

## **The importance of forum interaction and success rates in Language MOOCs**

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**Abstract.** This article explores the relevance of forums for Language MOOC (LMOOC) based learning. The role of forums is analysed in the general context of online learning and MOOCs, where forums are often the only tool available for students to obtain help and support from peers and teachers. A case study-based analysis is then presented which provides evidence towards the existence of a correlation between forum interaction and student success in an LMOOC (measured in terms of the correct completion of learning activities).

**Keywords:** language MOOCs, LMOOCs, forums, interaction, course success

### **1 Introduction**

Although research on online learning practice is currently focusing on social networks, for many reasons including their ease of use and large scale adoption in general, their structure and dynamics have similarities with online forums, which have been used since the very beginning of the Internet<sup>1</sup>. Forums can be seen to be modern agorae, i.e., online discussion tools where people can hold conversations or just interact with other people by posting typically textual messages and sharing files. The value of forums largely depends upon their technical sophistication, underlying implementation, and platform where they are located. The number, structure and functionality of forums in a given course also depend on other factors, such as institutional policy, course templates, and teacher design.

Authors such as Lamy & Goodfellow [9] argue that forum interactions can promote cohesion and learning. They also note the importance of online tutors in this process, who help by encouraging students to reflect upon tasks that they undertake and to participate in relevant discussions. Curtis & Lawson [7] explore the nature of learning in online forums and present evidence to support the existence of effective collaboration. They note that the nature of forums, how messages are organised and easily available to students facilitate collaborative learning in a way in which it would

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<sup>1</sup> Empirical data for this paper have been collected from the MOOC “How to succeed in the English B1 Level Exam”, designed within the EU-funded ECO Project (Elearning, Communication and Open-data Massive Mobile, Ubiquitous and Open Learning, 2014-2017; grant no. 21127). The research presented has been undertaken with the support of the Spanish Ministry of Education and Science (MEC) in the context of the SWITCHED-ON Project (FFI2016-80613-P).

not have been possible with other tools such as email. In a similar way, Barcena et al. [3] explore the interpersonal dynamics in online course forums, and identify the risk of miscommunication between students which requires the expert assistance of tutors.

This article addresses the relevance of forums for online language learners, where the role of the target language is three-fold: firstly, the vehicle of communication; secondly, the subject of the discussions undertaken therein; and thirdly, the learning goal. Specifically, the article focuses on forums in Language MOOCs (henceforth, LMOOCs), the most attractive, criticized and polemic of all types of online language courses. Their potential for open and large scale interaction presents enormous challenges in providing sufficient structure and support for the students to carry on participating actively and thus benefiting from the course.

## **2 Forums in online second language learning**

The importance of intercommunication as part of the learning process has been emphasized for some time, more so than just individual knowledge assimilation. This is particularly true for second language learners, whose communicative competences and skills are developed by social interaction online between the students and with the teachers [13]. Forums are considered a standard resource for online second language learning [8, 10, 6]. Their manageability allows the teacher to provide not only feedback on the content of the students' messages, but also on their actual use of language in a comparable way to how it is done in a classroom situation.

MOOCs represent an important step forward in the evolution of online learning, for many reasons including the very fact that they are more open to a wider range of learners than their closed course counterparts. This is particularly relevant to language learning since LMOOCs provide a remarkable opportunity to access heterogeneous profiles of interlocutors for the students to practice with. Therefore, it is inevitable that forum use in MOOCs and LMOOCs has already received some attention in the literature. The MOOC phenomenon has provided a new area of application for forums where their use is the main tool that students have for interaction. Castrillo [5] notes that in order to avoid the confusion characteristic of multiple-threaded forum debates, it is necessary to add structure to the forums in terms of categories, subcategories and subject threads, which allows for a more intuitive distribution of topics. Bali [2] indicates that MOOCs often have busy discussion forums where course notes can be shared, questions asked and answered, and topics related to the course discussed. Forum participation can be more productive in terms of learning outcomes than just following the course.

