

What engages MOOC learners: An interview study with ChinaX learners

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Abstract

The goal of this paper is to provide a thick description of learner engagement with humanities MOOC, ChinaX. As part of a larger study, 118 MOOC learners were interviewed. Thirty-six of these interviews were randomly selected and analyzed for this paper. The randomly selected learners were geographically diverse and ranged in age. We found that learners were engaged with the course in a diversity of ways and using a diversity of modalities. Thus we recommend that course developers provide multiple modalities and ways to access the content of the course.

Our research questions are:

R1: How do MOOC learners engage with MOOCs?

R2: What design characteristics engages different MOOC learner populations, particularly lengthy humanity courses such as ChinaX?

Methods

Learners were invited to participate in the end-of-the-course and mid-course surveys. 1,012 learners who took the two surveys, 475 agreed to be interviewed, of which course team interviewed 118, by ordering respondents in alphabetical order and going down the list. Each interview was 30-60 minutes and was transcribed by a professional transcription service. We randomly selected thirty-six interviews for coding and analysis for this report. After identifying major themes and reaching an acceptable inter rater reliability score across the authors ($\kappa = .71$), we proceeded with a grounded theory model, focusing on these major themes to identify sub-codes within each.

Introduction

Challenges MOOCs Face:

Learners find it challenging to persevere in courses. This causes high dropout rates (Onah, Sinclair, & Boyatt, 2014), especially in the first two weeks of the course (Tseng et al., 2016). Lack of understanding in how learners engage in these courses (Anderson et al., 2014). We know relatively little about the students who enroll in MOOCs (Evans and Baker, 2016). It is difficult to estimate the importance of student-level factors (previous experience, motivation for taking the course, goals, skills, and resources) in predicting student persistence in MOOCs. Designing, developing and running a MOOC is very resource intensive (Holland & Fiona, 2015). A MOOC can take hundreds of hours of development time and additional hours for running the course such as holding office hours (Kolowich, 2013). Thus, it is necessary to identify aspects of a course that engages or disengages learners.

Why does learner engagement matter?

Engagement is one of the key contributors of learner learning and academic success (e.g., Fredricks, Blumenfeld, & Paris, 2004; Wang & Fredricks, 2014). It is related to variety of theoretical constructs (including self-determination, self-regulation, flow). Academic engagement consists of three dimensions: behavioral, emotional/affective, and cognitive engagement (Fredricks et al., 2004). Behavioral engagement relates to effort, attention, and persistence. Affective engagement relates to positive and negative emotional reactions to instructionally relevant aspects of the course (e.g., belongingness). Cognitive engagement is about using in-depth learning strategies and exerting effort to comprehend learning content (Fredricks et al., 2004). So far, MOOC studies have focused on behavioral engagement because it is easiest to refer from log data (e.g., Anderson, Huttenlocher, Kleinberg, & Leskovec, 2014; Santos et al., 2014).

How is engagement measured in MOOCs?

Clickstream/log data, using cluster analysis to discover and categorize patterns of online engagement. Kizilcec et al. (2013): 1) completing (completed their assignments on time), 2) auditing (mostly watched videos without doing assignments), 3) disengaging (completed assignments in the beginning but dropped out later) and 4) sampling (explored some parts of the course). Kovanovic et al. (2016): 1) Enrollers (not active), 2) Low engagement (low activity), 3) completers, and 4) certified students. Khalil and Ebner (2016): 1) dropout, 2) perfect students, 3) gaming the system (e.g., students start quiz without watch the video), and 4) social (e.g., high activity engagement in forums but lower course completion rates). Ferguson et al. (2015): 1) samplers, 2) strong starters, 3) returners, 4) midway dropouts, 5) nearly there, 6) late completers, and 7) keen completers. In MOOCs with shorter duration, learners displayed truncated versions of engagement patterns due to the limited time given to display different types of engagement.

ChinaX Course

ChinaX, a Chinese history survey course, spanning from the neolithic to the contemporary, consisted of 52:96 hours of video content, over 500 pages of reading, 50 discussion questions and 580 graded assessments across 18 months--started on October 31, 2013 and ended on March 26, 2015.

The goal of the course was to understand "China's historical experience, of its patterns of philosophy and religion, and of its social and political thought. These themes are discussed in order to understand China in the twenty-first century."

ChinaX was divided into 10 mini-courses. Each mini-course had 4-8 modules that were released every week in the courseware on the EdX platform.

A module consisted of:
1-2 hours of video content broken up into 2-15 minute segments.
8-10 Assessments and engagements

A discussion forum question: an open ended question designed to push learners to synthesize and consider the whole module.

An "Office Hour" video of a faculty and graduate student discussing learner's discussion posts was released before the next module came out.

