and MIT, along with state flagships like the University of Wisconsin-Madison and the University of California-Berkeley (The Chronicle of Higher Education, 2012).

educational technology, and it was involved in pioneering an early computer network that helped

lead to the internet (Frazer, 1995; Mulcahy, 1989).

In this context, Michigan formed an early partnership with Coursera to offer MOOCs.

The University was one of four partners – with Stanford, Princeton and the University of

Pennsylvania – when Coursera announced its first set of course offerings in April 2012 (Oremus,

2012). Administrators from the U-M Provost's office recruited five professors from across the

university to teach the first set of courses, offered in fall and winter of 2012 (B. Fishman,

personal communication, May 22, 2014). Since that initial offering, and as of November, 2017,

Michigan has expanded its range of MOOCs to over 100 courses, on both the Coursera platform

and on Harvard's edX platform, and some of the first courses have now been offered dozens of

times. At first, the Provost's office led the MOOC initiative, but in 2014 the university created an

Office of Digital Education Initiatives (DEI) to manage the Coursera partnership and the

development of new courses.[4] The DEI established a process that allows faculty to propose new

MOOCs, and it manages a committee that evaluates these proposals and selects courses based on

a range of criteria that includes suitability to the MOOC format and maintaining a diversity of

offerings across disciplines and faculty demographics. The DEI also serves as a central

production house for U-M MOOCs, with multiple video and audio recording studios and editing

suites; early on in U-M's adoption of MOOCs, leadership including the provost decided that

Michigan's MOOCs would have high production values with professional quality audio and

video (S. Teasley, personal communication, March 14th, 2018).

Several features of the University of Michigan make it an excellent site for a single

institution study of MOOC faculty (Flyvbjerg, 2006; Small, 2009). The caliber of its research

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[4] The DEI has since been renamed Academic Innovation (AI), but for the sake of clarity, I will refer to it as the DEI throughout this dissertation. At the time of all the interviews, the office was called DEI and that is how participants referred to it.

operations is unusual among state universities,[5] while its deep and explicit commitment to serving the public set it apart from the Ivy League and other elite private research universities (Duderstadt, 2007). Because Michigan was an early adopter of MOOCs, at the time of this study it has a greater number of faculty who have taught courses than did most other universities experimenting in this space. Michigan thus provided a larger and more varied population from which to draw participants.

Furthermore, many institutions chose to limit their MOOC offerings to a certain discipline or set of disciplines, often in fields that were perceived to translate well to an online setting (Educause, 2012). By contrast, Michigan has aimed for diversity, both across disciplines and across the faculty who teach them. Michigan MOOCs have included courses in medicine, English literature, finance, computer programming, and political science.[6] Seven of the 22 early MOOC faculty in the study population are women, and they range in rank from Clinical Instructor to Assistant Professor to full professor. Some have taught a MOOC only once, while others have taught their courses several times. This broad assortment of disciplines, demographics, and experiences furnished a rich set of perspectives well suited to the conduct of an exploratory study designed to answer basic questions about why faculty choose to teach MOOCs.

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[5] Michigan is among the top-ranked universities in the United States in total research volume; in the fiscal year that ended in June, 2016, total research expenditures were $1.39 billion, a record high (University of Michigan, 2016).
[6] The university offers 247 undergraduate majors, 108 doctoral and 247 master's programs, and professional programs including medicine, dentistry, law, business administration, architecture, and social work (University of Michigan, 2014a).

## Data collection

### Study population and recruitment

At the time of this study, 22 U-M faculty had taught MOOCs at the University of Michigan. The research design sought a census to ameliorate some concerns associated with a single-institution study by providing comprehensive coverage of the study population (Luborsky & Rubinstein, 1995). Four of these early MOOC faculty members had left the university by the time of this study. All, however, retained adjunct appointments at Michigan expressly so that they could continue to be involved in MOOCs.

In March 2016 I sent an email request to every member of the study population asking them to participate in the study. To those participants who did not reply to the initial email, I sent up to two follow up emails, the first a week after the initial request, and the second a month later (See Appendix A for recruitment materials). The recruitment process resulted in agreement from sixteen MOOC instructors who consented to participate in the study. Of the six individuals who declined to participate, three were among the individuals who had left the university, and one had recently moved into a senior administrative role with extensive responsibilities. Two did not respond to any of my emails, both of whom were among the instructors who had left U-M.

### Development of the interview protocol

I developed the semi-structured protocol for the first interviews (see Appendix C) by brainstorming and memoing about what I wanted to know from MOOC instructors (Maxwell, 2013). I followed Seidman's (1998, 2005) general approach to phenomenological interviewing and data analysis, focusing on the development of interview questions that would provide understanding of "the experience of other people and the meaning they make from that experience" (Seidman, 1998, p. 3).

My previous professional background as an academic librarian who provided copyright and publishing support to faculty provided some ideas about what instructional faculty might care about, and why they might choose to teach in this new and potentially risky way. One of the things I did in that role was to help faculty who were interested in experimenting with new online tools or platforms for teaching and learning, and needed help understanding the copyright implications for the new digital content that they and their students were creating. I also worked with some instructors who wanted to share their educational materials more broadly online, so that they would be available to anyone in the world.

I also read the literature about faculty motivation and faculty work to identify relationships between the existing literature and my research goals (Seidman, 1998). Encouraging a positive lens on faculty work, O'Meara et al. (2008) identified five themes in faculty work that call for additional study: learning, agency, relationships/community, identity, and commitment. Several of the themes align with questions I had already included in my early drafts of the interview protocol, but others, particularly relationships/community and learning, suggested that I add questions to explore whether these particular themes applied to the work of teaching MOOCs.

To further inform the development of the protocol, I consulted a wide range of colleagues and advisors for additional ideas about questions and themes I should address in the interviews. Former colleagues in the University Library and the Medical School's Office of Enabling Technologies, who work directly with faculty on the development, production, and distribution of Open Educational Resources (OER), offered feedback on a draft of the protocol. They also had valuable suggestions for questions regarding how faculty develop their MOOCs, and how they think about ownership once the MOOC is complete. I also solicited feedback at a meeting

of the University of Michigan's USE Lab,[7] whose members come from departments including information science, education, psychology, survey research, business, and medical education, I asked team members what they would ask the faculty who teach MOOCS, if they could ask them anything at all. Their suggestions ranged from questions about what faculty would like to know about the students who take their courses, to how they approach online pedagogy in comparison with classroom pedagogy, to their comfort with and feelings about technology. Questions that were relevant to my research goals joined a master list of questions that I refined and adapted to produce the pilot interview protocol.

**Pilot interviews**

These efforts to build an interview guide resulted in a set of questions, primarily open-ended in nature, that would allow participants to tell me about their experiences in detail. I conducted pilot interviews using the initial protocol with faculty who have taught MOOCs. I selected three faculty members for the pilot interviews based on recommendations from people familiar with the early days of Michigan's Coursera partnership. All three had taught multiple iterations of their MOOCs, and had spoken publicly about MOOC teaching, but as a group, they were at different career stages and from different disciplines (business, medicine, and information science).

In my recruitment emails, I explained that I hoped to use the pilot interviews, in part, to revise and develop the interview protocol, but that I would like to include the data from these interviews in the full study. All three individuals agreed to participate, but only two were able to

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[7] This project initially began as a study for the University of Michigan's USE Lab, later called the LED lab, an interdisciplinary community of students, faculty, and other researchers who study how innovative instructional technologies and digital media can support teaching, learning, and collaboration, and the Lab continues to provide both financial and intellectual support (University of Michigan, 2011).

schedule interviews during the pilot stage. I interviewed the third during the full data collection period in Spring 2016. I audio-recorded the interviews, and focused my note-taking during the interview on the themes and questions that most energized participants, questions that seemed to confuse them, and new questions that occurred to me during the interviews.

The draft protocol that I used for the pilot interviews included questions about experiences, as well as questions that asked participants to reflect on the value of those experiences (Groenewald, 2004). For both pilot interviews, I followed the draft protocol, and when the interview had concluded, took a few minutes to ask the interviewee whether he or she thought I had asked the right questions, and whether there was anything important that I had not asked.

Overall, the draft protocol worked well. The interview questions on the protocol captured the topics that the pilot interviews raised and very few questions produced confusion or thin responses. One participant suggested I ask interviewees what they thought the future of faculty life would look like, and I incorporated this question into the interview guide. I also clarified questions that were unclear or that needed refinement, and added two questions that I wanted to ask in future interviews, one about whether they paid attention to the MOOC's analytics, such as demographics, enrollment, and completion, and one about who owned their MOOC (Seidman, 1998).

At the end of the pilot interviews I asked participants for permission to contact them again with follow up questions, which they granted. Although the pilot interviews were conducted in a single meeting, the full study required each participant to complete two interviews: a one-hour initial interview with an additional 30 to 60- minute follow-up interview

at a later date.[8] This design allowed me to include follow-up questions to the first interview in the second session, and to keep abreast of the swiftly changing landscape surrounding MOOC teaching at Michigan, including the addition of new MOOC platforms and shifts in Coursera's profit-sharing models.

**Final interview protocols**

I organized the first of the two interview guides into topics related to technology, MOOC teaching, and thoughts about ownership, online sharing, and changes in the MOOC landscape. (See Appendix C for both interview protocols.) The sequencing flowed from general experiences with technology, to more specific themes related to various aspects of MOOC teaching. Within those topics, I included key questions that were related to the research questions and the framing concepts on the faculty growth perspective, such as How do you see MOOC teaching fit into your broader sense of your role as faculty at Michigan? What have you learned from teaching a MOOC? and If a colleague in your department was deciding whether to do a MOOC and asked you for advice, what would you tell her?

I customized the second of the two interview guides for each participant based on preliminary analysis of their first interviews, and also included some standard questions that I asked of all participants as a result of early analysis. The follow-up included questions related to specific, emerging themes from the first interviews, changes in their MOOC experience since the previous interviews, and some questions aimed to elicit more, relevant information on a participants' background, such as Can you tell me about a time when you felt like your experiences as a student informed your approach to teaching? I also asked about their

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[8] While Seidman strongly recommends a three-interview sequence, with life history as the first interview, I used a two-interview sequence due to the difficulty of scheduling time with busy university faculty. As such, I did not develop a life history, but rather focused on the MOOC experience itself.

participation in DEI committees, the existence of which I learned about in some of the first-round interviews. In addition, I used the follow-up interviews as an opportunity to do some early member checking, asking if observations I had identified as a result of their first interviews were an accurate representation of their experiences.

**Conduct of the interviews**

I offered to conduct the interviews with participants in a location of their choosing. Most opted to meet with me in their offices. Two of the early participants suggested we meet in coffee shops, but the background noise made transcription difficult and for future interviews I requested that we meet at an office or another quiet location. In addition, I conducted interviews with three participants remotely. One participant no longer lives in Ann Arbor, and both of our interviews were conducted over live video chat, on the Bluejeans video conferencing platform. Another participant did his first interview over video chat, but his second interview in person in his office. Recent research suggests that interviews conducted over video chat achieve the same levels of rapport and rich description as interviews conducted in person (Shapka, Domene, Khan, & Yang, 2016; Sun, 2014), and indeed, even despite minor technical difficulties, I felt that I was able to achieve a rapport similar to what I was able to achieve in face-to-face interviews. One participant preferred to conduct his interviews by phone, without video, and I found it was more challenging to develop rapport and ask probing questions by phone.

At the end of each interview, I wrote or dictated a brief memo. These included my impressions of the interview, noted any key moments that I would want to return to during analysis, and captured any connections I noticed with previous interviews. In the memos after the first interviews, I also identified questions in the protocol that we may not have had time to

answer that I would want to ask during follow up, and recorded ideas for questions to include in the general follow-up protocol.

First interviews ranged in length from 45-75 minutes, while the second interviews ranged in length from 25-60 minutes, depending on how many follow-up questions I had and how much information and detail the participant chose to share. I was able to conduct two interviews with all but one study participant, with whom I had one 75-minute interview. He had been particularly difficult to schedule, and scheduling him for a second meeting proved impossible.

**Opportunities for observation**

While the primary mode of investigation for this study was interviews, opportunities arose to conduct observations at a few events where MOOC instructors were presenting as panelists and likely to be in the audience. These events provided a way to triangulate, in a very limited way, the data from interviews, as well as to observe MOOC instructors interacting with each other. In all I conducted observations at three events in 2016, in February, May, and October:

- A lunch-time panel discussion on MOOC teaching that included two study participants.

- A day-long event that kicked off a partnership with edX, a newer MOOC platform, and included a panel discussion with six MOOC instructors, all of whom were study participants.

- A launch celebration for the renaming of the Office of Digital Innovation and Education to the Office of Academic Innovation, which included a panel discussion with faculty engaged in a variety of pedagogical experimentation, both MOOCs and other tools. One study participant moderated and another was on the panel.

Many attendees used laptops during these events, so I was able to take typed notes in real time to record my impressions on the setting and dynamics, note who was in attendance and

whether any participants were sitting together or talking, as well as verbatim quotes from

speakers (Emerson, Fretz, & Shaw, 2011).

After hearing participants describe their MOOCs I often felt the urge to go and watch them,

but with one exception I did not. At the end of our first interview, one participant specifically

requested that I go and take his MOOC so that we could discuss it at our second interview; I

watched the first 2 videos before our next meeting. In general, the content of participants'

MOOCs was not relevant to helping me understand their motivations or experiences. I did not

have subject expertise or even a basic level of knowledge on most of the topics participants were

teaching, and my uninformed opinion of their ability to teach it would not have been valuable for

this study. In addition, together the 16 study participants had taught close to 30 MOOCs, and the

time it would have taken for me to watch them all would have been prohibitive.

### Data analysis

As I did in the development of the interview protocols, I took a phenomenological

approach to data analysis. Following a phenomenological approach, the aim of both coding and

analysis was to produce narratives, brief profiles of individual participants, and thematic

connections between and among participant responses (Groenewald, 2004; Mishler, 1991;

Seidman, 1998). My goal was to "let the interview[s] breathe and speak for [themselves]"

(Seidman, 1998, p. 100), rather than imposing any preconceived theoretical perspectives (King &

Horrocks, 2010). During the process of data analysis, I paid special attention to the stories

participants told, and what those narratives revealed about how they made sense of their work

and roles as MOOC teachers (Coffey & Atkinson, 1996; Groenewald, 2004).

Data analysis focused on the transcriptions of the interviews, as well as field notes of

observed events related to MOOCs, review of my post-interview memos, and contextual

information such as publicly available videos, news coverage, and articles that involved the participants. The goal of the data analysis was to develop a series of researchable propositions about motivations for why people teach MOOCs, what affects the experience of teaching MOOCs, how elements of the faculty growth perspective relate to the experience and choices around MOOCs, and ways to extend or amend the faculty growth perspective as a whole.

**Coding**

The coding process was iterative, and I used a combination of *a priori* codes, *in vivo* codes based on participants' framing of ideas, and concepts that emerged from the data itself (Coffey & Atkinson, 1996; Saldana, 2009; Weston, et al., 2001). *A priori* codes included the five broad elements of the faculty growth framework (i.e., learning, agency, relationships/community, identity, and commitment), as well as concepts suggested from the research literature and reflected in my research questions, such as research role, instructor role, MOOC benefits, MOOC drawbacks, and support. I had sole responsibility for developing the codes and for coding transcripts. I used NVivo for Mac software to manage my data. I used it for all of the coding, and for some aspects of the analysis, including analytical memos.

I completed the first pass of coding over a period of three months in the summer of 2016. At this point, I had completed most of the first interviews, and second interviews continued into September, 2016. In my first pass, I took a broad and inclusive approach, creating *in vivo* codes for every topic, experience, or concept that arose in interviews. It was clear that some of these codes were likely redundant, but I erred on the side of greater specificity during the first pass, in order to capture as much detail as possible, and not attempt to impose order on the data too early. I organized some codes under headings in order to make codes easier to find in NVivo, but for the most part these headings were not thematic, and I rearranged codes in the subsequent phases.

I wrote coding memos every one to two weeks during the coding process, observing possible themes, capturing new codes I had created that I would need to go back and apply to interviews I had already coded, and noting possible comparisons and connections for future stages of analysis. The initial codebook included more than 200 codes (See Appendix D for the final codebook).

After finishing the first round of coding, I ran reports on each code, checked for consistency in the coding, and consolidated thin or redundant codes into more robust themes, as well as breaking apart single codes that actually had two or more different threads that needed separation. I ran word searches in NVivo to ensure that I had captured every time a participant mentioned words related to an important code, such as "opportunity" or "risk."

**Analysis**

In the early stages of analysis, I used NVivo to identify intersections between codes. For example, I ran a report of the code "Why," which captured the reasons participants gave for teaching a MOOC, against all the other codes in the codebook, which helped me identify the most prevalent motivations for MOOC teaching, such as "platform" and "experimentation." I ran similar reports for each of the five aspects of the faculty growth framework. I also used NVivo to look at the overlap of just two codes with each other, such as "faculty lives," which captured details of participants lives both at work and at home, and "so very busy," about the challenges of a packed schedule, to confirm whether themes I believed were emerging were actually present in the data.

I continued memoing throughout this process, teasing out patterns and observing relationships between codes. One of the key memos I wrote during this period was simply a list of all the different stories I saw emerging from the data. I then used a white board to try to map

out these stories, to see how they might be categorized and how they connected. Some of these stories, such as the desire for a platform to share a passion with a broader audience, eventually grew directly into findings, while others morphed and merged throughout the analysis process. Working with this list also helped me decide how to organize my findings, by helping me to see larger narrative threads and ways to cluster themes together. I chose to divide them into stories about motivations (Why teach a MOOC?) and stories about the experiences (What was it like to teach a MOOC?), which also aligns with the two major research questions guiding this study.

Analysis continued through the writing process, as I refined the themes, stories, and connections between them. I began the final stage of my analysis focusing on participants' motivations for teaching a MOOC. As I began writing, I realized that in many cases I felt compelled to begin with a brief profile of the participant before discussing their particular motivations for teaching a MOOC, because of the ways that their identities and past experiences informed their decision. I took a step back from the motivation analysis and drafted brief profiles of each participant, attempting to capture some fundamental background information about each person, as well as an outline of each person's MOOC story. These profiles were a part of the phenomenological approach to analysis, one that takes a narrative approach to making meaning from qualitative data (Seidman, 2005). I also created a table with basic information about each participant, including whether they were a part of U-M's "first wave" of MOOC instructors, who received invitations from the provost, or the "second wave," who submitted proposals to teach a MOOC. Finally, I turned my attention to study participants' experiences with MOOC teaching. Here again I used a white board to help categorize the stories and experiences, experimenting with a few different ways of organizing the data before settling on the one I used to write the chapter.

**Ethics**

The study has been approved by the University's Institutional Review Board (HUM00093144). While most elements of the informed consent and recruitment documents for this study are standard as required by the Institutional Review Board, there was one substantial exception: participants could not be guaranteed confidentiality due to the small number of individuals involved and the public nature of their MOOC teaching. The University of Michigan is a distinctive location for this study, and the only public university among Coursera's four original partners. I cannot disguise the participants' disciplinary affiliations since within Michigan's early MOOC offerings, there are at most two courses offered in a single discipline and instructors are publicly known. Despite the use of pseudonyms, it will be easy for an interested reader to consult Coursera's Michigan page and deduce the identity of the business school professor who teaches a class on personal finance.

I explained this inability to guarantee confidentiality in consent documents provided to participants (see Appendix B) and during the briefing before each interview. For this reason, I strongly encouraged participants to read the consent form so they understood what I was asking of them. Furthermore, I made it clear that I would be careful to mask their identities in relation to particular statements of a sensitive nature. All of the participants expressed comfort with this approach. Occasionally during an interview, a participant requested that certain statements be off the record, or that that I not associate some comments with a given name, and I complied with all such requests. I sent all participants drafts of their participant profiles in Chapter 4 and gave them the opportunity to correct or revise them; most made no or minor changes, while one did remove some information that could be identifying. Two participants asked that I not use a pseudonym but instead refer to them by their real names; after consultation with the IRB, I

complied with this request. In one section of the dissertation, where I discuss more sensitive experiences related to stage fright, anxiety, and harassment, I did not use names or pseudonyms, and also used the gender-neutral pronouns "they" and "their" in order to obscure which of the participants I was discussing.

## Limitations and validity threats

Although a potential limitation of this study is that I interviewed MOOC instructors at a single institution, because the study is exploratory in nature, representativeness by institutional type and generalizability[9] are not a concern. The aim of the study is not to make assertions about MOOC instructors in all institutions, but rather to understand the experiences of a specific population of MOOC instructors in a specific context to produce a set of propositions that can guide further study of the phenomenon of MOOC teaching. However, any single institution, small-scale study faces several validity threats, and I took several steps to address and minimize those threats.

In order to address the limitations and potential validity threats of a single-institution study, I did not sample, but rather strove to include all members of the population in the study. While notions of sampling in qualitative research are almost as problematic as the ideal of generalizability, taking a census approach often furnishes sufficient variation across participants that negative cases and discrepant evidence provide natural comparisons across the data (Flyvbjerg, 2006; Luborsky & Rubinstein, 1995; Maxwell, 2013; O'Reilly & Parker, 2012). Though I did not achieve complete census coverage of the population, the sixteen people who

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[9] Indeed, there is a question of whether generalizability is a reasonable goal for qualitative research at all (Denzin, 2009; Freeman, deMarrais, Preissle, Roulston, & St. Pierre, 2007; Small, 2009).

chose to participate varied considerably across several factors including age, gender, discipline, and appointment type.

Another threat to validity in qualitative research is that participants may not answer questions truthfully or may behave differently when they know they are being observed (Maxwell, 2013). This threat is particularly salient in my study because I did not promise to protect participants' identities, and that may have further influenced what they were and were not willing to share. To address this possibility, I took special care to develop rapport with each participant, over the recruitment process as well as in the briefing and early stages of the interview (Kvale, 2007). I conducted interviews in a location of the participants' choosing to increase their comfort level, and at the start of the interview I assured them that I would share my work with them as it progresses and work with them to disguise potentially sensitive data.  In this way, I sought to make sure participants could feel comfortable speaking. Despite these constraints, in general I found that participants seemed relaxed and comfortable during our conversations. They talked about their families, they cursed, they shared some of their biggest challenges and fears. I noted that in some interviews, the responses participants gave were markedly different from responses to similar questions in publicity materials or newspaper interviews, suggesting that they were speaking more candidly with me than they do with members of the press.

Member checks have further enabled me to test the validity of my conclusions. I have taken my interpretations of the findings to a subset of the respondents for their comments and feedback, to ensure that I have not misinterpreted what they said and to identify any biases I may bring to the analysis (Maxwell, 2013). As a part of the member checking process, I searched for discrepant evidence and negative cases, to ensure that the people I asked for feedback will bring

a range of perspectives and experiences. Finally, I used reflective memos on my interviews, data analysis, and hunches as a validity strategy to identify and remain sensitive to my own subjectivity (Peshkin, 1988). I know that I come to this study with certain interests and biases, which I discuss further in the positionality statement below. Reflective memoing helped to reveal how my subjectivity was influencing this study, and to maintain transparency about the implications of subjectivity for data collection, analysis, and the conclusions that I have drawn.

### Positionality statement

I come to graduate study in higher education via circuitous professional and educational paths that includes trade publishing, a master's degree in information science, and several years as an academic librarian and library administrator. My interest in MOOCs came at first from my primary interest in the sharing of knowledge produced in academia, such as journal articles and teaching materials. The problem I saw over and over again as a librarian, the problem that drove me back to graduate school, was that too much educational and scholarly information is locked up in toll-access research journals, proprietary databases, and classrooms that only a few people have access to. I believe that information, especially educational and scholarly information, should be as widely and freely available as possible. MOOCs offered a new way to increase access to the knowledge that universities produce.

The broader discourse around MOOCs suggests that the rest of academia is not as optimistic about massive online education. In the early days, there were concerns that MOOCs would be the death knell for four-year residential education as we know it, though they appear to have been largely unfounded. Indeed, my personal reaction to MOOCs when they first hit the scene was one of profound skepticism. I am not particularly optimistic about them as an

educational platform, and I do not think they will be nearly as revolutionary as their early

proponents claimed (e.g. Koller, 2012; Markoff, 2011).

When I designed this study, I was excited about MOOCs because of what they potentially

mean for faculty who wish to share their teaching with the public. MOOCs provide a broader and

larger audience than an ordinary professor could ever have hoped to reach, and enable faculty to

share their work in new ways. I find this thrilling because I want as many avenues as possible to

get information out of universities and to the public. I want to encourage faculty to share their

work. Through this study of MOOC faculty, I hoped to learn whether the motivations and

experiences of people who teach MOOCs can tell us anything about ways to encourage more

faculty to share their work online. My positionality is reflected in my desire to conduct this study

not as an advocate of MOOCs but as an advocate of sharing.

## CHAPTER 4: Profiles in MOOC instruction

This section provides brief introductions to each of the sixteen participants in this study. In order to preserve the specific information that comes with knowing a participant's discipline, position, and MOOC subject matter, I did not guarantee anonymity to participants, and due to the very low risk of the study, the IRB approved this decision. Furthermore, the study population is too small, and too well-known, to mask their identities effectively. I am using pseudonyms to raise the bar for people who want to uncover the true identities of participants, but the information in the brief profiles here has not been changed.

The sixteen individuals who participated in the study come from a variety of backgrounds. Some teach undergraduates, while others teach exclusively professional or graduate students. Some are deeply engaged in research in their disciplines of origin, others do not conduct research at all. There are no untenured tenure track faculty in the sample, but other roles range from tenured professor to lecturer to clinician. There are, however, a few traits that apply to most of the participants in the study. Most of them self-identify as good teachers, committed to excellence in the classroom, and have received recognition for their teaching in the form of awards and named professorships. Many had prior relationships with the Provost who drove the early push to join Coursera; this is true not just of the original five instructors, but several who taught in the second wave of MOOCs as well. Nearly all of the participants have diverse interests and pursuits, by which I mean they have not spent their entire careers doing or studying one thing. Often they have made one or two or even three shifts in field, role,

institution, or some combination of the three. They have full and busy lives that often include children and partners, service on committees, volunteer work in the community, and hobbies.

Because this study population includes only faculty who taught MOOCs in the first two years of Michigan's Coursera partnership, they are a distinctive cohort of the first two waves of U-M faculty to teach MOOCs; the first wave was a group of five faculty who taught Michigan's very first MOOCs, and there was little or no existing infrastructure to support them, and all five participated in this study. With one exception, the first 5 people to teach MOOCs received invitations directly from then-provost Martha Pollack, and all had prior relationships with Pollack. Handpicked for the Coursera launch by the Provost's office, they received a long and detailed email from Pollack herself explaining the partnership with Coursera and inviting them to teach a MOOC on a specific topic. The second wave of Michigan MOOC faculty needed to apply for the opportunity. In some cases they were asked or encouraged to apply by their deans or another colleague, but the process required they actively pursue the opportunity. By the time the second wave of faculty were choosing to teach MOOCs, they had access to more data about the scale of enrollments (10,000-50,000 students in a single course), and the time commitment (hundreds of hours in some cases). By the second wave of MOOC applications, the University had also begun hiring staff and building facilities to support MOOC development, although participants reported that the process of creating the MOOC still needed work, and they sometimes felt like guinea pigs. The table below provides an overview of the participants, their rank, discipline, whether they taught in the first or second wave, and their participation in Digital Education and Innovation committees. In the profiles that follow, I describe each participant and identify when, in the timeline of the Michigan MOOC initiative, he or she taught. Understanding the timeframe can be helpful for understanding their experiences and motivations.

**Table 1: Study participants**

| Name | Gender | Position | Discipline | Wave |
|------|--------|----------|------------|------|
| Alan | Male | Clinical Associate Professor | Computer Science | 1 |
| Alexander | Male | Associate Professor | Business | 2 |
| Brian | Male | Professor | Political Science and Economics | 1 |
| Dev | Male | Professor | Business | 1 |
| Ellen | Female | Professor | Engineering | 1 |
| Krishna | Male | Professor | Engineering | 2 |
| Laura | Female | Assistant Dean, Professor | Medicine | 2 |
| Luke | Male | Professor | Public Health | 2 |
| Michael | Male | Deputy Director, Professor | English | 1 |
| Rebecca | Female | Division Chief, Clinical Assistant Professor | Medicine | 2 |
| Roger | Male | Professor | Business | 2 |
| Sarah | Female | Clinical Assistant Professor | Medicine | 2 |
| Sidney | Male | Lecturer | American Culture | 2 |
| Sophie | Female | Lecturer | Computer Science | 2 |
| Thomas | Male | Program Director, Research Professor | Cognitive Psychology | 2 |
| Tim | Male | Professor | Physics, Astronomy, and Education | 2 |

**Alan**

Alan is a mid-career lecturer in the School of Information (SI), who has taught multiple

MOOCs on computer programming and internet history, including a specialization of several

connected courses in programming with Python. Alan was one of the first five Michigan MOOC

instructors, but unlike the other members of that group who had received invitations to

participate from Provost Pollack, Alan pursued the opportunity due to his strong interest in being

at the forefront of MOOC instruction.

Alan's Ph.D. is in computer science, and he has held both software development and

teaching positions throughout his career. He was working as a software developer building

educational technology in 2001, and switched to academia as a clinical professor in 2007. As one

of the founders of the Sakai project, which built a widely used, open-source learning

management platform, Alan has extensive experience as a practitioner in the educational technology space. He is also a well-known presence on Twitter, with 15,000 followers, and in the 1990s hosted a cable talk show about the internet. He has written several textbooks on programming, app development, and how the internet works, but does not conduct much research, in part because he finds it difficult to find the time and funding to do so given the structure of his appointment and his other responsibilities. Alan says he enjoys teaching technical subjects to people without technical backgrounds; it is one of the things he says he appreciates both about his instructor role at SI, where many of the students are aspiring librarians and archivists, and his experience teaching MOOCs.

**Alexander**

Alexander is a tenured associate professor of management and organizations at the Ross School of Business. He co-taught a MOOC specialization on leading people and teams, some of the most recent courses at the time I was conducting this study. He also teaches residential courses to Michigan MBA students, both in the regular MBA program and in various executive education programs. Alexander and his co-instructor proposed their specialization of MOOCs on leadership in response to a call from proposals from Coursera seeking instructors for a MOOC on leading people in organizations and teams. He is in his late 30s, which makes him one of the youngest participants in the study. He told me he came to the University of Michigan because the business school has one of the best groups in the world for doing organizational studies and complexity sociology. Alexander kept his answers to my questions entirely in the realm of his professional work, and partly due to time constraints, I did not get as much personal background from Alexander as I did from many of the other participants.

**Brian**

Brian is a professor of complex systems, as well as the director of the U-M Center for the Study of Complex Systems, and an external faculty member of the Santa Fe Institute, an independent multidisciplinary research center dedicated to the study of complex systems. He taught the very first U-M MOOC, on model thinking. Brian is from a small town in northern Michigan, and he described himself as a "nice, Midwestern kid," who started helping out at his family's gas station when he was 12 and who enjoys hard work. He attended U-M as an undergraduate, where he majored in mathematics and was elected president of the central student government. His wife is a fellow academic, and their early faculty positions were determined in part by where they could both get jobs. He has taught two courses with The Teaching Company, which produces college-level enrichment videos sold in a variety of formats, and provides extensive training to its instructors on how to teach effectively on camera. More recently, much of Brian's research has centered on the role diversity plays in complex systems, and he has become a very popular speaker on the topic; he travels very frequently to lecture and speak on panels.

**Dev**

Dev is a tenured professor of Finance in the Ross School of Business. A senior faculty member who has won awards for both his teaching and his research, he has also held a range of administrative positions, including Associate Dean of Research & IT in the business school, and most recently, Special Counsel for Digital Education at the University of Michigan. He was one of the five faculty members invited to teach a MOOC when U-M launched the Coursera partnership. He has since created several MOOCs on both the Coursera and edX platforms, as well as a specialization consisting of several courses and a capstone experience. Prior to this, he

had some experience teaching in digitally enabled synchronous teaching in global programs offered by Ross. As a young man he had been in the theater and seriously considered pursuing a film career, which he credits with helping him feel comfortable in front of a camera.

**Ellen**

Ellen is a tenured professor of mechanical engineering in the College of Engineering (COE) who studies and teaches about energy systems. She teaches undergraduate and graduate students on campus, as well as part-time and masters level professional students the COE's online distance education program. Ellen taught one of the first five U-M MOOCs, on the topic of thermodynamics, and has remained involved with the DEI on multiple committees, including a faculty advisory committee, and the MOOC selection committee that reviews proposals for new MOOCs. Through her work with DEI she has built relationships with faculty across campus who are experimenting with educational technology, both in their classrooms and online.

Ellen is an active mid-career professor with a robust research program that includes many topics related to combustion, such as power and propulsion systems, and fuel chemistry. She has spent her entire career, beginning with her undergraduate degree, in the field of mechanical engineering, and she described to me her experience of the "classic welcome reception" when she entered her engineering program as a freshman: "Look to your left. Look to your right. Half of you won't be here." Ellen serves on the diversity, equity, and inclusion committee in COE, working to improve outcomes for underrepresented students in engineering, in part by setting up and studying various interventions for those students.

**Krishna (not a pseudonym per participant's request)**

Krishna is a professor of Mathematics and of Mechanical Engineering, as well as the Director of the Michigan Institute for Computational Discovery and Engineering (MICDE). He

joined the faculty of the College of Engineering (COE) in 2000 after doing his Ph.D. and a postdoc at Stanford. His two MOOCs, on continuum physics and finite element methods, were both a part of the second wave of U-M MOOCs, with the unusual distinction that he created his lecture videos before he constructed the MOOC, and in the meantime he posted them all to YouTube through Open Michigan, the University's Open Educational Resource (OER) initiative. His MOOCs are unusually long - over 35 hours of video each - and unusually advanced, targeting a highly skilled audience. Krishna's research is in computational physics, which he has applied to a wide range of disciplines; in addition to math and engineering, he also has affiliations with the Center for Computational Medicine and Bioinformatics, and the Center for Systems Biology.

**Laura**

Laura is a professor of emergency medicine and learning health sciences, as well as an assistant dean for educational research and quality improvement in Michigan's Medical School, and associate chair of education in the Department of Emergency Medicine. She has taught a MOOC on assessing clinical skills, and was selected early in the second wave of MOOC faculty, having applied when the dean of the Medical School put out a call for proposals. She also leads curriculum development, student assessment, and evaluation in the Medical School, which began a major initiative to overhaul its curriculum in 2013, a process that is still ongoing. She also does regular shifts in the Emergency Department. In addition to her MD, Laura has a Ph.D. in Education. Shortly after she started working in a teaching hospital, she found that while she had learned how to practice medicine, she had not learned anything about teaching it. She told me, "The medical [field] saying is, 'See one, do one, teach one,' and that just didn't feel right to me, I didn't feel like I should be able to teach if I didn't know something about teaching." Accordingly,

she returned to graduate school for education. Since then, her roles have always been split between clinical practice, medical education, and administration.

**Luke**

Luke is one of a handful of faculty who has left the University of Michigan since they taught their MOOCs; he moved on to a similar faculty position at another major research university. During the period under study, including the time of our two conversations, Luke was a professor of pediatrics, internal medicine, and public policy, as well as deputy director of the Institute for Healthcare Policy and Innovation. He held appointments in the Medical School, School of Public Health, and the Ford School of Public Policy. His MOOC, on the U.S. healthcare system, was a part of the second wave of U-M MOOCs, prompted by the Medical School's request for proposals. Beginning in his undergraduate years, Luke knew both that he wanted to be a doctor and that he was interested in the policy environment that influences how doctors can and cannot do the essential work of caring for patients. Directly after completing his medical training he entered a master's program in public policy. At the time of our conversations, he continued to practice as a primary care physician, seeing patients "from newborns to 90-year-olds." He also had an active research portfolio, much of it related to public health policy, especially regarding vaccines and community health.

**Michael**

Michael is an emeritus professor of English Language and Literature, as well as of Art and Design. He joined the faculty of the English department at the age of 24 and spent almost his entire career at the University of Michigan. He left in 2013 to take on the role of Associate Provost for Online Education at a university in New York, an opportunity that he attributes entirely to his experience teaching a MOOC. Throughout his career he held an assortment of

administrative roles, but always remained a prolific writer and editor, and continued to teach, including a popular course on science fiction and fantasy.

Michael grew up in Queens, NY, and all four of his grandparents were immigrants from Russia. While neither of his parents finished college, his uncle and many of his cousins became physicians. He felt similar pressure to pursue medicine, and as an undergraduate began by majoring chemistry, but as he described it, eventually rebelled and became an English major. He told me that rebellious streak stayed with him throughout his career, in part influencing his aggressively interdisciplinary approach to scholarship, and early adoption of technologies like online bulletin board systems and networked databases for teaching.

**Rebecca**

Rebecca wears many hats. She is an assistant professor of obstetrics and gynecology, clinical assistant professor of learning health sciences, and division chief of professional education. She is the sequence director for the Medical School's obstetrics and gynecology curriculum, and conducts research on instructional methods and the assessment of clinical skills. By night, she delivers babies at C.S. Mott Children's Hospital. She is a Michigander who attended U-M for all of her education, beginning as an undergraduate, staying straight through residency. There is a wall in her office dedicated to all things maize and blue. An experience on a curriculum committee early in her career prompted her to return to school for a masters' degree in education, and she describes both her professional role and her research interest as "teaching teachers how to teach." Her MOOC on instructional methods in health professions education was part of the second wave of U-M MOOCs, and she submitted her proposal in response to a call for proposals from the Medical School.

**Roger**

Roger is a tenured professor of business administration at the Ross School of Business. He joined the faculty at U-M in the 1970s, where he has stayed. While maintaining his home base in Ann Arbor, Roger has held visiting professorships at several universities. Roger taught his MOOC in the second wave of U-M MOOCs, recruited by his business school colleague Dev. He had previously taught on video in Ross courses, but had not otherwise made extensive use of technology in his teaching.