As well as the general benefits of forums for MOOC students in general, specific research has presented the additional benefits for LMOOCs, including target language practice, focus on target language structure and usage, and the incorporation of context and pragmatics [11]. Barcena et al. [3] note the value of participating in forums in LMOOCs. They developed a series of activities to foster collaborative learning there, firstly, in the forum, and secondly, via peer-to-peer (henceforth, P2P) activities. However, they go on to note that out of the 925 active forum users, half of them only post-

ed one message, and around 3% posted more than ten. Beaven et al. [4] argue that the effectiveness of the forum activity in their LMOOC was related to the authentic nature of the learning tasks, acting as “precursors” to discussions. They also note the importance that the connection of the forum with other parts of the course has for meaningful student interaction (directly related to the learning tasks) to take place. Read & Barcena [12] claim that while LMOOCs are becoming more mobile, in terms of their deployment for mobile devices, forums are still relevant and significant learning mechanisms.

### **3 Methodology and context**

The objective of this research was to study the relationship between student forum performance and successful completion of LMOOCs. A case study was undertaken of the LMOOC “How to succeed in the English B1 Level Exam”. To this end, the approach adopted was bottom-up, moving from observation and data collection towards a more theoretical and broader generalization, in an attempt to detect patterns and develop some conclusions. Both quantitative and qualitative data collection tools were used. The former involved the use of learning analytics provided by the MOOC platform. The latter came from the results of a final questionnaire, which included items about how online participation in discussion forums had been promoted throughout the course, and about the perceived usefulness of that type of social interaction.

The first edition of the LMOOC “How to succeed in the English B1 Level Exam” took place at the end of 2015. It consisted of six modules (one per week) and involved a combination of theoretical content and practical activities. Social interaction was actively promoted in the 8 forums of the course. There was one forum devoted to each of the modules plus a general one for technical issues and another one for methodological questions related to the successful completion of the course. Another resource for social interaction in the LMOOC was its Facebook group, which encouraged the development of an English as a Foreign Language learning community. There was also an element of gamification to heighten engagement, and participants could obtain up to 7 badges for various achievements (e.g. submission of P2P activities or completion of the initial and final questionnaire). In its first edition, there were 8,208 participants registered, 65% (5,359) of whom actually started the course, and of those 12 % (644) successfully completed it. As for the student profile, the vast majority of participants were Spanish (91.6%), female (60.5%), and in their late thirties (37.6 was the average age). Most of them had at least one degree (53.6% with a BA/Bsc, MA/MSc or similar) and were employed (56.8%).

### **4 Data analysis**

Regarding the number of posts in the discussion forums, it should be noted that the level of interaction was low for a “truly massive” online course like this one: there was a total of 1,161 messages divided as follows: 250 forum guideline posts; 54 general forum posts; 505 module 1 forum posts; 100 module 2 forum posts; 87 module 3

forum posts; 80 module 4 forum posts; 44 module 5 forum posts; and 41 module 6 forum posts. For this article, the authors have identified the participants who wrote 5 or more messages (established as a cut off for demonstrating course commitment) in the discussion forums and have analysed their performance in the MOOC, seeking to identify interaction and learning patterns, taking into account the Anderson et al. [1] classification of engagement profiles in MOOCs: all-rounders (students who both watch the video lectures and hand in the assignments), viewers (students who mainly watch the videos), solvers (students who mainly hand in the assignments), collectors (students who mainly download lectures) and bystanders (students who undertake very little activity). In order to gain a better understanding of participants' learning experience in the LMOOC, the data analysis has focused on their engagement with learning materials (access to video-classes, online texts, and the download of extra resources), and the submission of tasks and P2P activities. Table 1 shows the descriptive statistics for the different learning resources and task submissions.

