

MOOC LEARNING: CHALLENGES AND OPPORTUNITIES OF USING TEAM TEACHING

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Abstract

Facilitating the learning processes in massive remote environments represents an opportunity to contribute with the learners' selfmanagement capabilities development. This study took place in a Massive Open Online Course (MOOC) that promoted educational innovation with open resources, where a team of 800 Teaching Assistants (TA) volunteers was formed. The investigation was based on the question: What challenges are presented when forming learning facilitators' teams, and what are the opportunities for successfully conforming them as a Teaching Team in MOOC experiences? We adopted a case study approach with a nonrandom atypical sample, based on meta-inferences and the stratification of 200 TA. Six instruments were used for data collection: a diagnosis, an initial survey, production and mobilization self-assessments, a weekly work survey for facilitators, and a final teaching experience survey; in order to address three categories: the construction of learning, Team Teaching training, and the learning facilitation process. The data was triangulated, and the main findings show challenges in the course information, activities and organization, the use of technology and the platform management, as well as opportunities in the instructional, communicative and technological components.

Keywords: Mooc, team teaching, training, learning environments.

1 INTRODUCTION

Distance learning environments require new ways to promote facilitation of processes that assist in achieving high-level objectives and impact; and help participants not only to acquire, but to transfer new knowledge and skills to different situations and contexts. E learning plays a vital role in the future of training processes, and these environments are characterized by key aspects such as flexibility, innovation inclusion, and a continuous development.

Massive courses appear as a new type of distance learning environment, and they take place through Massive Open Online Courses (MOOC). These courses are faced with great challenges to offer suitable training for participants; and facilitators play an important role in this task. The study presented was based on the question: What challenges are presented when forming learning facilitators' teams, and what are the opportunities for successfully conforming them as a Teaching Team in MOOC experiences?

The study was conducted in a massive course environment that aimed to promote the use, production, dissemination and mobilization of Open Educational Resources (OER) in the participant's teaching practice. 20,400 students from 52 countries were registered in the course, and it was facilitated by two tenured professors, two tutors, and 800 teachers that were selected from the students that volunteered to form part of the teaching team as Teaching Assistants (TA). This paper aims to present the challenges and opportunities that faced the TA group, in order to provide empirical evidence for MOOC facilitators.

2 THEORETICAL FRAMEWORK

2.1 Distance learning environments and MOOC

Technological advances have improved access to information, and provide an opportunity to share information and knowledge through remote environments. Glance, Forsey and Riley [1] argue that online courses enhance learning through a recovery mechanism, short videos, self-assessments and discussion forums. Also, these pedagogical practices allow reflection and interaction among students, by creating their own networks of information and knowledge. A response to the educational needs of the knowledge age is facilitating MOOCs.

The phenomenon of online learning has gained impulse in recent years, massive open online courses (MOOC) are free online courses for which there is no other entrance requirement than internet access and interest, there are no schedules or a formal accreditation. These courses are considered massive because there are thousands of students participating; and open due to the software, access, curriculum, information resources, assessment processes and learning environments. Participation in these courses is self-directed in accordance with the goals, knowledge and interests of each student. The purpose is that students create their own resources and share the acquired knowledge through the learning activities, connecting nodes of fragmented knowledge [2; 3; 4; 5]. Siemens [6] describes the role of the teacher as an expert acting as a commentator, providing assistance to facilitate connections and create learning networks among students, guide them and provide information resources; as well as to encourage exploration, connection and creation of knowledge.

There have been several problems and challenges among MOOCs that relate specifically to their main characteristics: the large number of participants, the openness of the system and the low participation of the total amount of students. Siemens & Cormier [2] found that one of the biggest problems was the high dropout rate because there are no filters to choose the participants of the course. McAuley, Stewart, Siemens & Cormier [2] mention that many people do not feel comfortable in this environment, either by their geographic, economic and/or personal conditions; they also tend to feel disoriented due to the large amount of information. Rodriguez [4] identifies that one of the major problems in these courses are the participants who just follow the course in a consumerist way (lurker) with no intention of socializing the acquired knowledge or creating networks.

2.2 Team teaching in a MOOC

The construction of online learning, specifically in a MOOC, occurs through the connections between knowledge and learning that participants create and share. In these environments, facilitators play an important role, trying to "connect" the learning experiences of the participants. Zapatin and Maniscalco-Feichtil [7] suggest that having a support team to assist the instructors in a virtual environment is important to achieve a good teaching practice. In this way, a network that helps and guides the students to achieve an optimum use of the course is created. Kang and Im [8] found that students in a virtual environment seek to feel the presence of an instructor close to them. Hence, the role of the facilitator should focus on creating a learning environment where students can discuss and collaborate; and facilitate connections and networking to build knowledge and solve problems together. Ramirez [9] mentions some of the factors that influence the role of facilitators in a MOOC experience, such as prior experience, academic connection networks, institutional support and motivation for teaching. The study discovered that most participants who registered as volunteer facilitators considered themselves as "novices" in their teaching abilities. However, most of them considered being in an advanced level in the management of ICT.