**Sarah**

When she created her MOOC, Sarah was a clinical assistant professor of ophthalmology at the Kellogg Eye Center. During our second conversation, she told me that she was considering joining a private practice in California, and she has since made that move, leaving the field of academic medicine. During her training, she was co-chief resident at the Henry Ford Hospital in Detroit, and during her time at U-M she supervised residents in the Ophthalmology Residency program at the Veterans Administration Hospital in Ann Arbor. Though she is still early in her career, she has already had substantial experience as an educator, not in a classroom with medical students but in the clinic with residents. Her MOOC brought together lecturers from across her department, and it was a part of the Medical School's group of second wave MOOCs. She had not previously had any experience with online education, but received encouragement to lead the MOOC due to her work coordinating resident education at the Veterans Administration.

**Sidney**

Sidney, who died in the winter of 2017, was a lecturer at in the American Studies department who previously had a long career as an administrator at several institutions including the University of Buffalo and Antioch College. As a young professor he was involved in the civil

rights movement there, and also spent several years at home raising his two sons. Though his Ph.D. was in Philosophy, Sidney taught several courses in the American Culture and English departments; he did not conduct research, and made very clear to me that his interest and identity were as an instructor. He taught two MOOCs, one on HIV and AIDS and one on mass incarceration. In proposing his first MOOC he responded to a campus-wide call for proposals from the office of Digital Education and Innovation; no one invited him, and he did not have prior connections to the people who were leading the MOOC initiative at the time.

**Sophie**

Sophie is a computer scientist and an untenured lecturer at the School of Information (SI). At the time of this study, Sophie's series of MOOCs on web design were some of the newest of Michigan offerings; she had not yet completed designing the final MOOC when we had our first interview. When she responded to the call for proposals from Coursera, she planned to co-teach with Alan, a School to Information colleague who had already taught two MOOCs, but after Coursera accepted their proposal they decided that they had two specializations-worth of material, and chose to work separately.

Sophie was one of former provost Martha Pollack's graduate students at the University of Pittsburgh, and followed Pollack to Ann Arbor when she joined the computer science department at U-M. When Sophie completed her Ph.D. she took on a tenure-track job at a state university in California that did not offer degrees beyond the masters', that emphasized on teaching over research, and where a $10,000 grant (which is very small by research university standards) earned her an early promotion. Sophie moved back to Ann Arbor when her partner took a job in the area. Pollack had recently become Dean of the School of Information, and the week Sophie returned she received a message asking if she would teach some programming classes. Sophie

explained that she took the offer because her children were young and she only wanted to work part-time. Once her children were older, she moved into a full-time lecturer position and began teaching web design as well as programming. She continues to prefer the work-life balance that comes from a life off of the tenure track.

**Thomas**

Thomas is a research professor in the Survey Research Center at U-M and in the Joint Program in Survey Methodology (JPSM) at the University of Maryland, a combined program between Michigan and Maryland. He is the director of the graduate program at Michigan and, at the time of the interview, he also directed the program at Maryland. While completing his Ph.D. in cognitive psychology, Thomas worked with faculty who also held appointments in the National Opinion Research Center, working to integrate psychology with survey research methods. After graduation he held a few different positions until he landed at the Bureau of Labor Statistics, a federal agency, which led to an adjunct teaching position in the JPSM at the University of Maryland. After a few years the Institute for Social Research at U-M recruited him to join the faculty and, eventually, help lead the program. In his research, he applies cognitive psychology principles to survey methodology. Due to the structure of the collaboration between the Michigan and Maryland programs, where there are students taking classes concurrently in two states, he already had substantial experience teaching on video. His MOOC, on questionnaire design, is a collaboration with a colleague at Maryland, and is part of the second generation of U-M MOOCs.

**Tim (not a pseudonym per participant's request)**

Tim is a tenured professor of physics, astronomy, and education, as well as the director of the Digital Innovation Greenhouse, which develops and experiments with tools for exploring the

personalization of education. He has also held other administrative positions, including associate chair for the undergraduate program in physics, and director of the Honors Program for the college of LS&A. His has taught a MOOC on the topic of learning analytics. Now at mid-career, he describes himself as a data scientist, and recently he has been applying his analytical skills to research on postsecondary education. A first-generation college student, he reported, "When I was a junior, somebody told me graduate school is free. That sounded pretty good, so I applied to graduate school."

Tim has a history of adding disciplines to his purview. His PhD is in physics, but early in his career he worked at Fermilab, United States' premier particle physics and accelerator laboratory, where he shifted to astronomy after becoming involved in launching a project called The Sloan Digital Sky Survey. When he moved to the University of Michigan, he joined the physics faculty, but eventually he also received an appointment in astronomy despite a lack of formal training in the field. More recently, he added an appointment in education as a result of his work with learning analytics.

In the following chapters, I explore some of the reasons the sixteen study participants chose to teach a MOOC (Chapter 5), and what were some of their experiences as a result of choosing to teach a MOOC (Chapter 6). I did not approach the study findings as case studies of individuals, but rather as a thematic analysis that looks for commonalities, as well as disconfirming evidence of themes, across the participants' reported experiences.

**CHAPTER 5: Why teach a MOOC?**

Prior literature has suggested several reasons why faculty might <u>not</u> want to teach a MOOC, including the tremendous time requirements, dearth of sufficient technical support, and a lack of recognition in the tenure and promotion process (Evans & Myrick, 2015; Hollands & Tirthali, 2014; Rhoads, Camacho, Toven-Lindsay, & Berdan, 2015; Richter & Krishnamurthi, 2014). We know less about why faculty do choose to teach MOOCs. When I asked my study participants directly why they agreed to teach a MOOC, or applied to teach a MOOC, I rarely if ever received a single reason in response; faculty considered multiple factors, many potential benefits and drawbacks, in making their decisions. Often participants cited one or two reasons as being the most salient for them of the many factors they considered, and certain themes emerged regarding those salient reasons for saying yes, or choosing to apply.

This chapter discusses four of the reasons why faculty said they chose to teach MOOCs: Desire for a platform, interest in experimentation, altruism, and an aim to raise the profile of either themselves or their programs. Participants frequently used the word "platform" to describe MOOCs as an opportunity to reach a broader audience than had ever been available to them before. MOOCs also served as a means of experimenting with pedagogy, technology, or teaching styles, and some participants described their interest in using the MOOC to experiment as one of the driving reasons behind their decision to teach. A certain kind of altruism, centered around a desire to extend educational access to students who would otherwise have been excluded from it, featured prominently in much of the early press about MOOCs. Though some of the motivations

related to using the MOOC as a platform arose from a desire to do something that would benefit the world, for the theme of altruism I focused on statements where the mechanism of doing good was to give away educational content for free online. While this kind of altruism was not the primary motivation for any of the participants in the study, it did seem to play a role in their decision-making. Regarding the aim of raising their profile, participants were much more likely to talk about the value of MOOCs in raising the profile of their field, department, or institution than they were to talk about it raising their own personal profile, but both were considerations. The opportunity to have a platform and an interest in experimentation are reasons that came up with more than half of the participants in the sample, while altruism and raising profile were important to a smaller group of the participants.

I selected these four themes for discussion because they were the ones for which I had the strongest evidence. Either most participants talked about it, as in the case of platform and experimentation, or a few spoke about it deeply and at some length, which was the case for altruism and raising profile. There were other themes that I identified, both during data collection and during coding, but they came up only infrequently, or participants did not describe them as being central to their motivations or experience. For example, two participants spoke about their backgrounds as performers and their love of being in front of the camera. They told me about those experiences to explain part of why they felt comfortable with the idea of teaching on camera, but they gave different answers to the question of why they chose to teach a MOOC. Some participants discussed the $10,000 payment that Michigan offered to early MOOC instructors, as well as other financial incentives. However, given the salary structures for faculty at U-M, especially in medicine, business, and engineering, $10,000 is not an especially large sum. The two participants who had lecturer appointments, and presumably the lowest salaries in

the group, both described re-investing their $10,000 payments into their MOOCs, to do things

such as pay for airfare to bring in guest speakers, and hire a programmer. One or two participants

might have believed beforehand that their MOOC would produce a revenue stream in the future,

but as far as I could tell, financial incentives had little or no impact on participants' decision to

teach a MOOC, and there was no indication that MOOCs could be lucrative for the instructors at

the time they were making the decision.

The table below provides an overview of the themes discussed in this chapter. They are

organized based on my assessment of their salience to the participants. While the first two

themes were relevant to over half of study participants, and the latter two for less than half, this

order is not a reflection of frequency of mentions in the data corpus, since that would be a

reflection of both the questions I asked and my coding decisions, rather than a measure of the

importance of the themes to the participants.

**Table 2: Themes related to the motivation to teach a MOOC**

| Theme and contributing categories | Description | Example quote |
|---|---|---|
| *Platform* | | |
| - Reach for topic | A desire to share content about a particular topic that they believed would be useful to many more people than they could reach in a physical classroom, and about which they often felt passionately. | "It's vastly more, orders of magnitude more effective, in terms of reach, than the traditional way of just publishing papers and so forth." |
| - Reach for teaching | A desire to share a particular approach to teaching that they believed would be useful to many more people than they could reach in a physical classroom, and about which they often felt passionately. | "I feel like computer scientists are snobby….And it can be very intimidating and off-putting. And so, if there can just be this little space where you can ask a question and not be the only person, I think it would be nice." |
| - A message of social importance | A desire to share a message that participants believed had social importance, and the | "So I felt that there was a real social need for that… In the case of HIV and AIDS, one of the |

| | MOOC enabled them to have a positive impact on the world at large by raising awareness or increasing understanding of their subject. | overwhelming things that you learn is the destructiveness of stigma around HIV, around homosexuality. And my MOOC on AIDS is an attempt to help people overcome that, realize it and then help them overcome it." |
|---|---|---|
| *Experimentation* | | |
| - The MOOC as a lab for education research | Using the MOOC as a venue for conducting that research. | "Now I have a lab... now I have a venue for doing my own experiments and innovation and research. I was teaching, but I was constrained by the medical school curriculum and patient care necessities. The MOOC space was completely like just a crazy new lab." |
| - Technological and pedagogical innovation | MOOCs as a space in which participants could innovate with technology, pedagogy, or a combination of both, for example, developing effective assessments that would work on a mass scale. | "I'll be honest with you, for me it was a pure experiment. I didn't really know what I was getting myself into… In terms of just as an instructor, I think it helped me experiment with the modes of delivery that I'm typically not exposed and not used to, such as pure lecture." |
| - Risk, challenge, and exploration | The appeal of the newness and risk of MOOCs. | "Because like... It's sort of like if somebody said, 'We're putting together these three ships, we're gonna find America.' You'd probably say, 'Okay, I'm in.'" |
| - Rebels, pioneers, and early adopters | Some participants identified as early adopters, and saw experimenting with a MOOC as aligning with that identity. | "I like new shiny things 'cause I'm always curious, and I like to play with stuff." |
| *Altruism* | | |
| - Improving student access to education | A desire to improve access to education for students who would otherwise have been excluded. | "One is, I really like the appeal of reaching audiences across the world, many of which are not able to afford business school education in an in-class environment. That was an incredibly important factor in my decision-making because with tuition rates going well over $60,000 a year, and if you look at |

| | | this a very, very small fraction of the population who can afford to come to business school." |
|---|---|---|
| - Valuing openness as a principle | A belief in the principle that knowledge and information should be freely and widely available. | "To my mind, universities aren't just for the people who are enrolled. Universities have an obligation to help inform the public about these broader themes. So, I'm a firm believer in the power of the commons, and free access." |
| *"Fame and no fortune"* | | |
| - MOOCs as marketing | Interest in using the MOOC to promote a program, discipline of study, or the University of Michigan itself. | "It was a way of... a different way of creating profile for what we're doing here at the University of Michigan. The traditional scholarly way is you publish in superior journals. It's a slow method, it just is. Usually you do that and 30 people read your paper." |
| - "Total world domination" (personal fame) | MOOCs are opportunities to enhance visibility and reputation. | "I mean, I wanna be Mr. Wizard. I wanna be Bill Nye the Science Guy. And so, for me it was the scale, it was the outlet, it was just this notion that I have something..." |

**Platform**

One of the most common reasons for teaching a MOOC that I heard from faculty in the sample was that it gave them a platform to reach many more people. This was not one of the reasons that I or anyone I spoke to had guessed before the study began. We talked about altruism, which was a frequent reason given by Coursera leadership, we talked about the desire for fame, which did come up but not very much, and we talked about experimentation, which was indeed a motive for several people in the sample. Somehow, even though it seems obvious now, conversations about motivations for teaching MOOCs did not include the idea that the MOOC as a platform would be a primary motivator. In retrospect this was clearly an oversight;

in the email she sent to the first wave of MOOC faculty, Provost Pollack (2012) explicitly called out high enrollments as an enticement to participation. "There's been one piloted, [link to first MOOC]… By the way, [Brian] has over 50,000 people signed up for his course." I distinguish "platform" from "altruism" in part based on whom participants described hoping to reach; for platform, they were excited to reach a new audience, a very big audience, whereas for altruism, they aimed to reach an audience of people who had previously been excluded from or unable to access education.

A tangle of passion and pragmatism often infused participants' statements about reach. They noted that they have content that is useful, and believed that it would be useful to many more people than they can reach in a physical classroom. At the same time, they often felt passionately about the topic of their MOOC, and excited to be able to share it with a broader audience. The MOOC provided them with a much larger stage than had ever been available to them before. Some participants used the word "platform" to describe the appeal of teaching a MOOC, for example, "So for me, it just gives me a platform. It gives me a channel. It gives me an audience, and the success of it gives me other opportunities." In addition, I coded statements as related to platform when people used words like "large audience," "reach," and "soapbox." Luke summarized it succinctly: "it is a way to share what you know and how much you care about it with a broader audience than you've ever imagined." Within this desire for a platform, I heard three main aims: to expand the reach of a topic, to expand the reach of a style of teaching, and to transmit a message of social importance. All three of these motivations involved a conviction that the instructor has something – a research method, an assessment approach, a way of explaining things – that is worth sharing, and participants felt strongly about the value of that

something. They believed they had something unique to offer that many people would want or need.

**Reach for topic**

Sarah brought together instructors from the University of Michigan ophthalmology department to teach a MOOC on cataract surgery. Her MOOC grew out of a weekly lecture series for residents that she helped organize, where different senior members of the faculty taught about specific aspects of cataract surgery. The residency program director saw the invitation from the Medical School dean for MOOC proposals, and he suggested that it would be an opportunity to record the cataract surgery lectures, and make them more useful for residents. Cataract surgery seems like an unusual subject for a MOOC because it is relevant only to a small and highly educated audience, and because it teaches a skill that requires hands-on practice to master, but residents at the University of Michigan were already learning about aspects of it in a lecture format. The MOOC meant that many other people could learn it, too.

> Even though it's such a niche class, there's still people all over the world that need to have cataract surgery and people performing that, and so I thought, "Well, this might be a nice way to give people access to good content on how to do cataract surgery that might not otherwise get it." And I even thought about my own experience as a resident and how these lectures would've helped me, going through. Just to have it packaged in this way, and you can listen to it at any time. So as I got into it, I realized this could be a really useful tool for other ophthalmologists in training.

Another participant from the Medical School, Laura is a professor of Emergency Medicine as well as assistant dean for Educational Research. She travels extensively conducting workshops on how to teach and assess clinical skills. She knew that medical educators rarely had any training in education, and there was high demand for her workshops, which she had taught well over 100 times before undertaking a MOOC. Laura believed there was practical value in being able to teach these skills to thousands of people at once. In response to the call for MOOC

81

proposals, "I felt like – now obviously this is the retrospective scope, but at the time I was kind of like, 'It would be better... It would be great if I could disseminate this more widely.'" Laura went on to explain that she loves teaching, and the MOOC seemed like an opportunity to do this thing that she loves in a new way.

A slightly different, but still pragmatic, angle on reach came from Krishna, an engineer who teaches two advanced and highly technical MOOCs on finite element methods and continuum physics. His field is small but growing. For Krishna, what was appealing about teaching a MOOC was that the platform provided a way to extend the reach of his research methods, which would help to grow the population of potential collaborators. As he put it, "it's vastly more, orders of magnitude more effective, in terms of reach, than the traditional way of just publishing papers and so forth." He went on,

> I regard it very much as a stepping stone to doing research in the way we do. For instance, one of my most satisfying moments was when colleagues from here in the department who do work that is not the same as what I do, but have an interest in what I do, actually sat through all these classes of mine, not physically, but watched them online. And that gives us a connection. Whether or not something develops from it is a separate matter, but it creates an opening. And that is tremendously satisfying. Again, when I say reach, this is what I mean.

However, for Krishna the motivation to expand the reach of his research methods had a passionate side as well. He described feeling a powerful drive to create his MOOCs that stemmed from a fundamental desire to share what he knew.

> I think it is this thing that I simply had to get off my chest. It's not... Without aggrandizing it, without intending to, it's not dissimilar from the feeling or experience a creative artist may have when they feel there's something that they simply have to get off their chest. I felt that I had to do it…I'm certain, I'm sure this is why writers write, I mean, you feel, you have a story to... You feel there's something inside you that you wanna say, and so you write.

Passion for his topic was a driving motivation to teach a MOOC, which is something I heard repeatedly from study participants.

**Reach for teaching**

In addition to feeling passion for their subject matter, more than half of the early MOOC faculty I spoke to felt passionately about teaching. For the ones who named platform as a reason they decided to teach a MOOC, they saw inherent value in reaching a larger and broader audience with their teaching. People in this group tended to be in the second and third waves of MOOC instructors; they had already seen the very high enrollments in the earliest MOOCs, and they understood that part of MOOC teaching would mean dramatically expanding their usual audience. Some of them, like Alexander and Roger, had even done the math. Alexander explained:

> So I mentioned to you that we have over 130,000 students in just a few months, but at the same time if you look at all of my years of teaching, then I calculate that at most, I probably had five or 6,000 students, in actual physical classrooms. So the fact that you can reach so many people in such a short period of time, I think is remarkable and it's a unique opportunity.

Similarly Roger estimated how many more individuals he was reaching through his MOOC:

> I've developed a lot of intellectual property but it has reached a limited audience. So, a rough estimate is that over 42 years it's probably reached about 12,000 people, and in a year and a half my MOOC has reached 450,000 people. So, think of the dramatic difference and worldwide... Although our courses at Ross are fairly global in that, one-third of our MBAs come from outside of the US, and over the years I've done a lot of teaching around the world in seminars, but those are 35, 40 people at a time.

For these instructors, MOOCs provided an opportunity to reach students all over the world, students they never would have been able to teach in their classrooms in Ann Arbor. Roger, a professor in the Ross School of Business and the instructor of a widely popular MOOC on negotiation, described the reach of Coursera as one of the most appealing reasons to do a MOOC. He believed that extending the reach of his teaching to students around the world to be aligned with the mission of the public research university where he has taught for over four decades.

Sophie is a computer scientist and a lecturer at the School of Information (SI). She always knew that she wanted to teach, and that research was not going to be her primary mission. In her first job after completing her PhD, she taught at a master's terminal university with high numbers of first generation college students, which felt like the right fit for her. Sophie described her strengths as a teacher as patience and approachability. Her goal as an instructor, in the classroom, online, and as a volunteer with programs like Girls Develop It, has been to make programming and web design accessible to students who are likely to feel intimidated by the subject or by the culture of other technology classes.

> When I was a grad student, we'd have interesting conversations where some of the grad students only wanted to go where they would teach the best and the brightest because they had these dreams of creating great things. And my thought is, to be honest, I'm wasted on the best and the brightest. The best and the brightest are gonna do fine, they're gonna be fine. I was going to teach the people who needed a little bit of extra time and some hand-holding.

After she moved with her family to Ann Arbor, Sophie started teaching programming classes at the University of Michigan as an adjunct, and SI eventually brought her on as a full-time lecturer. She worked with Alan, who also taught programming at SI, and who was one of the original five MOOC faculty at U-M. Coursera put out a request for proposals to teach a specialization on web development, and Alan invited Sophie to work with him on a proposal. "[W]e wanted to do a nice on-ramp, I wanted both of our courses to be like, 'Hey, if you don't know what you're doing at all, come see us.'" After they were accepted, they realized that they had two specializations worth of material, and decided to work separately, Alan on web development, Sophie on web design.

Though she did not use the word, it sounded as though Sophie viewed herself as an ambassador for the field of technology and web design to people, and especially women, who historically had been excluded from it. By teaching a MOOC, she was able to make her

friendlier, accessible approach to instruction available to students who others might have turned away.

> I feel like computer scientists are snobby. Like very, "What? You're doing it that way?" And it can be very intimidating and off-putting. And so, if there can just be this little space where you can ask a question and not be the only person, I think it would be nice.

Sophie used her MOOC to make that space.

Meanwhile, Sophie's colleague at SI, Alan, also liked the idea of MOOC teaching because of its enormous scale. Alan is unique in this sample in several ways. He was in the initial cohort who taught the first five Michigan MOOCs, but unlike the other members of that group who had received invitations to participate from Provost Pollack, he pursued the opportunity the moment he heard about it. He was also the only person to talk at length about the appeal of potential MOOC fame, which I discuss later in this chapter. When he first learned about Coursera and its initial partnership with Stanford, Alan described feeling incredibly angry and frustrated that the idea had not come out of Michigan. Like Roger, he saw the idea of MOOCs as strongly connected to the mission of the public research university, and he wanted Michigan to be at the forefront. He reached out to the chair of his department, and learned that in fact, Michigan was already in secret talks with Coursera to launch several courses, and the timing was such that Alan was able to join that first cohort of instructors.

Alan had already been experimenting with sharing his instruction broadly online, including publishing all of his courses and lecture videos on Open Michigan, the U-M's open educational resource (OER) repository. He understood instinctively that working with Coursera would allow him to expand his audience by orders of magnitude.

> I wanna be the Anthony Bourdain[10] for education. Right? I don't understand why there's no Anthony Bourdain for teaching and learning. There's only so much damn cooking we

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[10] Anthony Bourdain is the star of several television shows in which he travels the world visiting different restaurants and trying different cuisines.

need to know about. Teaching. Let's have somebody who is fun and goes around with a camera crew all over the world and teaches. And so, for me it was the scale, it was the outlet.

Like Sophie, Alan felt that he had a particular talent for making technology and programming accessible to students who had not traditionally been in those fields. He wanted to use the MOOC as a platform to reach them.

**A message of social importance**

For a small subset of the instructors who described the reach of the platform as being a primary motivator, the desire to teach a MOOC went beyond sharing a subject they are passionate about, or teaching in an accessible way; for them, the subject had some level of social importance, and the MOOC enabled them to have a positive impact on the world at large by raising awareness or increasing understanding of their subject.

Luke's passion is health policy. Beginning in his undergraduate years, Luke knew both that he wanted to be a doctor and that he was interested in the policy environment that influences how doctors can and cannot do the essential work of caring for patients. Directly after completing his medical training he entered a master's program in public policy. When he joined the faculty at the University of Michigan as a primary care physician in 2000, he immediately approached the dean of the Ford School of Public Policy and asked to join the health policy faculty. "Well, who would they be?" she replied. Luke became the first person to teach about health policy at the Ford School. His first course, Issues in Child and Family Health policy, enrolled students from schools and colleges across campus, including Public Health, Public Policy, Nursing, Social Work, Business, and Information. Missing from those classrooms were medical students.

Across the country, there were very few medical schools that included any training at all on policy issues for aspiring doctors. In the early 2000s, Luke conducted a national survey of graduating medical students, and found that of all the topics he asked about, students felt least prepared on the subject of health policy. When the U-M Medical School revamped their curriculum in 2005, Luke lobbied hard to ensure that health policy was included among 200 other required topics. That first year, he was granted a single hour to teach first year medical students about policy. Over time, he carved out more space in the curriculum for health policy, but ultimately, he knew that he was only reaching the 175 students a year whom he could teach in person. He was not solving the bigger problem, which was that this important topic was largely absent from the curricula of the nation's medical schools.

> There are 130 medical schools. And probably 10 or 15 have an adequate number of Health Policy faculty who could really carry this off. So I said, that leaves at least 100 schools where students are hungry for basic instruction about policy that empowers them to see policy as something they can input, and give their shape to, versus something done to them. That could be fantastic for them.

When U-M launched its Coursera partnership, leadership at the Medical School was interested in encouraging health sciences faculty to experiment with the new medium. The dean offered $10,000 grants to support teaching a MOOC, invited proposals, and ultimately selected five to produce. Luke immediately recognized that teaching a MOOC would be a way to expand broadly the reach of his evangelism for health policy education. As he put it, "I have never done anything like this but let me go for it." Offering a MOOC on the U.S. healthcare system meant that any medical student interested in learning more about policy, not to mention any healthcare practitioner, politician, patient, or caregiver, could understand why the healthcare system is set up the way it is, and could be empowered to take action to make it better.

> It is so possible to teach about health policy, like any subject, in an incredibly boring disengaging way. I refuse to teach it that way because it turns people off to what I feel is

87

a highly relevant and really exciting area that people are genuinely frustrated and disturbed about. My whole argument is you don't have to be frustrated by not understanding it. You can be frustrated about how it works.

Ellen is a professor in the College of Engineering who studies and teaches about energy systems. In particular, she works on the development of sustainable energy systems that can combat climate change by reducing dependence on fossil fuels. Ellen was one of the original five MOOC instructors who received an invitation from the provost, and she made it clear to me that she would not have agreed to teach a MOOC based on just any of her courses. Rather, Provost Pollack invited her to teach her course on thermodynamics, a subject that is central to Ellen's research but also one that she viewed as having the most potential to make a positive impact on the world at large.

> So, [Martha] specifically said, "Will you do thermodynamics?" Which is a course that I've taught for many years here. And if she had come to me and said practically any other class, I probably would have said no, but it was because of the content I said, "Oh, I'm very passionate about sustainable energy systems, and the foundation of sustainable energy systems is thermodynamics. That's the fundamental principle that guides how we do any sort of power generation right now." And I thought, "I got a soapbox." She's just given me access to probably the world's largest podium, right? And I said, "For that I'd do it," because I wanted to spread a message of, we need to change our business, we need to change the way we're doing business right now. And again if she'd come with any other topic, she'd come with fluid mechanics, I'd say, "Eww, no." But that struck a nerve.

Ellen views climate change as one of the most pressing problems facing the world, and I could hear the excitement in her voice when she told me that her passion, which is reflected in both her teaching and her research, is the development of sustainable energy systems. She believes that an understanding of thermodynamics is necessary to help improve energy systems, and so the MOOC did not simply give her a way to teach more students than she can in a physical classroom, it offered her a soapbox to make an argument for sustainable energy to an audience she never had access to before.

At the end of my first interview with Ellen, after I turned off the recorder and was preparing to leave, she commented that she would be very interested to know some of the reasons that other people give for teaching MOOCs. She mentioned that she serves on the committee that evaluates new MOOC proposals, and started speculating about why others had chosen to teach MOOCs. She said, "There's the guy [Sidney] who teaches the AIDS MOOC, and now he's doing another on mass incarceration, and I think our reasons are probably very similar for teaching MOOCs. We wanted to have this platform for really getting a message out." She explicitly drew a connection between her reasoning and Sidney's reasoning, which she viewed as having a platform to broadcast a message of social importance.

As it turns out, Ellen's guess about Sidney's motive for teaching his MOOCs was correct. Sidney was lecturer at U-M who previously had a long career as an administrator at several institutions including Antioch College, a small liberal arts college with a history of civil rights activism. Sidney's MOOC, "AIDS: Fear and Hope," is a course that he had taught several times in a classroom setting. No one invited or encouraged him to teach a MOOC; he responded to a campus-wide call for proposals from the office of Digital Education and Innovation. Sidney taught several courses in the American Culture department, and I asked him how he decided which course he wanted to teach as a MOOC.

> Well it was a very natural choice there. It was about AIDS and HIV. Even though AIDS has been with us since the early 80s, there's a lot of need for public education and there's a lot of misunderstanding out there. So I felt that there was a real social need for that… In the case of HIV and AIDS, one of the overwhelming things that you learn is the destructiveness of stigma around HIV, around homosexuality. And my MOOC on AIDS is an attempt to help people overcome that, realize it and then help them overcome it.

Sidney believed the likely audience for his MOOC was people with HIV/AIDS, as well as their caregivers and family members, but he also hoped that it could be used to educate people who did not have any direct connection to the epidemic. Teaching on a platform with such a broad

reach made it possible for him to help combat stigma on a much larger scale than he could one classroom at a time, with the few dozen students who elected to take his course. "I mean, I'm motivated by the feeling that I can reach people who need the information and that that is a service."

I heard from around a quarter of the participants, and Sidney was one of them, that teaching the MOOC had been a colossal amount of work, more than they could possibly have imagined, and yet they decided to teach another one. In Sidney's case, when we spoke in the spring of 2016 he was in the midst of putting together a second MOOC on mass incarceration, and again his aim was to get a message of great social importance out to a wider audience. "I don't say this explicitly when I'm doing it, but teaching about mass incarceration is, in my mind, teaching about the most central civil rights issue of our country at this moment." He connected that impulse to his roots in the civil rights movement in the 60s at Antioch.

> It goes back to as a young faculty member becoming involved in the civil rights movement and that changing my life. I haven't been a very aggressive social activist. But those values have been part of my life ever since then, and I expressed them mainly through my teaching. So, teaching about issues with social justice. Principles come up like racism, like poverty, like inequality that I jump on in my teaching. And that all goes back to the changes in consciousness that I experienced by being a member of the civil rights movement and civil rights groups, and feeling that one of the things that you can do in life is to try to make the world a better place.

This motivation to teach a MOOC due to the social importance of the subject seems to be distinct from the altruistic goals that featured prominently in the early days of MOOC hype, where Coursera and other MOOC advocates explicitly pushed a message that MOOCs would open up access to education for millions of people who had been excluded, and that this access made MOOCs socially valuable. The access argument resonated with many of the instructors that I interviewed, but it was never the primary reason they gave me that they chose to teach a

MOOC. By contrast, the subset of instructors who imbued their courses with social importance named passion and excitement about the potential impact of their MOOCs as the main reason they decided to do it. The social value of their messages motivated them. By reducing stigma around HIV and AIDs, increasing public understanding of energy systems, or empowering healthcare providers to engage in the health policy issues, these instructors believed that they could help change the world for the better.

## Experimentation

The appeal of experimentation in MOOCs came up with more than half of the study participants, in a variety of ways, from the very first MOOC faculty to the most recent. It was an especially a strong theme among the earliest MOOC instructors; four of the five participants in the first wave of U-M MOOCs described experimentation as the primary or one of the primary reasons they agreed to do it. What participants were experimenting with varied, as did the reasons for their interest in experimentation. Sometimes they were experimenting with the technology, sometimes they played with pedagogy, sometimes it was just the appeal of trying something new. This interest in experimentation aligns with much of the early MOOC hype, which described Coursera and its peers as "disrupters" of higher education, at the cutting edge of technological innovation in education. I anticipated that the experimental nature of MOOCs would appeal to some participants in the study, and indeed, several of them used the word "experiment" or "experimentation" to describe their reason for teaching a MOOC. Participants also used words related to experimentation, such as innovation, risk, exploration, freedom, fun, and play, to explain why they wanted to teach MOOCs. I also identified as experimenters people who talked about liking things that are "new" and "shiny," or who described themselves as rebels, pioneers, and early adopters.

Several of the participants in this population are decorated instructors who are highly invested in being good teachers. The University of Michigan bestows a named professorship, the Thurnau Professorship, on five tenured faculty every year to "recognize and reward faculty for outstanding contributions to undergraduate education. This program is designed to honor those tenured faculty whose commitment to and investment in undergraduate teaching has had a demonstrable impact on the intellectual development and lives of their students" (University of Michigan, 2017). Three study participants are Thurnau professors; the significance of this became more apparent when I realized that only five participants in the study are tenured faculty who teach primarily undergraduates. One of those Thurnau professors has also won a Golden Apple Award, a student-organized teaching award granted to one instructor every year. For the most part, the participants in this study as a group are committed educators who think carefully about pedagogy and who work to adopt effective teaching practices. Given the nature of this population, it is not surprising that many of them were drawn to the opportunity to push themselves as instructors, and experiment with new ways of teaching.

There was a great deal of variability in the ways that participants described or thought about their experimentation. A few participants were education researchers themselves, and saw MOOCs as an opportunity to advance their research. Others were interested in technological and pedagogical innovation that would help them become better or more effective instructors. Some people liked the risky aspect of experimenting with MOOCs, and appreciated the challenge of trying something new and untested; those instructors often identified as rebels, pioneers, innovators, and early adopters, and for them, experimenting with MOOCs fit into their sense of themselves as people who push the envelope.

**The MOOC as a lab for education research**

Rebecca is the most dramatic example of the kind of participant who was drawn to the experimentation potential for MOOCs. Rebecca wears many hats. She is an assistant professor of obstetrics and gynecology, clinical assistant professor of learning health sciences, and division chief of professional education. Early in her career she was on a committee related to developing a new curricular intervention. In addition to physicians, the committee also had education faculty, members of the Center Research on Learning and Teaching (CRLT), and an assistant dean for medical education who was working on her Ph.D. at the U-M Center for the Study of Higher and Postsecondary Education. Rebecca describes the experience as revealing to her that there is a science to education.

> I was already doing a whole bunch of teaching, but it was intriguing to me that there was actually a right way to do this, and that nobody taught me how to do this but now all of a sudden, I was responsible for doing it and I might not exactly be doing it correctly.

Eventually, she decided to decrease her clinical appointment and pursue a master's degree in education, with a focus on teaching and learning in professional education.

Since then, Rebecca has taken on leadership roles in the Medical School that focus on studying and improving medical education. She describes both her professional role and her research interest as "teaching teachers how to teach," beginning when they are in medical school. Most doctors learn how to be doctors, and then they find themselves at teaching hospitals, teaching the next generation of doctors, without ever having learned how to teach. Rebecca interrupted that cycle for herself by pursuing an education degree, and now she wants to incorporate that educational training into medical training.

When Rebecca, whose MOOC is on instructional methods in health professions education, talks about using her MOOC as an opportunity to experiment, she does not mean just

playing around with some new things. She uses her MOOC to conduct carefully designed studies on the effectiveness of various teaching methods, lecture styles, and assessment types. From the very first iteration, Rebecca built her MOOC with certain analytics and assessments in place, and worked with an education researcher to integrate research questions into the course design. This allowed her and her collaborators to use the data that Coursera automatically collects about each learner's interactions with course materials to test hypotheses and experiment with different interventions.

> Now I have a lab, now I have a science, now I have a venue for doing my own experiments and innovation and research. Because I was doing all the other things before that. I was teaching, but I was constrained by the medical school curriculum and patient care necessities. The MOOC space was completely like just a crazy new lab.

When we spoke, her MOOC had run close to a dozen times, and every time she made tweaks and adjustments, and set up new experiments, to refine and improve her methods for teaching and assessing students in a MOOC.

Rebecca was one of three people in this study who developed such a deep interest in teaching and learning after they became faculty that they shifted their focus from topics in their initial field to education and pedagogy. In two cases, that of Rebecca and her Medical School colleague Laura, the participants returned to graduate school to study education after beginning professional careers as physicians. In a third case, Tim, a physicist by training, learned to apply statistical and analytical methods from physics and astronomy to learning analytics questions. Tim eventually held various administrative roles related to teaching and curriculum oversight, but unlike Laura and Rebecca did not pursue additional credentialing in education. Tim, Laura, and Rebecca were not part of the first group of MOOC recruits, rather, all applied to teach a MOOC. For them, interest in the study of education appears to have contributed to their desire to teach a MOOC.

**Technological and pedagogical innovation**

Only Rebecca went so far as to describe her MOOC as a lab for conducting education research, but others saw MOOCs as a space in which they could innovate with technology, pedagogy, or a combination of both. Two people I interviewed were interested in the challenge of developing effective assessments that would work on a mass scale. Alan wrote auto-grader software that would enable all of the assessment in his MOOCs to happen without human intervention, which he was refining and expanding every time he taught the course. He planned to make the code available to other MOOC instructors who taught programming classes so that they could build on it as well. This specific interest in experimenting with large-scale auto-graders was not at the front of Alan's thoughts when he sent off those angry tweets before Michigan had announced its Coursera partnership. Rather, he knew he wanted to play around in the space, and the particular areas of experimentation emerged as he began doing the work. At the other end of the disciplinary spectrum, Michael, who taught the first writing-intensive MOOC in the humanities, attempted with mixed success to teach a writing-intensive MOOC in which students assessed each other. Like Alan, he did not say that he had specific experiments in mind when he agreed to teach a MOOC, but that he saw the MOOC as a sandbox that would allow him to try new things in general.

Laura, the other physician-education researcher, expressed an interest in the process of migrating content she usually taught in person to an online format:

> I was all in the fun of, "What would it look like?" [My colleague] and I have these series, we love to take new methods of teaching and apply it to our teaching, and so I was thinking about, "Wow, how do you take this to a digital environment? And what would that look like?"

As a part of her administrative role as assistant dean for educational research and quality improvement, Laura stays current with the latest innovations in teaching and learning, and

regularly tries them out in her own instruction. She hoped the MOOC would provide a new way to do that same kind of pedagogical experimentation in a different context.

Alexander described his MOOC as a chance for him to do "teaching innovation." He went on,

> I'll be honest with you, for me it was a pure experiment. I didn't really know what I was getting myself into… In terms of just as an instructor, I think it helped me experiment with the modes of delivery that I'm typically not exposed and not used to, such as pure lecture.

Alexander did not talk about himself as someone who regularly experiments with new pedagogical approaches in the way that Rebecca or Laura did. Rather, he liked the opportunity that the MOOC provided to leave his comfort zone, which he described as leading discussion-heavy seminars, and to try out a mode of teaching, namely lectures, that was new to him. When he spoke about "pure experiment", he was referring to personal experimentation, rather than using the MOOC to conduct educational research.

One aspect of pedagogical and technological experimentation that participants discussed, which I go into at more length in the following chapter, was the flipped classroom. Several participants were interested in the way that teaching the MOOC might inform or improve their in-person teaching, though in most cases, it seemed that the flipped classroom was less a motivation to teach a MOOC than an unexpected or pleasant outcome of having taught a MOOC. This may have been connected in part to the rhetoric from DEI, which frequently emphasized that its primary concern was innovation in "residential education" (Kuang, 2015). It was not enough for MOOCs to extend access to education for students around the world, these MOOCs had to improve education for the tuition-paying students on campus. Luke took this notion the furthest, coordinating an interdisciplinary one-credit on-campus course for students at the University of Michigan that uses a combination of MOOC lectures and in-person discussion

groups, but others including Sophie, Krishna, and Roger also described using their MOOCs to flip their classrooms.