A weekly survey was imbedded into the courseware for iterative feedback on the course including a question soliciting further content related questions learners still had. These questions were also addressed in the "Office Hour" video.

Table 1. Number of Unique ChinaX Learners by Participation

Participation Level	Number of Learners
Registered in at least one mini-course	88,520
Viewed in at least one mini-course	51,214
Explored in at least one mini-course*	9,108
Certified in at least one mini-course	4,708
Certified in all 10 mini-courses	890
Verified ID in at least one mini-course	127
Verified ID and certified in at least one mini-course	105

*Explored is defined as completing over half of the courses content.

Findings

Prior interest, familiarity, curiosity and course utility, initially engaged learners.

Related to prior interest, learners found some sessions or topics more engaging than others. For instance, Craig liked the case studies because he had experience learning with business cases during his MBA. On the other hand, Vince knew nothing about Qing Dynasty and his engagement with this content was primarily driven by curiosity. Learners also expressed an interest in the whole scope of the topics covered, preferring the breadth ChinaX provided.

Behavioral engagement

Participants talked about their behavioral engagement in the course. Jean described her learning experience as "so involved and involving. And, I got so caught up in it." Furthermore, learners sought additional information to ChinaX content. Two participants talked about how much they enjoyed reading relevant books and materials. They appreciated professors recommending books to them. For instance, Sophia said that she purchased all the books that instructors recommended to the learners. She described reading all these books during her school break as the most memorable experience of the past year. The willingness to seek further information indicates high level of engagement and interest in the content that the course achieved to ignite. Participants got engaged with the content anywhere they could. For instance, Peverell had to listen to the lectures while completing other tasks, like cleaning up, because his wife did not like him spending time on courses; Tristan completed assignments while on treadmill.

Curriculum and Instructional Design

Detailed curriculum even if it felt overwhelming sometimes and not "dumbed down". "I felt that almost all the time that far from dumbing it down, you were really talking to the people online the way...you were presenting the material the way you would within the university." -- Maria, USA

The modular design of the course.

"...each module were a bit different from each other, so it never got boring. It wasn't always the same format, the same people, the same model, sometime it was more visual, sometime there was more learners, like video from the learners, sometime it was more interviews from other people..." --Tristan, Canada

Multimodality to present content (e.g., illustrations, interactives, maps).

"the timeline there was certainly most helpful. In other places I used the timeline and the maps, the maps... I liked the maps." --Albert, USA

"The lecture tools and the ability to review the artifacts, in let's say virtual 3D, the video clips, especially from the modules, let's say eight, nine and 10, presenting China as it changed throughout the 19th and 20th century. Quite a lot of videos and photographs, which we were not able to see, the funny stories, the jokes from the history, and it was a great experience. Not just learning about China, it's also a good example of how an online course should be organized." --Agnieszka, Croatia

Affective/Social Engagement:

Both a motivator and a motivator for further engagement.

Participants talked about how much they liked the sense of presence and sense of cohort. One of the participants from Australia, Brandon, even described this experience as "...almost a family experience. He also emphasized that professors had a big impact on giving learners this feeling by their attitudes and by designing the course as it is. Some of the aspects of ChinaX that facilitated these feelings are discussion forums, social media groups (e.g., ChinaX Facebook group), and office hours. Facebook: Learners shared resources and with each other on the social network group.

"That [Facebook] was like an extension of ChinaX and that that worked very nicely. But at least while the classes were going, people exchange... Were very generous giving information and exchanging tips and books, references, articles. So that worked very well. It was like an extra part of the campus." --Jean, UK

"I really liked the Office hours. So, seeing interactions between the Professors, and between Professors and the grad students and hearing what other students had said. It felt a lot like a little community even though I was always behind. I think that sense community and learning is something I'll take away, it's not really a single moment. But it's a sense that I'll take away with me." --Summer, Australia.

"So, there were quite a few things that I liked, the videos, the lectures basically, and the profound knowledge that is clearly present in the lectures. The sense of humor from both Professor Bol and Professor Kirby." --Agnieszka, Croatia

Cognitive Engagement:

Learners found it common to have the opportunity to connect ideas from the MOOC to prior experience and knowledge. Learners enjoyed the specialized knowledge of visiting professors.

"the discussion...was one of the really good aspects of the course. It allowed me to learn and fully engage and I thought it treated me as an adult mature learner who wanted to learn for his own sake. There's a lot of structure like that that treated me in that way as opposed to saying the right or wrong answers. Things like, "Okay. What do you get out of this upon reflection?" And that was really, really good. You know what, let me say something else, too. As I indicated, I taught at a college and university level for 37 years. I've taken many, many courses and I think that this is certainly one of the better courses I've ever had. So, anyway, kudos to all of you." --Matthew, USA