Due to the specific characteristics of MOOCs, the teaching team faces certain problems to do their job successfully. The most common problems are related to the ability of the facilitators to confront the massiveness, because it hinders communication with teachers and among peers. Maintaining the motivation of participants to prevent them from dropping, and making appropriate evaluations and feedbacks are other challenges for the facilitators of these courses [10, 11; 12; 13]. It is important to explore further how the formation of a team of facilitators is given, in order to identify areas of opportunity and be better prepared to solve the problems that arise.

3 METHODOLOGY

We worked with a qualitative methodology through an instrumental case study [14], using the experience in the MOOC to understand the challenging implications that occur in the formation of teams of learning facilitators, and opportunities to successfully conform as a teaching team. Grounded theory was used for data analysis, collecting information on the natural context of the MOOC and making a continuous comparison of the data with the objective of generating theoretical formulations based on the observed reality [15]. We triangulated the data to validate the results, comparing the information obtained from different instruments [16].

The MOOC population was 20,400 participants from 52 countries and 800 volunteer facilitators who were selected for their expertise in distance education and prior knowledge about open educational resources (OER). The teaching assistants (TA) group was the focus of the study, where a purposive sample of 200 facilitators who were consistent in their facilitation processes until the end of the course was selected. From this perspective, the qualitative, non-probabilistic, atypical sample based on population stratification [17] was founded in the representativeness and availability of those involved. Three categories were analyzed: the construction of learning, training in team teaching, and the practice activity of facilitation; through six instruments: a researchers' diagnosis, a starting survey, self-assessments about production and mobilization of resources, a survey about the weekly activities of the facilitators, and a final survey of the teaching experience.

The study was conducted in a MOOC, which aimed for participants to identify strategies to use Open Educational Resources (OER), through the analysis of their context, the contributions of the subject in the theoretical realm, and the experiences that have raised in academia, in order to contribute with innovative practices in the open education movement (Figure 1).



Figura 1. Portal web del curso (<https://www.coursera.org/course/innovacionrea>)

The TA formation was in charge of two tenured professors, through four weekly meetings in which issues about the content and the facilitation process required [18], were addressed. The functions requested to the tutors were the social construction of knowledge, interaction, assertive communication, training, and the registration of their practices.

4 RESULTS

We identified the main problems in the MOOC using the Team Teaching strategy. 77% of the teaching assistants (TA) reported that participants had doubts about the dynamics of the course. The most common questions were about the activities (how to perform them, what tools to use and where to place them) because they did not understand the instructions, and several of the participants agreed that they were not clear. The facilitators commented that this lack of clarity in the instructions caused participants to deliver poor activities. Added to this, the participants expressed their desire to receive feedback, because they had doubts about the quality of their work. One TA commented: "There have been doubts about the organization of the topics and questions about how to perform activities, but sharing ideas has helped resolving this questions." The initial questions were related to course logistics (registration and surveys), so a more extensive induction process was suggested. Initial surveys were considered confusing and biased because the multiple-choice questions had very limited answers. As the course progressed, the lack of structure generated anxiety in the participants, which

asked about the objectives and methodology of the course, the schedule of meetings, times and places to deliver activities, how to participate in discussion boards and how to make peer evaluations and self-evaluations. On the other hand, participants felt confused by the grand amount of resources and repetitive information, and wonder if they should read only recommended pages or all of the available content. TA also commented that some forums are confusing due to the large number of contributions, many of which are similar because participants do not have the habit of reading before posting. Some students decided to create a space on Facebook for socialization, but the TA considered it problematic. There was also confusion about the role of TA, they were not sure what were their responsibilities, and the rest of the participants asked why they received this distinction and how to identify them. In general, the TA mentioned that they observed a lot of participation and resolution of doubts from their peers, but they confess that sometimes they did not know the answers to the questions raised. They also commented that the fact of not having a specific space in the platform to administer activities and grades makes their work difficult.

Another common problem is related to the use of technology and platform management. 15% of the TA said they were asked to solve problems of technical nature (connection, audio, broadcast, broken links, browser issues). In addition, there were learners who were not familiar with the technology and didn't know how to use the platform, how to attach documents, conduct a Hangout, post comments, access a Google group, complete an online survey, use social networks, etc. There were some participants that said that the course was difficult to follow because of its virtual mode. 8.5% of participants who served as TA mentioned that there were problems due to lack of information, for example, many participants did not know their ID number and didn't know how to found it. Some TA mentioned that they were not sure if they were selected as facilitators because they did not get a confirmation email. On the other hand, there was confusion regarding the cost of the course, several participants were not sure if it was free.