**Risk, challenge, and exploration**

Brian, a professor of complex systems, political science, and economics, taught the very first MOOC at the University of Michigan, and for him, much of the appeal came from riskiness and freedom to explore. Some faculty in this study had prior experiences experimenting with technology in their classrooms, but when I asked Brian about his use of learning technology before teaching a MOOC, he bluntly informed me that I was asking the wrong question. Many of Brian's courses are on heavily mathematical subjects, and his primary classroom technology is a piece of chalk, or at most a simple PowerPoint deck. However, as I quickly learned, that did not mean that he had not experimented with new modes of teaching. Brian was one of three participants in the study who had previously worked with the Teaching Company, which produces college-level enrichment videos sold in a variety of formats. The Teaching Company recruited Brian to teach courses on complexity, and as a part of that process provided extensive training, feedback, and practice on how to teach for the camera. Brian credits this experience as one of the main reasons for his selection to teach the first U-M MOOC. He believes that his successful Teaching Company courses demonstrated his ability to teach on video, which was necessary for the first MOOC instructor; at the time, Michigan lacked the infrastructure to help get faculty camera-ready, yet wanted to produce MOOCs as quickly as possible.

After explaining all of this background to me, and the reasons he believed the provost chose him to teach the first MOOC, I asked Brian why he said yes when the opportunity was offered. He responded, "Because like... It's sort of like if somebody said, 'We're putting together these three ships, we're gonna find America.' You'd probably say, 'Okay, I'm in.'" Later, he used

another exploration analogy: "And we just had a, I don't know, it was probably a 20-minute conversation with Martha [the university provost]. I was like, 'Look, I'll just do it.' You're asking me, 'Would you like to be an astronaut?' Yes! I'll be an astronaut. Right? Do it. Great." For Brian, the opportunity to be first to explore new territory, and the accompanying risk of failure, were a huge part of the draw. He went on:

> I thought, "Okay, what's the goal here?" And the goal is to educate people, have fun, try new things, see what happens. If I'd have been 50th, and I knew how many people were watching me... If I'd never gotten involved – and [if] they were asking me to do it now, and I knew how much work it was, I don't know that I'd do it necessarily. But at that time – it was extremely high-risk, right? – I got to define it however I wanted to define it. So if I were to do it now, there's probably procedures and protocols, and a bureaucracy, and I hate that stuff. So for them to be like, "Here's a laptop, here's a microphone, here's a camera, go do whatever you wanna do," – then I'm happy to do it.

Brian repeatedly mentioned the freedom that came with being first, and how it enabled him to try different things, play, and have fun. He described the experience as "like being on vacation," despite the fact that preparing the MOOC took hundreds of hours of work, mostly in isolation. Brian said he enjoyed the trial and error of figuring out how to shoot and edit his videos, fumbling through the best way to structure his lectures, and the silliness of having his dog jump up and start wagging its tail every time he said, "Hi!" at the beginning of a video segment. The appeal of the MOOC's riskiness also came up multiple times across both of our interviews. Brian likened it to improvising in the kitchen, where instead of using a recipe you just figure out how to work with what you have.

> And so sometimes that turns out that great, and sometimes that turns out kind of mediocre. Most of the time, mediocre and it's not something you can recreate. But other times, other people can then figure out, "What was this that made this great?" And so being early on in the creative process was, I think, more fun than coming in later.

98

Brian contended that he knew from the outset that there was a good chance that the MOOC would be mediocre, but the opportunity to experiment with something completely new, and the accompanying risk of failure, spurred him to accept the invitation, and even provided him with a positive experience despite a complete lack of organized support or assistance.

Because Brian was U-M's first MOOC instructor, aspects of his experience were unique, but his motivations aligned with those several other participants who reported enjoying the risk that came with trying something new. When I started this study, I wondered how risk factored into participants' decisions to teach MOOCs. Though some of them may have been publicly visible figures in other contexts, typically their teaching, like that of most faculty members, happens behind closed doors. The only witnesses are a select group of students who have been admitted, and chosen to enroll at the University of Michigan and in the courses these faculty members teach. Making a MOOC means broadcasting one's teaching at an unprecedented scale, opening oneself up for scrutiny, critique, and worse. I expected that the riskiness of MOOC teaching would be among the drawbacks that participants mentioned, and it is true that some did frame the risk as a downside. However, other participants were attracted to this risk in much the same way that Brian was. Tim, who in his spare time performs in community theater productions, likened it to acting:

> I think none of us really know what this is yet or what it's gonna mean or how it's gonna work, so it is risky to make the investment in doing one of these, and it's the kind of investment that is especially seductive. Doing it well demands a lot and it's very public. There are some tasks you can take on and they're not very public, and so if you get really busy or whatever, it's not the end of the world if you don't do them that well. This is one where it's pretty out there, so it's kinda like signing up to be part of a stage play, right? You can actually stand out there.

Rebecca made a more classical comparison: "It's a huge experiment. It can fly or go down like Icarus, I don't know. Right? But it's fun. It's crazy. Fun."

Two theorists have been helpful in thinking about the appeal of risk, as well as the early adopter identity discussed below. The literature on diffusion of innovations (Rogers, 2003) includes a strand that investigates what motivates individuals to adopt new innovations, especially new technologies. Rogers describes five categories of individual adopters, distributed over a bell curve that approaches normality: Innovators, early adopters, early majority, late majority, and laggards. According to Rogers, "the salient value of the innovator is venturesomeness. He or she desires the hazardous, the rash, the daring, and the risky" (p. 248). Though not all of the study participants identified as or described themselves as innovators or early adopters in their everyday lives, for those who did, Rogers' description seems to fit. In addition, there are connections to the literature on self-efficacy, as it relates to participants' belief in their capacity to succeed at a new and risky form of teaching. According to Bandura (1994), people develop beliefs about their capacity to meet situational demands (i.e. their self-efficacy) in response to four influences: mastery experiences, social modelling of vicarious experiences, social persuasion, and their physical and emotional states and responses. Participants with prior experiences of successfully adopting new educational technology, and who may react to the idea of a risky new challenge with excitement rather anxiety, may have been motivated in part by a higher level of self-efficacy. It is possible that MOOCs were especially appealing, or at least less intimidating, for individuals who had a high level of confidence in their own abilities to adapt successfully to an unfamiliar technology and a novel approach to pedagogy.

Those participants who described the riskiness of MOOCs as seductive and fun were all accomplished, usually tenured faculty who had received recognition for their teaching. For them, failure might have been a disappointment, but it would not have ended their careers or perhaps even tarnished their own sense of themselves as effective teachers. Furthermore, none of these

people actually did fail. Their MOOCs enrolled thousands, sometimes tens of thousands of people, and they also opened up exciting new professional opportunities that might never have been available to them without the exposure and recognition that the MOOC provided. Brian received invitations to speak about complexity to staffs of the Federal Reserve and the International Monetary Fund. The one medical school in the island nation of Mauritius adopted Rebecca's MOOC as a part of the required training for all faculty. The MOOC students who pay to get certificates for completing Alan's very popular MOOCs have opened a new revenue stream for him. Due to the nature of this study, the participants' accounts are all retrospective, presented to me after everything had turned out well, in some cases exceeding their wildest expectations. They remember the riskiness of teaching an early MOOC as an appealing feature of the experience. It is possible that if something had gone terribly wrong, their recollection of how they interpreted that risk might have been very different.

**Rebels, pioneers, and early adopters**

For some of the people who were motivated by experimentation, there appeared to be an element of identity that fueled the decision, one of the five themes of the faculty growth framework discussed in chapter 7. Around a quarter of the participants described themselves as early adopters, rebels, and pioneers, people who strive to be ahead of the curve in areas related to technology and pedagogy. Teaching a MOOC aligned with their senses of themselves as people who try new things. "I like new shiny things 'cause I'm always curious, and I like to play with stuff," as Rebecca put it. This feature spanned generations from the oldest participants (who have been faculty for close to 50 years) to those who had been in academia less than 15 years (only one of the first waves of MOOC faculty were very early-career faculty), though what being an early adopter meant varied substantially over time. They possessed both "the ability to

understand and apply…technical knowledge" (Rogers, 2003, p. 248), along with a strong sense

of self-efficacy related to their abilities to use new educational technology successfully (Bandura,

1994).

Sidney, the lecturer who taught the AIDS course, started his first faculty position in the

late 1960's.

> My career goes back... What was high tech when I started was using 35-mm slides and reel-to-reel tape recorders and coordinating them for presentations. I really hit my stride when computer conferencing became available and I was an early adopter of that here. But of course, computers have changed the world and they've changed this part of the world. So in the last 20 years, I've experimented with various kinds of online work. Well, aside from being sort of early in MOOCs, I'm not particularly cutting edge right now, but I keep trying.

The self-deprecating tone of Sidney's description of himself, as not particularly cutting edge

(aside from MOOCs, which at the time that he started teaching them were completely brand

new), struck me, and in further discussion I learned a bit more about why.

> I had a teacher and a mentor who also became a colleague of mine when I first started teaching. And he was very innovative and he was interested in technology, and he was, what's the word? He was iconoclastic. He was always defying conventional wisdom, and I am not like that by temperament, but I am like that by commitment and philosophy. So it doesn't come as naturally to me as it did to him, but I keep striving for pushing boundaries.

This conflict between his philosophy and his temperament may explain why Sidney

seemed to minimize his current experimentation, even as he went on to explain that for him, his

early adoptions extend beyond new technologies, to include subject matter and content. Sidney

said he preferred to teach about subjects that were not usually a part of the curriculum in his

field, and included materials like YouTube videos and graphic novels in his syllabi. "It's hard to

stay out of the curve, but that's what I try to do." Iconoclasm did not come naturally to him, but it

did not make it any less a part of his identity as someone who pushed the envelope with his teaching.

Michael also began his career in the 1960s, and he described himself at various times in our conversations as both a rebel and a pioneer, not just academically but in other areas of life. He related his youthful rebellions against his father, which then carried over into his academic career. Like Sidney, he taught subjects that some would consider outside the mainstream of his field, such as science fiction and fantasy, and experimented with early online bulletin board systems on the proto-internet computer network that U-M helped develop. He then made an explicit connection between that identity and his reasons for teaching a MOOC. "I liked the idea of pioneering. I like the idea of studying stuff that's new. I wanna be able to get out there with things that I think are important that the rest of the world might poo-poo." Michael enjoyed being an iconoclast, and it was not just the newness of MOOCs but also the controversies they raised that appealed to him about teaching them/one.

Dev, who is on the faculty of the business school and has served as an advisor to the Digital Education and Innovation office since its early days, also tied his interest in the MOOC to his sense of himself as someone who experiments and is open to new things. He was in the first wave of MOOC instructors, who received an invitation to teach from Provost Pollack.

> So I've been experimenting, I take it almost my responsibility to keep ahead of everybody, personally. I'm not sure that is only related to my teaching, that's me. I mean if you tell me something new, I'm gonna drop everything else and try to get it done. So I said, "Yes," and usually I say "yes" very easily to things I don't know much about and it always turns out okay.

His reason for saying yes was that he is someone who says yes.

This connection between identity as an early adopter and an interest in experimenting with MOOCs borders on the tautological; participants seem to be following a logical path that

says, "I am person who experiments, teaching a MOOC is experimental, therefore I will teach a MOOC." These participants report that they like experimenting, that they like trying new things, and just as importantly that they identify as people who like experimenting and trying new things. For some of these participants, it seems as though the motivation to teach a MOOC was not about any particular kind of experiment, but rather the fact of the experiment itself. Neither Michael nor Dev had a specific experiment in mind when they agreed to teach a MOOC. They simply knew that MOOCs themselves were a giant experiment, and so teaching one would be an experimental endeavor.

## Altruism

Much of the early news coverage and promotion for Coursera focused on the goal of expanding access to higher education, or at least aspects of higher education, for previously excluded populations. This self-described altruistic aim, in fact, was one of the dominant arguments for the creation and distribution of MOOCs in general. In an interview with the New York Times on the eve of the launch of Stanford's first MOOC, instructor Sebastian Thrun said, "The vision is: change the world by bringing education to places that can't be reached today" (Markoff, 2011). The press release announcing Michigan's partnership with Coursera proclaimed, "With the capacity to reach millions of people at once, web-based courses are pioneering a new model for higher learning -- one that potentially gives everyone in the world access to a top-level educational experience that was once reserved for a small percentage of the population" (Marketwire, 2012). And while it was true that the goal of expanding access to education resonated with some of faculty with whom I spoke, it was never their sole or primary motivation. Often they seemed to see through the early media coverage, while a few expressed some concerns about the sustainability of creating MOOCs with high production values and then

making them available for free. As one of the faculty in my study said of statements by Daphne Koller, founder of Coursera: "She's talking about the orphan kids, and translating into different languages and you're like, 'Oh my God, she's like drinking Kool-Aid and it's ridiculous.'" That said, some of the motivations expressed by participants in this study were related to a desire to make their content freely available to everyone in the world, and I divided those into two categories: improving access to content, and valuing openness as a principle.

I coded several kinds of statements as instances of altruism. First, I coded a passage as altruism if participants themselves used the word to describe their motivations (e.g., "I really did do it for altruistic reasons"). In addition, I coded a comment as altruism when a participant described MOOCs as being good for society or beneficial for disadvantaged people, especially if it advantaged students who would not normally have access to University of Michigan courses (e.g., "I always thought I would try to help people with that. I had free education and it made a big difference to me, so pass it on."). Though some of the statements that I discuss above in the section on using the MOOC as a platform are related to a desire to do something that would benefit the world, for altruism I focused on statements where the mechanism of doing good was to give away educational content for free online. For example I did not code as altruism statements in which participants discussed reaching a generic large audience; rather, altruism was only applied to specific statements made about reaching an audience of people who would not otherwise have had access to higher education.

In a few interviews, participants and I spoke at some length about the value of openness, and the importance of making educational materials (and sometimes data and scholarly research as well) freely and widely available online. I view this altruism of openness as distinct from the altruism of increasing student access, although they are connected. The altruistic impulse related

to student access centers the needs and experiences of students and potential students, while the impulse related to openness focuses not on the beneficiary but on the knowledge itself. It is in line with a famous comment from Stewart Brand, author and founder of the Whole Earth Catalog in the 1960s and the Long Now Foundation in the early 2000s, who observed long ago that "information wants to be free" (Brand, 1985). Not surprisingly, there was some overlap between the Michigan MOOC instructors who wanted a platform to spread message of social importance and those motivated by a spirit of openness.

**Improving student access to education**

In 2012, Daphne Koller, the founder of Coursera, gave a popular TED talk called "What We're Learning from Online Education." Though her focus was on harnessing data from large-scale courses to better understand how people learn, Koller began with a story about a stampede at the University of Johannesburg in South Africa, where the lingering effects of apartheid caused a severe shortage of seats relative to all the students who wanted to enroll. Koller described a woman who died in the stampede as "a mother who gave her life trying to get her son a chance at a better life" (2012). It is not an exaggeration to say that Koller and other early MOOC proponents framed the potential ability of MOOCs to expand access to education as a matter of life and death. While the faculty I interviewed were less dramatic in their language, some of them hoped that working with Coursera would help democratize access to high-quality education, or at least, some pieces of a high-quality education.

Alexander is a professor of management and organizations at the Ross School of Business. On campus, he teaches MBA students, both in the regular MBA program and in various executive education programs. Coursera put out a request for proposals for a series of courses, called a specialization, on leading teams and organizations. Ross school leadership

shared the request, and Alexander and a colleague with whom he has previously collaborated put

together a proposal. When I asked him why he pursued the opportunity to teach a MOOC.

Alexander answered,

> One is, I really like the appeal of reaching audiences across the world, many of which are
> not able to afford business school education in an in-class environment. That was an
> incredibly important factor in my decision-making because with tuition rates going well
> over $60,000 a year, and if you look at this a very, very small fraction of the population
> who can afford to come to business school.

Later he continued on the same theme:

> So the fact that you can reach so many people in actually such a short period of time, I
> think is remarkable and it's a unique opportunity. The fact that you can do it for people
> who otherwise would not be able to afford to come to the University of Michigan, and the
> business school particular, I think it is also incredibly rewarding, I think for me and my
> colleagues.

Alexander seemed acutely aware of the cost for students to attend business school.

Tuition for an MBA at the Ross School of Business is the highest of all the graduate and

professional programs at the University of Michigan, while the difference between in-state and

out-of-state tuition is much lower.[11] In-state tuition for a Ross MBA is nearly three times the

tuition for a masters' degree in the School of Education. Alexander saw MOOCs as an

opportunity to increase access for the many people who may have the interest, ability and the

preparation to do well in business school, but for whom the cost is prohibitive.

Other faculty who mentioned altruistic impulses seemed to do so almost in passing, and

often with awareness of demographic data released a year after Coursera launched, showing that

most MOOC students already had a postsecondary degree (i.e. Daly, 2013). Dev, a fellow

business school professor said, "I was hoping that at least people interested in business would be

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[11] Tuition rates for the University of Michigan graduate programs were found on the Office of
the Registrar's website, at http://ro.umich.edu/tuition/tuition-fees.php#fullterm.

attracted to it. But I was really, really hoping, illogically so, that people who had no access to Michigan or a similar school, would have access to it." Dev also expressed awareness of the prohibitive costs of business school. Meanwhile Laura, the practicing physician in the Emergency Department who also teaches clinical skills, said, "The idealistic part of me wants to help the world, and I can help individual patients through my practice but I generally... I do, but I don't. The residents do more of the helping than I do." She talked about how her "unique contribution" was in educational research, and that increasing access to her teaching was a way she felt she could make a positive difference. For these faculty, altruism does not appear as the primary motivation for teaching a MOOC. The possibility that their MOOCs might have a positive impact on the lives of students, or on the world more broadly, held some appeal, and may have contributed to the decision to teach one, but other considerations, such as experimentation, held more importance.

**Valuing openness as a principle**

Beginning in the 1980s, with the rise of personal computers and later the Internet, a constellation of "open" movements have advocated for free, public access to various kinds of knowledge, information, and computer code. The open education movement provided a foundation for the first MOOCs; it argues that educational materials should be shared freely online in formats that are downloadable, shareable, revisable, and remixable. Other open movements include the open source movement, which promotes the development of software that is free for future developers to adapt and expand on, and underpins several modern operating systems including Linux and Android. The open access movement advocates for free, online access to peer reviewed scholarship such as journal articles and monographs, while the open data movement encourages researchers to share their data publicly to enable both replication studies

and new research. All of these movements share as a premise the idea that the Internet makes possible free and instantaneous distribution of knowledge, and that we should harness the efficiencies of the network to promote the progress of society (U.S. Const. art. I, §8 cl. 8). I have categorized openness as a kind of altruism because the goal of open movements is to make the world better, using access to code, data, and knowledge as the mechanism.

Slightly less than half of the faculty in this study had some experience with one or more open movements prior to teaching a MOOC, and in a few cases their belief in openness influenced their decision to do so. Krishna, the engineer who was excited about increasing the reach for his advanced computational methods, comes from a field that has been at the forefront of the open access movement, where norms encourage the sharing of articles, drafts, proofs, and data.

> It's this very open development, and the advancement it's making possible is really notable. There are some tremendously, these very famous, longstanding mathematical problems which people attack in the open there. And the great thing is that these are incredibly complex, difficult problems. Even when a person or group thinks she or he has a breakthrough, it needs to be checked and cross-checked, by dozens and scores of people. And when all of this is done in the open, it obviously advances the whole thing.

Krishna believes that sharing openly advances the entire field, and he operates in a discipline that has a culture of openness, both in his department and among colleagues around the world. For him, teaching a MOOC was an obvious next step to promote broad, open access to knowledge. It is notable that Krishna treated his MOOC lecture videos the same way he treats his research papers. With his research, Krishna publishes in a peer-reviewed journal, but he also shares the paper in the arXiv repository where anyone can access it without a subscription. Not only did Krishna create a MOOC on Coursera, which requires students to enroll and log in, even when the courses are free, but he also posted all of his lecture videos on the Open Michigan YouTube channel, to democratize access even further. At the time of this study, he was active in the

comments sections on YouTube, answering questions and providing clarifications to anyone who asked a question. It was clear from our conversation and such actions that Krishna believes deeply in the value of openness in research and teaching, and for him creating a MOOC was a part of enacting that commitment.

Other participants had also shared their work openly prior to teaching a MOOC. Years before teaching her MOOC, Rebecca was posting her teaching materials to Open Michigan. In the late 2000's, the U-M Medical School was working to turn much of its curriculum into open courseware, which meant that lecture slides, recordings, notes, and assessments would be freely available online under an open license for anyone to use, adapt, or share. In addition, the Medical School worked with Open Michigan to share materials produced by global partnerships with medical schools from several African countries, including Ghana, Ethiopia, and South Africa. Rebecca was among the faculty who participated, both in the opening of the Med School curriculum and in the global health initiatives, and she had a longstanding relationship with the staff of Open Michigan.

Through these partnerships, Rebecca described witnessing firsthand the power of openly available information to influence medical practice. She told me about her experience of having Ghanaian physicians come to U-M to do observation, and feeling that "they're infinitely smarter than we are, and better, because they know what they're supposed to do, and they also know what they can do, given their limited resources, and so they MacGyver everything." There was a moment in a surgery where she was in a situation that she had never experienced before, but it was more common in Ghana and one of the visiting physicians had handled it many times. His instructions helped her delivery the baby successfully.

> It's really impressive. These guys know exactly what's going on. But they can't do a lot of it 'cause they don't have the technology, so they find ways to do the right thing through a

variety of workarounds. So, I knew that having open access to information would just help so many people, right? Our colleagues in Ghana, when they would come here and see all the stuff that they could access online, and they took all of those resources and those links home with them. And that's gonna make a huge difference.

When she was producing her MOOC, Rebecca learned that while the U-M was partnering with Coursera for the moment, there were other MOOC platforms that U-M might want to use in the future. She also learned that these kinds of startup tech companies did not always stick around. To ensure that her content would persist and remain available even if Coursera shut down, Rebecca went to her contacts at Open Michigan for their help her in sharing all of her MOOC content under Creative Commons licenses and posting all of her MOOC content to the Open Michigan repository. Rebecca described this approach as "self-preservation"; openness was a way to protect her investment in her content but it also made that content permanently available and usable to others.

Luke, who taught his MOOC because he believed in the social importance of improving health policy education, spoke about how openness is crucial to fulfilling higher education's mission to serve the public.

I don't know how else we're gonna get to a better functioning system whether it be a health system, or political system, or economic system, or social welfare system if we don't open up the walls of universities to help people learn. Because we are failing people in the elementary and secondary ed, and we never give them a chance to catch up after that. So, we can't go back in time, but we can try to address the shortcomings that we've previously left our population with. To my mind, universities aren't just for the people who are enrolled. Universities have an obligation to help inform the public about these broader themes. So, I'm a firm believer in the power of the commons, and free access.

Luke saw MOOCs as a new way for universities to "open up the walls," and fulfill their obligations to educate the public. However, at the same time that openness is tied up in the public service mission of universities, Luke also described feeling caught in the middle, between the

111

desire to make important information accessible, and the desire to create a sustainable platform with a healthy funding model.

> I think that if we wanna make it free all the time no matter what the subject we have to have a funding model that works. And I've alluded to the fact that we don't seem to have quite the funding model there, beyond giving me a job, and then hoping that I will continue to work on this.

The healthcare MOOC that Luke taught included mini-documentaries about different moments in U.S. political history as these related to healthcare, he brought in panels of experts to participate in the MOOC, and he regularly updated the content as the political climate shifted. Not only did he spend his initial $10,000 grant on the MOOC, he raised additional money that he also spent on the MOOC. The high cost of his MOOC raised his awareness of the tension between the principles of openness and access and the reality of the need for a sustainable funding model.

Other participants in this study had not thought as deeply about both the moral and practical issues of openness, but belief in the importance of openness came up in passing in other interviews. These MOOC instructors lacked the kind experience with the open movement that Krishna and Rebecca had, but its altruistic aims were nevertheless a value that influenced their decision to teach a MOOC. For example, Sophie commented:

> I've always been very big on the idea of open access education. I try, when I can, I volunteer a lot at things where I can do things like that and so I was excited about the idea of just volunteering and getting things out there.

A belief in the importance of open access to education influences other areas of Sophie's life, such as her volunteer work, and she seemed to see openness as a connection between her volunteering and her MOOC teaching. Meanwhile Ellen said:

> I'd argue most of you go through high school and you probably had a level of thermodynamics although it may not have been labeled as such. So, yeah. Everything about that should be open. A MOOC is absolutely the right answer for that. And any information that's generated from that MOOC should be open access.

112

In this conversation, Ellen contrasted her MOOC teaching, which she believed should be open access, and her research articles, which she described as more "niche." She reported being much more comfortable having highly specialized research articles behind a costly firewall because most of the people who would understand those articles have access to them via institutional subscriptions through their employers. In contrast, she believed that content that is foundational to understanding a subject like thermodynamics should be available to everyone.

For faculty like Sophie and Ellen, openness may not have been the driving motivation to teach a MOOC, but it contributed to their belief that creating and teaching a MOOC would be a valuable use of their time. They believed that certain kinds of information should be open and available to everyone, and that MOOCs are a good way to do that.

### "Fame and no fortune"

In describing the email she received from Provost Pollock inviting her to be one of the first MOOC faculty at U-M, Ellen paraphrased the message as "What's in it for you?… Fame and no fortune." Perhaps because it is unseemly to admit it, participants rarely mentioned the possibility of fame as a reason to teach a MOOC. If anything, it tended to come up in language that was depersonalized or generalized, for example, "I think faculty members, like everybody else, we have a big ego and we'd love to teach a course that's popular worldwide, get our name out there. So, that's a piece of it, too." This may have been their way of telling me that they liked the opportunity to be well known for something, without confessing it directly. Participants talked about fame as something we the generic faculty might have some desire for, rather than as something that appealed to them specifically, as individuals. Brian explained why he thought that might be:

The academy is a strange place because people don't like self-promotion. It's very passive-aggressive. We're basically promoted and hired and paid based on reputation, but anything that smacks of trying to burnish your reputation... Right? 'Cause some people view it as like, that we [MOOC faculty] were sort of like shameless self-promoters, or something. I think that's out there and I think there are probably some people that fit in that box, and there's other people who really had a sense of mission.

Given this understandable reluctance, I will not make any assertions from this data about whether or not fame motivated participants to teach a MOOC, though I will discuss the dispositive case, the one person who openly described his ambitions, at the end of this section. Also, while participants resisted presenting themselves as shameless self-promoters, they appeared comfortable promoting their departments and programs, and even the U-M as a whole. A few named the desire to raise the profile of their program or department as their primary reason for doing a MOOC.

**MOOCs as marketing**

Thomas is the director of the graduate program in Survey Methodology at the U-M Institute for Social Research (ISR), a joint program with the University of Maryland. He explained to me that the survey methodology program is what is called a soft money degree program, which means it does not receive any money from the university. It is entirely self-supported with grants and tuition from students enrolled in the program. He believed that the MOOC had the potential to serve as free marketing, a new way to raise the profile of his program, and drive up enrollments. For him, an increase in enrollments would mean more revenue and financial stability for the program. This explains why he pursued the opportunity to teach a MOOC, even though unlike many U-M MOOC faculty, a large portion of Thomas's career trajectory did not include any teaching at all, and he described himself as feeling much more closely identified with his research than his teaching.

114

Thomas was less invested in the details of teaching a MOOC than most of the people I

interviewed. He co-taught his MOOC with a colleague based at the University of Maryland,

which like Michigan, had partnered with Coursera. Thomas's colleague planned to teach the

majority of the segments, and at first the team tried to teach their MOOC under Maryland's

agreement. After Maryland rejected their proposal, they proposed it at Michigan and the DEI

accepted them. When I asked Thomas why he chose to do a MOOC, his answer surprised me. It

was not about his own interests at all, but rather about the interests of the survey methodology

program.

> Our thinking was that well, we ought to teach the course, our joint program ought to offer
> a course, because someone else is going to do it first, and we think we'd do it better. And
> then we know kind of who the other players were likely to be and we really thought that...
> It wasn't so much a competition, just kind of like, their vision of questionnaire design and
> related topics will get out there and we don't think it's exactly right. So we decided we
> should do it first.

For Thomas, teaching a MOOC was a strategic decision to stake a claim in the MOOC space for

his program. By being the first survey methodology program to teach a MOOC, he hoped that

their vision for questionnaire design would become the dominant one.

Beyond just having the opportunity to articulate a specific perspective on survey

methodology, Thomas hoped that the MOOC would help promote the program to potential

students, and that it might increase applications and enrollments.

> I met a young woman from Brazil at a reception last summer who said, "I didn't know
> there was a field of survey methodology until I took your MOOC. And now I'm here at
> the summer institute learning more." And I was thinking, "Well, this is exactly what we
> hoped would happen." We would recruit people to come to Michigan or Maryland, and
> enroll in these programs.

Thomas's position as the lead administrator for survey methodology increased the salience of the

potential financial implications of teaching a MOOC, and he was not shy about telling me that

his reason for teaching a MOOC was to raise the profile of his program, boost enrollments, and bring in more money.

Other participants mentioned similar motivations even when they were not directly responsible for the financial wellbeing of an entire program. Tim, who taught the learning analytics MOOC, said,

> This was also a little bit motivated by my pretty heavy participation in other things around DEI and the desire to advertise and capitalize on our investment in learning analytics. It was a way of... a different way of creating profile for what we're doing here at the University of Michigan. The traditional scholarly way is you publish in superior journals. It's a slow method, it just is. Usually you do that and 30 people read your paper.

The MOOC, by contrast, was produced in a few months, and reached many thousands of people. Alexander made a similar statement. "I felt that it's a good way to get the Michigan brand and the Ross School of Business brand out in those geographies that are not typically involved in in-class education programs." Like Thomas, Tim and Alexander saw the MOOC as an opportunity to market their programs to new audiences, people who they would not necessarily reach with scholarly papers or standard outreach. And I think it is important to note that these people did not mention raising their own personal profiles, but that instead they emphasized increasing the profile of their programs. It is possible they recognized that the benefits of higher visibility for their programs would also accrue to them as individuals, but if so they did not mention it.

**"Total world domination"**

Only one study participant spoke openly about his desire for fame and fortune. Alan believed that teaching a MOOC would help him attain those desires. He was a prominent figure in the learning technology community before teaching his MOOCs, as one of the leaders of a group that developed the open source learning management platform called Sakai. He was very active on Twitter, and travelled extensively for conferences and invited lectures. When he

116

recounted for me how he pursued the opportunity to be one of U-M's first MOOC faculty, he

explained that when Coursera first launched at Stanford, he felt intensely angry that Michigan

had not come up with the idea first. He went on what he described as a Twitter rampage, and

alienated some colleagues in the open education community in the process. I asked him what he

saw in MOOCs at the time that made him so mad.

> All I saw in my rage was 100,000 students. I saw it as media from the beginning. I have a background in media, I had a television program in the mid 90s. I mean, I wanna be Mr. Wizard. I wanna be Bill Nye the Science Guy. And so, for me it was the scale, it was the outlet, it was just this notion that I have something... I think of myself as Mr. Wizard, as Bill Nye the Science Guy, and why am I not doing that? And that is sort of my destination is to show a lot of people a lot of things, explain to the masses, beyond the radio, beyond television, explain technology to the whole world is part and parcel of who I am. Everything I ever do includes world domination somewhere and total world domination somewhere in the problem statement. "Comma, total world domination." And so this felt to me like an avenue towards total world domination. And now, Stanford was ahead by three months.

Alan wanted to teach a MOOC because he thought it could help him reach a huge audience and

become famous, and he did indeed create one of the most popular MOOCs in the world (Online

Course Report, 2017), which he has parlayed into speaking gigs and book deals.

I do not believe it is a coincidence that Alan was the one participant willing to speak

openly about his desire for fame. He is an eccentric character even by academia's standards, and

he seems to revel in his persona as someone who speaks his mind and shoots spitballs at

authority figures. Over the course of his career he has oscillated between tenure-track faculty

positions and lecturer positions, but has settled comfortably into a lecturer role because of the

freedom it affords him. When we were discussing his discipline, we had this exchange, which I

think captures his happy outsider status:

> Molly: So you said the other courses were taught by computer scientists. Are you not a computer scientist?

Alan: I am, but I'm like a defrocked computer scientist.

Molly: Okay…

Alan: They wouldn't accept me in a computer science department 'cause I'm not hard ass enough… I find technology fascinating and I love technology and I love teaching, but I don't like the fact that Computer Science tends to take technology and say, "We're only gonna teach you technology if you agree to learn everything."

No other participant in the study put "total world domination" in their personal mission statements, but I doubt that Alan was the only one tempted by the potential fame that came with MOOC teaching. Rather, his public face as a straight-talking rebel enabled him to speak freely about the appeal of fame, while other participants expressed concern about the appearance of self-aggrandizement. Although I tried to build rapport with my study participants through multiple interviews, and probed on their answers to fully understand their statements and motivations, it is likely that researchers will need more time with participants, and possibly to promise confidentiality (which I did not), to encourage unfettered honesty about personal motivations.

**Conclusion**

These findings highlight some reasons why instructors might choose to teach a MOOC. These U-M MOOC instructors believed they had something of value to share with a broader audience. Some liked the experimental nature of MOOCs and wanted to use them as a laboratory or a sandbox to do research and try new things. Some wanted to do good. Some wanted to be famous, or at least help their programs enroll more students. Often these reasons were intertwined with aspects of passion, identity, community, and a desire to learn, all of which are elements of the faculty growth framework discussed in Chapter 7. While the findings of this study alone are not generalizable to the broader population of faculty who teach MOOCs, many of these motivations do align with the findings of a study that examined institutional reasons for

118

teaching a MOOC, which included "extending the reach of the institution and access to education, building and maintaining brand, innovation in teaching and learning, [and] conducting research on teaching and learning" (Hollands & Tirthali, 2014).

Hollands and Tirthali noted that while many administrators and faculty had certain expectations for MOOCs, the reality did not always fulfill them. As I discuss in the next chapter, for the participants in this study, the experience of teaching a MOOC was often full of surprises, both good and bad. In some cases, the experience did not meet their expectations, but in many others participants simply had no expectations, or their experience exceeded their expectations in ways they could never have imagined.

**CHAPTER 6: What were the experiences of early MOOC faculty?**

Two of the sub-questions I set out to answer with this study related to how faculty describe and make meaning of their experiences teaching a MOOC:

1) How do university faculty members view their MOOC teaching in relation to their roles as researchers, teachers, and academic citizens? How do they believe MOOC teaching aligns (or not) with these conceptions?

2) What do university faculty experience as the benefits and challenges of MOOC teaching?

This chapter focuses on the meanings that participants who taught MOOCs made from their experiences, and how they framed those within the larger context of their lives as academics. In my interviews, I tried to plumb participants' meaning making through questions designed to elicit participants' feelings about their MOOC teaching, and their descriptions of how their MOOC teaching fit it into their understanding of various different academic roles and responsibilities.

In analyzing the data, I used *a priori* codes, seeking concepts or themes suggested from the research literature and reflected in my research questions; *in vivo* codes based on participants' descriptions and framing of their experiences; and concepts that emerged from the data itself (Coffey & Atkinson, 1996; Saldana, 2009; Weston, et al., 2001). Throughout the analysis process, I wrote memos to help identify themes, patterns, and relationships between codes. A key memo was simply a list of all the different stories I saw emerging from the data,

many of which had to do with patterns of experiences that participants seemed to share. Two of the sections below – Learning about teaching, and Balancing act – depict experiences that most or all of participants in the study described in one form or another. Two others – Isolation and connection in MOOC teaching, and Visibility and discomfort – describe themes where there was a wider range of experiences among participants, including one individual with a uniquely uncomfortable experience. The final section, What is MOOC teaching? reflects answers to a question that I asked every participant, about their meaning making around where MOOC teaching fits into their roles as academics.

**A "worthwhile" experience**

For most of the participants, teaching a MOOC was a decidedly positive experience. By and large, my interviewees told me that if they had it to do over again, even knowing what they know now about how much work it would be, they would still choose to do it. This was true even for the people who said that they would not teach another MOOC in the future; they were satisfied with the one they had done, and reported that they were happy to move on to other things. Participants used words like "inspirational," "opportunity," "humbling," "fulfilling," and especially the word "grateful" to describe their experiences with MOOCs. Despite their reports of the colossal amount of work required to create the MOOC, they somehow managed to enjoy the process; several participants even described it as "fun". As Brian put it, "This is like some amazing gift I was given, yet I have to put in freakish amounts of work." Dev said, "And so the thing I would like to say is that I just have had a blast." He went on, "Oh, it's fun and it's opening up too many opportunities to experiment, and my challenge now is what to say no to." Regardless of whether this was an opportunity that was offered to them, or one that they pursued,

nearly everyone I spoke to felt that doing the MOOC had been a net positive, something that had been a "worthwhile" use of their time.

A few participants described the MOOC as life changing because it opened up opportunities and connections that would not have been available to them in any other way. Participants received speaking invitations, consulting work, and even job offers that they attributed to their MOOCs. Rebecca, who uses her MOOC to do education research, said "I just remain grateful for the MOOC. 'Cause it really was a game-changer for me in a lot of ways, professionally, personally, intellectually." Her MOOC gave her a space to conduct the kind of education research that she had been unable to accomplish in her other academic roles, and it brought her a degree of fame within her field that created new opportunities for her to travel, present, and collaborate with colleagues. Sarah, whose MOOC on cataract surgery was somewhat unusual for its specialized, hands-on subject matter, was invited to participate in meetings with policymakers in India who are developing plans for improving eye-care delivery across the country through the use of telemedicine and online educational modules.

**The multiple contexts of MOOC teaching**

In order to analyze the experiences of MOOC instructors, it is necessary to take a moment to consider the contexts in which these experiences occurred. As Seidman (2013) argues in his structure for phenomenological interviewing, "context is crucial to understanding the meaning of participants' experience from their point of view" (p. 19). In the case of MOOC teaching, there are several contexts that potentially influence the experiences and meaning-making of the instructors in this study. They include the studios where participants spent many hours in front of a camera, the virtual spaces of the MOOCs themselves, the public research university at which the participants were all employed during the time of their MOOC teaching,

122

and the global context of academia as a whole. Each of these contexts contributed to shaping the experiences of MOOC instructors, and to influencing the meaning that instructors have made from those experiences.

