The Learn To Learn Online MOOC:
Supporting Novice Online Learner Development

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Abstract

This paper presents findings of a mixed methods study on the experience of novice learners in a MOOC designed to build skills for successful online learning. The Learn to Learn Online (LTLO) MOOC, a five week course delivered in the Canvas platform, has been delivered in 2015 and 2016. This paper describes the intentions of the design team and the participants, the pattern of interactions through the initial and second revised offering, and retrospective perceptions of the course. Utilizing the Community of Inquiry (CoI) in regards to design and delivery resulted in the identification of ways in which to support quality delivery of a MOOC. The ongoing efforts to improve and humanize the design approach in the LTLO deliveries, which included common features found in both cMOOCs and xMOOCs, resulted in adjustments for the second offering of the course to better support a nascent CoI and address some of the unexpected dimensions in the initial 2015 offering. Findings related to the MOOC design point to ways in which design and delivery of MOOCs may utilize the CoI framework. Preliminary delivery findings indicate that learners who responded to the survey were very satisfied with the course design and enthused about online learning after their LTLO experience. Learners expressed how the course has enabled them to continue to develop and explore online learning and to integrate it into their own educational practices. Outcomes of this research point to ways in which MOOCs, designed using a CoI focus, can be developed in scalable ways while maintaining meaningful and quality delivery for learners.

Introduction

The Learning to Learn Online MOOC began as a component of a broader MOOC research initiative funded by the Gates Foundation. The MOOC offered Athabasca University, Canada's open university, the opportunity to pilot a high-quality MOOC as a step toward establishing a position about instructional quality in MOOCs. In keeping with Athabasca University's mission to *reduce barriers and increase access to education*, LTLO was designed with the principles of social, experiential learning in mind and targeted a general audience interested in online education. Athabasca University committed to deliver and research a MOOC in order to observe, document, measure, analyze, and disseminate information. This was expected to lay the foundation for a well-articulated position at Athabasca University regarding the design and delivery of MOOCs.

Learning to Learn Online (LTLO) is a facilitated massive open online course (MOOC) providing novice e-learners with technical and learning theory background knowledge to develop effective skills, practices, and attitudes for online learning. The five-week MOOC ran first in the spring of 2015 and again in the spring of 2016. A third run is planned for 2017.

Guided by the Community of Inquiry framework (Garrison, Anderson, & Archer, 2000), one of the key elements of LTLO's design is to create smaller, more focused learner support networks within the MOOC by dividing the students into a number of homeroom forums for general discussions facilitated by graduate students. Students are divided into homerooms alphabetically by first name, regardless of student characteristics, abilities, or interests. As part of their learning, students are also prompted, through activities, announcements, and weekly video summaries, to contribute to additional population-wide, lesson-related activity forums throughout the course, with all facilitators participating in each activity forum.

Members of a design and delivery committee established the goals of the LTLO MOOC that reflected the intention of the project. Four key goals guided the work of the design team selected for the MOOC:
1. maintain the 'open' concept of a MOOC,
2. design using the CoI model,
3. utilize multi-modal design,
4. establish a learning community.

Literature review
The massive open online course has been relatively under-investigated, despite significant institutional investment and media attention. While some hail the end of the MOOC movement in higher education (Hill, 2016), for institutions dedicated to open and accessible education MOOC delivery and research will continue to have importance. Gasevic, Kovanovic, Joksimovic, and Siemens (2014) emphasize the lack of methodological or theoretical rigor in early MOOC reports, and suggest there may be an extra difficulty in the very scale of a MOOC preventing the use of existing social learning frameworks to understand it. While there is a long tradition of social learning frameworks in educational research, it is the unique characteristics of the MOOC, including the high volume, low interaction, and noise of its discussion forums that suggest a seeming mismatch between traditional educational research methods and the new structural qualities of the massive open online course.

Nevertheless, the importance of instructor presence remains a key tenet of research in online learning (Garrison & Cleveland-Innes, 2005), and despite the challenges brought on by scale, the role of the facilitator within a MOOC, and the greater problem of creating a true community of learners, becomes an important, emerging area of exploration.

Four Design Goals
1. Maintain the 'open' concept of a MOOC.
Provide learners with choice in their own learning experience; designing for learners of varying knowledge and computer experience. This goal was articulated in that there were no prerequisites for any part of the course. MOOC learners were free to choose their learning path and could move through the course however they wish and at whatever level of engagement they selected. Computer and Internet Basics sections were created to ensure scaffolding of information beginning at even a novice computer user as an effort to further reduce barriers to entry.

2. Design using the CoI model.
Design to feature cognitive, teaching, and social presences as posited by Garrison, Anderson, & Archer's (2000) Community of Inquiry model:
- *Cognitive presence:* content was presented in progressive chunks and learners were provided the opportunity to practice and apply each section of content. Learners were led through constructivist

activities leading them to formulate their own personal strategy for adapting to the online learning environment.