Some participants were not satisfied with the accreditation parameters of the course, like the fact that those who didn't participate as assistants couldn't obtain honors. In fact, 7% of the facilitators mentioned that participants had doubts about how they were being evaluated and mentioned that they would like to receive feedback from their activities; on the other hand, they wanted to know if they were going to be evaluated only by their peers or also by the course instructors. There were also a lot of questions about the dates to deliver activities, they wanted to know if not delivering an activity on time or starting the course after the stipulated date were reasons for not receiving their constancy, and whether they would have a failing grade if they canceled their participation in the course. 5% of the participants mentioned that doubts presented in forums were related to the course content. One of the most significant questions was related with the production of educational resources and quality standards available for that production. Discussions regarding the implementation of OER in teaching, and the importance of the MOOCs were also presented. There also emerged more specific questions, such as how to make dynamic presentations, how to use platforms like Slideshare to share resources with the academic community, and about search strategies. One TA commented: "By Friday, they began to focus on the central theme of the week. Participations showed a great diversity in terms of the skills and experience of the participants, but a great desire to learn and the need for exchanging points of view. "

5% of the TA expressed that participants exposed personal problems that interfered with their learning in the course. For example, some found it difficult to attend the live sessions because the schedules were not right for them, and others indicated not having enough time to perform all of the requested activities. Some participants didn't speak Spanish, and others didn't understand English and had difficulty understanding the videos that were in this language. On the other hand, some learners were considering dropping the course due to their lack of experience with the subject. Only 3% of the TA mentioned that they didn't have any doubts. One facilitator commented, "The information about the open education movement is new for me, but expert videos are very explicit, so it has been easy to learn."

The next table summarizes the problems faced by TA in the MOOC

Table 1.

Problems found in the MOOC using the Team Teaching strategy

Problems	Percentage
Course dynamic (methodology, activities)	77%

Technology and platform use	15%
Lack of information	8.5%
Evaluation and course accreditation	7%
Doubts about course content	5%
Personal problems	5%

4. ANALYSIS AND CONCLUSIONS

This study began with the question: What challenges are presented when forming learning facilitators' teams, and what are the opportunities for successfully conforming them as a Teaching Team in MOOC experiences? The data was triangulated in the analysis, and findings show challenges and opportunities for the facilitation processes in massive experiences.

For the learning facilitators (TA) to conduct their work, it is necessary to address certain key aspects related to the dynamics of the course, like how to write clear instructions and define objectives for activities, use a logical organization for the content, opening appropriate spaces to provide feedback and discuss topics with their peers, and clarify the role of the instructor and TA. Most facilitators (77%) expressed that these design flaws hindered their task of facilitating learning. McAuley, Stewart, Siemens & Cormier [2] suggest that many people are not comfortable in connectivist environments. It is recommended to design the course so that participants feel more secure in these new abundant environments, defining logic, clear and structured objectives, activities and assessments.

On the other hand, the fact that many participants were unfamiliar with the use of technology was a challenge for the facilitators' team. 15% of the TA mentioned that students were asking them for technical support, related to the use of the platform and social networks (attaching documents, posting comments, access to the Google group, answering an online survey, doing a Hangout, etc.). Cormier & Siemens [19] claimed that one of the biggest problems in MOOCs is the openness of the system because there are no filters to select participants. We recommend addressing the problems that can arise due to lack of digital skills that some learners may have. It would be appropriate to upload a tutorial or a space of questions and answers that directly relates to the management of the platform, or having a team in charge of providing technical support.

Another problem that arose was the lack of communication between the course organizers and the team of facilitators (TA). 15% of the TA said they lacked information about how to do their jobs and many of them did not know their ID number or how to use it, or even had doubts about whether they had been selected as facilitators or not. Ramirez [9] finds that participants who volunteer as facilitators in a MOOC usually do so because they believe they have a high level of competence in the management of ICT, but do not consider that they have the necessary pedagogical skills. The organizers must have constant communication with the TAs so that they feel guided and safer to facilitate learning, because many of them don't have any training as educators.

There are many areas of opportunities in the implementation of MOOCs; one of them is the formation of teaching teams. This study identifies opportunities in instructional, communicative and technological components. Ramirez [9] identified that having previous experience, networks of academic connections, institutional support and motivation for teaching are important conditions for facilitators. Siemens [6] also states that tutors should facilitate connections, create learning networks among students, guide them and provide information resources, as well as to encourage exploration, connection and creation of knowledge. For the successful formation of the facilitators' team in a MOOC, we should take care of the course instructional design, implement effective communication strategies and take into account the level of digital skills of the trainees and the TA.

This study considers the view of participants and facilitators, however, for future studies it's recommended to consider the experience of the course designers. This paper is a qualitative look at what teachers reflected in a MOOC experience, with an invitation to make further investigations about MOOCs and the learning facilitation processes.

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