**The studio.** Nearly every participant described the effort it took to adapt to teaching in front of a camera instead of a room full of students; it came up so much that "the camera" seemed like a character in my participants' stories of MOOC teaching. Most of the participants made their videos in a studio, with bright lights in their faces, a green screen behind them, a microphone attached to their clothes, and a single technician operating the camera, sometimes giving feedback, sometimes focused on something else. Depending on the number and length of lectures in a given MOOC, instructors could spend as many as fifty or even one hundred hours in the studio and in front of the camera. In reflecting on their experiences teaching a MOOC, the physical sensation of sitting in that hot seat came up again and again, which I discuss in more detail in subsequent sections.

**The MOOC.** MOOCs themselves are virtual spaces, with structures, timelines, and norms that form their own kind of context in which instructors experienced MOOC teaching. The MOOCs are also forums for communication, mostly among MOOC students but sometimes with instructors and teaching assistants as well. In the virtual space of the MOOC students could make connections with each other, set up study groups both in person and online, ask and answer questions, and discuss the content of the course. All assessments of students occurred within the context of the MOOC, as well as most instructor interactions with students. The platform on which the MOOCs run, built by Coursera, changed frequently throughout the period that participants were making their MOOCs, contributing to a sense of experimenting and being

experimented on ("That's one of the things that I'm contributing that's unseen, is that I'm a guinea pig, and hopefully for the next faculty member it will be better").

**The public research university.** An entire study could be conducted on the institutional context in which instructors produce MOOCs. Relevant for this one is that the University of Michigan is an elite research university. The tenure process is long and grueling, and often emphasizes research over teaching and service (Schuster & Finkelstein, 2006). Demands on faculty time are myriad, including administrative committees, grant applications, service to academic societies and professional organizations, and mentoring and supporting students. Departments are often very large, but at the same time, an individual's research is likely to be highly specialized, and she may not have any or many collaborators at her home institution (Clark, 1989; Gappa, Austin, & Trice, 2007). A large portion of the instructional staff do not have tenure, but are rather in lecturer positions, only some of which confer any degree of job security (Halcrow & Olson, 2008). Online courses, which are increasingly common in other sectors of higher education, are unusual, and most faculty have no prior experience teaching online. These facts of life at an elite university are threaded through the participants' descriptions of their experiences with MOOCS, and are crucial to understanding what it was like for them.

There are also specific choices that the administration of University of Michigan made regarding its approach to MOOCS which affected participants' experiences, and which would be different at another MOOC producing institution. For example, leadership decided very early on that Michigan MOOCs would have professional production values, and the DEI invested in building video studios and hiring production staff to work with instructors on their courses. These choices provided instructors with access to support and expertise that they would not have

had if they did not teach a MOOC, but also added layers of bureaucracy and complication to what was already a very time consuming process.

In addition, there is a duality that results from Michigan's status as a public research university. Michigan features the cosmopolitanism one might expect from an elite university, in that it draws its faculty from a global community of scholars rather than a local one, but at the same time its central mission is to educate and serve the citizens of the state of Michigan (Rhoades, Kiyama, McCormick, & Quiroz, 2008). Michigan balances (or tries to balance) its status as an elite R1 institution that competes internationally for both talent and funding, with a commitment to meeting the educational needs of a local public (Duderstadt, 2007). When the University announced its partnership with Coursera, it emphasized dual goals of expanding access to education across the world, and improving the educational experience for students on campus. In the press release, then president Mary Sue Coleman said, "Our faculty members are eager to share their knowledge globally and our students are equally excited about experimenting with this new approach to learning" (Coursera, 2012). These dual purposes, and the tension inherent in them, are an important part of the context in which study participants pursued and experienced MOOC teaching. Participants expressed a sense of responsibility towards their residential students, most of whom pay to attend Michigan, while at the same time they were aware of how the cost of attendance is a barrier for many worthy people around the world who cannot access high-quality postsecondary education. "Michigan is trying to showcase what we do on campus and say, 'We do even better when you come here.' I think our challenge is: How do we not just keep doing MOOCs, but use MOOCs to enrich what we do on campus, that's what our challenge is."

**Academia.** Within the institutional context of U-M, MOOCs were framed in terms of global access and local educational innovation, but in the broader context of academia writ large, the narrative around MOOCs was one of controversy and disruption. In both the higher education news outlets (e.g. *The Chronicle of Higher Education, Inside Higher Ed*) and mainstream press popular among academics (e.g. *The New York Times, The Atlantic, The Economist)*, stories about MOOCs abounded, usually focusing on the ways that they would revolutionize, innovate, and disrupt the entire system of postsecondary education as we know it. In this study, participants referred to the disruption controversy in relation to a variety of issues, including how they decided to do a MOOC, whether and how they speak to their colleagues about it, and their expectations for what impact their MOOC would have. By the time of this study, most of the hype about MOOCs disruptiveness had given way to the "trough of disillusionment" that often follows excitement about new technology (e.g. Selingo, 2014), and that also came through in interviews, for example, when a participant learned that most of the people enrolled in MOOCs had already completed at least some postsecondary education and many had advanced degrees.

**Experiences of MOOC teaching**

In this chapter, I describe an array of experiences with MOOC instruction, beyond declarations of gratitude and opportunity. The first four sections provide evidence of four themes I derived from the analysis: Learning about teaching, Isolation and connection in MOOC teaching, Visibility and discomfort, and Balancing act – while the final section focuses on answers to a question central to instructors' meaning making: What is MOOC teaching? In Learning about teaching, I follow the theme of learning through the different spaces in which participants learned to teach differently and better, both in their on-campus classrooms and in the

virtual space of the MOOC. In Isolation and connection in MOOC teaching, I trace the dual

threads of isolation and connection through the assorted social contexts in which some

participants made connections while others did not. The section entitled Visibility and

Discomfort reveals some of the more unpleasant aspects of teaching a MOOC, especially those

related to the increased visibility that comes with teaching in this new and public way. In

Balancing act, participants describe the tremendous time commitment creating a MOOC

required, and the challenge of balancing it with their already busy lives. And finally, in "What is

MOOC teaching?" the focus is on how faculty define and make sense of their experiences

making MOOCs. These themes offer possible answers to my research questions.

The table below provides an overview of the themes discussed in this chapter. As in the

previous chapter, I organized the themes roughly according to their salience to participants. The

first two themes were relevant to over half of study participants, and the latter two for less than

half.  As noted in the previous chapter, this order is not a reflection of frequency of responses in

the data, which would reflect both the questions I asked and my coding decisions rather than a

measure of the importance of the theme to participants.

**Table 3: Themes related to the experiences of MOOC teaching**

| Theme and contributing categories | Description | Example quote |
|---|---|---|
| *Learning about teaching* | | |
| - Learning to teach the MOOC | Descriptions of various skills participants had to learn in order to teach their MOOCs. | "I think the whole experience helped me to become a better lecturer in general. Because I feel just going through the process of recording it, watching myself, I realized different things. I rehearsed the lecture a lot before I recorded it, but I felt like that made it go smoother." |
| - Learning for classroom teaching | The MOOC provided new insights/ideas about how to make more effective use of | "I also specifically teach now in eight- to ten-minute chunks, and then I pause, or I pivot to a new |

| | | |
|---|---|---|
| | time, honed their lecture skills, and gave them valuable insights into their students. For a few, the MOOC experience inspired significant changes in how they structured their residential courses. | topic. Or I take a moment to summarize in ways I never did before…Now I feel that my participation in the MOOC environment has in turn helped me be a better in-person teacher." |
| *Balancing act* | | |
| - Tremendous time commitment | Discussion of the extensive and often unexpected time commitments MOOC teaching required. | "I didn't really know what I was getting myself into. I grossly underestimated the cost that would take to develop this course, this specialization. I probably underestimated by a factor of two easily." |
| - Full academic and personal lives | Discussion of how MOOC teaching intersected with other parts of participants' lives (e.g., family, travel, teaching). | "Long story short is, I think it would be really fun and I would love to, but in the pie chart of where my time is, I'm like, 'What would I take away?'" |
| *Isolation and connection in MOOC teaching* | | |
| - Home departments | A sense that colleagues in their home departments did not know or care about their MOOC teaching. | "I'd be surprised if six of my colleagues know I teach MOOC. And those are probably the six people that teach thermodynamics that I went and talked to about this." |
| - Fellow MOOC instructors | Involvement with fellow MOOC instructors that lead to a sense of colleagueship, or the absence of colleagueship and feelings of isolation. | "There are representatives from the Medical School, from the Business School, from LS&A. That's nice again just for me to see, 'Oh what are your perspectives? What do you value in your school? What do your students value? Who's your audience?' Things like that." |
| - Students | A determination that engagement with MOOC students was unnecessary for learning and thus not a good use of faculty time. | "When it first came out I was intensely involved, and now I hardly ever think about it. I follow the forums, I try to participate and so forth. And the more you do it, the more you realize that it's not important that you do it. That the |

| | | important thing is the people's engagement with the material and with each other." |
|---|---|---|
| *Visibility and discomfort* | | |
| - Dealing with feedback and criticism | The challenges of dealing with feedback from MOOC participants because of their high profile and scale. | "I was getting, at the beginning, hundreds of emails a day and some of them weren't very nice and it was too depressing. I want to fix things, but negativity doesn't actually help when you are trying to just create. I just don't read them anymore." |
| Fame, wanted or not | The challenges of "fame" and feelings about it. | "I went and did this workshop and it was the weirdest thing to go into this group because they all gave me hugs like they knew me and I'm like, 'I don't know you'. That was a really weird experience. And they all remarked that like, 'I felt like I know you. You've been in my living room' and I'm like, 'Yes, but I haven't.'" |
| Stage fright | Description of the experience of stage fright. | "All of a sudden, I'm like, 'Wait a minute, I have to be videotaped. I can't do that,' was kinda my response. And there was a period of time, when I was like, 'I'm not doing this.' But I had the money, I couldn't not to do it, right?" |

**Learning about teaching**

MOOC teaching was new for all of the participants, and teaching online was new for

most of them, so I expected that the experience would provide ample opportunities for learning,

which is also a central aspect of the faculty growth framework. One of the questions that was in

bold type in the interview protocol, because I wanted to make sure to ask it of everyone, was

"What have you learned from teaching a MOOC?" In addition to answering that question

directly, participants continued to describe experiences of learning throughout the interviews.

129

Learning was required at different points in teaching a MOOC, including how to create the video lectures, develop assessments, and interact with MOOC students. Participants described learning to teach better, and learning to teach differently. They described learning to teach in the context of the MOOC, and learning skills that they were able to employ in their classrooms on campus.

Many participants reported that doing a MOOC changed the way they teach in their residential classrooms, and very early I created a code for "changed the way I teach." Participants identified these changes as a clear benefit of MOOC teaching, both for themselves and for their residential students. As Ellen observed, "we learned so much from the MOOCs that we can translate back to the residential experience. There is a benefit." A few instructors specifically used their MOOC videos to flip their residential classrooms or had plans to do so, while others described applying techniques they learned while doing their MOOCs to their in-person teaching, such as "chunking" their lectures into shorter segments to improve student focus and attention.

Participants described adapting to MOOC teaching as a "learning curve" for several reasons, such as getting comfortable in front of the camera, adjusting to the short lecture format, and creating assessments that worked at the scale of a MOOC, which could have several thousand students enrolled at once and needed to work without human intervention. They frequently noted contrasts between their experiences with classroom or clinical teaching and their experiences learning to teach the MOOC. My analysis suggests two main contexts for which participants learned about teaching: They learned how to teach the MOOC, and they learned new ways to teach in their classrooms.

**Learning to teach the MOOC**

An experience that most participants discussed with regard to learning to teach the

MOOC involved adjusting to being in front of a camera. Discussions of the work that was

required just for instructors to learn how to teach for the camera, aside from all the other work

they did to create course materials and lectures came up frequently in interviews. Teaching to a

camera is a dramatically different activity than teaching to a seminar room or lecture hall; the

camera provides no feedback, no signs of interest. For a few participants, prior experiences as a

performer, or a preference for the camera over a crowd, meant that the filming aspect of making

the MOOC was fun, or at least less difficult. However, most of the participants found that

adapting to the camera was one of the biggest challenges of doing a MOOC, and likewise a

major source of learning. Some of the challenge derived from the specifics of teaching for video,

but much of it had to do with adjusting to the loss of the interaction and energy that comes from

a room full of students. As Alexander put it:

> The first thing that I've discovered is that being in front of the camera is a very
> unforgiving experience. One of the reasons I love teaching is, unlike in the publication
> process, you get instant gratification. So you know if the class has gone well. You see the
> level of energy, you see the smiles on student faces and you kind of feed off of that
> energy, at least I do as a faculty member. And this digital environment there was none of
> that. You come in and you're staring at the camera, and I had a very supportive
> videographer who was absolutely awesome. But I'm used to audiences of 60 plus people
> and it's just a different experience.

Many participants expressed similar sentiments, for example Rebecca said, "The

experience of the teaching is tough, because usually, you're used to being in a room with people,

where you can read the crowd. In this, you are talking to a camera, and it's weird." She added

that the videographer worked with her on how to be a more effective on-camera instructor: "So, I

ended up creating some strategies. He taught me how to talk to a camera, 'cause he's a

filmmaker, and I had to just envision the one or two people who I was talking to."

There was a physical component to learning to teach for the camera beyond the lack of in-room feedback. In the classroom, many participants, regardless of their teaching style, described wandering around, pacing, moving throughout the room. Teaching for the camera is necessarily a stationary activity. Krishna explained:

> I hadn't realized how out-of-body of an experience it can be to be in front of a camera the first few times, until you get used to it. And that it actually takes... It's a mental effort but it also becomes a physical effort, because after sitting for two and a half hours in one of those chairs, you are actually aching.

This visceral aspect of MOOC teaching had not occurred to me. Not only did MOOC instructors observe the psychological aspects of teaching alone and teaching students, but they identified the actual physical experience of teaching for the camera as unfamiliar as well. They had to make both the mental adjustment to teaching without an audience, and the physical adjustment to being stationary. While for most participants this learning was mostly relevant in the context of the MOOC, a few described ways that these skills then translated to other contexts. Brian found that having extensive practice speaking to a camera in an empty room prepared him to be more effective when doing webinars. He became comfortable just "speaking into the void" in a way that he believes he would not have been prior to the practice he got from doing the MOOC.

In addition to learning how to teach for the camera, some instructors also had to learn new modes of instruction for the MOOC. Most early MOOC instruction was lecture-based. Though the lectures are often shorter than a standard university class, for instructors who did not previously use lectures as their primary mode of teaching, it still required quite a bit of practice. Prior to the MOOC, Sarah, the ophthalmologist, did most of her teaching in a clinical setting, working one-on-one or in small groups with residents. Though she lectured occasionally, it was

not a mode in which she felt comfortable. Sarah believes that doing the MOOC gave her the

practice and support she needed to learn to be a better lecturer.

> I think the whole experience helped me to become a better lecturer in general. Because I feel just going through the process of recording it, watching myself, I realized different things. I rehearsed the lecture a lot before I recorded it, but I felt like that made it go smoother. So I feel like there's just intangible things that [I learned] going through the process; when I give my future lectures it kind of helped me.

Alexander, whose on-campus courses are all discussion based, and who feels quite

confident guiding and leading those kinds of classes, also had to learn to teach in a lecture format

for the MOOC. He spoke about the challenges of adapting to MOOC teaching.

> So for example, when you do discussion, yes, at some level you can say that it's more difficult because you're never fully and completely in control, you don't know exactly what questions are gonna come up, how students are gonna respond to your questions, how they're gonna respond to one another. But the classroom is always engaged and you can evaluate this engagement while being in the class, but because they're involved in the creation of knowledge essentially and this inductive reasoning, they're always engaged. In a lecture environment, I had to think very hard about, how do I create these punctuations in the delivery so that people would stay engaged?

Though it was "not easy," ultimately Alexander felt that learning to lecture for the MOOC taught

him new tools to use in his classroom.

> It also helped me, I believe, develop a broader portfolio of engagement tactics. So, with situations where I cannot rely on participants to drive engagement and drive energy, what else can I do in terms of asking questions? Creating a less linear flow over discussion, pausing with question, inserting an anecdote, a vignette, a video, on my end.

Indeed, there appeared to be several connections between learning to teach the MOOC and

learning skill, tools, and methods that applied in face-to-face classrooms.

**Learning for classroom teaching**

Several participants described how teaching a MOOC taught them to make more

effective use of time, honed their lecture skills, and gave them valuable insights into their

students. For a few, the MOOC experience inspired significant changes in how they structured

their residential courses. This small group of instructors used their MOOCs to flip their classrooms in a way that completely revolutionized their teaching.

Krishna described the MOOC as a "game-changer" in his teaching approach. His MOOC on Finite Elements, an advanced computational method for physics and engineering, covers the same content as the class that he teaches on campus. Once he completed the lecture videos, he stopped giving those lectures in the class, and instead assigned students to watch 2-3 hours of video each week before coming in. When we spoke, he had taught the residential course this way three times, refining it each time. After the first two times, he said, "I grew a little dissatisfied because I found that students were watching it, they were definitely using it, but I was not getting quite the amount of discussion I wanted to in class." The third time, he organized the students into groups of five and created forums for them on the course learning management site, where he required them to post questions related to the lectures each week, and those questions provided the groundwork for each week's discussion. "What that let me do, which was always the intent, was let me go far deeper, and in some cases broader, than the foundational material that's in those lectures, and which I would formerly be only teaching."

Prior to the MOOC, Krishna had almost exclusively lectured in his classes. That was how the instructors he admired as a student taught him, and because it is quite standard in his field, he prided himself on being an excellent lecturer who could work without notes. Referencing professors he once sought to emulate, he said,

> It was clear that these guys did not need notes to teach, that they just went in there and they taught because they owned this material so completely. And I found that very cool. Not just cool... How to put it, it makes you feel that you are learning, that you're actually diving into a very broad and deep subject and there are actually, there are no barriers to how far you can go… And that makes a very different learning experience, I found, at least it spoke to me. So I think that that's what I aimed to do.

He had always addressed questions that students posed during classes, but flipping his classroom profoundly altered the structure of the course from one that primarily used lecture—which he had worked hard to master — to primarily using discussion. Moreover, flipping his classroom allowed the class to move through the material more quickly, freeing up time to teach subjects he had never had the opportunity to cover before.

> I have two weeks at the end of it when I bring in my [research] group, and they talk to them about how they can take this and go much, much further with it. Do things that we don't cover in those lectures and I never intended to cover. It's actually true now that after taking this one campus class with me, using these lectures, doing the programming, and doing this extra two-week period, they are actually better positioned than a finishing PhD student would have been before all this material.

Krishna believed that teaching this way required his students to work harder, but he also described it as a game-changer for him because he learned to teach a completely different way.

In our interviews, Dev spoke at length about the ways he thinks residential education will change as a result of the proliferation of MOOCs and MOOC-like content. Reflecting on his role as a special advisor on digital education to the provost, he argued that in-person education must become even more high-touch and individualized, at the same time that "we owe it to society to see how much technology can help us make education more impactful, and less costly at the same time." He described learning how to use digital education to enhance his residential classroom, as his "responsibility," to provide leadership and a model for how technology can improve education. In line with that belief, he used one of his MOOCs to flip of one of his business school classes, called Fast-Track Finance, which exists both as a residential course and as a MOOC. As he has created more online resources and assessments for the MOOC, Dev integrated them into his class on campus. Like Krishna, he found that using the MOOC lectures and exercises, and assuming that students had already watched them, enabled him to tackle much more challenging material in class. It has also challenged him, because,

what I then do, which is more difficult for me, is I show up in class and it's completely... I tried for at least 80% of the classes to be unorchestrated, where they are showing up and they don't know what's going to happen. That's a challenge because I don't know what I'm going to do either. But I think that's what face-to-face education should be about, right? So I'm playing that game, and my motto is "If I say anything that you can Google live while I'm talking, shame on me." Very tough to live by, by the way, because they catch me all the time.

Dev commits himself to teaching material that is not readily discoverable with a quick Google search, and reported that his students regularly hold him to it by attempting to search for what he is teaching in real time in the classroom. "I think of it as, 'If you can Google it, you don't need me.'" Using the MOOC content allows Dev to push himself into unfamiliar territory in his teaching, teaching content he has never included in his courses before, and that is not part of a standard finance curriculum. By his animated tone, it was clear that he relished this change in his teaching.

Although the changes that the MOOC experience prompted in participants' teaching were not all as dramatic as completely flipping a classroom, they presented new opportunities. Several made or were planning to make smaller changes to their teaching as a result of the MOOC experience. Thomas explained that he prefers lecture as a mode of instruction, but the MOOC exposed him to other teaching methods. At the time of our second interview, he was working on a new MOOC in which he interviewed experts in the field rather than creating a series of lecture videos. Thomas described the goal of this approach, saying, "I think it will feel almost like [the students are] eavesdropping on a conversation. But it won't feel quite so scripted or structured as the lectures. I think I'm gonna do some of that in my conventional classes. It's not like it's a radical idea to bring in guests, but I've never done it." For Thomas, who had never brought guests into his classes before, teaching the MOOC showed him how an instructional approach other than a lecture could be valuable, and made him feel like it was something he could try.

User studies from the earliest MOOCs found that most students stopped watching lecture videos after six minutes, regardless of how long the video was (Guo, 2013); as a result Coursera and DEI staff strongly encouraged instructors to keep their lecture videos under ten minutes. Several participants mentioned incorporating this advice into their face-to-face teaching, though they all admitted they could never quite meet the six-minute target. These participants found that chunking their classes into shorter segments helped maintain students' attention, allowed them to check in with themselves to make sure they were staying on track for the day's topics, and permitted more opportunities for students to ask question. As Luke described it,

> I also specifically teach now in eight- to ten-minute chunks, and then I pause, or I pivot to a new topic. Or I take a moment to summarize in ways I never did before. Appreciating just how effective that can be, and how necessary it is for the learners. But, I didn't respect that enough before. Now I feel that my participation in the MOOC environment has in turn helped me be a better in-person teacher.

Sophie had a similar experience.

> So I tend to be a little bit longer, but it's still trying to break it down into chunks like that has translated well into my classroom and that I've tried to build in more break points, more very deliberate break points where I can stop with the students, check in, see how everybody's doing. I've learned that it's important to really break things up more, not only just for the students' comprehension but for my own to kind of make sure I've hit everything.

All of these instances of learning from the MOOC raise a pair of questions about the participants' experiences: Why is teaching the MOOC so different from teaching in the classroom, and why do instructors learn so much from it? Doing the MOOC happened outside of the routine of participants' regular teaching and research schedules. Furthermore, all had heard the media narrative that MOOCs were something different, that MOOCs were going to change higher education and revolutionize teaching. One aspect of that message is that MOOC teaching is different from other kinds of teaching. This break from the routine afforded participants the opportunity to step back and focus on their teaching, to think about it in a way that they do not

always get to in the regular rhythm of course preps and teaching during school year. Because

MOOC teaching was so public and risky, it pushed some participants to practice more, and to be

more conscientious in their preparation, something I discuss later in this chapter. In addition,

most participants were given access to support staff who would work with them on camera skills,

on developing assessments, and who would tell them about best practices in the MOOC space,

some of which are also applicable in the classroom. Doing a MOOC gave participants access to

time to think deeply about teaching outside the demands of their normal routine, and resources to

improve their teaching that would not otherwise have been available to them.

The faculty growth framework describes learning as central to faculty work and to the

contributions that faculty make. The authors emphasize opportunities to consider faculty learning

in the context of regular faculty work and life. These findings, that MOOCS offer rich

opportunities for faculty learning in part because they are outside the confines of regular faculty

life, suggest another avenue for potential study.

**Isolation and connection in MOOC teaching**

At the start of this study, I was curious about whether teaching a MOOC afforded

instructors opportunities to make connections with other people, what kinds of connections, and

with whom. In part my questions were derived from the faculty growth framework, which

highlights professional relationships as one of the potential advantages of faculty life. The

faculty growth framework is set up as a "counternarrative" to the "narrative of constraint" that

prevails in much of the existing research on faculty. One thread of the constraint narrative that

the authors highlight is the "image of the academic as the lone ranger, limited by isolation"

(O'Meara, Terosky, & Neumann, 2008, p. 158). Would people who teach MOOCs have

opportunities to meet and know their fellow MOOC instructors from across the institution?

Would the MOOC provide a way to deepen relationships with colleagues in their own departments? Would they somehow connect with students in the MOOCs? There were clearly obstacles that might impede such connections; though MOOCs provide the opportunity to teach tens of thousands of people at once, dramatically extending the reach of an individual instructor, the experience of teaching one could be quite isolating. The process of creating a MOOC was often solitary, the instructor alone in front of the camera. MOOC teaching is almost entirely asynchronous; the instructor creates the videos, activities, and assessments alone or with a small team, and it is not until weeks or months later that students engage and respond to the materials (if they respond at all). Moreover, because the participants in the study were among the first MOOC instructors in the world, they did not have many peers who understood what they were doing, with whom they could share experiences and frustrations. It seemed possible that in the case of MOOCs, the prevailing narrative of isolation might in fact be more applicable than a counter-narrative of connection and community.

In the interviews, I took a mostly positive approach, asking questions that centered on connections rather than isolation. I included questions in my interview guide designed to gather information on how MOOC instructors' home departments responded to their decision to teach MOOCs, and I asked about it in my first interview with every participant. I also asked whether participants interacted with other MOOC faculty, and whether they had given or received any mentoring related to teaching the MOOC. To get at possible connections with students, I also asked participants about their involvement in the MOOC forums, and about what kinds of interactions they had with people who were enrolled in their MOOCs. Some participants paid attention to the MOOC demographics and analytics – large-scale data that provide a big picture overview of students -- but I wondered if the MOOC was so big that it would make it difficult to

think of students as individuals, and because day-to-day involvement in the course varied substantially among participants, and for a single participant over time.

In this section, I trace the themes of isolation and connection that I identified in my analysis, focusing on three different populations with whom instructors interacted: colleagues in participants' home departments, fellow MOOC instructors, and MOOC students.

**Home departments**

The answer to the question "How has your department responded to your MOOC teaching" ended up being much less interesting than I had anticipated. It was consistent across most participants, and boiled down to four words: "They have no idea." As Ellen put it, "I'd be surprised if six of my colleagues know I teach MOOC. And those are probably the six people that teach thermodynamics that I went and talked to about this." I had assumed at the start of this study that instructors' home departments would have responded either with support, or, given much of the MOOC backlash in the media, perhaps with some suspicion and hostility. I was not prepared for such uniform ignorance.

When I asked participants why they thought their colleagues did not know about their MOOC teaching, their answers were less consistent. Ellen said, frankly, that "they don't care." Thomas assumed it had to do with the hectic nature of faculty lives: "Not much reaction at all, I would say. Just because everyone's so busy they're really not paying attention to what others are doing." A few participants appeared to be actively hiding the MOOC from their colleagues. One participant said, "This is sort of personal but I've flown very much under the radar. I don't talk about my MOOC because I'm afraid of the reaction." He expressed concern that his colleagues would think MOOCs are the wrong thing for his program to be doing, or that they might be envious of the popularity of his course. Similarly, Laura, who had mixed feelings about the

MOOC she taught, blamed her colleagues' ignorance on her own failure to communicate. "So

people don't know, right? Because I haven't advertised. I didn't talk about it. I think most people

would not know I have a MOOC."

This desire to keep their MOOC teaching hidden is understandable in the face of the

second most common response to the department reaction question: They know, but they don't

get it. Rebecca, the OB-GYN who also conducts education research, explained that her education

work has always been strange to her clinical colleagues, and that their reaction to her MOOC is

in line with their reactions to much of what she does.

> Folks in my department, they're like, "Oh, Rebecca's got her little thing. That's great."
> They don't understand it. But they have not understood a lot of my formal scholarship
> and training in education, which is okay. I've referred to myself as an edugeek, right?
> When you're an edugeek, people just don't know what to do with you. So when I talk
> about epistemology, they look at me as obstetricians. They're like, "No. We don't do
> those anymore, Rebecca."

This was a joke. An episiotomy is a once-common surgical procedure performed during

childbirth that has fallen out of favor in recent years. Epistemology is the study of the production

of knowledge popular among education theorists. Rebecca is joking that when she mentions

epistemology, her colleagues think she is talking about episiotomies (or perhaps her colleagues

are the ones poking fun). Her tone suggested that perhaps her colleagues are somewhat

dismissive of her educational research, an experience shared by Sidney. When I asked him about

his department's reaction he said, "They basically ignore it. Everybody thinks it's cool. Nobody,

except me, thinks it's important." At the time of our interview, Sidney was the only person in the

American Culture department who had done a MOOC, and one of the only ones in the entire

College of Literature, Sciences, and Arts. He went on, "'Yeah, that's something that Sid does.'

I'm a lecturer, I'm not a tenured faculty member, and so I'm kind of a marginal person to begin

with. I'm valued, but I'm also marginal. And I don't think people give much attention to the

MOOC." These experiences, of feeling their MOOCs are not valued by their colleagues, did not necessarily belong to the people who identified themselves as outsiders and rebels, discussed in the previous chapter. It spanned disciplines, and generation of MOOC. For most participants, doing the MOOC did not provide new ways to connect with colleagues in their home departments; instead, the MOOC was an experience apart from life in their departments, either because participants intentionally kept the MOOC work separate, or because of the "cosmopolitan" life of faculty in research universities, whose colleagues are not typically local but rather exist in global scholarly communities (Clark, 1989).

Krishna offered a single dispositive case. While he believed that most of his colleagues in his very large department have no idea about his MOOC, he said that a handful of colleagues not only knew about his MOOC, but watched it and used it.

> One of my most satisfying moments was when colleagues from here in the department who do work that is not the same as what I do, but have an interest in what I do, actually sat through all these classes of mine, not physically, but watched them online. And that gives us a connection. Whether or not something develops from it is a separate matter, but it creates an opening. And that is tremendously satisfying.

This feeling, that his MOOC offered him a new way to connect with some of his colleagues in his field, with or without the potential to grow into a more collaborative relationship, was something I hoped to hear more often from participants. Instead, Krishna was the only one. In the context of their home departments, it appears that teaching a MOOC was an isolating, or at least isolated, experience.

**Fellow MOOC instructors**

While teaching a MOOC did not provide most instructors with better connections to colleagues in their departments, for some it did offer opportunities to build relationships with fellow MOOC faculty from across the university. There were two main ways that participants

connected with fellow MOOC instructors; either they were involved in one or more DEI committees, comprised of MOOC faculty and others actively engaged in adopting and developing digital education tools, or there were other MOOC instructors elsewhere in their school or college with whom they may have already been familiar, and the MOOC offered an additional point of commonality over which they could relate. However, there was also a group of participants who did not know or feel connected to any of their fellow instructors. For this group, who neither connected with colleagues in their home departments or fellow MOOC instructors, the MOOC experience was one of isolation.

About halfway through the first round of interviews, I learned that some of the study participants were involved in one or two advisory committees for the office of Digital Education and Innovation, related to MOOC selection and developing strategy for digital education initiatives at the University of Michigan. I added questions about participation in committees to the follow up interview protocol, and observed that there seemed to be some clear differences between the participants who were involved in DEI committees and the ones who were not, in terms of their feelings of connectedness with fellow MOOC faculty.

The DEI committees appeared to provide a rewarding and enjoyable context in which MOOC instructors developed camaraderie with their colleagues. Some of this structure has changed since this study was conducted, and participants themselves found the structure confusing, but as it was explained to me by James DeVaney, the director of DEI, there were two committees related to MOOCs that offered opportunities to spend time with other MOOC instructors. The first is Digital Innovation Advisory Group (DIAG), which was large, had several subcommittees, and included both faculty who teach MOOCs and others who do not but are involved in educational technology innovation in other ways. The second was the MOOC

143

selection committee, a smaller subcommittee of DIAG which Dev chaired, and which was responsible for reviewing all MOOC proposals, providing feedback to creators, and ultimately making recommendations to accept or reject proposals. The members of the selection committee were called DEI Fellows, and most were people who had taught at least one MOOC.

Four participants were involved in the MOOC selection committee: Dev, Ellen, Rebecca, and Krishna. Those four plus Tim were also members of DIAG. At the time of our second interview, Tim was also chairing a different subcommittee of DIAG called Personalized Learning. Serving on the MOOC selection committee gave participants an opportunity to spend extended time with their colleagues who had taught MOOCS. The selection committee met and communicated frequently (as Ellen put it, "I see those guys at least monthly. We interact by email practically weekly"), and was small enough that participants felt they got to know each other. Rebecca said, "I love being enmeshed in that community and I hope that when the fellowship ends we don't kinda just get booted out." Rebecca and another member of the committee who does not teach MOOCs found they shared a research interest and decided to collaborate on an MCubed grant, a U-M research funding program that offers grants to interdisciplinary teams from at least two different units on campus. As she put it "[My collaborator] and I would not have gotten together without the DEI fellowship." Ellen, who is based in the College of Engineering, also described the benefits of cross-campus connections that resulted from her work on the committee: "There are representatives from the Medical School, from the Business School, from LS&A. That's nice again just for me to see, 'Oh what are your perspectives? What do you value in your school? What do your students value? Who's your audience?' Things like that."

Serving on the selection committee gave participants a window onto new potential

MOOCs, as well as the faculty who proposed them. "You get to watch how, once you make these

approvals or not, you get to watch how these MOOCs evolve. That's a lot of fun." I asked if the

review committee took a mentoring role with any of the faculty proposing new MOOCs, and

Ellen told me that for the most part they did not. The relationship extended as far as giving

feedback, and connecting proposed instructors to people and resources in the DEI that might be

helpful to them. Participants had less to say about DIAG, except that it was big. As Tim

described it to me, "It's pretty diverse in its degree of engagement with this kind of work and in

its disciplinary spread. So it gives [DEI leadership] a chance to find out, 'What do people think

about the move to Canvas, what do people think about Unizin[12]?'" DIAG did not create the same

feeling of connectedness that the MOOC selection committee did, though because of its scale it

offered some opportunities to network with colleagues from across campus.

The other way that participants made connections to fellow MOOC faculty was by being

in a school or college that had other MOOC faculty in it. Eleven out of the sixteen study

participants had at least one other MOOC instructor in their school or college:

- Sophie and Alan in the School of Information

- Laura, Rebecca, Luke, and Sarah in the Medical School

- Dev, Roger, and Alexander in the Business School

- Ellen and Krishna in Engineering

When I asked if participants knew or had connected with other MOOC instructors, the ones who

said yes tended to mention colleagues in their own discipline. In some cases, those connections

already existed before people taught their MOOC. Laura and Rebecca worked together on

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[12] Canvas is a Learning Management System that the U-M implemented campus-wide in 2015. Unizin is a consortium of public universities that collaborate on the development and purchasing of educational technology.

developing the new Medical School curriculum, and were generally aware of each other's work in both teaching and research. Sophie and Alan proposed their MOOCs as a team, even though they ended up teaching separately. In the business school, because Dev was in the first wave of MOOC instructors, and because he took on a leadership role as the special counsel to the Vice Provost for digital education, he served as an ambassador to the Ross School, and recruited Roger to do his MOOC. These were not necessarily strong connections or mentoring relationships, but at least in some cases, participants did feel there was someone they could reach out to when they had a question or hit a snag.

However, having another MOOC instructor in their school or college was not a guarantee that participants would make connections with them through MOOCs. Sarah did not feel like she had any strong connections to fellow MOOC instructors. The Medical School dean did a kick-off event after selecting four medical MOOCs, where the instructors had the opportunity to meet, but for Sarah it did not lead to any ongoing relationships. She worked on her MOOC in isolation from peers who were also teaching MOOCs.

While I was collecting data for this study, the DEI held a workshop on MOOCs. Several study participants were in attendance, and many participated in a faculty panel. Most of the people on the panel were very involved in the DEI community; they served on committees, and were socially well connected. When I spoke to Sarah, who served on the panel, that afternoon, she mentioned that she had never met any of her fellow panelists before this morning. She said there had been a video conference call awhile back that she had wanted to participate in, but she was in clinic and could not make it. I noted that she stayed the whole day at the workshop, and I saw her chatting with fellow panelists at other moments throughout the day. She expressed a desire to make connections with her fellow MOOC instructors, but she had found it difficult to

do so. Her participation in the workshop appeared to be an attempt to build relationships with her

peers and others interested in similar work.

Luke, also in the Medical School, expressed a desire for more ways to connect with other

MOOC faculty, and acknowledged the difficulty of making those connections.

> I remember being really excited. I think it was spring 2015, maybe 2014, 2015 I'm not
> sure, where we got together all at the School of Information around a table. And it was
> just a sharing session, common best practices, how we're gonna sustain this on campus,
> and that was a blast. I wish there were more opportunities like that, honestly. Because
> we're so far flung across different schools we never get a chance to interact really
> otherwise.

There were also participants who did not have colleagues in their schools and departments, and

did not serve on any DEI committees, who felt quite disconnected from their MOOC peers.

Thomas, who runs the survey methodology program, described a lunch meeting with Daphne

Koller (former CEO of Coursera) and a handful of other MOOC instructors, but he struggled to

remember their names and had not had any subsequent interactions with them. "Anyway, so I

haven't really compared notes with anyone outside. It'd probably be a good idea but I haven't

done it." Thomas did not seem bothered by this lack of connection; it did not seem to occur to

him that he might have wanted or needed to get to know other MOOC instructors. When I asked

Sidney if he had connected at all with other faculty at Michigan who are teaching MOOCs, his

concise reply was, "I haven't, no. Not yet. I think that I will." After our interviews concluded, I

saw evidence that Sidney might make those connections. He was one of a few MOOC instructors

who spoke on a panel for a major launch event for the University's Office of Digital Education

and Innovation. I observed him before and after the panel chatting with fellow MOOC

instructors. People often talk after presentations, and this alone does not necessarily indicate that

Sidney and Sarah were trying to build connections with other MOOC instructors. However, the

choice to participate in campus-wide DEI events, especially carving out the time to spend a

whole day there, suggests that some of the participants who felt isolated in their MOOC experiences were either taking advantage of or seeking out opportunities to become a part of U-M's MOOC community.

The experience of teaching a MOOC did not appear to afford participants with opportunities to make connections with colleagues; rather, the university created committees and structures that enabled a select group of instructors to build relationships with each other, while the rest remained isolated. MOOC-related events provided another set of opportunities to connect, but hectic schedules meant interested instructors were not always able to participate.