- *Teaching presence:* Three levels of instruction were present in the course included the Professor, the Inspirer, and the Facilitators. The course was led by an Athabasca University Faculty member who acted as the figurehead of the MOOC in the role of the *Professor*. The Professor provided a consistent flat presence through the use of pre-recorded video and pre-written text segments. The second level of instructor presence, the *Inspirer*, involved a dynamic interactive presence in the course. The third level of instruction was that of the *Facilitators* who were responded to daily learner emails, discussion board posts, submissions and activities.

- *Social presence:* instructor-student interaction and student-student interaction were encouraged throughout the course. Video announcements by the *Inspirer* and use of multi-media were used to increase social aspects of the course. Ongoing course discussion was facilitated, fostering the development of a learning community.

3. Utilize multi-modal design.

The MOOC should utilize a full range of multi-modal aspects and designs to appeal to various learning preferences: text, audio, visual, video. Various types of content representation and use of multi-media throughout the course should be evident such as: ongoing course discussion, a variety of assessment methods (such as quizzes), practice activities, explores activities, and e-portfolio type of activities.

4. Establish a learning community.

Learners should be encouraged and prompted to develop a learning community through the presentation of course content, within activities, and by course *Facilitators*.

Teaching Presence

As described in the goals outlined in the previous section, the CoI was the design framework utilized by the design team. Key for the LTLO MOOC design were the course components that represented the three levels of instructor presence in order to both support learners and to encourage the development of a Community of Inquiry (CoI). The particular details of how the three levels of instructor presence were incorporated into the design are as follows:

- Lead Instructor: University Faculty member
  Provided a static presence via pre-recorded videos (each of the five module introductions) and text-graphics placed strategically in modules to help clarify complex subject matter.
- The Inspirer: Graduate Student
  Provided a dynamic presence via informal video and text announcements, discussion board posts, and email support, acknowledging and addressing notable content contributions and in-course activities by learners. Declining frequency as learners became more self-reliant and built CoI.
- Facilitators: 10 Graduates/Students
  Provided a dynamic presence designed to provide a sense of touch with all participants. Each Facilitator was responsible for: daily monitoring and facilitation of discussions in one 'Homeroom' forum and topics started in the various course forums by learners from their homerooms, and responding to email queries from leaners, declining frequency as learners became more self-reliant and built CoI.

The Study

In order to study the participant experience in the LTLO MOOC, a mixed methods (Cresswell & Clarke, 2007; Johnson & Onwuegbuzie, 2004) approach was selected. A strength of the mixed-methods approach is that researchers can answer a more general range of research questions resulting in stronger evidence for conclusions as well as more detailed descriptions of the complex phenomena being studied (Johnson & Onwuegbuzie, 2004). Qualitative and quantitative data were collected in this study via online surveys, journaling, and semi-structured interviews. A total of 474 pre-course surveys and 103 post-course surveys were completed. Five facilitator field notes (journals) and follow-up interviews were collected and a series of eleven participant semi-structured interviews were conducted. Data from the surveys was coded and

analysed into common themes and these themes were used to guide the interviews. At the time of writing only a preliminary analysis of the data collected from the first delivery of the LTLO is available.

Findings

The first offerings of LTLO had an enrollment of 1825 participants, of which approximately 70% percent were female and 30% were male. *Table 1: An Overview of Learn to Learn* provides a general view of some of the LTLO statistics. These are in line with those reported in the MOOC literature ad more details can be found on the LTLO website (available at www.ltlo.ca).

Table 1

Learn To Learn Online Statistics Overview

	Number	Percent
Enrolled	1825	
Signed into the course	916	50.2 %
Passed all 5 quizzes (mark of over 80%)	148	8.1 %
Downloaded a certificate	143	7.8 %
Female *		70 %
English as first language *		65 %
Holding no degree		28 %
Graduate student or above		41 %

* as a percentage of those who completed the LTLO MOOC.