**Table 1.** The relation between learning object engagement and task submission

	<b>Video access<sup>2</sup></b>	<b>Online text access</b>	<b>Document download</b>	<b>Task submission</b>	<b>P2P submission</b>
<b>No.</b>	6449	3419	3009	2766	1392
<b>Mean</b>	9.53	5.17	5.33	1.84	2.23

Of all the LMOOC participants, those who actively engaged in online interaction (previously established as having posted at least 5 messages) were selected for the case study (25). Most of these students (14) posted just 5 messages and the one who sent most messages wrote a total of 17 (roughly 2 per forum). When tracking their overall progress, it can be seen that they performed exceptionally well in the course. The lowest mark achieved was 72.3%. Table 2 shows the results for these 25 participants, defined as “heavy forum users” of the discussion forums in this LMOOC.

**Table 2.** Performance of „heavy forum users“ in discussion forums

	<b>Video access</b>	<b>Online text access</b>	<b>Document download</b>	<b>Task submission</b>	<b>P2P submission</b>
<b>No.</b>	25	25	22	24	25
<b>Lost val.</b>	0	0	3	1	0
<b>Mean</b>	45.40	15.28	14.91	3.63	3.96

A Student's *t*-test was performed in order to compare the means in the two sets, and the results obtained show that the difference between means is significant. The qualitative analysis provided by the final questionnaire helped complement the analysis of the participants' learning behavior. When asked about their perception of social interaction in the LMOOC and the peer support received, they rated it quite positively (59.05% considered it good or excellent). As for the posts and comments made by

<sup>2</sup> The data on access in this article reflects the no. of accesses, not the no. of participants. A participant may access these resources more than once.

their peers, although they were few, they were well received (55.79% rated them as good or excellent). Finally, participants were also queried about their perception of the work shared and revised in the P2P activities, and once again it was considered to be mostly good or excellent for promoting participation online (52.53%).

## **5 Discussion and conclusion**

This article presented evidence from the literature on the way in which forum activity can support learning in online courses. It went on to present the relevance of such activity for second languages, and finally focused on MOOCs and LMOOCs, where forums are often the only tool available for students to obtain help and support from peers and teachers. A case study-based analysis was subsequently undertaken on the relation between forum interaction and student success (defined in terms of the completion of the course, accomplishing 50% or more of the learning activities therein) in an LMOOC.

The tally of forum posts in the LMOOC under study revealed, firstly, that online interaction and discussion was very low in general, and secondly, that those who were active in the forum succeeded in the LMOOC without exception! The identified group of “heavy forum users” would be considered closest to “all-rounders” (as per [1]), i.e., the “top students” of the group, who balance watching video classes and the use of other learning objects with the handing in of assignments, which were subsequently marked as being correct. Furthermore, “heavy forum users” accessed all the learning resources in the course more often than the average student, which provides additional evidence towards the existence of a correlation between pro-active forum participation and eventual course success.

The authors of this article had previously reflected on the importance of these highly motivated, engaged students and defined them as “e-leading students” (or eLSs [3]), and the research described herein complements this work by showing that social engagement in forums promotes commitment to other learning objects within LMOOCs. Pro-active forum participation had been studied in the literature in terms of lower attrition rates (e.g., [13]), but not of successful course performance. It is clear, particularly from the qualitative analysis of the questionnaire, that course participants themselves perceive discussion forums as a positive element in their LMOOC experience. However, some future action must still be taken to overcome the difficulties highlighted in this article and boost the active participation of students in the discussion forums. A more in-depth analysis of the posts generated by “heavy forum users” would be of interest, looking at the type of messages that they write (questions, answers, comments to previous questions, comments to previous answers, general observations, requests, etc.), so that the instructional designers of LMOOCs can attempt to promote these influential factors. Finally, future research should attempt at extending the engagement styles proposed by [1], once checked their relevance in the language learning domain, to include the analysis presented here with regard to the type of LMOOC forum users and the notion of “e-leading students”, also developed by the authors [3], since they all focus on complementary MOOC didactic and communica-

tion tools. This work should provide a finer grained model of LMOOC users, which would better enable teachers to design and prepare effective courses.

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