**Students**

MOOC students were another group of people with whom MOOC instructors might have connected. Instructors' involvement in their MOOCs was in part predicated on the way MOOC schedules changed during the period under study. The first MOOCs were on a schedule; they had beginning and end dates just like regular courses. This created cohorts of students who could interact and collaborate in the forums, and provided clear moments in time when instructors could engage if they desired. During the period that I was conducting interviews, Coursera was transitioning many MOOCs to an on-demand format; students could enroll in the courses whenever they wished, and do the work at their own pace. People whose courses had already made the switch to on-demand reported that they felt less impetus to engage with the forums in the new system.

The asynchronous and highly mediated nature of the MOOCs did not easily facilitate direct contact between students and instructors, and indeed some instructors chose to minimize and avoid contact with students as much as possible. However, others were open to interacting with students, in forums, over email, and even in person. Coursera and the DEI understood that

the creation of a MOOC was already a laborious process, and they made an effort to take the burden of managing and running the class off of faculty. The university hired paid course assistants to serve as moderators in the forums, fielding questions from students, troubleshooting technical problems, and deleting inappropriate comments such as spam, trolling, and harassment, so that those kinds of issues did not often reach the instructors. The result was that instructors could choose to engage in the forums or reply to emails, but it was not necessary. It was a personal choice for each instructor, and participants handled student interaction on a spectrum from minimal contact or forum involvement, to very high-touch interaction with the forums and even individual email correspondences with students.

Few participants were willing to field emails from students. As Dev put it, "The first time I offered [the MOOC], I was obviously very engaged. But even then, I said I am not going to go to the forums and I am not going to entertain emails. And by the way I live on emails and I love people." Sophie created a filter so that all the emails related to her MOOC would skip her inbox and she could avoid seeing them entirely. By contrast, Krishna sometimes responded to students who were writing with specific questions (though "one guy wanted me to write him a letter of recommendation. I think I said I can't"). And Brian expressed a surprising willingness to correspond with his MOOC students, given how much time he had already invested in the MOOCs creation.

> Brian: I engage in the sense that I get probably... Of the 375 emails I get a day, maybe 20 of them are MOOC-related.
> Molly: Okay. And do you answer them?
> Brian: A lot of times. I get some great stuff.

He told me there is one category of email that he always replies to, because he finds them so delightful.

The biggest surprise positive effect was a lot of students, their parents take the MOOC while they're taking my course [on campus]. So the parents then can see, since this is such an out there course, like, "Wow, you're actually really learning something, and this is interesting," and all that. And so, I've answered I think every single email from a parent I've ever gotten, 'cause that's just really cool. It's a synergy no one ever would've anticipated.

A small subset of participants sought to connect with their students more directly, by offering live office hours, either on a chat platform or even in person. Sophie described in-person office hours as her favorite part of teaching, when she can just sit one on one with a student and help them work through a programming problem that is giving them trouble. She tried to have a couple of online office hours for students taking the MOOC, but did not have many participants. Laura also attempted to have online office hours as a way to get to do more of the direct one-on-one coaching that she likes about teaching. "Which I did enjoy, the reinforcement of what parts of it did I like, we created some connect times because I felt like I wasn't getting that personal connection with the people that were doing it. And so we did some Google Hangouts with some people who were taking it." Alan took it a step further. Because he travels so much to give talks, he would schedule live, in-person office hours at coffee shops in the cities he traveled to, and he would post about them both in his courses and on Twitter. During those times, anyone in the area who wanted to come and talk to him about programming, his classes, or anything else, were welcome to drop in. This was the most direct, one-on-one interaction with MOOC students of any of the participants I spoke to.

Many participants started out engaging on the discussion forums, sometimes quite actively, but they all tended to taper off over time. They were excited to see how students were reacting to the material, eager to answer questions and chime in on the discussions. However, eventually they found that the course assistants were able to handle any issues that arose, and that students often answered each other's questions quite capably. Other faculty chose not to read

150

the forums directly, but to rely on their course assistants to let them know if there were times when it would be valuable for them to join a thread and answer a specific question. Luke tried to engage, but found it challenging and time consuming, and eventually backed away. Writing in web forums is a new style of communication for some faculty, one that did not necessarily come naturally, and trying to adapt could take a lot of time and energy that they might choose to use elsewhere.

> I would say, I was involved most the first couple of times we ran this course. I find that difficult, as a faculty member, because there's a fixed nature of what's written that is taken very seriously by the readers. I respect the written word very much, and I wanna make sure I'm choosing the right word when I write. So I'm not a millennial, just posting. I'm not. I'm not how my daughter interacts, in the online environment. She's a freshman in college. And so, that took a huge amount of time.

Even participants who did not find the forums difficult still tended to engage less and less as time went on. As Krishna described it,

> When the first class ran in Coursera, I was very engaged, we were all very engaged in my [research] group. The first few weeks we were on it every few hours and we would respond. But gradually, we understood the medium better and we also got used to it more. Towards the end, there would be periods for about a week when I would not check in. And one of the wonderful things about those forums is that they manage themselves, by and large.

Sidney had a similar experience. At first he was heavily engaged in the forums, but over time he realized that the students were doing just fine without him, that the forums were set up to let students learn from each other. In response to my question about whether he was involved in the forums, he replied seriously, "Well, that's a psychological issue, it's an emotional issue." He went on,

> When it first came out I was intensely involved, and now I hardly ever think about it. I follow the forums, I try to participate and so forth. And the more you do it, the more you realize that it's not important that you do it. That the important thing is the people's engagement with the material and with each other. So when it was still a novelty, I was obsessed with it and now I ignore it. I think both those things are okay. I don't think continued involvement on my part is particularly important to people learning.

This observation by Krishna and Sidney, that the forums were self-sustaining, and that the students were learning from each other, was a theme I heard from several participants, and is also borne out by some research. For example, one study used an A/B test to evaluate whether instructor participation in forums had any impact on student outcomes, and found that it had no statistically significant impact on overall completion rates, overall badge acquisition rates, student participation rates, or satisfaction with the course (Tomkin & Charlevoix, 2014). Student leaders often emerge in the forums, encouraging participation and answering questions from peers (Moon, Potdar, & Martin, 2014). From the instructors' perspectives, the interesting thing happening in terms of relationships with students was often not between instructors and students, but rather students making connections with each other. Roger created a practice exercise in his MOOC that encouraged students to find partners who were also enrolled in the class.

> You can negotiate the exercise with a friend in your own community, but if you want to negotiate with somebody else just put up a notice on the discussion board, and that has been very, very popular. People from around the world have negotiated with each other and I think it's really one of the best features of the course. To be able to practice their negotiation skills, but also to do it with somebody from another part of the world.

In talking about their students, participants observed with pride that their MOOCs had facilitated connections between students; they felt they helped make those connections possible, which was very gratifying to them. Michael's writing-intensive MOOC included a peer-feedback component that required students to interact directly with each other. "I love the fact that I've been able to structure an environment in which people can learn from each other. I've been able to give them guidance. And they seem to like it. And so that's terrific, it makes me feel good." A few participants found that their students were even making real-life connections as a result of their MOOCs. Krishna described being surprised by how much students in the course were willing to share their notes with each other, to help each other learn.

> Like I told you, pages and pages of their own work, their own notes, and explained things to each other. And yeah, self-organizing. They would set up all these WhatsApp, and Skype groups to talk about it, and people are also trying to hook up physically. The very first day guys were planning to meet at a cafe in Oslo, and that was the day one. It is amazing. It literally feels like you set off something in motion worldwide. And it's true, it is the case. It's really, it's really notable.

While it was rare for MOOC instructors to develop new ongoing connections with students as a result of the MOOC, they felt some sense of involvement in the connections that students made with each other.

It seems unlikely that the creation of a study group would feel so notable in a traditional on-campus course. The connections between students may feel more important to MOOC instructors because in the MOOC they are unable to make connections directly with students. What becomes visible from this analysis, and from the previous section about adapting to teaching to a camera instead of a room full of students, is that the technology of the MOOC disrupts many of the social aspects of teaching, from feedback mechanisms to simple face-to-face conversations. MOOCs may not have disrupted the entire higher education system, but on the micro level of individual instructors, the experience of teaching is, for at least some instructors, deeply altered. While some of this may be the case for online education more generally, the enormous scale of MOOCs seems to take the disruption a step further. In a MOOC, it is possible to complete an entire course without a single direct interaction between instructor and student. The forums run seamlessly without their involvement. Instructors may have created content and context that enable students to learn from the material and from each other, but they lose the direct human interaction that can make teaching such a fulfilling experience.

### Visibility and discomfort

For the faculty in this study, most if not all of their teaching prior to the MOOC happened behind closed doors, in classrooms full of students who had applied, been accepted, and enrolled

at the university where they were teaching. A few had taught distance courses, or the videotaped Great Courses series[13] that were more widely available to paying customers, but by and large teaching was a private activity, visible only to the relatively small group of people who were present in the room when the teaching happened. Doing a MOOC meant opening the doors on their teaching in a way that could be intimidating because it was so public, and it had some uncomfortable ramifications that are important for developing a complete picture of the MOOC teaching experience. Alexander said:

> Psychologically, [you're] going from a classroom where that experience is private and stays with the students, versus going public, where that experience is essentially immortal, where you can think of it as such, and it is available to a much, much larger circle of people with whom you don't necessarily have the same connection that you would in an actual classroom.

The public nature of MOOCs invited potential criticism at a level the instructors had never experienced before. Previously, most criticism of their teaching occurred in evaluations at the end of the term. Now, everyone was a potential critic. One participant, speaking on a panel about online education, said, "I had this real moment of panic about five weeks into this course where I was like 'Oh my gosh, I've Kardashianed myself. When people are cruel, what do you expect?'" When I asked about it in an interview the participant elaborated:

> I had a panic attack for like two weeks, I think, when the emails started. And I was like, "This isn't very nice what people are saying," but then I was like, "Did I ask for it?" I put myself out there and it never really occurred to me that I was putting myself out there as a target or anything like that. But no, I guess I had.

Another aspect of the publicity that came with MOOC teaching was that whether they admitted to wanting fame or not (and as I discussed in Chapter 4, most did not admit it), teaching MOOCs did bring a degree of fame to some of the early instructors. However it was not an entirely positive sensation. Participants recounted experiences of being recognized, especially at

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[13] As described in Chapter 4, The Great Courses is a series of recorded lectures and courses produced by The Teaching Company for sale in a variety of video and audio formats.

professional conferences, because of the MOOC, and what a strange and even creepy feeling it was.

In this section I have included three kinds of uncomfortable experiences of MOOC teaching that were the direct result of the increased visibility and highly public nature of MOOCs. They all relate in some way to the psychological shift that Alexander described when instructors moved their teaching from a private classroom to a public online space: dealing with feedback and criticism (or sometimes a lack thereof), new fame, wanted or not, and a single case of stage fright that is in stark contrast to some other participants' enjoyment of performance and attention. These uncomfortable experiences do not fit cleanly into the faculty growth framework that takes an intentionally positive perspective on faculty life, nor do they necessarily align with the "constraint narrative" that the growth framing is meant to counter. Teaching a MOOC was a risky activity, and even if it was mostly a positive opportunity for growth for most people, a full retelling of participants' stories must highlight the painful moments as well.

A note: In this section, I have chosen not to name the individual respondents, even using their pseudonyms, and as much as possible I use the gender-neutral pronouns "they" and "them". Participants shared some difficult experiences and feelings with me, about panic, anxiety, criticism, and harassment.

**Dealing with feedback and criticism**

Teaching publicly at the scale of a MOOC profoundly changed the experience of receiving feedback, and especially criticism. Overall, MOOC teaching seems to be, as one participant put it, "a very low feedback medium." Because the teaching is asynchronous, there is no real-time feedback from students to see whether they are paying attention or engaged in a particular lecture. Not many students complete MOOCs, let alone the course evaluations when

155

the MOOC is over, so feedback after the fact tends to be patchy. According to several participants, the feedback is often positive but not very deep. "…Less helpful are their evaluations, like over 2,000 people have submitted course evaluations. They're a little more general, like, 'Great course!' That kind of thing. But the stories are very interesting, because they talk about how they're using [what they learned in the class]." Occasionally participants would receive a more personal message detailing the impact their course had on someone's life, but for most those messages were not the norm. "Every once in a while, I get an email from a neurologist in Japan, or an activist in Africa, or a nurse in England, and it's very rewarding when that happens. But it happens rarely."

Meanwhile, negative feedback at this scale can be overwhelming, or even debilitating. Partly it comes down to a question of numbers. "If one or two students in your class of 30 complains in their course evaluations, it feels bad, but I can get past it. But if I had 2,000 complaints or something, even if that was a smaller fraction it would feel pretty bad." There is also the fact that Coursera is not immune from common internet behaviors such as snarkiness, trolling, and harassment. While the course assistants who manage the forums often delete truly harassing or off-topic comments, it does not come close to stemming the flow of criticism and outright nastiness. "I was getting, at the beginning, hundreds of emails a day and some of them weren't very nice and it was too depressing. I want to fix things, but negativity doesn't actually help when you are trying to just create. I just don't read them anymore." Not everyone was bothered by the criticism, though they recognized that dealing with this sort of feedback was not for everyone. In talking about how they do not get overly bothered trying to make their course perfect, or worrying about what people will think, one participant said, "I think you have to be really thick-skinned, or it's gonna be hell." Almost as if in reply, another participant told me

about attending an event with several other MOOC instructors where the group talked about some of the criticism.

> I'm not sure I have the thick skin that they all have. They all talked about the people who trolled them and they were laughing and how silly it is, I was like, "Oh, 'cause it really bothers me." And that's just a personality trait. And they were like, "Oh yeah, there's this one guy who takes all my courses just to tell me how horrible I am." I was like, "Oh, ouch."

There appeared to be a gendered aspect as well, though it was difficult for me to pursue deeply. At the start of our first interview, one female participant said that she was happy to talk to me about anything except harassment. "Sometimes people ask me about harassment online and I'm learning more and more that if you mention being harassed online it seems to invite more harassment." Most other participants did not bring it up at all. However, there are 35 years' worth of evidence in the research literature that students seem to have different expectations of their female professors than their male professors, and that these differences are reflected in course evaluations (e.g. Basow, 1995; Bennett, 1982; Boring, Ottoboni, & Stark, 2016). In one creative study, assistant instructors in an online class, one man and one woman, taught one discussion group as themselves and one discussion group as the other assistant instructor. At the end of the course, "students rated the male identity significantly higher than the female identity, regardless of the instructor's actual gender" (MacNell, Driscoll, & Hunt, 2015, p. 291). It would not be surprising to learn that a similar bias occurs in MOOCs as well. One participant said, "It seems that when a man makes a mistake, they make a mistake. And when I make a mistake, I got words like 'incompetent', 'idiot', 'unqualified'." Not all of the women I spoke with raised these concerns, but I also did not ask. To truly unpack the impact of gender on the experience of MOOC teaching, further research would be needed.

**Fame, wanted or not**

Though most participants did not claim to be interested in fame when they decided to

teach a MOOC, several described achieving some modest degree of fame or renown as an

outcome of MOOC teaching. They seemed genuinely surprised by the recognition, and perhaps

slightly unnerved.

> I was at a continental breakfast at a conference, there's an extra seat at a table, I'm like, "Oh do you mind if I sit… " They say it's fine, so I sit down and the guy across from me says, "So how are things in Ann Arbor?" And I looked at him and I knew. And I was like, "You've taken my course." And so then the three of them all started laughing. They're like, "Yeah, actually we all have taken your course." And I'm like, "Oh my God. This is so creepy."

Another participant had a similar story:

> I went and did this workshop and it was the weirdest thing to go into this group because they all gave me hugs like they knew me and I'm like, "I don't know you". That was a really weird experience. And they all remarked that like, "I felt like I know you. You've been in my living room" and I'm like, "Yes, but I haven't."

According to these recountings, the way MOOC students behave when meeting their MOOC

instructors in person is different from the way a colleague might respond when meeting someone

whose work they have read. It is much more familiar, even if the students are actually

professional colleagues. The nature of watching these instructors on video, when it feels as

though they are looking right at the viewer, seemed to bring out a much more personal response

that was occasionally discomfiting. Even for instructors whose research was already well known,

achieving this level of recognizability for their teaching felt "weird" and "creepy." Some MOOC

students seem to treat instructors more like celebrities than like faculty or colleagues. One

participant told me that they periodically encounter MOOC students who want to take selfies

with them, something their children find hilarious. "People send me things. People send me

coasters a lot, which is weird, like as gifts. I don't know why. They must think I need coasters.

But people will send me things saying, 'I took your course.'"

The fame did bring with it some benefits. Becoming well known for the MOOC has also resulted in professional opportunities that were not available to the participants before. They have received speaking invitations, requests to participate in advisory committees, and even book deals as a result of their MOOC teaching. However, it is not clear that these sorts of benefits will continue to accrue to newer MOOC faculty. In the early days, MOOCS received a tremendous amount of free publicity, and there were only a few courses to choose from. One participant whose MOOC was more recent described the field as a "competitive landscape" and said "it's difficult to market in an online space, especially now that it's getting more and more crowded." It may be that this fame experience will be limited to those very early instructors, when MOOCs were new and it was easy to attract much larger audiences.

**Stage fright**

For one extreme case, the experience of making the MOOC was intensely negative. As they explained it, "I have stage fright. I can't speak in public. I have managed in my national persona because I do it so many times, but I had forgotten that I wouldn't be able to do that." This instructor had essentially created a persona to manage their fear of speaking in public, to the extent that when they decided to apply to teach a MOOC, "It didn't actually occur to me… It just did not even... I was all in the fun of, 'What would it look like?'" When I asked, "So you applied [to teach a MOOC] forgetting that you had that issue?" They replied,

> You just don't think about it. I just didn't think about... All of a sudden, I'm like, "Wait a minute, I have to be videotaped. I can't do that," was kinda my response. And there was a period of time, when I was like, "I'm not doing this." But I had the money, I couldn't not to do it, right?

Eventually, working with the production team at DEI, this instructor developed strategies to help deal with the discomfort of being on camera. They used a lot of slides, so that most of the screen time would be devoted to the slides rather than to their face. They practiced extensively with a camera in their own office to try, unsuccessfully, to get more comfortable. In the end, they rushed through the process as quickly as they could, just to get it over with, and did not feel great about the final product.

Earlier in our interview, this participant had spoken at length about the creative enjoyment they get from exploring new ways to teach something. I asked, "Did you eventually get to have that creative experience as well? Did you ever find that creative enjoyment in this process?"

Participant: I don't know.
Molly: Okay.
Participant: Right? Because it was so painful.

No other participant came close to describing their experience of teaching the MOOC as emotionally painful in this way. The physical pain of sitting in front of the camera for long stretches is one thing, but I could hear in this voice the intense distress of even remembering what it was like to struggle with this debilitating anxiety and stage fright. At our follow up interview, I brought it up again, to try and learn more, and the participant simply said, "I'll never do it again."

Molly: You'll never do it again.
Participant: Yeah, there's no way.

On a continuum of attention seeking, with Alan and his desire to be the equivalent of "Bill Nye the Science Guy" at one end, this participant represents the opposite endpoint. I honestly did not expect to encounter someone with such an intense dislike of public speaking in this population. Teaching a MOOC was voluntary, and in the case of this participant, who was in

the second generation of MOOCs, it was an opportunity they willingly pursued. The contrast,

between freely pursuing the opportunity to do a MOOC, and then finding the whole experience

absolutely miserable because of stage fright, surprised me, and was starkly different from all the

other participants in the study. It appears that this participant was so distracted by the possibility

of pedagogical experimentation that it obscured some of the practicalities of how the MOOC

would be created. Rather than ignore this experience as some kind of aberration, I believe it is

important to include it here in order to present a full picture of participants' MOOC experiences.

This disconfirming case provides an important counterweight to the more prevalent narratives in

this analysis of fun, learning, and expanded opportunity. It also offers a tantalizing clue as to why

some faculty might choose not to teach a MOOC, even if they are accomplished instructors, or

have something valuable they want to share with the world.

## Balancing act

When I asked participants how their expectations for the time required to teach their

MOOCs matched up with reality, nearly all told me that they "had no idea what [they were]

getting into" when they agreed to teach a MOOC, and that the time commitment was

substantially greater than they had imagined. Even those who felt that they accurately predicted

how much time it would take to create a MOOC still described it as colossally time consuming.

This experience was universal across the entire study population. In an earlier section of this

chapter, I focused on the effort required to adapt to teaching for the camera, but other, off-camera

efforts were required to create and teach a MOOC, such as developing assessment tools and

identifying resources that were free from copyright restrictions.

When talking about their lives and the enormous space that creating a MOOC occupied in

those lives, participants used phrases like, "balls in the air," "irons in the fire," and "full plate."

As a group, these early MOOC instructors seemed to embody the old adage, "If you want to get something done, ask a busy person." As is typical of faculty at a research university, their myriad personal and professional commitments spanned research, writing, classroom teaching, international speaking engagements, administrative roles, advisory committees, treating patients, delivering babies, parenting, and volunteering. Most had to squeeze MOOC teaching into already overpacked calendars. None of the MOOC instructors in this study received a course release to teach a MOOC, which means that some created their MOOCs while also meeting their regular classroom teaching load. Several participants created their MOOCs over the summer or during a semester when they were not scheduled to teach.

Under the theme of "balancing act" I observed two competing demands on instructors: the time and effort needed to create a MOOC, and the time constraints of their already full and busy lives. The combination of the "full plate" of academic life with the high time demands of MOOC teaching meant that participants sometimes wondered themselves how they were supposed to do it all.

**Tremendous time commitment**

Comments about the time commitment often emerged when I asked the participants what they would tell a colleague who was asking for advice about whether or not to teach a MOOC. The advice almost always included an admonishment about how much time it would take. Sophie had actually advised several colleagues about MOOC instruction, so the question was not hypothetical for her.

> I said, "It's gonna take you more time than creating a regular class, even though you'll probably cover less material." I said, "It's the equivalent of at least one full prep of creating... Even if you've done the material before, it's a brand new prep for you. Look at it that way, 'cause you have to rethink things, you have to think about how you're going to assess. You have to decide, do you care that much about assessments."

Many participants were taken aback by how much time it would take them to create their MOOCs. Sophie said simply, "It was a much bigger commitment than I was expecting." Alexander elaborated, "I didn't really know what I was getting myself into. I grossly underestimated the cost that would take to develop this course, this specialization. I probably underestimated by a factor of two easily." There seemed to be a few possible reasons for this. One is that no one was sure of exactly what needed to be done and how to do it; this included administrators and support staff working directly or indirectly on the Coursera initiative. Participants described challenges working with the DEI that led to delays of various kinds, including videos that needed to be re-shot, file naming conventions that kept changing, and a Coursera platform that was still under development as they were using it. Brian, who taught the very first MOOC, shot and edited all of his own video, which required him to learn how to edit video. "I did, ballpark, 200-300 hours of work on this, minimum... If you count soup to nuts, and for free." Even for people who were not surprised by the amount of time it took, making a MOOC was still a major investment. As Tim put it, "My experience is, every time I go to teach a class it takes all the time I have. I think that's almost a theorem… So I kinda knew that would happen."

For most of the instructors, shooting the video was the largest investment of time, but other aspects of creating the MOOCs could be just as demanding. Each instructor had to determine how to create and run assessments that would be valid for the subject matter and also function at scale. Even if the assessments did not require any involvement from the instructors once the course was up and running, designing those assessments for the MOOC space was a frequent challenge. Michael, who for his MOOC on fantasy and science fiction literature created a series of writing-intensive assessments that were graded by peers, and whose teaching career

spanned 40 years, said, "I worked harder on this course than any other course I ever taught in my life." For Krishna's courses, students were writing code for their assignments, and he and his team needed to create an autograder that would run what he called "very complex, actually cutting-edge, finite element open source code," and would work on Coursera's frequently-changing servers. In his understated way, Krishna described that work as "not entirely trivial… It took several months of me working with my group, with the guys in IT here."

There were several reasons that teaching the MOOC was so demanding relative to teaching an in-person course. Not including preparation, shooting an hour-long lecture video usually requires more like one-and-one-half to two hours in the studio, whereas an hour-long lecture in the classroom only takes one hour. Figuring out how best to do assessments that would work at scale, where grading could happen without the intervention of an instructor or course assistant, often required extensive research and careful design, whereas for many in-person courses instructors can re-use the same assignments every time they teach. Because the MOOC did not count as a part of their teaching load, all of the instructors in the study created their MOOCs in addition to all of their other responsibilities. Furthermore, as discussed above, there is the pressure that comes with knowing the MOOC will be so widely available, which for some instructors motivated them to ensure everything was as good as it possibly could be. Sidney explained it nicely:

> I mean, I'm an old hand at this stuff, so I can walk into a classroom with hardly any preparation and get 98% of it right. And the 2% that's wrong, I'll realize it and I'll correct it the next class. But when you're videotaping it for the world, you don't wanna get 2% wrong. And so I found that my preparation had to be much, much more thorough, not only in terms of the dynamics of presentation, but in terms of getting it right, getting the information right. But that's been pleasant and exciting, to know that I can ratchet up my standards for my own knowledge. That's a big thing that I've learned.

One thing that struck me was a small minority of instructors who told me the MOOC was

an outrageous amount of work, and then in the very same breath said that they were doing

another one.

> Molly: So then, what were your expectations in terms of the time and energy that it
> would take to make a MOOC?
> Sidney: I expected that it would take much less time and energy [laughs]. It was an
> incredible amount of work and I thought I'd never do it again, although I've just had
> another one approved.
> Molly: Really?
> Sidney: I am going to do it again. And I expect that I'll do it much more efficiently. I hope
> I'll do it much more efficiently. I think I learned a lot about how to do it, and I think that
> the studio people and the studio facilities are up to speed in a way that they weren't. So
> both my inexperience and their inexperience caused us a lot of slippage and a lot of
> wasted time. And I hope that doesn't happen this time. But I mean, when I started doing
> it, it was May and June, and I expected to complete it in June, and have the rest of the
> summer to myself, and it wasn't completed till December.

Despite all of the challenges and demands, for Sidney, the value of doing the MOOC outweighed

the pain. Sidney, who as I discussed in Chapter 4 was largely motivated by a desire to share a

message of social importance, felt that the topic of the second MOOC, mass incarceration, was

profoundly important. "Teaching about mass incarceration is, in my mind, teaching about the

most central civil rights issue of our country at this moment." He felt that he and the DEI team

had learned enough from the doing the first MOOC that together they could do it better and more

efficiently the next time.

Other participants said they would not do another MOOC because they would not be able

to carve out that kind of time again. They are glad that they did it, but it felt like a special

circumstance, one they do not wish to repeat. Alexander, who created a whole specialization,

said,

> And if you ask me now, I'd say, no. Right now, I'm not gonna do it again because I'm just
> simply completely swamped with other things… It was a valuable learning experience. I
> don't regret for a second that I've done it. If I were to do it over again, I would have done

it again. I think I would have been smarter in terms allocating my energy and time for prep. But I don't know when it's gonna happen, to be honest.

For academics with busy and productive lives, choosing to do a MOOC means choosing not to do something else. Having done it once, many participants were satisfied with the experience, pleased with the opportunities it brought, and happy to move on to other things.

**Full academic and personal lives**

Teaching the MOOC intersected with many other areas of participants' busy lives. This was reflected in comments about their children, about their clinical practices, about their travel. The experience of teaching the MOOC was in some cases a disruption from their regular day-to-day, and in other cases was just one more thing in a litany of things. As Brian put it, while he was doing the MOOC, he also had "a lot of stuff" going on.

> I have a lot of stuff. I teach, I was running Complex Systems, I give on average 75 to 100 talks a year on diversity. I have two kids, I have a wife that works full-time, I have a dog, both my parents died. It's not like this has been a time where I've had a lot of time.

Though I did not directly ask participants questions about their lives outside of work, the subject often came up, perhaps because of the way that many academics intertwined their work with their lives (Schuster & Finkelstein, 2006). Michael articulated it very clearly.

> MOOC is one of the ways I'm a professor. This is another way in which I'm a professor. Being a professor is not a task; it's an occupation. Which is to say, it occupies my life. It doesn't completely occupy my life. I'm also a father and a grandfather, and a husband and a friend. But it occupies my life. If you wake me up in the middle of the night, I may be thinking about my wife and I may be thinking about a book.

Michael, who currently has emeritus status, described himself as incredibly busy "for a retired guy." He continues to do consulting work, to write, and occasionally to teach. The occupation of being a professor did not stop even when he reached retirement.

The way Brian talked about his MOOC, the experience was especially intertwined with the rest of his life, in part because he was shooting it at home. One of his sons helped him figure

out how to use the video editing software. His dog kept him company during shoots. And his wife, a fellow academic, had the opportunity to witness up close just how much time the MOOC was taking, and as he reported it, really pushed him to be open about that experience with administrators so that other people would not have to go through what he went through to make a MOOC.

> My wife... She was just almost perfect in this case, in the sense that she was not blindly supportive. She was constantly saying, "Come on," right? "What the fuck are you thinking? You're putting way too much effort..." She was great, in terms of keeping it in perspective, in terms of the amount of time I should do, and what I should do, and how much work I was doing. And then when I finished... I'd been finished a day, and they were like, "Okay, we need our laptop back." And she was like, "You gotta be kidding me."… She made me be super, super honest about it. She was like, "You have to tell them how much work this was, because no one should do this."

Setting aside the interactions between home and work, and looking just at work, this is a group of people who were very busy even before they taught their MOOCs, too busy to do all the things they wanted to do. Often they are trying to balance administrative responsibilities with their teaching and research work. As Rebecca put it, who holds both administrative and clinical roles, "The problem is now being sort of in leadership, you don't have time for your own science." Others also expressed a desire to have more time to do research. Ellen in particular wanted to be able to do research on her MOOC, about gender disparities and underrepresented minorities, topics she cares about a great deal and is heavily involved in on campus, but she is not an education researcher, she is an engineering researcher. "Long story short is, I think it would be really fun and I would love to, but in the pie chart of where my time is, I'm like, 'What would I take away?'" She felt like there were probably other people who would be more appropriate to do it, who might have an easier time justifying it, even though she recognized that in practice that meant the research just might not get done.

167

Thinking about the balancing act in the context of the faculty growth framework, these findings create a tension between the constraint narrative and the growth counternarrative. The growth counternarrative emphasizes that faculty have agency to direct and shape their own professional lives. It envisions "faculty pushing their campuses to expand notions of legitimate professional contributions, to navigate barriers, and to put effort, will, and talent into their work" (O'Meara, Terosky, & Neumann, 2008, p. 169). This is in contrast to the constraint narrative, in which there is a preoccupation with certain kinds of faculty productivity, and reward systems that do not value the work faculty want to do. In this analysis, I see faculty on the one hand dedicating themselves to work (MOOC teaching) that is far outside standard notions of legitimate professional contributions, and on the other hand, I see them struggling to balance the demands of the work they chose with the demands of all the other work that is placed upon them by virtue of their being faculty in a research university. The study participants did indeed exercise agency to put effort, will, and talent into their work, but they did so while under the constraints placed on them by their roles and their institutions.

**What is MOOC teaching?**

The question of how participants believed MOOC teaching fit into their roles as university faculty is central to understanding the meaning that instructors made of their MOOCs. Did teaching a MOOC align with the traditional "three-legged stool" of teaching, research, and service, and if so, where did it fit in that model? In short, what is MOOC teaching? To learn about how instructors conceive of MOOCs relative to their other work as academics, I asked all the participants where they believed doing a MOOC fit among the traditional "three pillars" of academic work: was it teaching, research, service, or some combination? Answers ran the gamut, including a couple of participants who told me I was asking the wrong question altogether. The

lack of consensus in response to my question about whether doing a MOOC was teaching, service, or research was delightful for me as an interviewer. I never knew what any individual would say, and yet they often responded in a way that suggested their answer seemed completely straightforward to them, by prefacing it with an "of course" or "obviously." Other participants said they had never thought about it this way before, and in talking through their answers I had the opportunity to hear a little bit of their process as they tried to make sense of where the MOOC fit into their work as academics. Participants interpreted the question in different ways. Most thought I was asking them what doing a MOOC felt like, but others thought I was asking how the MOOC was or should be counted by their institution. Answers fell into a few distinct groupings; MOOCs were either a combination of teaching and service, or they were research, or it was not something that participants felt they could answer because it was up to the university, or it was something else entirely.

The most common response was that the MOOC was a combination of teaching and service. Participants believed that teaching a MOOC was teaching, even if it was a different kind of teaching than they had done before, and that doing the MOOC informed and improved the teaching they do in their classrooms. They also felt that it was service because of the way the MOOC serves a different population from the one that is enrolled on campus, and because the MOOC supports the U-M brand in a way that they saw as a service to the university. Luke's response is somewhat typical for this category:

> In the Medical School we add clinical work to those three so it's whatever, a four-legged stool in the medical school. So yeah, I definitely see the MOOC primarily fitting the teaching and service components. Teaching because it's education, but service because we're able to extend beyond the walls of the university. And we're hoping to impact the broader community, with lessons learned and empowerment gained, by taking part in my course.

That belief, that part of what makes the MOOC service is the impact he hopes the course will

have, was echoed by Sidney, who also believed his MOOC was a combination of teaching and

service.

> Well, I don't do research, so that's just not a reality for me. And of course, it's teaching
> and service, I think there is a big service component. I mean, I'm motivated by the feeling
> that I can reach people who need the information and that that is a service.

Participants who responded this way did not necessarily believe or argue that the MOOC

would or should count as teaching or service; in fact, for none of the participants in this study did

the MOOC count towards their teaching course load. Whether it counted as service is less clear;

at least one participant felt that doing the MOOC bolstered her successful bid for promotion,

though she does not know for sure, and does not know how it was treated in the tenure decision

process. It was also clear that some of the participants who viewed the MOOC as service were

not thinking in terms of service that "counts," but rather as a public service, one that would

benefit society but would not necessarily hold any bearing in a promotion or tenure review.

Only two participants thought of their MOOCs as most related to their research, either

because they conduct education research, in the case of Rebecca, or because their MOOC

supports others in learning their research methods and doing research the way they do it, in the

case of Krishna. As Rebecca put it,

> Now I have a lab, now I have a science, now I have a venue for doing my own innovation
> and research. Because I was doing all the other things before that. I was teaching, but I
> was constrained by the medical school curriculum and patient care necessities. The
> MOOC space was completely like just a crazy new lab.

As I discussed in Chapter 4, recognizing that the MOOC could provide her with a venue to do

educational research is part of what motivated Rebecca to do a MOOC in the first place, and that

mentality remains in how she categorizes the MOOC relative to her many academic roles.

Though she is *teaching* the MOOC, she thinks of the MOOC as a space for doing research about

that teaching. By contrast, Krishna thought of his MOOC as a means to promote his research

methods, by teaching others how to use his computational approach and how to apply it; he

shares it with colleagues who are interested in learning more about what he does, and as noted in

Chapter 4, Krishna said he decided to teach a MOOC because he could use it as a platform to

extend the reach of his research methods.

> What was appealing to me was the possibility of an additional outlet for the methods we
> work with. And there is the teaching aspect of it, but it really is an entry to research
> because these are advanced research tools. And so, I really regard it as putting our
> research methods out there. It gives people the first step, or the first steps, to get into this
> sort of research.

> Ellen interpreted my question about the three pillars as being about how MOOCs were

counted by the University, rather than how she experienced it. And she was very firm in her

response.

> So, at the University of Michigan, it's service. It's not teaching. And it's not likely to
> evolve into teaching at any time in the near future. For me, it was more service, because it
> didn't count in any way, and they were very adamant, "We cannot let this count in any
> way."

As she explained, "To this day, they say, 'And we can't let it take away from any of your

academic year commitments,' because what they don't want is for a free education to compete

with people who are paying through the nose for the residential experience." This was clearly a

subject she had thought about a great deal, in part because of her role on the MOOC selection

committee, where she interacted with tenure-track faculty who felt that they could not do a

MOOC if they did not get credit or course release. It was also an issue where the landscape

changed significantly between our first and second interviews. In our first interview, from which

the above quote came, Ellen said she believed that the university would never recognize MOOCs

as teaching, and would never grant MOOC instructors a course release. But at the time of our

second interview, a little over two months later, Ellen said that the tides were shifting, and that

she had heard of the first instructor getting a course release for doing a MOOC. She expressed surprise at the shift, but also appreciation that the U-M might make it easier for early career faculty to teach MOOCs.

Like Ellen, Michael also believed that the question of where MOOC teaching fits among the three pillars would be decided by universities, not by faculty. "Practically speaking, it's up to the University of Michigan. These things haven't settled down yet. They are quite different at different institutions." He argued that being a professor was not easily divisible into three buckets, and that furthermore much of what he did crossed boundaries and fit more than one category. As he talked it through, he eventually settled on the idea of treating MOOCs as most similar to writing a book.

> And in the case of a book, there are really two different models, one is the model in which we think of it as the generation of new knowledge, in which case we don't expect you to get any money from it, but we permanently raise your salary. The other is, we don't really count it as the stuff that we care about, but you get royalties from it.

In this framework, he argued that MOOCs seem more like the second model, and if it did not count in the evaluation of academic work that might lead to tenure and promotion, it should therefore include some kind of revenue-sharing. And indeed, this appears to be the direction MOOCs at U-M are moving, with Coursera paying royalties to partner institutions from paid courses and certificates, and the partner institutions then splitting those royalties with the instructors. At the time of my study, most participants had not received any royalties from their MOOCs, and did not expect to, including Michael. Under the revenue sharing model, only courses with large numbers of students who paid to receive certificates, as opposed to taking the class for free, produced royalties that accrued to the instructors. These tended to be the programming, computer science, and business courses.

One faculty member simply told me I was asking the wrong question. When I asked

Brian where he saw the MOOC fitting into the three pillars, he replied, "None of them."

> Molly: None of them?
> Brian: None. I think that that model is kind of outmoded… I think calling it service would be like dislocating my elbow in terms of patting myself on the back. I think it's entrepreneurship, engagement. It's actually stepping outside the academy and engaging the world, meeting the world where it's at, and being part of things that might make money, might lose money, might conflict with other issues. You're putting yourself out there in a place that is different from what people normally do.

