Collaborative global health E-learning: A Massive Open Online Course experience of young family doctors

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Abstract

Massive Open Online Courses (MOOCs) are unlimited web-based courses accessed through computers, smartphones, or other digital devices. Although they have multiple advantages, a common challenge is the low course completion rates. Young family doctors of the World Organization of Family Doctors (WONCA) from more than 20 countries recently completed an initiative that combined social media platforms with a MOOC offered by Harvard University. This resulted in a completion rate five times greater than the baseline rate. We propose perfecting and expanding this method to augment continued medical education, collaboration, and best practice exchange among WONCA’s members and participating organizations worldwide.

Keywords: Family medicine, global health, Massive Open Online Courses, medical education, social media

Introduction

Massive Open Online Courses (MOOCs) are unlimited web-based courses accessed through computers, smartphones, or other digital devices.¹¹ They were first developed in 2006 and usually consist of video lectures, assignments, and online discussions. These courses encompass innumerable topics with varying levels of difficulty.¹² There are thousands of MOOCs from hundreds of universities worldwide, which have helped students who cannot afford to attend in person due to financial, work, or social reasons. Therefore, these courses are made accessible online at one’s convenience. Some of these universities offer courses for free, while others provide them at affordable prices or even sponsor students who cannot afford the fees.¹³⁻¹⁴

Common MOOC platforms include Coursera, FutureLearn, EdX, and Open Classroom,¹⁵⁻¹⁶ through the World Organization of Family Doctors (WONCA), similar courses have been prepared by the European General Practitioners Research

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Network. Specifically, a web-course called “The International Web-based Course on Research in Primary Health Care” was developed-consisting of 25 modules with 15–25 min of didactic lecture videos from primary care research experts.\textsuperscript{[9]} Each module concludes with a quiz to ensure knowledge learning and retention. The course can also be associated with expert research mentorship so that these lessons can be transformed into the practice.\textsuperscript{[9]}

Some MOOCs are highly interactive with participation from teachers and other faculty members so as to engage students in constant educational activities. A common challenge is the high number of dropouts with average completion rates for MOOCs being only 13%.\textsuperscript{[11]} Limited course content and lack of instructor interaction have been implicated as some of the reasons for the high dropout\textsuperscript{[4]}, while a lack of digital or learning skills, lack of time, low personal motivation, course difficulty, and poor support also play a role.\textsuperscript{[11]} We proposed a trial of combining MOOCs with social media to improve upon the average 13% completion rate.

**Methods**

WONCA members, especially Young Doctor Movement (YDM) members, have masterfully employed social media over the past 5 years in the areas of Family Medicine teaching, leadership, advocacy, and resiliency.\textsuperscript{[12-14]} The lead author (K. H.) envisioned methods of splicing MOOCs and social media to take advantage of both platforms. After navigating through the course options offered by EdX, he found Harvard University’s “Improving Global Health: Focusing on Quality and Safety” course.\textsuperscript{[9]} Then family doctors (FDs) and residents were recruited through WONCA YDM-related Facebook pages with 67 individuals showing interest. On 18 April 2018, the adventure began and FDs professionals from the primary care of the seven WONCA regions quickly joined this unique collaboration. The learning initiative was from three basic objectives:

1. Team work: despite being an individual course, it was suggested that we do it as a team
2. Advocacy for family medicine systems: participants enrolled into the course as a prelude to the celebration of World Day of Family Physicians (May 19\textsuperscript{th})
3. Foster an international learning experience.

Of those who showed interest, 40 FDs from over 20 countries actually joined the initiative and were associated with three social media platforms-Facebook, Whatsapp, and Google documents. In addition, each participant registered for the course and started on May 1\textsuperscript{st}, 2018.

The EdX platform remained the main learning platform, while the Facebook and Whatsapp groups allowed for improved peer-to-peer interaction, organization, and mentoring. As part of the learning resources one of the participants (M. M.) designed mental maps [Figure 1] that summarized the learning content and presented these to the group after completion of each module. Weekly reminders and updates through social media were also provided for the group.