Figure 1: Learn to Learn Online MOOC Discussion Activity details the participation rates related to the discussion forum activity. Of particular note is the relatively high level of engagement of students with the facilitators throughout the course. While this high level of facilitator response is not a scalable approach to maintaining quality in a MOOC (due to the cost of employing facilitators in a free course delivery), it does indicate that instructional posts are important to success and therefore quality in online delivery.
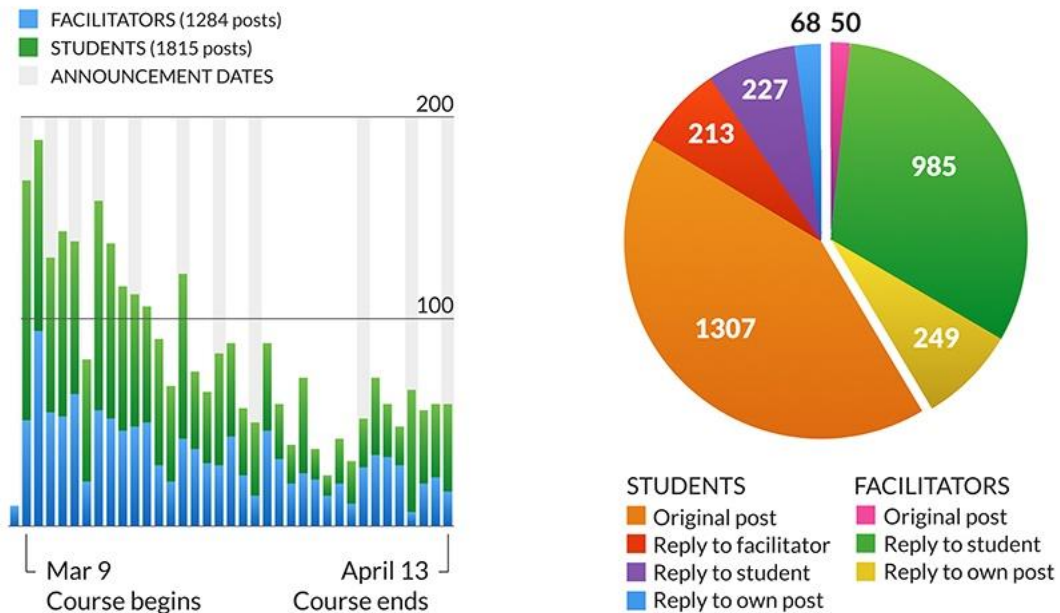
Figure 1: Learn to Learn Online MOOC Discussion Activity (as presented on www.ltlo.ca)

In this first delivery of the MOOC the 10 course facilitators posted 1284 times and the students who participated posted 1815 times. This very high rate of facilitator posting is believed to have limited the development of a community of learning which was one of the key goals of the design. The LTLO2 design, while not presented in this paper, addressed this level and type of facilitator postings. The LTLO2 preliminary research on facilitator and student postings indicates a much more evolved community of learning developed when fewer facilitators and less direct answers are provided.

An important aspect of the LTLO research is the identification of student objectives and motivations for MOOC participation. *Table 2: Reason for LTLO Participation* provides preliminary themes based on the pre-course survey administered in LTLO1.

Table 2

Reason for Participating

	Number	Percent
I enjoy learning about topics that interest me	148	31.2 %
Preparing for College/returning to school	90	19.0 %
Career / Skills for promotion	75	15.8 %
Curious about MOOCs	62	13.1 %
I like the format (online)	40	8.4 %
Want to try Canvas Network	39	8.2 %
I enjoy being part of a community of learners	20	4.2 %
Total		100 %

Post course data was collected relating to the student motivations and resulting experiences that participants had in the course detail how useful the course was related to online course delivery:

> "I went in with no expectations and came out with really seeing how technology can be used in different ways that I'd ever seen it used before."

> "… that's like a huge breakthrough for me. I think yours is the first course where I've done it. I just don't like that. I've tried to get over a mental block for posting things online."

Other data collected indicates that a subset of course participants were interested in seeing how the Athabasca MOOC design would look like, which is in line with some of the reports that MOOCs are perhaps professional development opportunities for many learners. This is indicated in the large number of graduate level participants (41%) as listed in Table 1 above.

> "I don't think it's an effective way of engaging learners in the MOOC by starting off so heavy on theory and concepts and principles and so perhaps we can rearrange the way it's designed …"

> "I was actually taking it to see how you can set up an online course. I have a Master's in Education so a lot of the education background information was kind of a review for me but I was more interested in seeing how things were set up."

Conclusion

The preliminary findings of the LTLO MOOC study indicate that using the Community of Inquiry as a design framework results in successful learning about the topic presented. Findings indicate that learners were engaged in the activities and appreciated the variety of technologies and range of activities presented. Participants who responded to the survey were very satisfied with the course design and enthused about online learning after their LTLO experience. Finally, learners expressed how the course enabled them to continue to develop and explore online learning and to integrate it into their own educational practices.

With this preliminary research in mind, the first three goals of the MOOC design team: 'open' concept of a MOOC, using the CoI model, incorporating multi-modal design appear to have been accomplished. The fourth goal of establishing a learning community, which in of itself is a challenge in online learning courses that take place over longer periods of time, has more work to be done in order to achieve. A second delivery of the LTLO MOOC in 2016 addressed this learning community formation aspect of the design and shows promise on this design goal. Additional research on further support of learners and delivery aspects that expand the international and English as a Second Language (ESL) student support in MOOCs are areas that need further exploration.

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