Brian's argument was that there are some scholars, particularly in fields like business,

engineering, and some of the social sciences, where there is a "deep engagement in the world"

that is not about service in the traditional sense of service to the college or to the profession, but

is rather about participating in a larger conversation, using their specialized knowledge to

influence decision making in the wider world, and possibly engaging in business pursuits related

to their field of expertise. He sees himself as being in that group, and he sees his MOOC as

fitting into that kind of public engagement activity that is not teaching, research, or service. This

is notable in the context of the faculty growth framework, which argues that one thread of the

constraint narrative is that faculty are disinterested intellectuals disengaged from the real world

(O'Meara, Terosky, & Neumann, 2008, p. 163). In Brian's reasoning, doing a MOOC is an

example of exactly the kind of public engagement that O'Meara et al. might argue is ignored by

a constraint perspective on faculty.

Participants' motivations for teaching a MOOC (discussed in Chapter 4) often seemed

connected to how they defined MOOC teaching in the context of their academic responsibilities.

For example, as discussed in Chapter 4, a desire to share a message they believe to be socially

important motivated Sidney and Luke to teach their MOOCs. They both answered the three

pillars question the same way – that the MOOC was both teaching and service, and they

described the service as expanding access to information. Rebecca wanted to do the MOOC because she was interested in its potential for conducting educational research; she thinks of her MOOC as falling primarily into the "research" category. Krishna, who wanted to increase access to his research methods so that other people might be able to do similar research, also saw his MOOC as most connected to his research, even though it clearly affected his teaching as well.

It may be that because what MOOCs were and where they fit into the academic landscape were so ambiguous in the early years, faculty were left to define it however they chose. In thinking about how faculty make sense of their MOOC teaching, it seems that the reasons they have for doing a MOOC are often connected to how they themselves defined it in the context of their academic work. In this ambiguous space, where no one is clear how the university will count MOOC teaching or even whether they should count it, MOOC faculty could rationalize it as doing the work that they feel is important, whatever that work is. The ambiguity lets them impose their own vision, own interpretation, own desire on the MOOC, one that fits for them, makes it possible for them to invest tremendous time and energy with no guaranteed return.

**Conclusion**

This chapter offers an overview of some of the common experiences of early MOOC instructors, as well as a handful experiences that were unique to a single participant. Many of these experiences align with either the narrative of constraint or the counternarrative of faculty growth outlined by O'Meara, Terosky, and Neumann (2008), though some seem not to fit comfortably in either story. MOOCs provided a major learning opportunity for most participants; they learned new things in order to teach their MOOCs, and they honed skills they brought back to their classrooms. Though some participants made strong connections with their colleagues as a result of participating in DEI committees, many others felt isolated from their fellow MOOC

174

instructors and from colleagues in their own departments. Though participants exercised their agency in deciding to do the MOOC even though it was outside of academic norms for teaching, research, and service, they still struggled to balance it with all the other demands placed on them by their roles and their home institution. And in addition to the difficulty of handling the time demands of the MOOC and of their work, for some the MOOC experience also came with a certain amount of discomfort arising from the unprecedented visibility they afforded. In short, there is no question that teaching a MOOC did provide opportunities for growth that align with the faculty growth framework, but it did so in an institutional context of constraint. In the next chapter, I provide more extensive analysis of these findings, and I evaluate the appropriateness of both the faculty growth counternarrative and the constraint narrative as potential perspectives for understanding faculty experiences and motivations in teaching a MOOC.

**CHAPTER 7: Discussion and conclusions: Instructors' motivations and experiences with MOOC teaching, through a lens of faculty growth**

MOOCs are large online courses in which any individual with access to the internet can enroll, usually for free. Distance and online education are not new, but the scale and scope of MOOCs raise novel questions about access to higher education, faculty work, and the adoption of new technologies for teaching and learning. The research on MOOCs is expanding rapidly in several directions, with most studies focused on students who take MOOCs, while others evaluate the technology itself. There is little literature on the motivations, experiences, and behaviors of people who teach MOOCs. As MOOCs become more prevalent across the higher education landscape, an understanding of why college and university faculty choose to teach MOOCs, and what their experiences are when they do, is needed.

My study seeks to illuminate these unexamined aspects of faculty work by answering an overarching research question: *Why do faculty teach MOOCs, and how do their beliefs and experiences inside and outside the university shape their MOOC experience?* With this in mind, the study also addressed the following sub-questions.

1) How do university faculty members view their MOOC teaching in relation to their roles as researchers, teachers, and academic citizens? How do they believe MOOC teaching aligns (or not) with these conceptions?

2) What do university faculty experience as the benefits and challenges of MOOC teaching?

3) How do university faculty believe their colleagues, departments, and institutions respond to their MOOC teaching?

Since the phenomenon of MOOCs is relatively new and there are few studies of the faculty members who teach MOOCs, this study was, by necessity, exploratory in nature. To investigate faculty motivations and experiences with MOOCs, I conducted an interview study of MOOC instructors at the University of Michigan. Michigan formed an early partnership with Coursera (an early MOOC publishing start-up founded by a former Stanford professor) to offer some of the first massive open online courses, and now boasts one of the largest populations of university faculty who have taught at least one MOOC. Aside from MOOCs, Michigan does not have extensive online education offerings, which meant for most participants teaching a MOOC was their first foray into online pedagogy. My methodology is derived from recent approaches to phenomenology (e.g. Seidman, 2005); I conducted two interviews with each participant, focusing on the lived experience and meaning-making of the MOOC experience. I sought to interview all 23 U-M faculty and instructors who had taught at least one MOOC as of March, 2015; in total, 16 agreed to participate in at least one interview, with 15 consenting to two interviews. I also conducted observations at events where MOOC instructors were presenting as panelists and likely to be in attendance. Using a phenomenological approach to interviewing and analysis, I conducted multiple interviews with each participant, focusing on their lived

experience and meaning-making of the MOOC experience. A thematic data analysis focused

primarily on analysis of the interviews transcripts, with field notes from my observations

providing background and context for understanding the faculty experience.

<div align="center">**Findings**</div>

**Why teach a MOOC?**

Participant's responses to the question of why they chose to teach a MOOC fell into four

categories. I found participants rarely identified a single motivating factor, but rather discussed

several considerations that contributed to their decision. While most offered one or two primary

reasons, these four themes encompass the most frequent or salient reasons for saying yes to the

university provost's invitation to teach a MOOC, or the decision, after the initial set of MOOC

offerings, to apply: Desire for a platform, interest in experimentation, altruism, and an aim to

raise one's personal profile or that of their program. From a cognitive motivation perspective,

some of these reasons were more intrinsic in nature, arising from internal desires, while others

are more extrinsic, considering external rewards such as recognition, suggesting that in the

ongoing debate about whether faculty are primarily driven by intrinsic or extrinsic motivations,

these findings would suggest that the answer is "both" (Blackburn & Lawrence, 1995).

**MOOC as a platform to reach a larger audience.** Most study participants described

their desire for a broader platform in one of three ways: they wanted to expand the reach of a

topic related to their field of research or teaching, they wanted to expand the reach of their

particular way of teaching, and they wanted to transmit a message that they felt had social

importance. As one participant explained: "It is a way to share what you know and how much

you care about it with a broader audience than you've ever imagined." All three of these

motivations involved a conviction that the instructor has something – a research method, an

<div align="center">178</div>

assessment approach, a way of explaining things – that is worth sharing, and participants felt strongly about the value of that something. This was especially true for the instructors who believed that their subject had some level of social importance, such as a course on thermodynamics, which is fundamental to understanding energy systems and combatting climate change, or another on HIV/AIDS and the stigma experienced by people with the disease. Those instructors felt that the MOOC enabled them to have a positive impact on the world at large by raising awareness or increasing understanding of their subject.

This motivation to teach a MOOC due to the social importance of the subject seemed to be distinct from the altruistic goals that featured prominently in the early days of MOOC excitement, where Coursera and other MOOC advocates explicitly marketed a message that by making educational content freely available online, MOOCs would open up access to education for millions of people who were excluded from formal education in some way, and that this access made MOOCs socially valuable. The access argument resonated with many of the study participants, but it was rarely the primary reason they chose to teach a MOOC. By contrast, the subset of instructors who imbued their courses with social importance named passion and excitement about the potential impact of their MOOCs as the main reason they decided to do it. The social value of their messages motivated them.

**MOOC as a venue for experimentation.** The appeal of experimentation in MOOCs came up with more than half of the study participants, in a variety of ways, from the very first MOOC faculty to the most recent. The nature of this experimentation varied, as did the reasons for their interest in it. This interest in experimentation aligns with much of the early MOOC messaging, which described Coursera and its peers as "disrupters" of traditional higher education and at the cutting edge of technological innovation in education. Participants described their

desire to experiment with MOOCs in a wide variety of ways. One participant was an education researcher herself, and saw MOOCs as an opportunity to advance her research. Several were interested in technological and pedagogical innovation that would help them become better or more effective instructors. A few people liked the risky aspect of experimenting with MOOCs, and appreciated the challenge of trying something new and untested.

The literature on diffusion of innovations (Rogers, 2003) includes a strand that investigates what motivates individuals to adopt new innovations, especially new technologies. Rogers identified five perceived attributes of innovations that can help explain individual adoption:

1) Relative advantage: Is the new innovation an improvement on the tool it replaces?

2) Compatibility: Does the innovation align with the individual's values, needs, and experiences?

3) Complexity: How difficult is the innovation to understand and use?

4) Trialability: Is it possible to test out the innovation in a limited way, without making a major commitment?

5) Observability: Are the results of using the innovation visible to others

Rogers also describes five categories of individual adopters, distributed over a bell curve that approaches normality: Innovators, early adopters, early majority, late majority, and laggards. According to Rogers, "the salient value of the innovator is venturesomeness. He or she desires the hazardous, the rash, the daring, and the risky" (p. 248), features that also describe study participants who self-identified as pioneers. Meanwhile, what Rogers calls the early adopter is more socially integrated, and as a result "he or she must make judicious innovation decisions" (249). The early majority are willing followers, but never leaders, while the late majority tend to

be more skeptical of innovations, and are heavily influenced by peer pressure. Laggards actively resist change. Though not all of the study participants identified as or described themselves as innovators or early adopters in their everyday lives, and indeed some described themselves as comfortably in the early or late majority, in the case of MOOCs, they all fell in the innovator section of the curve. I did not collect data on the perceived attributes of MOOCs in a way that would align with Rogers' framing, but my findings suggest that in terms of compatibility, for the instructors who identified as rebels, pioneers, and early adopters, experimenting with MOOCs fit into their sense of themselves as people who push the envelope. In addition, for those participants who believed in openness as a value, MOOCS may have felt compatible with those beliefs, while participants interested in promoting themselves or their programs may have reacted favorably to MOOCs' high visibility.

For those participants who identified as early adopters or risk takers or simply people who say yes to things, perceived self-efficacy (Bandura, 1994) related to technology and pedagogical innovation may have contributed to participant's beliefs in their capacity to succeed at a new and risky form of teaching. According to Bandura, people develop beliefs about their self-efficacy in response to four influences: mastery experiences, social modeling of vicarious experiences, social persuasion, and their physical and emotional states and responses. It is possible that MOOCs were especially appealing, or at least less intimidating, for individuals who had a high level of confidence in their own abilities to adapt successfully to an unfamiliar technology and a novel approach to pedagogy.

**MOOC as a form of altruism.** Much of the early news coverage and promotion for Coursera focused on an altruistic goal of expanding access to higher education, or at least aspects of higher education, for previously excluded populations, especially global populations with

limited access to college. In an interview with the New York Times on the eve of the launch of Stanford's first MOOC, instructor Sebastian Thrun said, "The vision is: change the world by bringing education to places that can't be reached today" (Markoff, 2011). While it is true that the goal of expanding global access to education by giving away educational content for free online resonated with some of faculty in this study, increasing access was rarely their sole or primary motivation. Some study participants, in fact, seemed to see through the early media coverage (one described it as "drinking the Kool-Aid"), while also expressing some ambivalence about giving away so much content for free when residential students pay dearly for their educations. This is in contrast to the literature on faculty motivations to share their research articles online; those studies have found that altruism was a significant factor influencing faculty decisions to post their work online (e.g. Kim 2011).

I identified two main types of motivations related to this type of altruism: improving access to content for students, and valuing openness as a principle. I coded a comment as altruism related to improving access when a participant described MOOCs as being beneficial for disadvantaged people, especially if it advantaged students who would not normally have access to University of Michigan courses (e.g., "I always thought I would try to help people with that. I had free education and it made a big difference to me, so pass it on."). In a few interviews, participants and I spoke at some length about the value of openness, and the importance of making educational materials (and sometimes data and scholarly research as well) freely and widely available online. The altruistic impulse related to student access centers the needs and experiences of students and potential students, while the impulse related to openness focuses not on the beneficiary but on the knowledge itself.

**MOOC as a route to fame.** Perhaps because it is unseemly to admit that teaching a MOOC might bring personal fame, participants rarely mentioned this possible rationale. If anything, fame tended to come up in language that was depersonalized or generalized, for example, one participant said, "I think faculty members, like everybody else, we have a big ego and we'd love to teach a course that's popular worldwide, get our name out there. So, that's a piece of it, too." Although most participants resisted presenting themselves as self-promoters, they appeared comfortable using their MOOC to promote their departments and programs, and even the University as a whole. A handful of participants named the desire to raise the profile of their program or department as their primary reason for doing a MOOC. The sample, however, also included one dispositive case, a person who openly described his ambitions to become a famous educator, jokingly describing it as "total world domination."

Overall, the reasons participants reported for deciding to do a MOOC aligned with the few similar studies on faculty motivations to teach MOOCs. Though only a few studies have attempted to understand motivations for faculty to teach a MOOC, possibilities identified in the literature include altruism, reach, and experimentation. As I found here, Evans and Myrick (2015) noted that participants seemed more ambivalent on the question of using MOOCs to promote themselves.

**What were the experiences of early MOOC faculty?**

In keeping with the phenomenological goals of the study, my analysis focused on the meanings that participants who taught MOOCs made from their experiences, and how they framed those within the larger context of their lives as academics. Most of the participants described teaching a MOOC as a generally positive experience. They used words like "inspirational," "opportunity," "humbling," "fulfilling," and especially the word "grateful" when

talking about their experiences with MOOCs. In addition, an array of experiences with MOOC instruction emerged from this study beyond declarations of gratitude and opportunity, which I categorized into four themes: Learning about teaching, Isolation and connection in MOOC teaching, Visibility and discomfort, and Balancing acts. In addition, I examined answers to a question central to instructors' meaning making: What is MOOC teaching?

**Learning about teaching.** MOOC teaching was new for all of the participants, and teaching online was new for most of them, so I expected that the experience would provide ample opportunities for learning. Studies on faculty transitioning to teaching online in more conventional courses have similarly found that it requires a great deal of learning, both to adjust to teaching in a new format, and to dealing with the technology itself (e.g. Peterson & Slotta, 2009; Sword, 2012). Participants described experiences of learning throughout our interviews, both in response to direct questions and at other moments. Learning was required at different points in teaching a MOOC, including how to create the video lectures, develop assessments, and interact with MOOC students. Participants described learning to teach better, and learning to teach differently. They described learning to teach in the context of the MOOC, and learning skills that they were able to employ in their classrooms on campus. Participants identified their learning as a clear benefit of MOOC teaching, both for themselves and for their residential students.

**Isolation in MOOC teaching.** The faculty growth framework highlights community as one of the potential advantages of faculty life. However, in the case of MOOC teaching, instructors often felt isolated – from colleagues in their home departments, from fellow MOOC instructors, and from their MOOC students. Five participants reported making meaningful connections with colleagues as a result of their participation in MOOCs, all but one of whom

184

were members of University committees related to MOOCs and digital education that provided opportunities for regular interaction and connection with colleagues across the university. This isolation occurred despite the fact that producing a MOOC, and indeed producing a conventional online course as well, requires more input and support from others than teaching a face-to-face course (Bennett & Lockyer, 2004). Typically teaching is something instructors can run alone, which can be isolating but also affords a great deal of freedom. To teach a course online, instructors need help from outside, which means they lose some of their autonomy. However, in the case of Michigan MOOCs, the outside help came largely from support staff, rather than colleagues.

**Heightened visibility and criticism.** For the faculty in this study, most if not all of their teaching prior to the MOOC happened behind closed doors, in classrooms full of students who had applied, been accepted, and enrolled at the university where they were teaching. Doing a MOOC meant opening up their teaching to a much wider public, and this resulted in a sense of intimidation and discomfort that is important for developing a complete picture of the MOOC teaching experience. The scale and public nature of MOOCs invited criticism at a level the instructors had never experienced before, in course evaluations, forums, and even emails. Rather than a handful of negative course evaluations one might receive in a residential course, instructors faced the possibility of dozen or even hundreds of critical responses. Forums, which give students an opportunity to talk amongst themselves, created a source of criticism that most instructors did not experience in a residential course. Though some participants reported feeling eager to collect critical feedback in order to iterate and improve their courses, others found it overwhelming and "depressing". As one participant explained, "I want to fix things, but

negativity doesn't actually help when you are trying to just create. I just don't read them anymore."

This finding echoes those of Comer, Baker, & Wang (2015), who analyzed comments in MOOC forums and observed that students made negative comments directed toward the course, the instructor, the discipline, peers in the forums, and even the instructors' clothing choices. They also noted that a small number of frequently negative student commenters can change the tenor of the whole course; in one of the courses, the authors identified only nine students who were responsible for the bulk of the negative comments. This unexpected negativity influenced instructors' sense of satisfaction with the MOOC teaching experience, as well as contributing to what the authors describe as instructor burnout.

**Balancing acts.** When I asked participants how their expectations for the time required to teach their MOOCs matched up with reality, nearly all of them admitted that they "had no idea what [they were] getting into," and that the time commitment was substantially greater than they had imagined. When talking about the enormous space that creating a MOOC occupied in their lives, participants used phrases like, "balls in the air," "irons in the fire," and "full plate." As is typical of faculty at a research university, their myriad personal and professional commitments spanned research, writing, classroom teaching, international speaking engagements, administrative roles, advisory committees, treating patients, delivering babies, parenting, and volunteering with community non-profit organizations. Furthermore, many of the early MOOC instructors were not just typical faculty, but rather some combination of award-winning teachers, exceedingly accomplished in their fields of study, and unusually active in academic leadership roles. This was a highly successful, incredibly hardworking group of people. The heavy regular workload and additional burden of experimenting with MOOCs aligns with recent major studies

186

on the shifts in faculty work lives (Gappa, Austin, & Trice, 2007; Schuster & Finkelstein, 2006). Both studies identify the rise of information technology as one of the major pressures reshaping faculty work. Even in a situation like MOOCs at Michigan, where faculty were choosing to participate and it was not a top down decision, as online education has been at many other institutions (Allen & Seaman, 2012), the outcome remained one in which the labor of adopting a new technology placed a burden on participants' time.

**The place of MOOCs in faculty work.** The question of how participants believed MOOC teaching fit into their roles as university faculty is central to understanding the meaning that instructors made of their MOOCs. Where did teaching a MOOC fall within the traditional "three-legged stool" conception of teaching, research, and service? In this study, the context appeared to have a substantial influence on the answers; because the University of Michigan had not clearly articulated a definition for MOOCs, or their position in the work lives of faculty, this left faculty free to come to their own conclusions. The most common response was that the MOOC was a combination of teaching and service. Participants highlighted the teaching role, even when it was a different kind of teaching than they had done before, and many believed that the MOOC informed and improved their teaching on campus. Yet, participants also claimed the MOOC as service because it reached a different population from the residential student population, and because it supported the U-M brand in a way that they saw as a service to the university. Only two participants viewed their MOOCs as most related to their research roles, either because they conduct educational research and used the MOOC for this purpose, or because their MOOC supported others in learning the participant's research methods. Others would not answer my question themselves, saying they believed that the question of where MOOC teaching fits among the three pillars would be decided by universities, not by faculty.

One participant saw his MOOC as a kind of public engagement that is outside the three pillars of teaching, research, or service.

## Interpretations and discussion

The findings described above provided answers to the research questions guiding this study, and contribute to the limited literature on faculty motivations and experiences with MOOC instruction. In this section, I explore the convergences and divergences between my findings and the small existing body of literature on MOOC faculty. These studies generally address only my first two research questions, about motivations for teaching a MOOC, and the benefits and challenges associated with MOOC teaching.

### Motivations for teaching a MOOC

In attempting to answer the question of why faculty choose to teach MOOCs, I identified four motivations with strong data to support them: a platform for expanded reach, experimentation, altruism, and the desire to raise the profile of either the school or program, or the individual. To date, only three studies explicitly investigate this question of instructor motivations to teach MOOCs: one interview study of 14 MOOC faculty across several institutions (Zheng, Wisniewski, Rosson, & Carroll, 2016), and two large surveys, one published in a peer reviewed journal (Evans & Myrick, 2015), and one conducted by *The Chronicle of Higher Education* (Kolowich & Newman, 2013). My findings reinforce several of the findings of these studies; although often the language the authors use to describe their findings varies from mine, the underlying themes appear to be consistent. Both surveys of MOOC faculty were limited by the options they offered respondents for reporting their motivations, while the qualitative approach taken in my study and by Zheng et al. allowed faculty to explain their motivations with a level of nuance that is missing from the survey-based research. Dominant

motivations included reaching a broader audience, the opportunity to learn, the desire to increase

access to educational content, and interest in increasing visibility for their school, program, or

themselves.

These studies agree that many faculty are motivated to teach MOOCs by the platform

they provide to reach many more students than they could ever teach in a physical classroom, but

the participants in my study described different kinds of reach that were important to them - for

teaching, for topic, and most especially, for a message of social importance. Passion and identity

were also absent from the reported findings in these studies, both of which I identified as

underlying drivers for the decision to teach a MOOC. For example, both Kolowich and Newman

(2013) and Evans and Myrick (2015) noted that the majority of the early MOOC instructors in

their samples did not have previous experience with online education, which I also found, but

their findings obscure the many other ways that MOOC instructors may act and identify as early

adopters of technology. And while both Zheng et al. (2016) and Evans and Myrick capture some

of their participants' excitement about the scale of MOOC teaching, they do not describe the

kinds of passion that my study participants expressed about the material they were teaching and

the way in which they were teaching it. I would argue that this level of detail is critical for

understanding the full picture of instructors' motivations for teaching MOOCs. It also provides

insight that could be applicable in other aspects of faculty lives, such as approaches to public

engagement, and the adoption of technology more generally.

**Benefits and challenges of MOOC teaching**

Some findings of my study are mirrored in every other study I have seen on faculty

experiences with MOOCs: Faculty report that the tremendous amount of time it takes to create a

MOOC was surprising, overwhelming, and in many cases disruptive, a major drawback. In a

189

typical example, Evans and Myrick (2015) summarized their findings as follows: "The amount of time and effort required to produce a MOOC was the biggest challenge: it was 'death-defyingly huge,' 'astounding,' 'immensely more than I had anticipated,' and 'a huge time sink;' 'it took a major, major amount of effort and was costly personally and professionally'" (p. 304). At the same time, faculty learned a great deal from the experience of doing a MOOC, a huge benefit. Zheng et al. (2016) concluded that "MOOCs provide [participants] a testbed to improve the effectiveness of their teaching and help them to refine their teaching practices" (p. 211).

Existing studies of MOOC instructors report that faculty learned from doing MOOCs, but what faculty learned is mostly absent. As O'Meara, Terosky, & Neumann (2008) note, "we cannot study [faculty] learning without understanding what is being learned" (p. 166). This is another contribution of my study; participants described in some detail the skills they learned – from learning to teach in front of a camera, to the revolution in their on-campus teaching that came from being able to flip their classrooms, as well as instructional adjustments such as chunking their content into smaller segments, that they viewed as improving both their online and their in-person instruction. One of the commonly stated institutional goals for experimenting with MOOCs is to "increase the value students get from residential education" (Hollands & Tirthali, 2014, p. 74), but how MOOCs are going to do that constitutes administrator hand-waving. My findings offer the beginnings of an understanding of *what* instructors learn from teaching a MOOC, and *how* that learning might positively affect residential students. For institutions that seek to measure the benefits of their investment in MOOCs, the positive impacts on teaching described by instructors would be an excellent starting place.

My study also reveals that teaching a MOOC could be an isolated and isolating experience; these kinds of reports do not appear in any of the other studies I have located on

190

MOOC faculty experiences. For study participants who were not selected to participate in central DEI committees, the asynchronous, time consuming, off-the-beaten-path nature of MOOCs meant that they were often working in solitude, with few opportunities to connect with or learn from other MOOC faculty. General indifference towards MOOCs from departmental colleagues enhanced this effect. It appears that the sensitizing concepts from the faculty growth framework led me to focus on the presence or absences of relationships that resulted from MOOC teaching, which other studies have not done. This finding is particularly useful for administrators looking for ways to provide better support to their MOOC faculty; in addition to meeting their technical and pedagogical needs, it would be valuable to find ways to meet their needs for connection and interaction as well.

In the case of negativity, one study found some data to support conclusions that my data only hinted at (Comer, Baker, & Wang, 2015). The authors reported that students made negative comments directed toward the course, the instructor, the discipline, peers in the forums, and even the instructors' clothing choices. The authors also observed that the scale of negativity in the forums resulted in instructor disengagement, and "left the instructor by turns exhausted, frustrated, defeated, and anxious" (p. 100). While I did not have enough rich data on negativity to make a general assertion about its impacts, I did note that some of my study participants struggled with negative feedback in their MOOCs, and that it seemed to be in part related to the scale. Comer et al. reinforce my suspicion that there is the potential for negativity to have a detrimental impact on MOOC instructors, and it is an area that would benefit from further study.

### Considering the faculty growth framework

Though this is not a faculty development study, the Faculty Growth framework devised by O'Meara, Terosky, and Neumann (2008) provided a set of sensitizing concepts throughout all

191

stages of this dissertation, from creating the interview protocol to analyzing the data. Defining

growth as "change that allows professionals to bring new and diverse knowledge, skills, values

and professional orientation to their work" (O'Meara & Terosky, 2010, p. 45), the framework

offers a lens through which to consider the professional lives of faculty, one that focuses on

opportunities for learning, agency, commitment, and community building. The authors argue that

the dominant narrative in most research on faculty has highlighted constraints of one form or

another, such as the difficulty of achieving tenure, or the specific challenges facing women and

especially mothers in academia (e.g. Bellas & Toutkoushian, 1999; Fairweather, 2002; Perna,

2001, 2005). While this research is important for revealing and emphasizing roadblocks facing

faculty that may be ameliorated by changes in policy or institutional culture, the authors claim

that it also serves to obscure the many positive aspects of faculty life and professional growth.

To broaden our understanding of faculty work, O'Meara, Terosky and Neumann (2008)

argue for a professional growth perspective, a counternarrative which proposes five themes that

offer a positive lens on faculty careers: learning, agency, relationships and community, identity,

and commitment.

- Learning is at the center of faculty work and their contributions.
- Faculty have and can develop a sense of agency to navigate barriers and put effort, will, intent, and talent into their work.
- Faculty learn, grow, and make contributions through professional relationships that are embedded in communities.
- Who a faculty member is - her identity, history, and experiences - shapes what and how she learns, the types and quality of contributions she makes to academe, and the ways in which she makes them.
- Faculty are professionals with capacities for deep commitment and vocation (pp. 165-166).

I found the faculty growth framework particularly compelling as I was considering

theoretical and conceptual approaches to a study of MOOC faculty because teaching a MOOC

seemed to be an enormous opportunity for growth. For the faculty at the University of Michigan, teaching a MOOC was a voluntary decision. Participants who chose to teach early MOOCs either received an invitation to do so from administrators, or they proposed a course and subsequently received time, resources, and institutional support to develop and create their courses. This did not seem to be a situation of constrained resources. With this in mind, I took it to heart when I read the following:

> We propose this challenge for scholars who study faculty, academic leaders, faculty development specialists, and the faculty themselves: identify ways to foster, in faculty members, the desire and will to craft themselves as teachers, researchers, and partners in service and community engagement who have actively chosen—and continue actively to choose—the academic career as a way to lead their lives (O'Meara, Terosky, & Neumann, 2008, p. 19).

We need more research on the positive aspects of faculty life, these authors argued, that reveals what the constraint narrative obscures. A study on MOOC instructors at Michigan seemed an appropriate site for studying growth, and I remained sensitive to that mindset throughout the research process. However, in my analysis, especially related to the experiences of doing a MOOC, I found some stories that aligned with the growth counternarrative, while others reinforced the dominant constraint narrative.

The stories of *why* participants in this study chose to teach MOOCs most often align with the growth counternarrative. Participants perceived, as I did, that doing the MOOC was an opportunity to try something new, that would enable them to learn, exercise their agency, and follow their passions. Meanwhile, the stories of how participants actually experienced their MOOCs were a mix of constraint and growth. Some of the anticipated opportunities for growth came to fruition, especially the opportunity to learn, but other aspects of the *experience* fit quite neatly into the traditional constraint narrative, in which faculty are isolated lone rangers, and a narrow definition of productivity makes it difficult to do new and experimental work that is not

easily assessed using the traditional metrics of faculty workload. In the following section, I explore the way my findings do and do not align with the faculty growth framework and the constraint narrative. I also offer some critiques and proposed refinements of the faculty growth framework as it currently exists.

**MOOCs as Opportunities for Growth**

**Learning**. The findings of this study aligned most closely with the learning aspect of the faculty growth framework. In defining the learning aspect of the framework, O'Meara, Terosky, and Neumann (2008) emphasize that "learning is at the center of faculty work, and all faculty are expected to be 'master learners'" (p. 26). They take a sociocultural perspective, in which learning happens in social environments and through social interactions in these environments that "affect learning and what is learned" (Creamer & Lattuca, 2005). This perspective ties learning to the community and relationships aspect of the framework, as well as to identity, noting that much of faculty learning happens in interactions with colleagues, students, administrators, and the work of fellow scholars. The authors also highlight that the constantly shifting academic landscape, accompanied by frequent impacts on faculty work, can create learning opportunities for those faculty who are prepared to take them. Technology in particular is an enormous arena for both change and potential learning.

Throughout my findings, participants described learning from their experience with MOOCs. For those who were motivated by experimentation and the desire to try new things, they were attracted in part by the possibility of learning to work and teach with this new technology. Laura said, "And my educational practice is really... [My colleague] and I have these series, we love to take new methods of teaching and apply it to our teaching, and so I was thinking about, 'Wow, how do you take this to a digital environment?'" Others may not have

expected to learn so much, or to have to learn so much, but in retrospect most identified the MOOC, as one participant put it, as a "big learning experience."

The social aspect of learning from the MOOC experience took a different form than that predicted by the authors of the faculty growth framework; many participants noted that they people from whom they learned in the context of the MOOC were not fellow faculty, or even students, but rather the support staff who assisted them with the instructional design and video creation of their MOOCs. As Rebecca described it,

> [The DEI videographer] and I, like I said, we spent a ton of time together and he was great in terms of helping me produce. I can't say enough great things about him. Just ideas about how to sequence things, and they edited me so well. I learned a lot about what you can and can't wear on camera, just silly things, too.

Staff also served as a vector for distributing information between the faculty creating MOOCs. Rather than interacting directly with each other, participants described hearing about what other people were doing from the support staff with whom they all worked.

In proposing an agenda for understanding faculty learning as a part of the faculty growth framework, O'Meara, Terosky and Neumann understandably focus on learning from faculty colleagues and do not include staff in their list of potential sources of social learning. However, as I discuss in more detail below, most participants of this study felt isolated from their fellow MOOC instructors. Much of the learning about how to teach for the MOOC, including skills that were transferable to the classroom, came from staff with expertise in online education and instructional design. It is unlikely that this is unique to the MOOC experience. One of the biggest shifts in the field of faculty development is towards providing more expert support to help faculty use technology effectively in both their online and in-person teaching (Austin & Sorcinelli, 2013). As a former academic librarian I would be remiss not to point out the extensive learning opportunities also available to faculty in their libraries, related to teaching but also to

195

research, data analysis and visualization, and technology (Oakleaf, 2010). A complete picture of social opportunities for faculty learning must look beyond professoriate to include the myriad support staff who are experts in some aspect of faculty work.

**Agency**. The authors of the faculty growth framework borrow from sociology to define agency as "'the human capacity … to act intentionally, playfully, and reflexively in a temporal or biographical mode'" (Marshall, 2000, p. 11, quoted in O'Meara, Terosky, & Neumann, 2008, p. 28). Agency is distinct from academic freedom and autonomy because "it originates from within the faculty member herself or himself" (O'Meara, Terosky, & Neumann, 2008, p. 28), rather than from professional or political institutions. They note that, like learning, agency is deeply connected to social context, which can influence an individual faculty member's access to resources, opportunities, and constraints. Subsequent research by some of the faculty growth authors (e.g. Neumann & Pereira, 2009; Corbin & O'Meara, 2014) has sought to refine and deepen our understanding of faculty agency related to such issues as parenthood, departmental context, and the interaction between faculty learning and tenure. Other scholars have also noted that agency can also flow from the belief that one has the capacity to do something, or the belief both that one has the capacity to do something and that it will have an impact (e.g. Weiner, 2010).

In the context of MOOC teaching, I saw connections between the notion of agency and participants' decisions to teach a MOOC. The faculty growth authors offer as an example of agency the choice to do research that an individual faculty member believes is important but is not valued by their department; the choice to teach a MOOC, which very explicitly did not "count", and of which most of their departmental colleagues were ignorant, seems to embody this idea of faculty agency in action. In short, agency captures some of the why of MOOC

teaching, an internal motivation that sustains those who want to teach a MOOC in an environment that does not necessarily value it. Participants had a passion for a topic or a way of teaching, or they wanted to effect social change, or they wanted to explore and learn and experiment with a new kind of education, and they saw the MOOC as a way to pursue what they desired. As one participant put it, "I had to do it, I had to put it out there to satisfy myself, mostly, first and foremost, I think to satisfy myself. That this was an idea that I had and I had to follow through on it, that's it."

It is notable, in thinking about agency, that all of the participants in the study either had tenure or were not on the tenure track. Indeed, even if I include the few people who chose not to participate in this study, there were no untenured tenure-track faculty in the population of early MOOC instructors at Michigan. To the extent that agency implies that an individual has the power to exert their will over the will of their home institution or department, the absence of assistant professors from this population may suggest that their ability to choose risk and experimentation is limited. Future research might uncover what features of the social context, the individual, and the nature of the opportunity might enable some faculty to choose to experiment with something like MOOCs, and some not.

**Commitment**. O'Meara, Terosky, and Neumann (2008) define commitments as "long-term, conscious, personal, and professional investments that scholars make in certain people, programs, places, and social concerns through the concrete activity that furthers the goals of higher education" (p. 30-31). They argue that understanding the ability of faculty to both form and act on commitments ought to be central to a growth perspective on faculty, and provide three elements for their definition of commitment: conscious choice, active nature, and content. However, two of these - conscious choice and active nature - seem perilously similar to agency,

197

discussed above. Furthermore, in a later section, the authors note that the concept of faculty commitment is seriously undertheorized; "research on passion in academic work (Neumann, 2006) and on the nature of vocation (Braskamp, Trautvetter, and Ward, 2006; Hansen, 1995) edges close to what we refer to as commitment as part of faculty growth" (p. 176).

Given these assorted definitions, it was difficult to identify whether and how my findings on MOOC faculty related to this aspect of the faculty growth framework. The authors define commitment as passion, and so in my initial coding passes I used an *a priori* code called "Commitment/Passion" to represent this one of the five aspects of faculty growth. As I moved deeper into my analysis, I realized that the way faculty spoke about their passions was quite different from how they spoke about their commitments. Not including the many references to the "time commitment" of doing a MOOC, participants used the word "commitment" to describe a sense of responsibility, or even a pledge, to themselves or to some principle, such as openness or innovation. Participants usually described this sense of responsibility in a neutral way, as just an expected part of their lives. Every faculty member has commitments.

This was in stark contrast to how participants spoke of their passions: with excitement, animation, and audible emotion. When participants described feeling passionate about something, whether it was a topic, a style of teaching, or an issue of social importance, they leaned forward in their seats, spoke faster, gestured more. Participants had a lot to say about their passions, while they mentioned commitments only briefly. Passion drove them, and for many, it was passion that informed their decision to teach a MOOC. It became clear to me that I would need separate codes, one for passion, which was easy to identify, and one for commitment, this fuzzy aspect of faculty growth that had to do with long term professional investments.

I would argue that in a refined version of the framework, passion should replace commitment as a way to capture the notion that there is an affective aspect to faculty work lives, in which strong feelings undergird a sense of connection to and investment in their research, teaching, and/or service. Anna Neumann (2006), one of the faculty growth authors, has already laid the groundwork for the inclusion of emotion generally and passion specifically in the study of faculty. Additional research and theorizing could build on that work, and I believe that a focus on passion would help deepen our understanding of faculty work in a way that emphasizes growth.

**Identity**. In the early chapters of *Faculty careers and work lives*, identity is not included as a dimension of the faculty growth framework; however, in the concluding chapter, the authors add identity to the framework. They briefly explained: "Who a faculty member is—her history, identity, and experiences—shapes what and how she learns, the types and quality of contributions she makes to academe, and the ways in which she makes them" (O'Meara, Terosky, & Neumann, 2008, p. 166). Because it was not included in the earlier chapter on the framework, the authors do not delve as deeply into the research underpinning this aspect, although it is consistent with the sociocultural perspective that informs the framework. I chose to include it as one of the sensitizing concepts for my study because it seemed likely that identity would play some role in either motivating faculty to teach a MOOC or the experience of teaching the MOOC itself.

Indeed, in my analysis I saw that identity was highly relevant for some of the participants as they made the decision to teach a MOOC. I observed a group that I called "rebels, pioneers, and early adopters," people for whom iconoclasm, experimentation with new technology, and being on the cutting edge were a part of their identities. For those participants, the decision to

teach a MOOC was less about a particular experiment that they wanted to do with the MOOC, and more about the idea that MOOCs were new and "experimental" and they were people who experimented. Their identities as early adopters also seemed to influence their self-efficacy, their sense of themselves as people who would be able to succeed in a new medium. I also saw more demographic forms of identity play a role in the decision to teach MOOCs. As a woman in a field without a lot of women, Sophie viewed it as her mission to make her subject less intimidating and more welcoming to women who might otherwise feel excluded.