**Results**

Our group had 40 participants start together with 26 completing the course-a 65% completion rate. This was lower than expected but was five times better than the reported baseline MOOC completion rate of 13%.\textsuperscript{[11]}

Some of the feedback received from participants at the end of the course is as follows:

“Being part of this experience allows me to promote similar initiatives among my residents and colleagues,” “Old groups have been connected with new groups,” “Being part of different teams is really great,” “Soldier on! We’ll all get to week 8. Most important is to learn and change practice,” “I really enjoyed all of the modules and the final essay, too. This course has changed my perspective on quality of care in Low and Middle Income Countries. It is neither only for High Income Countries nor a luxury in the healthcare system. It is just one of the basic human rights related to healthcare organizations,” “This course taught me many things and also proved to me that you can build a Parthenon with less money than you can even think!,” “This course was a great experience and learning opportunity. I believe that now I have more tools and skills to overcome some problems of my daily practice.”

**Discussion and Conclusions**

**Benefits**

The main benefits from our experience with this course include an improved course completion rate, the ability to collaborate, unlimited course accessibility, and the resultant knowledge gained. Our group experienced a 65% completion rate-five times greater than the standard MOOC completion of 13%.\textsuperscript{[11]} This is likely because of several aspects. First, the inclusion of parallel social media interactions allowed for greater peer support an understanding surrounding the course material. Team members received clarification on topics from our peers in the form of direct conversation, mind maps, illustrations, and internationally related examples. Additionally, our group overall had a higher level of education on average compared to the general population. Whereas the average person may have a high school or college level education, our group had a minimum of a doctorate. Finally, physicians need an innate high degree of motivation to complete the long journey to becoming a doctor. It is likely that this cohort proves more motivated and boasts superior time management skills needed for course completion.

Collaboration also proves key. The standard EdX platform has a more limited ability to collaborate by reading others’ posts that does not allow for participants to easily delve into greater depth compared to social media platforms. The majority of our group did not speak English as their first language and this served as an
opportunity to practice medical English with colleagues from 20 different countries. The addition of the social media component augmented our learning through increased discussion and personal experiences on a global scale. By doing this, we found new perspectives and employed best practices for the same problems in different countries. Our group coalesced into a team-motivating each other to stay on pace and complete a common goal.

Both the MOOC and the social media platforms are accessible on several different levels. First, they are free or with negligible monetary cost to participate. There are also no educational barriers to entry in that anyone with interest-no matter his or her level of education-can attend the course. This is in stark contrast to standard higher education courses that can costs $10,000s yearly. Additionally, the virtual platforms are always available, allowing for increased flexibility around one’s everyday obligations.18

Finally, the continued education aspect proves important. Medicine perpetually evolves and we must remain on the forefront of our field. This course gave us subject matter experts in global health. Beyond the high level of excellence provided by Harvard, this platform also has helped promote innovative teaching and learning methods.19 Moreover, non-native English speakers have the opportunity to watch the text while they listen and watch the video and—in this way—they can understand better and advance their English language skills.17 Completion of this course broadens our global health knowledge, make us more competitive within our field, but more importantly-have a greater capacity to improve the lives of countless lives worldwide.

Limitations

Ultimately, course completion depended on internet connectivity and high English comprehension. First, a fast and reliable internet connection with appropriate bandwidth was needed to watch the videos. Without this, the content did not load properly so as to negatively interfere with the learning process. This occurred greatest in remote locations and in developing countries.

A second limitation was that the weekly modules and videos were in English. With the graded questions and final essay also due in English, a high level of language proficiency was needed. Limited foreign language subtitles did exist, but more options would better allow international participation. Our group was able to overcome many of these language barriers through social media communication in Spanish, Portuguese, and Turkish-among other languages.
Next steps
Our approach built on an existing framework for continuous professional development—enrolling in a MOOC. We demonstrated that young FDs can identify a common learning interest and work together toward achieving a learning objective. Because WONCA is the umbrella body for all FDs across the globe, our experience confirms its role in fostering continuous learning for all FDs. It also reiterates the relevance of MOOCs and their promotion. Additionally, a focused recruitment of FDs will likely augment the quality of the courses, increase the number of participants that enroll and complete them and ensure continued primary care advocacy promotion.

Future studies should further explore facilitators and barriers among FDs for enrolling and completing MOOCs. In addition, there is a need to evaluate how these group learning initiatives can help participants incorporate lessons learned from the course into their daily practice. We propose perfecting and expanding this method to augment continued medical education, collaboration, and best practice exchange among FDs in WONCA worldwide.

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Conflicts of interest
There are no conflicts of interest.

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