As O'Meara and her colleagues continue their work on faculty growth, identity deserves additional attention. I found it a useful concept as I considered whether and how participants' senses of themselves influenced their decision making about MOOCs. A deepening and expansion of this aspect of the framework would be valuable, and it is an area where there is already a research literature on which to build that examines the roles that racial and gender identity play in the behavior and decisions of faculty (e.g. Blackburn & Lawrence, 1995; Lester, 2008; Reybold, 2003).

**MOOCS in an Environment of Constraint**

**Professional relationships**. In explaining professional relationships, the authors of the faculty growth framework emphasize relationships with colleagues and students, defined as "interactions that provide personal and professional support; that stimulate, facilitate, and shape learning; and that strengthen faculty capacity to bring the best of their talents to their work roles" (O'Meara, Terosky, & Neumann, 2008, p. 28). They highlight research on the role of community and "colleagueship" on faculty satisfaction, motivation, and learning. Throughout the rest of the framework they use a sociocultural lens to emphasize that aspects such as learning, identity, and agency are all shaped and influenced by the social contexts in which faculty work and live. This

aspect of the framework is also set up as being in opposition to the constraint narrative, particularly the idea of the faculty member as a Lone Ranger, working in isolation.

Although I agree in principle with the idea that the social context is critical for understanding faculty work lives, and that professional relationships can be a source of growth for faculty, in this study, the findings regarding professional relationships were mixed. For a small subset of participants, who were invited by the university to participate in committees related to MOOCs and innovation in digital education, doing a MOOC provided them the opportunity to connect with and learn from colleagues across the university, with whom they were unlikely to come into contact in any other way. Most participants were not involved in those committees, and they characterized their MOOC experiences as largely solitary. Even a participant like Sophie, who created her MOOC proposal in partnership with a colleague in her department, ultimately worked alone without much support or guidance from fellow MOOC instructors. Furthermore, most participants said that their colleagues in their departments were not aware of their MOOC teaching, or did not care. Nor did any participants describe forming relationships or connections with MOOC students. As I mentioned above, the relationships participants described were with the support staff who helped them craft and film their courses.

It may be that the unique features of being an early MOOC instructor resulted in greater than usual isolation. I approached this study using a framework that offered a positive lens, and I framed questions in such a way that I looked for professional relationships in several different ways, and yet most of my findings were about not connections but ways in which the MOOC teaching experience was sequestered, both from colleagues and from students. The technology seemed to disrupt the relationships that faculty often feel with students, rather than connecting them. As online education in many forms grows on campuses across the country, it will be

important to pay attention to how it affects faculty professional relationships, and what that means for faculty work and growth.

**Productivity**. The constraint narrative depicts faculty as burdened by a narrow definition of productivity that measures worth by the number and impact factor of publications, teaching and advising loads, grant dollars, and awards. O'Meara, Terosky, and Neumann argue that this narrative obscures "faculty learning as measured by concrete changes in understanding that positively and influence and improve faculty work" (p. 18). My analysis suggests an even more complex understanding of productivity. Participants in this study were acutely aware of what work "counted" in terms of productivity and what work did not, as well as the fact that at the time, MOOCs did not count. The MOOC was something that did not count in the usual sense and yet they did it in addition to their usual work. The enormous time demands of the MOOC, on top of their many other work commitments, meant that participants described feeling overburdened, and several said that while they valued the MOOC experience, they would not do another one because they would never be able to carve out the time again. As Alexander put it, "And if you ask me now, I'd say, no. Right now, I'm not gonna do it again because I'm just simply, completely swamped with other things… It was a valuable learning experience. I don't regret for a second that I've done it."

In other words, Alexander is constrained by the requirement that he be productive in a narrowly defined set of ways (the "other things" by which he is "simply, completely swamped"), but at the same time, he did something outside that narrow definition and had an important learning experience. My analysis thus suggests that while participants grew and learned from their MOOC experiences, that growth and learning did not so much contradict the constraint narrative as reside within it. Narrowly defined productivity and the demands it places on faculty

202

are the context in which participants exercised their agency, tried something new, and learned from it. Rather than treating these different threads of faculty experience as a narrative and a counternarrative, it might be more accurate to approach constraint and growth as concurrent realities that interact with and inform each other.

Overall, the faculty growth framework provided valuable sensitizing concepts for this study, but my findings suggest ways in which it can be further developed. Identity proved very useful in understanding the nature of faculty lives, work, and motivations, and there is a strong existing literature on faculty identity upon which the faculty growth framework could build. Expanding on the identity aspect, and drawing more on the existing research literature (e.g. Baker & Lattuca, 2010; Gallego, Castelló & Badia, 2016; Jain, George, & Maltarich, 2009; Lester, 2008; Murakami-Ramalho, Nuñez, & Cuero, 2010; Reybold, 2003), will enrich the framework and increase its possible applications. The commitment aspect of the framework, which is defined as "passion," might also benefit from further explication and clarification. In this study, participants described commitment and passion very differently. I note, as well, that in their discussion of commitment, the authors largely cite literature related to professionalism in academia (e.g. Rhodes, Kiyama, McCormick, & Quiroz, 2008; Sullivan, 2005), which may also be distinct from commitment as the authors have defined it. All three of these themes - commitment, passion, and professionalism - may be relevant to a research agenda on faculty growth, but each might be productively expanded in its own right.

Looking at the framework as a whole, I think it would benefit from a nuanced investigation of how faculty navigate constraints successfully to achieve growth, rather than the current construction of narrative and counternarrative. What I saw in my analysis was that growth and constraint do not exist in opposition to each other. In many ways, constraint

describes the reality of the academic environment in which faculty work: there *is* an emphasis on a narrowly defined set of activities that "count", many faculty *do* feel isolated. But growth often happens anyway. O'Meara and her colleagues allude to this in their text, but a reader could easily focus on the dichotomy between growth and constraint and miss this important point.

Participants in this study chose to teach MOOCs even though they knew it would not count for promotion or tenure, or even as a part of their teaching load. They sought connections with other MOOC faculty even when it meant carving time out of their busy schedules to do so. Rather than thinking about constraint and growth as opposing forces, I started to see constraint as the medium in which growth occurred. For future work, I would propose expanding the framework for studying faculty growth into a framework that highlights relationships between the different aspects of growth, as well as the interactions between contextual constraints and faculty growth.

As one example, my findings suggest an interaction between faculty identities as early adopters and their agentic willingness to take a risk on a new and unrecognized form of teaching, even as the University's emphasis on research productivity created pressures that might have discouraged them from using their limited time to create and teach a MOOC. In this study, however, it appears that many participants' identities, both as innovators and risk takers but also as successful and accomplished academics, activated their sense of agency to do work that was outside the bounds of their traditional faculty roles. Participants expressed an awareness that MOOC work existed outside of the typical reward systems, and reported advising junior faculty not to teach MOOCs because it might put their tenure cases at risk, but that did not stop them from choosing to do the MOOC. Instead, they found ways to negotiate the challenges of teaching a MOOC in the early years of the University's initiative and to frame the experience in ways that

were consonant with their preferred identities. This is one example of how faculty in this study experienced the constraints of a large research university while achieving growth. Other studies would likely identify other sets of constraints, and forms of growth, that are specific to other institutional or situational contexts. Additional research could help elaborate of the faculty growth framework to investigate how faculty achieve growth within contexts of constraint.

## Propositions

The goal of this study was to understand faculty motivations to teach MOOCs, as well as their experiences with MOOC teaching, and how they view their MOOC teaching in relation to their roles as researchers, teachers, and academic citizens. Because this study was exploratory in nature, the analysis leads to a set of propositions that can provide directions for future study. In the following section, I highlight key findings from this study, and for each, offer a testable proposition that follows from that finding.

**Key finding: For instructors accustomed to face-to-face instruction, the combination of the scale, asynchrony, and mediated nature of MOOCs disrupted the expected instructor-student relationship.**

Most of the participants in this study identified strongly as good teachers; prior to offering their MOOC, teaching meant having extensive direct, face-to-face interactions with students, both in the classroom and one on one. Because the University of Michigan is an elite R1 institution with little in the way of online curriculum, very few instructors had any previous experience teaching online in any form. Nearly all were making the transition to MOOCs directly from face-to-face instruction. Teaching a MOOC may have enabled participants to reach a much larger audience, but it disrupted their usual experiences of connection with students. In the MOOCs, participants could choose whether or not to engage with students, and regardless of

205

what they chose, they found the interactions to be very different from what they could expect in a residential course. All of the participants who started out engaging heavily in the forums eventually felt that they were not needed, and stopped. Students helped each other, course assistants handled any problems, and participants felt their time was best used elsewhere. Meanwhile, several participants chose to have no direct contact with students from the start. They did not reply to emails related to the MOOC, and did not participate in the forums. They felt that the scale was too great, and they wanted to focus their energies elsewhere, often on their residential students.

In addition, some of the typical modes for relating to students in a residential course were not available, or did not work well, in the MOOC setting. Participants who described the deep enjoyment they got from working with students one-on-one in office hours found that virtual office hours were unpopular, and did not allow them to provide that same level of hands-on support. Others were accustomed to facilitating discussions in their classrooms every week, giving them an opportunity to listen to their students as they wrestled with course content, and getting to know the students in the process. These participants did not find forums to be a sufficient proxy for the experience of leading classroom discussions. Even participants who were accustomed to lecturing found it difficult to adjust to the lack of visible cues from students about whether they were paying attention, confused, or disengaged, leading multiple participants to describe MOOC teaching as a low-feedback medium.

Studies of online education more generally have found that the asynchrony and technological aspects do affect instructors' experiences and satisfaction with teaching (e.g. Bolliger & Wasilik, 2009; Glass, 2016; Samarawickrema & Stacey, 2007). Findings on instructors making the transition to conventional online teaching have been mixed, with for

example one study concluding that the structure of the online course enables all the students to participate more fully, giving the instructor a stronger sense of connection with their students (Peterson & Slotta, 2009), while others found that new online instructors struggled with the loss of face-to-face interactions (Conrad, 2004; Sword, 2012). One path for future research on MOOC faculty would be to investigate what impact the distinctive features of MOOCs – scale, asynchrony, and technological mediation – have on faculty interactions with students, both how faculty think about those interactions and how they behave.

*Proposition 1: The scale, asynchrony, and technological mediation of MOOC teaching alters the way instructors interact with their students, their experiences of teaching, and how they conceptualize their role as teachers.*

**Key finding: Several external and internal factors influenced faculty decisions to teach a MOOC, including faculty members' sense of personal identity, their beliefs about MOOC teaching, and their temporal and institutional context.**

Participants described many considerations in their decisions to teach a MOOC; many of these were related to aspects of their identities, while others arose from their perceptions of the values, priorities, and needs of their home institutions. In the case under study, the institution remained vague about how it defined MOOC teaching, and where it might fit in the three-legged stool model of teaching, research and service that has historically described faculty work in four-year institutions. This ambiguity permitted participants to see their own identities reflected in MOOC teaching. MOOCs offered a blank canvas on which participants could project their own goals and ideals. Participants who were primarily interested in research saw the MOOCs as most strongly associated with research, while others who chose to do a MOOC in order to impart a

message of social importance saw MOOCs as service, because they hoped that by imparting that message they would be serving the public good. Participants who identified as good or accessible teachers also saw the MOOC as something that would enable them to expand access to their teaching. They had a desire to speak to a broader audience about topics they cared about, and MOOCs provided a platform on which they could <u>teach</u> those topics, which appealed to their identities as good teachers. Building on research about the way that faculty identities influence aspects of their work, such as decisions by faculty of color to invest time in mentoring underrepresented students (Stanley, 2006), or by Latinx faculty to teach at a Hispanic-serving institution (Murakami-Ramalho, Nuñez, & Cuero, 2010), further research on MOOC instructors could investigate which identities instructors describe as being relevant to their decision to teach a MOOC, and how salient those identities are in the decision-making process.

*Proposition 2a: Faculty invoke a range of identities to explain their decision to teach a MOOC, including identities related to demographics, their relationship to technology, and prior experiences with education (e.g. being a first-generation college student).*

Research has established that faculty make assessments of the relative value of different activities to their institutions, and that those assessments influence their decisions to engage more heavily in activities such as teaching or curricular change (e.g., Fairweather, 2008; Graham, 2012; Hora, 2012). In my study, every one of the four participants who were invited by the provost to teach MOOCs mentioned the significance of the provost's message to them, and the importance that the institution was placing on MOOCs, when they decided to say yes. Others described being recruited by a department chair or colleague to teach a MOOC, again noting the value that leadership was ascribing to MOOCs, even though doing a MOOC explicitly did not

208

count toward teaching load. Some reported feeling that as a public university, U-M had an obligation to increase public access to educational resources, an argument that supported their decision to teach a MOOC.

The institutional context did not always weigh in favor of doing a MOOC. When participants described the advice they would give or had given to colleagues considering MOOC teaching, they reported that they had discouraged junior faculty who were still pursuing tenure from doing a MOOC unless the institution began formally recognizing MOOC labor as relevant to tenure and promotion considerations. Many of the time pressures on MOOC instructors arise from the expectations of faculty at a major R1 university, and these pressures appeared to discourage some participants from planning to teach additional MOOCs.

*Proposition 2b: When deciding to teach a MOOC, faculty assess the value of the MOOC to their institution and their institutional leadership as part of their decision making.*

For participants who viewed themselves as rebels, pioneers, early adopters, and innovators, doing a MOOC aligned strongly with that aspect of their identity. When the opportunity arose, either because they were invited or they had the chance to apply, the early adopters told me that they said yes in part because they thought of themselves as people who would say yes. This relates to some areas of theory that I did not consider at the start of this study: Rogers' (2003) work on diffusion of innovations, especially as it relates to individual adopters of innovations, Bandura's (1994) work on the development of self-efficacy, and Weiner's (2010) attribution-based approach to motivational theory.

Rogers' definition of innovators, the first wave of people to begin using a new innovation, describes a group of people whose characteristics include venturesomeness, risk

tolerance, and a higher level of technical confidence, features that closely resemble the participants in this study who self-identified as pioneers and early adopters. According to Bandura, one of the four ways that people develop a sense of self-efficacy is through prior experiences of mastery in a specific kind of task or domain, while another is the physical and emotional reaction that a person has to a possible activity. Having succeeded at a difficult problem in the past, individuals are more likely to have confidence that they will be successful at a similar challenge in the future; having an aversive or stressful response to a possible activity reduces a person's confidence in their ability to do it. The self-identified early adopters in this study described an assortment of prior successes with using new educational technologies, whether those technologies were 35 mm slides, class blogs, or video lectures, as well as positive feelings towards the idea of trying something unfamiliar or challenging. In Weiner's theory of motivation, one of the central forces is an individual's self-assessed ability. For participants who identified as early adopters, that identity as an innovator seemed to inform how they made an assessment of their own abilities, as well as their conclusions that teaching a MOOC was something they could do or learn to do, and succeed at. Together with my findings, these theories suggest interactions between identity, self-efficacy, and motivation that may influence decision making related to teaching MOOCs, as well as the adoption of other new educational technology.

*Proposition 2c: An individual's identity as an innovator in the context of educational technology, and self-efficacy in that domain, will influence their decision to teach a MOOC.*

**Key finding: Faculty learned new skills, modes, and tools for both online and residential teaching through their MOOC experience.**

Whether or not participants were motivated to teach a MOOC by a desire to learn or improve their teaching, nearly all of them reported doing so. Very early on in the process they discovered that planning, prepping, and delivering a MOOC would be different from the face-to-face courses most were accustomed to teaching, and would require them to learn a wide range of new skills. They reported learning skills that were specific to online teaching: In trainings and one on one sessions with the videographer they learned how to teach for video, while working with instructional designers they learned how to design assessments that would function on a large scale without human intervention. Participants also described learning techniques in the process of doing the MOOC that they felt improved their residential teaching, such as chunking content into shorter segments. Because of the permanent and public nature of the MOOCs, some participants reported feeling pressure to perfect their lectures in a way they do not for the classroom. They spent more time thinking about and rehearsing their lectures, something that they felt improved their lecturing skills in the process.

For some participants, creating the video content for their MOOCs enabled them to make radical changes to their face-to-face courses, flipping the classroom so that students watched lectures at home and engaged in discussion and hands-on activities while in class. This required additional work and learning that the MOOC facilitated but which took place beyond the scope of the MOOC, things like adapting their syllabi, adopting a new classroom management style, and incorporating new content into their courses. MOOC instructors exercised their agency both in the manner that they tackled learning new ways to teach for the MOOC, and in transferring those skills back into their classrooms. Research on institutional motivations for adopting MOOCs has found that administrators often claim that their institutions are doing MOOCs in order to improve residential education (e.g. Hollands & Tirthali, 2014). Though this may not

have been a goal for instructors to teach MOOCs, they do report it as an outcome, and additional research could help uncover the mechanisms for that learning.

*Proposition 3: By providing faculty with additional resources such as time, expertise, and technical support, MOOCs enable faculty to learn new skills, modes, and tools for both online and residential teaching.*

**Key finding: In addition to the benefits, teaching a MOOC had negative impacts on instructors, including unexpected time demands, feelings of isolation, and exposure to negativity and criticism on a large scale.**

Nearly all of the study participants found positive things to say about MOOC teaching, sometimes even many positive things, but for different people it was different things. Sometimes it was the learning, for others it was the reaching a much larger audience, for some it was the opportunities that arose from doing the MOOC. However, many also reported some negative impacts of MOOC teaching. The tremendous amount of time required to create a MOOC may not have a negative impact in itself, rather the negative impact arose from the fact that it was a surprise for nearly all of the study participants. For participants who taught their MOOC on top of already full plates of teaching, research, and service commitments, the unexpected element of the time demands meant that doing the MOOC started to impede on other aspects of their lives. It may be that this experience was an artifact of being some of the first MOOC instructors; the university may have since streamlined the effort required to create a MOOC, and may communicate the time requirements more accurately, but conversations I have had outside the scope of this study suggest that those efforts have not been entirely successful. Certainly, for the

first waves of MOOC instructors, the surprising time commitment was one of the major drawbacks participants reported.

For a cosmopolitan faculty, whose closest colleagues may reside on another continent, isolation is often an issue, regardless of whether or not they teach a MOOC (Clark, 1989). Indeed, it is a key component of the "constraint" narrative in much research on faculty (O'Meara et al., 2008). However, there were specific features of the MOOC experience that were unique. Because MOOCs were so new and controversial, participants reported that most of their departmental colleagues did not know about their MOOC teaching, either because participants intentionally did not feel comfortable talking about it, or because colleagues did not care. For participants who had been invited to serve on the MOOC selection committee, isolation was not an issue; they reported experiencing fulfilling connections with colleagues who shared their interest in MOOCs and other educational technologies. Participants who were not on those committees reported that they did not have connections to fellow MOOC instructors, though they would have liked to. I saw some of those participants attend events where they had the opportunity to network with fellow MOOC instructors. This suggests that if the institution provided more opportunities for networking and connection, faculty would value them.

*Proposition 4a: Teaching a MOOC can contribute to feelings of isolation from colleagues both at an instructor's home institution and in the field more broadly. Institutional support to help MOOC faculty make connections with other instructors across the institution can ameliorate that effect.*

While there were only hints of problems with exposure to negativity in MOOCs in my data, other research suggests that it warrants further study (Comer, Baker, & Wang, 2015).

Participants explained that while they might get a handful of negative evaluations from students in their on-campus classes, the sheer scale of the MOOC meant that the negative feedback could become overwhelming and demoralizing. One participant alluded to the gendered aspect of some of this negativity; students seemed more skeptical of her abilities, and more likely to see any mistakes as evidence that she is incompetent, a problem her male colleague did not appear to have. This may be harder to solve institutionally; participants had their own approaches to insulate themselves from MOOC students, but the fact remains that MOOCs exist on the internet, and the internet is full of trolls.

*Proposition 4b: The scale and visibility of MOOCs, along with their context in internet culture, can result in negative impacts for faculty, some of which may be directly associated with an instructors' gender, race, or other marginalized identities.*

### Implications for future research

As MOOCs have become a more accepted element of the higher education landscape, it is crucial to understand their impacts on the instructors whose labor makes them possible. The findings of this exploratory study suggest several paths for future research. One would be to conduct similar studies at other MOOC adopting institutions, especially other types of MOOC adopting institutions such as smaller liberal arts colleges, private universities, and community colleges, to better understand the influence of context on faculty motivations and experiences with MOOC instruction. Such studies would also make it possible to learn whether the common motivations and experiences I identified among participants at the University of Michigan are also present elsewhere, compare and contrast experiences among instructors who were already doing a substantial amount of teaching online, and perhaps enable researchers to begin making

some generalizations about faculty responses to MOOCs. Similar studies with more recent

MOOC faculty at institutions where MOOC adoption has begun to mature might reveal if and

how the issues and challenges affecting early MOOC adopters have resolved, as well as how

motivations and experiences might be different among later groups of MOOC instructors.

I am particularly interested in future research that evaluates interventions to help reduce

the negative impacts of creating and teaching a MOOC. Are there methods to reduce the time

and effort required to create a MOOC that could be adopted at an institutional level? Have the

changes that mature MOOC institutions already implemented actually resulted in reduced time

demands for instructors? What kinds of interventions might reduce negativity and improve

student behavior in MOOC forums? An extensive body of research already exists on user

behavior in online forums, and some has even focused on students in online courses (e.g. Cheng,

Danescu-Niculescu-Mizil, & Leskovec, 2015; Christie & Dill, 2016; Lobel, Neubauer, &

Swedburg, 2005). Applying some of the lessons learned from that work, such as the positive

impact of reputation systems in forums on student experience (Cheng, et al, 2015), could enable

administrators to improve the experiences of both MOOC faculty and MOOC students.

Another thread of research should draw on existing theories of motivation (e.g. Lewin,

1951; Weiner, 2010; Wigfield & Eccles, 2000), as well as investigate more fully the impact of

instructors' identities on both their motivations to teach a MOOC and their experiences with

MOOC instruction. The faculty professional growth framework that provided sensitizing

concepts for this study is still in the early stages of theorizing. It was useful for this exploratory

study, but stronger conceptualizations and more well-defined constructs around agency, identity,

and motivation would be valuable. Nearly all of the participants in this study were white, and the

majority were men. As the population of MOOC instructors has expanded, it has included faculty

from more diverse backgrounds. Whether and if so how do sociodemographic identities play a role in MOOC motivations and experiences? Research on teaching paradigms and pedagogical techniques in face-to-face classrooms has found that female faculty and faculty of color tend to employ more interactive and inclusive approaches to instruction than white male faculty, and that their beliefs about the role of instruction tend to center more on process and less on content (e.g. Singer, 1996; Umbach, 2006). Do these differences in beliefs and approach and manifest in the motivations of later, more diverse waves of MOOC faculty? Are some motivations more or less salient for certain sociodemographic identities?

I have lingering questions about participants' understanding of who owns their MOOCs, and what it means to them to make so much material available for free. I asked participants in this study about MOOC ownership, but for the most part the questions did not seem to resonate or lead to larger conversations. Many believed that the university owned their MOOC, a few thought it was Coursera, and a few (correctly) answered that they themselves were the owners, but that they had given the university and Coursera certain rights. I did not learn what participants thought of this arrangement. For future research, it would be useful to continue asking instructors about the ownership and control of MOOCs, as well as their thoughts on the business model itself. Instructors are one of main sources of labor for MOOC production; what do they believe about who profits and who should profit from that labor?

On the experience side, there were hints in my data that female MOOC instructors may face bias and negativity specifically related to their gender, which would reinforce 35 years worth of evidence in the research literature that students seem to have different expectations of their female professors than their male professors, and that these differences are reflected in course evaluations (e.g. Basow, 1995; Bennett, 1982; Boring, Ottoboni, & Stark, 2016). In one

study, assistant instructors in an online class, one man and one woman, taught one discussion group as themselves and one discussion group as the other assistant instructor. At the end of the course, "students rated the male identity significantly higher than the female identity, regardless of the instructor's actual gender" (MacNell, Driscoll, & Hunt, 2015, p. 291). It would not be surprising to learn that a similar bias occurs in MOOCs as well. Further research could help identify those gendered experiences more clearly, as well as investigate similar experiences that result from race and ethnicity, sexual orientation, or nationality.

Though some of the start-ups have already shut down, MOOCs appear to be here to stay. Learning about the experiences and beliefs of faculty who teach MOOCs may help uncover strategies to improve support and resources for those instructors, and potentially for all faculty who use technology in their teaching. It may also help reduce the burden that MOOC teaching places on those instructors who choose to do it. Furthermore, learning what it is about MOOC teaching that appeals to faculty could help administrators and policy makers identify levers to encourage other kinds of public engagement, and improve access to the educational riches housed at universities, as well as to help instructors create MOOCs that produce their desired outcomes.

## Conclusion

The findings of this exploratory study provide a window into understanding both the "why" and the "what" of MOOC teaching for instructors at a large, public, research university. Through this study, we come to understand that faculty have different motivations to teach MOOCs, some altruistic, some self-interested, and some driven by curiosity or passion or both. We also see that the experiences for these faculty were largely positive; they resulted in learning new things about their teaching, and provided opportunities to reach audiences on a scale that

was previously unimaginable. But, there were also downsides, some of them significant, including the tremendous and often surprising time commitment, as well as the exposure to negativity on a dramatically larger scale than is possible in residential classrooms. I identified several testable propositions to guide future research, focused on deepening our understanding of how instructors decide to teach MOOCs and the effects that the MOOC teaching experience has on instructors. This study also provided some guideposts to the use and elaboration of the faculty growth framework, one that can offer a view of faculty learning and development that balances the ever-present contextual constraints that shape the lives of faculty with the equally real capabilities of individual faculty to exercise agency, develop relationships, follow their passions, and forge identities.

I hope that in future researchers also attend to how administrators, support staff, and institutions can improve the experience of MOOC teaching. Knowing what motivates an individual faculty member to teach a MOOC, how might help institutions ensure that the outcome aligns with the faculty members', as well as the institution's, goals? Knowing that the time burden can be surprising and overwhelming, what can institutions do to reduce that burden, or at minimum reduce the surprise? Knowing that the internet is full of trolls, and some of those trolls sign up for MOOCs, how can institutions protect faculty from the "students" in their courses whose primary purpose is to make them feel bad? As more and more institutions adopt MOOCs and more faculty teach them, their influence on faculty work lives will increase. Administrators must seek both to amplify the opportunities for learning and growth that MOOCs afford, and reduce potential negative impacts.

## APPENDIX A: Recruitment emails and follow-ups

**Initial email**

Subject: Request to participate in dissertation research study

Dear [Dr. Lastname],

I am writing to request your participation in my dissertation research study examining the motivations and experiences of faculty who teach MOOCs. To date, research on MOOCs has focused almost exclusively on the perspectives of students. Studying faculty like you who have taught a MOOC may help uncover strategies to enhance support and resources for MOOC instructors, and potentially improve use of technology in teaching more generally.

My interest in MOOCs comes from my experiences as a copyright specialist in the U-M Library and my interest in finding ways to increase access to the knowledge that universities produce. Faculty will be a crucial part of any solution, and MOOCs offer a visible new platform for faculty to share their work and reach a wider audience.

For this study, I am asking participants to schedule two interviews with me over the next three to four months. Ideally, the first interview would occur in the next month, and then I would follow up with you in May (but we will of course work around your schedule). Broadly, my questions focus on the reasons you decided to teach a MOOC, the contrast between your experience teaching MOOCs and teaching in the classroom, and what you see as the benefits and challenges of teaching a MOOC.

If you have any questions about the study, I am happy to discuss it in person or by phone, or answer by email. Thank you for your consideration, and I look forward to hearing from you. (The study has been approved by the University of Michigan Institutional Review Board.)

Sincerely,

Molly Kleinman

PhD Candidate

Center for the Study of Higher and Postsecondary Education

University of Michigan

**Follow-up email**

Subject: Following up: Request to participate in dissertation research study

Dear [Dr. Lastname],

I know it's a busy time of year, so I hope you will not mind if I resend this earlier request to participate in my dissertation research on faculty who have taught MOOCs. To date, research on MOOCs has focused almost exclusively on the perspectives of students. Studying faculty like you who have taught a MOOC may help uncover strategies to enhance support and resources for MOOC instructors, and potentially improve use of technology in teaching more generally.

My interest in MOOCs comes from my experiences as a copyright specialist in the U-M Library and my interest in finding ways to increase access to the knowledge that universities produce. Faculty will be a crucial part of any solution, and MOOCs offer a visible new platform for faculty to share their work and reach a wider audience.

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If you have any questions about the study, I am happy to discuss it in person or by phone, or answer by email. Thank you for your consideration, and I look forward to hearing from you. (The study has been approved by the University of Michigan Institutional Review Board.)

Sincerely,

Molly Kleinman

PhD Candidate

Center for the Study of Higher and Postsecondary Education

University of Michigan

**Request for follow-up**

Hi, [Firstname],

Thanks so much for taking the time to speak with me last month about your experience teaching MOOCs. As I mentioned, I'd like to do a follow-up interview with you to ask some new questions and get deeper into some of the topics we discussed last time. Would you be available for another hour-long interview some time in the next few weeks? My schedule is very flexible. Please let me know what works for you, and I look forward to seeing you again.

Best,

Molly

**APPENDIX B: Consent to participate in a research study: MOOC faculty motivations and experiences**

**Principal Investigators**

Molly Kleinman (mollyak@umich.edu), PhD candidate, University of Michigan Center for the Study of Higher and Postsecondary Education

**Faculty Advisor**

Lisa R. Lattuca, PhD, (llatt@umich.edu), University of Michigan Center for the Study of Higher and Postsecondary Education

**Invitation to participate in a research study**

Molly Kleinman invites you to participate in a research study about the experiences of university faculty who teach MOOCs. The goal of the study is to understand the motivations, beliefs, and experiences of faculty who have chosen to teach MOOCs through the University of Michigan's Coursera partnership.

This study is a student project conducted to meet the requirements of the dissertation. The researcher aims to interview the entire population of Michigan faculty who have taught MOOCs through Coursera.

**Description of subject involvement**

If you agree to be part of the research study, you will be asked to participate in two 1-hour interviews with the investigator.

**Benefits**

The benefits to participants might include increased understanding of their own personal beliefs and experiences with MOOC teaching. In addition, the investigator will share the results of the full study with participants, which may lead to additional benefits in learning about fellow members of the small MOOC teaching community.

**Risks and discomforts**

Due to the small size of the population of MOOC faculty at Michigan, and to the likelihood that discipline-specific information will be relevant to the study, *the researcher cannot offer a guarantee of confidentiality*. It is highly likely that participants will be identifiable, and that their statements will be associated with their names and courses.

To protect the raw interview data and other study information, all notes and recordings will be stored on a password protected University-maintained server, and will be deleted at the conclusion of the project.

**Confidentiality**
I plan to publish the results of this study, and may include information that would identify you. In addition, there are some reasons why people other than the researchers may need to see information you provided as part of the study. This includes organizations responsible for making sure the research is done safely and properly, including the University of Michigan, or government offices.

To keep your information safe, the researchers will never associate your name with interview recordings or notes. A pseudonym will be used instead. All notes and recordings will be stored on a password protected University-maintained server, and will be deleted at the conclusion of the project.

**Storage and future use of data**
The data you provide will be stored on a password protected University maintained server. The researcher will retain the data for the duration of the project, and will dispose of your data after completion of the course.
The data will not be made available to other researchers for other studies following the completion of this research study and will not contain information that could identify you.

**Voluntary nature of the study**
Participating in this study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. If you decide to withdraw early, any recordings that have been made up until that time will be deleted and any notes will be shredded.

**Contact information**
If you have questions about this research, including questions about scheduling, you may contact Molly Kleinman at mollyak@umich.edu.

If you have questions about your rights as a research participant, or wish to obtain information, ask questions or discuss any concerns about this study with someone other than the researcher(s), please contact the University of Michigan Health Sciences and Behavioral Sciences Institutional Review Board, 2800 Plymouth Rd. Building 520, Room 1169, Ann Arbor, MI 48109-2800, (734) 936-0933, or toll free, (866) 936-0933, irbhsbs@umich.edu.

**Consent**

By signing this document, you are agreeing to be in the study. You will be given a copy of this document for your records and one copy will be kept with the study records. Be sure that questions you have about the study have been answered and that you understand what you are being asked to do. You may contact the researcher if you think of a question later.

*I agree to participate in the study.*

_____
Printed Name


_____  _____
Signature                                                    Date



**Consent to be audiorecorded**

Audio recording will be done as part of study procedures. Upon completion of the study, these recordings will be deleted. Please sign below if you are willing to be recorded. You may still participate in this study if you are not willing to be recorded.

*I agree to be audiorecorded.*

_____
Printed Name


_____  _____
Signature                                                    Date

**APPENDIX C: Interview guides**

**First interview guide**

*Getting to know you*
To begin, I would love to hear a bit about your history, and the path that led you to your current position at U-M.

*Experience teaching with technology*
Before you taught a MOOC, what was your experience using technology in the classroom?
What would you say is your general comfort level with technology?
        [How have you felt about the Coursera software?
        Are there things you want to do that you currently you can't because of the software?
            Are you finding ways to work around it?]

[Do you draw explicit connections between your research and your teaching?]

*MOOC Teaching*
Were you invited to do a MOOC, or did you propose one?
Do you remember who asked you and how it went?
        (If invited): Why, at this time, did you say yes?
        (If proposed): Why, at this time, did you want to teach a MOOC?
            How did you put together the proposal?

What were your expectations for the cost of teaching a MOOC in terms of time/energy?
How did that line up with the actual cost?
Yours was the very first Michigan MOOC, is that right? What was it like to be first?

**We often talk about the three pillars of faculty work: teaching, research, and service. How do you see MOOC teaching fit into your broader sense of your professional life as faculty at Michigan?**

**What have you learned from teaching a MOOC?**

**What do you think is the most valuable thing about MOOCs?**

Do you see potential for MOOCs that isn't being fulfilled yet?

*Other online teaching*

Before Coursera, did you do any other online teaching?
>How did you like it? Why did you do it?
>What is different and similar between the previous online teaching you did and the MOOC?
>Which do you like better?

*Course design*

When you were designing your course, did you move an existing syllabus to the MOOC, or start from the ground up, or something in the middle?

How do you choose the resources to use in your course?
>Are you expecting people to buy a textbook?
>Did you transition materials that you used in the classroom before into the MOOC?
>Are you using materials you created for the MOOC in your classroom?

How do you imagine people will use your MOOC?
>Have you thought about how other faculty might use it?
>Do you expect this to be something that people are going to watch in 5 years?
>Do you expect it to be a building block, or preserved as is?

Do you pay attention to the analytics; enrollment, demographics, stuff like that?

*Pedagogy*

How involved are you once the course is up and running?
How many times have you taught this course?
>(Did you choose to do the pay to enroll version when Coursera rolled it out?)

What did you anticipate would be same/different in MOOC teaching?
>Are there you things you learned while teaching the MOOC that you brought back to the classroom?
>What is your favorite thing about teaching a MOOC?
>What is your least favorite thing about teaching a MOOC?
>Do you see any benefits that have come from teaching a MOOC?

*Departmental support and collegiality*

How has your department responded to the Coursera initiative?
>Have they provided incentives?
>How have your colleagues responded?
>What do you get for teaching?
>How does it count in your department?
>Do you have tenure? Has tenure factored into your thinking at all?

Have you consulted with colleagues, either at Michigan or elsewhere, for guidance about teaching or designing MOOCS?
>Who?
>Do you provide similar support to others?

**If a colleague in your department was deciding whether to do a MOOC and asked you for advice, what would you tell her?**

What do you think faculty life at a research university is going to look like in 5 or 10 years?

*Ownership*
What are your thoughts about the ownership of MOOCS?
        Who owns your MOOC?
        Which parts do you own?
        Under what conditions?
        Do you know what happens if you leave the university?

*Online sharing*
Have you put materials in Open.Michigan or another OER site?
Have you published in an OA journal?
Are you familiar with Creative Commons?
Do you use CC licenses?
Do you post your scholarly articles to a repository like PubMedCentral or Deep Blue, or on your personal website?
        Has creating a MOOC changed any of your thoughts about these things?

## Follow-up interview guide

**General update**
What is new in your MOOC teaching since we last spoke?
        Have you tried the new edX platform?
        Are you running your course again?
        [If running course again] How has it changed since the last time?

**Follow-ups questions based on data analysis**

Are you a DEI Fellow, or are you involved in any of the other DEI committees? Can you tell me a bit about that experience?

Have you gotten to know your fellow MOOC faculty? How has that happened, and what is it like?

Can you tell me about a time when you felt like your experiences as a student informed your approach to teaching?

**Participant-specific follow-up questions**
[Possible Themes?]
[Member checking?]
[What else?]

# APPENDIX D: Codebook

**Table 4: Codebook**

| Code | Definition | Example |
|---|---|---|
| Access | Related to using MOOCs to increase access to education or educational resources. | "One is, I really like the appeal of reaching audiences across the world, many of which are not able to afford business school education in an in-class environment. That was an incredibly important factor in my decision-making because with tuition rates going well over $60,000 a year, and if you look at this a very, very small fraction of the population who can afford to come to business school." |
| Administrator role | Participants describing their administrative roles and responsibilities, and thoughts based on those roles. | "However, the delivery format is also important, and it then bumps up into my new role as the division chief of professional education." |
| Advice given | Advice that participants reported giving to others about MOOCs. | "I said, 'It's gonna take you more time than creating a regular class, even though you'll probably cover less material.' I said, 'It's the equivalent of at least one full prep of creating... Even if you've done the material before, it's a brand new prep for you.'" |
| Advice received | Advice that participants reported receiving from others about MOOCs | "And so within that advice, they said, "Make it more modular." So I redesigned the whole MOOC, and created a specialization out of it." |
| Altruism | Related to using MOOCs to further altruistic goals including increasing access, creating more open content, or making the world a better place. | "I always thought I would try to help people with that. I had free education and that it made a big difference to me, so pass it on." |
| Analytics | Participants discussing the data that they received about their courses, such as enrollment and student demographics. | "It was not the highest subscribed course but like the initial offering had 18 or 19,000 people signed up. I don't know how many completed, maybe, it's always a fraction who actually complete the course…Maybe 1,000 completed or something like that. And it was from 180 countries and that was kind of exciting." |
| Anxiety | Feelings of stress, fear, or nervousness related to doing the MOOC. | "I had a panic attack for like two weeks, I think, when the emails started. And I was like, 'This isn't very nice of what people are saying.'" |
| arXiv | Mentions of arXiv, an open access repository for papers in the fiels of physics, mathematics, and engineering. | "arXiv also was invented really around physics and astronomy and so my first paper went on the arXiv in 1993 and every paper I've ever written goes on the arXiv." |

| Assessments | Designing student assignments for the MOOC. | "That's the one that I really struggled with is how do you do assessments beyond your basic multiple choice, quizzes, things like that? I'm fascinated to learn what people are doing for having the cohorts teach each other. I heard some really neat ideas that I would love to implement." |
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| - Peer Assessment | Creating projects where MOOC students evaluate each others' work. | "I will use peer grading. That's what I'm shooting for. Till now, everything was graded technology-wise, that's why it took up so much of my time. I had to not only create the assessments, but to make them so that a computer could grade them. " |
| - Assessing the MOOC | Purposeful evaluation of the MOOC itself, such as measuring learning outcomes, for the purposes of improving it. | "I'm like, 'Oh, there's educational scholarship around this. We need to be purposeful.' And so I was thinking about stuff and how we were gonna assess this, and not just as a product, but really, 'What's the educational impact here. How can we assess this?'" |
| Audience | For whom are participants creating their MOOC? Who do they think will take it? | "I didn't have a specific audience in mind, but there is a natural audience, which is HIV infected people, gay men especially, healthcare workers or people engaged in healthcare policy issues." |
| Balancing time | Participants describing their busy lives and many commitments and how or where MOOCs fit into that. | "The problem is I have too many brands in the fire. I have trouble sorting all of the things that I'm trying to do at the same time." |
| Because new | A motivation for teaching a MOOC: because the participant has an interest in or tendency to try new things. | "I liked the idea of pioneering. I like the idea of studying stuff that's new. I wanna be able to get out there with things that I think are important that the rest of the world might poo-poo." |
| Believer in free education | Holding beliefs that education should be freely available to everyone. | "I'm an educational socialist, I believe that we should be sharing without owning and so I think the world should own the MOOC." |
| Blended learning | Discussion of course models that involve both face-to-face and online components. | "So, I have done that before, but I don't do that consistently. Typically, it's a blended, so for the distance learning courses that I do, there's typically an on-campus cohort and an off-campus cohort." |
| Camera is a challenge/different/hard | Teaching a MOOC required learning how to teach on video. | "I hadn't realized how out-of-body of an experience it can be to be in front of a camera the first few times, until you get used to it." |
| Challenge | Any of the challenges associated with doing a MOOC. | "So now that this transition to on-demand is going on, it's another high hurdle to get... Because to transfer everything and the way my peer-to-peer assessments are set up is gonna be wrong in the new on-demand, so I have to create rubrics, and I have to re-score things." |
| Community TAs | MOOC teaching assistants, which participants called a variety of things, including community TA, course operations liaison, and course assistant. | "And so we actually hired a graduate of our PhD program, they pay $15 an hour for an undergraduate assistant, so we had a highly overqualified course operations liaison, and she really sheltered us, or me anyway, from interacting with the students, the 'learners,' as Coursera calls them." |
| Connections to other MOOC faculty | Interactions or relationships with other MOOC faculty, or | "The DEI organized and I went to part of one day of that and met a few other instructors. And they |

| | lack thereof. | seemed to have thought about MOOCs a lot more than I have. So maybe I... Anyway, so I haven't really compared notes with anyone outside. It'd probably be a good idea but I haven't done it." |
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| Connections to students | Interactions or relationships with MOOC students, or lack thereof. | "And so we did some Google Hangouts with some people who were taking it. Not many people showed, but I actually think... I think... I don't know if MOOCs are a success or failure, right? So how many people actually are taking it or engaging in it, what's the real finishing rate?" |
| Content | Sources of MOOC content, how MOOC content was created. | "I don't think that there was anything fancy or special about translating from one medium to another. There was often a search for materials. One of the nicest things about MOOCs is being able to link out to other material on the web." |
| Copyright | Copyright issues, both related to the MOOC and in general | "I was very sensitive to copyright and when I did the MOOC, in particular, I didn't use problems that had come from previous textbooks, 'cause I'm like, 'Look, that's not my content.'" |
| Course design | How participants designed their MOOCs or thought about designing their MOOCs. | "So I was at this meeting trying to understand better what the affordances of edX are. I think in the end they're not so very different that I'll be able to do something extremely novel. There are a couple of possibilities. There's a built-in kind of Wiki structure that students might populate. A lot of good things could be done with that, maybe." |
| Coursera | Discussion of the Coursera MOOC company, including general impressions, working with them, and interacting with their staff or leadership | "So, Coursera has pivoted... And even edX, they're pivoting towards, "We're gonna deliver online content and you can pay for a certificate," so in some ways that undermines the complete OER notion." |
| Creative | Opportunities to be creative that arose from doing the MOOC. | "So, it was fun. It was good. But it was not standard. But that was fun. To try and come up with something that's gonna be different, take people out of what they usually do but make them think and apply." |
| Creative Commons | Creative Commons are a set of copyright licenses that grant blanket permissions to all users under certain conditions. | "I'm told that I own copyright on it. So it was all done under Creative Commons. So I'm told I own copyright on it in the sense that we never had a real discussion on this. I've signed things with Scott and James, and that does say I own copyright, but it was all created... Of course, it was under a Creative Commons license." |
| Credit hours/course release | Discussion of having the MOOC count or not count towards credit hours or course release. | "…the reality is that I've never had any protected time to do this. And that's a big problem for the sustainability of this. I love innovating. I think you can probably get that sense. And I will squeeze in, and try to make it fit in, and take extra effort to try to improve the learning experience for students for as much energy as I have, but that's not sustainable." |
| Criticism | Experiencing or thinking about potential criticism related to the MOOC | "And criticism is always hard to take for me, anyway, and there's been... I haven't actually heard any criticism of the videos, but there's plenty of |

| | | criticism of the courses, considering that the students aren't paying anything, that doesn't seem to inhibit criticism," |
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| Deep Blue | University of Michigan institutional repository where faculty and students can deposit open access copies of articles they have written. | "Sometimes it would be SSRN, sometimes I think it's Deep Blue. You know, Harvard has its own network I think and some of the papers were posted there because I have co-authors from that school." |
| DEI | Digital Education and Innovation, the U-M office that coordinated the early MOOCs. | "I hold the DEI in the highest regard. I mean it's a new organization but man they really, they just seem to have so much skill and competence." |
| DEI Committees | A handful of participants served on DEI committees related to MOOCs or digital education. | "Right, so another role that is an official one is that James Hilton created this Digital Innovation Advisory Group, the DIAG Committee, and so I've been on the DIAG Committee since it was formed. And this year, I am the Chair of a subcommittee of DIAG it's called Personalized Learning." |
| Demographics | Demographics of students in the participant's MOOC. | "I'm very interested in the analytics and the demographics. In the early offerings of my course, we're in an engineering course where STEM discipline... Where minority and gender is very under-represented, and mechanical engineering, in particular undergrad is only 20% or something like that. In the earlier offerings, it was really... There was a really high number, almost, I wanna say 40% or 50% women." |
| Department reaction | Responses to a standard interview question about how their department reacted to their MOOC. | "Yeah, I think everybody knows that we did it. I think people are unclear as to why we did it." |
| Did not realize what I was getting myself into | Many participants said something similar to "I did not realize what I was getting myself into." | "Once I got in it, I was like, 'Oh my goodness, what did I get myself into?' I think I met with Doctor Raj, he's the [associate dean for medical student education], and he was just like, 'This is a big thing, this is global, it's not just a residency thing and that's it.' So that kind of woke me up a little bit." |
| Digital education | Discussion of the broader field of digital education, beyond just MOOCs. | "This whole space of digital education is still growing so fast, and changing so fast, that it's ... the balance of innovation and uniformity is very much on the innovation side, and not so much on the uniformity side." |
| Discipline | Participants' discipline or disciplinary background, or thoughts on some aspect of the relationship between discipline and MOOCs | "And this was a wonderful and joyful opportunity for me because I'm a Computer Scientist but I'm sort of not a Computer Scientist. I find technology fascinating and I love technology and I love teaching, but I don't like the fact that Computer Science tends to take technology and say, 'We'll only gonna teach you technology if you agree to learn everything.'" |
| Diversity | Discussion of diversity of MOOC students and/or MOOC instructors. | "And that informed what I then tried to do with MOOC. Because I knew that classroom could be very lively. And as an instructor, I also had a sense that what many instructors see as a limitation, |

| | | which is the heterogeneity of the students, actually was something that I could adapt my material to be engaging for." |
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| Doing another MOOC | Discussion of the decision to do or not do another MOOC after the first MOOC. | "I expected that it would take much less time and energy. It was an incredible amount of work and I thought I'd never do it again, although I've just had another one approved." |
| Drawbacks | Downsides of the MOOC experience. | "Their structure is very complex for somebody first launching a MOOC. I really relied heavily on the DEI staff, especially with the first MOOC, getting up to speed. Editing the videos it's just a task that takes time and it's a little bit boring, but it needs to be done." |
| Early adopter | Participants described themselves as early adopters or identifying as early adopters. | "I've experienced this many times in my career because I love being an early adopter. I identify as an early adopter. Early adopters suffer the pangs of having to reinvent and reconfigure. I get that." |
| edX | A MOOC platform that U-M moved to after the initial wave of MOOCs; some participants switched from Coursera, some did not, some had courses in both places. | "Their recommendation was that they were... That it seemed like edX would give us more flexibility to do things differently." |
| Empowerment | Some participants expressed a desire to empower their MOOC students. | "[We] ask about levels of optimism for positive change in the health care system in the next one, five, and 10 years. And then also, whether the learners feel that they themselves will take a part in that. And we measure before and after, and with all the limitations of pre and post, we see remarkable changes in optimism, after taking the course. Even though what we're doing is essentially, lifting up the hood, and showing them some tough stuff in terms of how the system isn't working that great." |
| Enormous amount of work | Participants used language such as "enormous amount of work" to convey that doing the MOOC required tremendous effort. | "Developing a new course is a huge amount of work. And then you have to be willing to put in the time to do it in a totally different way." |
| Experimentation | Discussion of trying new things for the MOOC, or doing the MOOC because of a desire to try new things. | "I'm experimenting with an audience that I'm deliberately saying, "You don't need any kind of background," and I'll try to reach out to you in ways that are appealing to you, which is much more difficult because you could be anybody." |
| Faculty Growth | | |
| - Agency | Agency describes participants' actions arising from their own interests, desires, and free will, as well as attempts to influence their field or institution. | "And there will be a handful of people who actually really have a formal training, who help to lead forward and set the standard for it, too. That's an important role I have to play, make sure that people do good work." |
| - Commitment | Commitment describes participants' sense of obligations or duties related to their work. | "He was always defying conventional wisdom, and I am not like that by temperament, but I am like that by commitment and philosophy," |

| - Identity | How participants' beliefs about themselves influence their decisions or behavior | "I'm an early adopter and always have been." |
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| - Learning | Participants' experiences of learning, either as a result of doing the MOOC, or thoughts about their own learning in general. | "That in turn I think, I hope, made me a more effective in person teacher. 'Cause I realized where the time might be wasted in person, that I need to be more efficient about. I also specifically teach now in eight to 10 minute chunks, and then I pause, or I pivot to a new topic." |
| - Professional relationships | Connections or relationships that participants had or developed as a result of the MOOC, or a lack of those relationships. | "I just remain grateful for the MOOC. 'Cause it really was a game-changer for me in a lot of ways, professionally, personally, intellectually. And now, there's this community of practice around online and digital education and innovation that has taken hold, and so that's exciting as well, so I want to stay part of that community." |
| Faculty life | Descriptions of various aspects of participants' lives, both work and home. | "I think they're gonna try to talk me into doing a bootcamp in August, but I'm gonna tell them no, because... Actually to be honest money-wise, it would be a killer to put my kids in daycare. And then second, I actually wanna spend the time with my kids, so." |
| Faculty role | Descriptions of participants' different professional roles, including as teachers, administrators, and researchers. | "And that sticks with you, and the residents, and then you're still on call. So you have to just brush yourself off and keep going. And then, like, lament that, 'I don't have time for my research.'" |
| Fame | Thoughts about or experiences with becoming famous or recognizable as a result of the MOOC | "I was in Seoul about two weeks ago and longtime colleagues and friends of mine in the same areas and they mentioned very casually, 'Oh, yeah your Finite Element classes, da-da-da, we use them this way, that way.' … It's becoming reasonably common for people to have seen this and used it, and these are all my peers." |
| Familiarity w/ distance and/or online education | Prior experiences with online or distance education, before working on the MOOC | "So actually, what was once called 'distance learning' is not so alien to me because we've been sharing these courses, but it's not like you and me talking on our laptops, it still is these... It's high-end video conferencing with these big plasma screens and I guess at a certain point the information was transferred over the internet, originally it was ISDN. But it's really quite good and it shrinks the physical distance quite a bit." |
| Fear | Experiences of being afraid or panicked by some aspect of the MOOC. | "They are not scared. So, that's actually made me think like, whenever I felt scared, I've just said, screw it." |
| Feedback | Thoughts about students' responses to the MOOC | "The two other sources of information that are very valuable are the learners submit stories, and that's very helpful. And then also less helpful are their evaluations, like over 2,000 people have submitted course evaluations. They're a little more general, like, 'Great course!' That kind of thing." |
| First gen | A few participants described their backgrounds as the first in their families to attend | "I was a first gen student and stuff. I didn't really know what I was doing. When I was a junior, somebody told me graduate school is free. That |

| | college. | sounded pretty good, so I applied to graduate school.” |
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| Flipping the classroom | Descriptions of using MOOC content to alter the structures of their residential courses. | “I'm also experimenting on campus in a fast-track finance program, where I'm trying to flip and do stuff that actually is helpful to our campus students to not get focused on content, but to do much more applied stuff.” |
| Fun! | Descriptions of enjoyment and pleasure that came from doing the MOOC | “And so the thing I would like to say is that I just have had a blast.” |
| Gender | The impact of gender on the experience of doing the MOOC | “I also thought the thing was interesting is, I mean, everyone wants to look nice, right, but I did think later, I was like, "Why am I putting on makeup? I don't put on makeup." I think like the first seven lectures I'm wearing makeup and then I'm not.” |
| Gotta be thick skinned | Participants used language about being tough to handle the criticism that came from doing the MOOC. | “I watch 'em and then like, laugh at the mistakes, but you gotta... I think you have to be really thick-skinned, or it's gonna be hell.” |
| Gratitude | Thankfulness for the opportunity to do the MOOC, and for what the MOOC has given them | “As you can tell, I'm pretty passionate about it because I thought it was a cool idea to start with and now that I'm in it, it's given me so much in return, just from an intellectual and academic richness that I'm really grateful that I got the opportunity to participate.” |
| Harassment | Issues of harassment or potential harassment, both online in general, and related to MOOCs | “I told the female [course assistants] that they might wanna just get a pseudonym, because that's the thing is, if you put your name as like, Sonia, they can check, probably won't be that hard to track down, ‘Oh, they're at U of M and this is their first and last name,’ you can find that.” |
| How used $10,000 | U-M provided $10,000 to early MOOC instructors; participants sometimes described how they used that money. | “I actually used it to pay people to come into town. So two of my people were external, and so I basically paid for them to come and do it, so that's what I did with the funding. And I bought a camera because the blasted pictures have to be open source on your slides, as you know, and we couldn't find the pictures that we wanted.” |
| Impact | Participants describing what kind of effect they felt the MOOC had. | “At sometime in the last couple of months, I've discovered a page in Coursera that a couple of dozen students have summarized their experience with my course. And reading those is fantastic. So I would say, "Yes, I am encouraged." I don't know how wide spread it is, but a few dozen people have taken the opportunity to leave comments like that.” |
| Imposter syndrome | Descriptions of experiencing “imposter syndrome”, where an individual believes that they do not deserve to be where they are, even when they do. | “I suffer greatly from the imposter syndrome, like very greatly.” |
| Incentives | Discussion of the $10,000 payment early MOOC instructors received, as well as other incentives or | “The funding obviously was unclear, and we didn't... I don't think anybody did it for the funding. It was basically, ‘Here's $10,000, put it in your kind of own account and do what you want |

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| | possible incentives for teaching a MOOC. | with it.'" |
| Increase visibility | A reason for teaching the MOOC, to increase visibility for a program or the university | "And the programs don't receive any money from the university, we're called soft money degree programs, which is a little weird but not unique. So that was for me, that was the emphasis for continuing with MOOCs was to increase the applicant pool for our degree programs and to bring at least a little bit of revenue into the programs." |
| Innovation/innovative | Participants used the word innovation or innovative to describe aspects of the MOOC, or their own work. | "Well, I mean, it's obviously teaching but to me it's beyond teaching in a sense. I actually felt that it's more like teaching innovation, that's experimentation. I was really excited about this because I felt that this is truly an opportunity to A, Create something new. B, Have enormous reach and sort of C, kinda experiment along the way. To me it's a teaching experiment, if you will." |
| Interisciplinarity | Descriptions of participants own movement across and between disciplines, or partnerships across disciplines | "So I started doing things with my own kind of mindset, very different from most of the people who do education research, 'cause I'm a physicist. I just was thinking differently. Gradually, I've learned how to think in many people's ways. So I think I can translate a little bit, but it started with doing weird things that a physicist would do." |
| International reach | Participants discussing their desire for their MOOC to find a global audience, or ways that it did have a global audience. | "Yeah. I haven't looked lately at questionnaire design but there were like a 170 countries and I'm trying to remember what some of the other demographics were... But that was the most striking one is that it was really international. The vast majority are in North America and Europe. North America, US primarily, but a lot of people from other countries." |
| Involvement | Participants engagement with the MOOC forums or other aspects of running the MOOC while it was in progress. | "But yeah, when the first class ran in Coursera, I was very engaged, we were all very engaged in my group, and we were... The first few weeks we were on it of every few hours and we would respond. But gradually, we understood the medium better and we also got used to it more. Towards the end, there would be periods for about a week when I would not check in." |
| Lecturer not tenured | A few participants had lecturer appointments and were not on the tenure track. | "To be honest the workload would be much higher than I'm interested in having if I were to go tenure track, I'd leave U of M and go to a place that's more education-based." |
| Love the camera | A few participants had previous experience performing or teaching on camera, and enjoyed it. | "But the videos were easy, because I know my stuff. Right? And I loved the camera always. |
| Martha Pollack | Martha Pollack was the Provost at the time the Coursera initiative launched, and directly invited the first wave of instructors. Participants sometimes | "It was funny because you get this five screen email that essentially ends with, what's in it for you as described by Martha who I have known for many years, so she's like... I will paraphrase, 'Fame and no fortune.'" |

| | | discussed their interactions or their previous relationships with her. | |
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| Mentorship | | Experiences of mentoring or being mentored in relation to doing the MOOC. | "Generally, most people are smart enough to do their homework first. They generally have been mentored by [someone on the DEI staff]. What is a recipe for success for a content and delivery of a MOOC? They've been mentored ahead of time by that cohort, not necessarily by us." |
| Mission | | The mission of MOOCs, and the way MOOCS align with the mission of the university | "The chance to reach a huge number of students, which I think is very much aligned with the mission. Well, let me back track. We say that it's very much aligned with the mission of a public university like Michigan reaching out, but Harvard and Stafford, they're all doing the same thing. So, it's really not special for a public university, but anyway, that's the line." |
| MOOC | | | |
| | Adapting to MOOC teaching | Descriptions of the changes participants had to make to adjust to teaching for the MOOC. | "So, I'm comfortable on camera, but actually I never tried to adjust my teachings that would be on camera. Which I have to thank [my videographer] for his patience with that, 'cause I love the interaction with students. And so, to lose the ability to throw a question out, and roll with the response, whatever it is, to lose that, was a huge trade off for me." |
| | Benefits of MOOCs | Positive outcomes of MOOCs, for instructors, students, and institutions. | "It's been a game-changer in terms of the material I can put out there, the quality of the class, the level of the class, the level of... The students do much better in terms of learning the material sooner, just having more times to do things with the [material]." |
| | Broader MOOC landscape | Discussions of what other institutions are doing with MOOCs, the bigger picture of MOOCs beyond U-M | "A lot of MOOCs are just not worth the time, I feel like. They're just advertisements. Even top schools are trying to just make it sweeteners, and I think that's just... In my book, that's the wrong way. You just almost demean the platform and its value." |
| | Does MOOC teaching count? | Participants often raised the question of whether and how MOOC teaching should be counted as a part of their workload. | "Like here I staff the residents but I don't do lectures or teaching. But I feel like they recognize the Coursera and my involvement with the residents as far as falling into the teaching category." |
| | Goal for teaching a MOOC | Participants goals for their MOOCs, what outcomes they hoped to achieve. | "I know the idea of a capstone is this really nice project. But in all honesty, after taking my other four courses, you shouldn't be able to make a really nice project. You should be able to scrape something together." |
| | MOOC backstory | Recollections about how they learned about MOOCs, how they reacted when they were invited or decided to teach one, and how their particular MOOC came to be. | "Well, I think it was really probably [my colleague's] idea. She's good friends with some faculty who've launched a hugely successful data science specialization through Coursera, and I think through her contact with them she reinforced her belief that we should do something like this." |
| | Shifting MOOC | Mostly in follow-up | "Yeah. In the first gen, like the first five and then |

| landscape | interviews, discussions of what has changed since they started out working on their MOOC. | my generation, we weren't given anything. You had no carrot there, other than the, 'I want to play in this sandbox.' Now we are seeing assistant professors at least apply for this opportunity. Like I said, I think they are moving forward with it." |
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| Negativity | Discussions of negative feedback or just general negative responses to the MOOC. | "I was getting, at the beginning, hundreds a day and some of 'em weren't very nice and it was too depressing." |
| Not like the other MOOCs | Several participants pointed out the ways that their MOOCs were unusual. | "I was aware, initially, that the material I was proposing to teach was a little more advanced than the typical MOOC. For instance, most students here would take, these are all graduate level classes." |
| OER | Open educational resources are eduational materials that are available online for anyone to use and free from most copyright restrictions. A few participants produced OER before doing MOOCs. | "So, Coursera has pivoted... And even edX, they're pivoting towards, "We're gonna deliver online content and you can pay for a certificate," so in some ways that undermines the complete OER notion." |
| Office hours | A few participants tried offering virtual office hours, or even in-person coffeeshop office hours, for MOOC students. | "I've done just two office hours online. But with my capstone I actually plan on doing office hours multiple times. I would like to do office hours at least once a week but at multiple times so I can grab people." |
| Open access | Open access refers usually to research articles and books that are freely available online with few copyright restrictions. Participants described both creating and using OA materials. | "So, some of my stuff is in MedEdPORTAL, which is through the AAMC, which is open and it's peer-reviewed. The challenge in putting in open access journals is that nobody knows to look there." |
| Open Michigan | Open Michigan was the OER initiative at the University of Michigan. Some participants had worked with them prior to doing their MOOC, or during the process of doing a MOOC. | "And so I think I have something to share, really broadly. And I'm trying to push it as far as I can through Open Michigan, through every outlet that I can come up with. And in fall 2011, the gurglings of the MOOC movement at Stanford start coming out." |
| Openness as a value | Some participants described increasing access to knowledge and information as something important that they believed in. | "But I and my group very much buy into the idea that doing these things in the open actually advances for the entire field. And I think it's completely true." |
| Opportunity | Chances to do new things that arose as a result of the MOOC. | "But then, it gets reinforced, so then it's actually a feed-forward mechanism, right? You get involved in this new pedagogy called a MOOC, and it opens up a whole level of professional opportunities that you wouldn't have had." |
| Ownership | Beliefs about ownership of the MOOC or other scholarly work. | "In my mind, the videos were created by Michigan. Have I been sharing them? Yes, I have been sharing them. I don't know the right answer. I'm an educational socialist, I believe that we should be sharing without owning and so I think |

| | | the world should own the MOOC." |
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| Parenting | A few participants talked about different aspects of their home lives, including being parents. | "I watched my own children grow up here in the Ann Arbor public school system. It's a great school system, and the way science is taught at high schools is not very conducive to encouraging people to want to participate in science. It isn't very much about science, it's some facts that science has learned." |
| Passion | Initially part of the Commitment/Passion code under the faculty growth framework, I later separated passion from commitment. | "I am unabashedly trying to transform how we think about, teach about health policy because I think it should not be optional. It shouldn't be more optional than physiology. It shouldn't be more optional than pharmacology or anatomy or biochemistry." |
| Personal background | I asked all the participants a about their lives and backgrounds. | "Well, I started out as a very young member of the philosophy department. And that was in the 1960s when there was a lot of interesting innovation in higher education. Especially student-centered education that gave students more control over their education. And I was part of that movement and Antioch was part of that movement." |
| Personal next steps | Some participants talked about their plans for the near future. | "Because I've just announced I'm gonna be moving. I've been recruited by [another research university]. And I really hope that I can continue this MOOC work, as a [new university], U of M joint venture. I hope." |
| Platform | Participants described for a larger platform as one of their motivations for doing a MOOC. | "So for me, it just gives me a platform. It gives me a channel. It gives me an audience, and the success of it gives me other opportunities." |
| Previous experiences with video | Some participants had taught or performed on camera in other contexts prior to the MOOC. | "I have a background in media, I had a television program in the mid 90s. I've been, I do video interviews for iTripoli Computer magazine. I mean, I wanna be Mr. Wizard. I wanna be Bill Nye the Science Guy." |
| Process of creation | What were the various steps and activities involved in making the MOOC. | "I think the big challenge was putting together the decks connected with the video, so taping it went as planned. The deck... There were some technology issues with the deck, they were using a different PowerPoint system. So, number one I had to convert to their size slides, everything." |
| Profit motive | Opinions on the business model related to bringing in a profit. | "I really, to be perfectly honest, I wish everything I was teaching was free so I wouldn't have to feel so much like, 'Are they getting their money's worth?' I don't like that. I wish it wasn't about that at all. I wish it was about, 'Hey, did I teach what I wanted to teach? Did I do what I wanted to do?' And as the money comes into it more and more, it's gonna go from being this, 'Hey, let's see what we can do,' to complaints." |
| Questions | | |
| - Experience as a student | In the follow-up interviews I asked every participant how their experiences as a student had influenced their approach | "I would have a test in a class, on a subject matter, where I'd be like, 'Boy, I know this. I got this.' Take an exam and be like, 'Oh, that didn't go so well.' It was the phrasing. It was the way the |

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| | to teaching. | | questions were presented to me. That was very much an experience of, 'Oh you can know the material and the presentation and the assessment itself can bias the results in a very, to me, not just in a culture, climate DEI way, but just in the technical way you're trying to communicate.'" |
| - | Three pillars | In the first interview I asked every participant where they saw MOOC teaching into the three-legged stool of faculty work, research, teaching, and service. | "In the medical school we add clinical work to those three so it's whatever, four-legged stool in the medical school. So yeah, I definitely see the MOOC primarily fitting the teaching and service components. Teaching because it's education, but service because we're able to extend beyond the walls of the university. And we're hoping to impact the broader community, with lessons learned and empowerment gained, by taking part in my course." |
| - | What would you tell a colleague? | In the first interview I asked every participant what advice they would give to a colleague who was considering teaching a MOOC. | "But I would say, 'That's great, and just be prepared for the amount of work it takes because it's...' I think that would be me, but then I would also... I would probably even preface that by saying that, 'This will be great, and chances are you'll really look back upon it as something... As a very significant thing you've done.'" |
| - | Who owns your MOOC? | In the first interview I asked every participant who owns their MOOC. | "I don't know, I mean I think the University of Michigan owns it. I think the Provost office is funding the DEI and I think they own it but I put a copyright on the slides and they didn't object to it, they meaning DEI, didn't object to it." |
| Raise the profile of U-M or program | | One reason participants gave for doing a MOOC was they wanted to help promote their program or the University of Michigan. | "This was also a little bit motivated by my pretty heavy participation in other things around DEI and the desire to advertise and capitalize on our investment in learning analytics. It was a way of... A different way of creating profile for what we're doing here at the University of Michigan." |
| Reach | | Participants discussed with appreciation how broadly the MOOCs are available, how many people have access to them. | "This is partly due to the MOOC, places that I never would've expected – the group of people who financed all of Wisconsin's retirement funds, the Federal Reserve System, the IMF – the places who'd want me to come in and talk about it, it's one thing to teach to undergraduates, another thing to stand in front of 200 people who've been investing funds for 30 years or 20 economists with the IMF, who think really deeply about this sort of stuff." |
| Rebel | | A few participants described themselves as rebels or rebellious. | "I rebelled for a lot of reasons, part of them having to do with ambivalences about my dad, who as I said didn't make it very far through college, smart but he had his own emotional issues with his father, with whom he wound up going into business or joining his father's business." |
| Refining an existing MOOC | | Some participants made their MOOCs and then were done, others have continued to revise and adjust them. | "I'm launching a new MOOC this week and as part of that, I'm going back and revamping the site, upgrading it, just for example one thing that was missing was after each module adding a quiz, so students got feedback, immediate feedback and |

| | | whether they understood the material or not, so I'm gonna add that." |
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| Research | Discussion of participants' research work | "My research is pretty down in the trenches with respect to fuels and fuel chemistry, and that doesn't tremendously translate well to MOOC. On the other hand, I can say when I talk about sustainable transportation fuels that it's from an informed position, what's gonna work, what's not gonna work, and what are the things we need to consider." |
| Residential education | Connections or disconnects between MOOCs and residential education. | "I mean, to be honest, if they did that, the time that I would have to make an actual good course even better. But you don't wanna feel like you're cheating your residential students. Residential students need to come first, absolutely." |
| Resources | What kinds of learning resources like articles or textbooks did they use for the MOOC. | "There's not a textbook, but I do recommend a number of books for both classes, and I do talk about them. For the Coursera class, I put them up as a part of the material around the class. And for the Continuum Physics, I actually have a short segment where I talk about the books I would recommend." |
| Revenue | Discussing real and potential revenues that came from the MOOC. | "And yet at some level, that is a commodity that can be provided with some revenue that helps us be self-sustaining. And we haven't gotten there yet. At least not in this environment. I think we can get there. I know James [Devaney] and I've talked about it once or twice, as a future goal." |
| Risky | Some participants described MOOC teaching as a risk. | "Once we cross that barrier, I think a lot of people will jump. It happens with any new initiative, right. It's viewed as risky, "I don't want to do it, I'm very happy doing my own thing." So we are still at that stage a little bit, but I think in five years…" |
| Self-promotion | Comfort or discomfort with promoting themselves or the MOOCs. | "Again, this is my Achilles' heel, because I don't like to be out there, I'm not out advertising mine. I'm not that kind of person, and so I didn't put it out there for people to do. So I just didn't... I didn't try to advertise or sell it in any way. Now there are lots of people... People found it, but I didn't try to do anything with it." |
| Difference between teaching and research | Participants sometimes described the different ways they thought of their teaching and research, especially in regard to sharing. | "I would argue that certain material is probably better suited for open access than others. For example, I can't imagine that there's a lot of people that wanna read my research papers. We're a very small community. I think they get it, we all have access, so we're not really limited in our access. But for things like MOOCs, and for engineering education and pedagogy, that's stuff that you wanna disseminate openly." |
| Service | Discussion of MOOCs as service, as well as other service activities. | "But I would say, yeah, I hadn't really thought of it in those terms but it's clearly a blend of service and teaching 'cause none of our students in our degree program take this course. It's not in my job description, in a sense that I have a job |

| | | description." |
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| Sharing | This code has overlap with openness as a value and open access, related to attitudes toward sharing various kinds of scholarly work online for free. | "I feel myself caught in the middle. I think that some introductory material should be open source, but I also recognize the need to establish a platform that is sustainable over time." |
| So very busy | Descriptions of participants' hectic and overly full lives. | "So I'm in the middle of... Right now, if I go up, I have five tabs of five different courses, and a sixth one is coming, which is a capstone course of the specialization I'm working on right now. So there'll be six courses happening simultaneously, [chuckle] and so many times I worry, "Will I send the wrong announcement to the wrong... You know what I mean?" |
| Specialization | A few participants were not teaching just a single MOOC, but an entire specialization, a series of MOOCs with a capstone at the end. | "The request for proposal was for the entire specialization. So when we signed up, we knew that it's gonna be four courses plus the capstone. So it's 16 weeks of content four by four, four courses, four weeks each. 16 weeks of content plus the capstone." |
| Staff as vector for learning from other faculty | Participants described learning about what other instructors were doing from the DEI staff who supported MOOCs. | "In some ways, the sort of connectors are the DEI web, right? And then it's like, "Oh, well so-and-so is doing this. So-and-so is doing that." So they're in many ways a connector and a multiplier." |
| Stage fright | Mentions of performance anxiety, either in the MOOC or in the classroom | "And I don't like being in front of a whole big audience. And so, I feel like the MOOC is a different way for me to do it, but not have all the nerves or whatever that come with it." |
| Students | Any discussion of the MOOC students. | "So the fast-track students I teach, they test all those out. They sometimes don't like being guinea pigs, but you learn much more from an undone product than you learn from a finished product, so most really like that." |
| Students learning from each other | MOOC students working together or learning from each other, without direct involvement from instructors. Or attempts to facilitate collaboration among students. | "One of the things, it's not exactly the demographics, one of the things that's cool and lives up to one of the promises is that there are these affinity groups to find each other and they're from different corners of the world. And they find something in common and they talk to each other on the discussion board and I don't know how else that would happen." |
| Support structure | Discussion of the resources, staffing, and other supports in place for MOOC instructors | "So, such as, "Boy, Professor, I cannot submit my assignment", or "I submitted. I still haven't received my grade." And what I would typically do, I'd response to the student very briefly, but I would cc and involve someone from the support team." |
| Surprise | Things that were unexpected about MOOC teaching. | "But what I didn't expect was the immediacy of the use, how they were coming right back while I just tried it. I just got my raise, I just got a promotion or even very personal stories. 'I'm a very timid person. I don't... I'm very much afraid to interact with people and your course gave me |

| | | new confidence in my life.' I wasn't expecting that kind of feedback, but I think the immediate nature of the feedback was a big surprise." |
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| Teaching | General discussions of teaching, as well as discussions of the way that MOOCs fit into the "teaching" category of faculty roles. | "I've taught at Duff's Business Institute, that's a real place in Pittsburgh where I taught Word and Excel and things like that. So my favorite part of teaching is office hours. Absolutely by far my favorite part…" |
| - Changed the way I teach | Discussions of the way doing the MOOC changed the participant's teaching, either online or in residential courses. | "It has helped me really kind of help focus my lectures. Helps me realize, "Oh, wait a second. In this one class today, I planned on covering these nine things that I did on Coursera and each of those was 10 minutes. How am I going to fit that all in?" Along that line. So it has helped me formalize my teaching and think a little bit more about am I pushing it attention span-wise." |
| - Classroom teaching | Discussions of residential teaching. | "Because I knew that classroom could be very lively. And as an instructor, I also had a sense that what many instructors see as a limitation, which is the heterogeneity of the students, actually was something that I could adapt my material to be engaging for." |
| - Clinical teaching | A few participants are medical doctors who teach in a clinical setting. | "I also then have M3s with me. So third year medical students, brand new clinical learners in a one-on-one setting in my office. So they'll be with me for four to six half days, which is about four hours in clinic with me seeing patients. So, they all go in and do the history and then we do the physical exam together and then we think about what does this mean, what do you do, diagnostic reasoning." |
| - Teaching as discipline | A few participants were education researchers, either by training or by interest, which informed their MOOCs in various ways. | "So for me personally, my science is teaching teachers to teach or you could consider a pedagogy. Or your could also say my science is online education. But I also kind of oversee everyone else's science too." |
| Teaching Company | The Teaching Company produces video lecture series for purchase in a variety of formats. Some participants had done Teaching Company courses before their MOOCs. | "Unbeknownst to me, early in the days of the Teaching Company, one of my students after graduating went to work for them and suggested that they contact me. So, years ago, I did a couple of different courses for the Teaching Company. I had since done a couple more." |
| Tech adoption | Descriptions of adopting other technologies besides the MOOC. | "So I went out and bought an Oculus [virtual reality headset] now. 'Cause I have a Samsung [smartphone] , a six, it's really cool. I don't know how you would use it, but it's really fun." |
| Tenure | Discussions of tenure, include how and whether MOOCS can or should count for tenure. | "That's interesting because I don't think it's fair for administration to ask for people to do this if they aren't going to, for assistant professors, I don't think that's fair. Even then, I would be very cautious if I was an assistant professor because the whole tenure process is local and then, not global." |
| Time commitment | Discussions of how much time it took to make a | "But the others who hadn't done it and are not probably likely to do it, have reasons for... Either |

| | MOOC. | just the time, and I've told them, those who I have spoken to about it, I have told them that it takes a huge amount of time. I don't know if I could go back now and think of doing another MOOC from scratch. I couldn't, really." |
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| Uses of MOOCs | What participants saw as potential or actual uses of their MOOCs by others. | "So we have a bunch of people who work for pharmaceutical companies, or health insurance companies, or they're staff in a private practice somewhere, and they wanna understand what's going on in this health system around them." |
| - How using the MOOC | How participants used their own MOOCs, or planned to. | "I'm hoping that we can leverage the Coursera. Now that it's on-demand, it'll be even better, because for the residents who don't have a lot of time and can't be synchronous and that kind of stuff, it'll be helpful. Maybe I can do some guest appearances locally for them, to sort of facilitate in real time." |
| Value of MOOCS | What did participants see as the value of MOOCs in general. | "However, the challenge is with a MOOC, to me, you don't want to bake in an expires by date. That's really, to me, I'm like, "That's not leveraging the strength of the MOOC." The strength is you can make the materials and expand the materials." |
| Why | Answers to the question: "Why did you decide to teach a MOOC." | "I was pleased to be asked. I believe in public education, I really believe in public education and this was a way to reach out. I believe in trying to come up with better ways to teach and this was a whole new field to play in. So, when they asked me if I would consider doing it, absolutely." |
| Worthwhile | Some participants used the word "worthwhile" to describe the MOOC experience. | "Well, I have had that experience. This one person who's being urged to teach a MOOC, because she... Because it would add to the sort of multicultural environment or multicultural effort. And I tell her that it's a lot of work, and I think that it's good work. I think it's worthwhile, but it's a lot of work." |

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