Thesis project feedback from MOOC learners

A case study

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Abstract. This paper describes a case study where master's students enrolled at a traditional campus based course at the University of Copenhagen, used the discussion forum of a mooc to get feedback to their master's thesis projects. The aim was to examine if and how *master's students* can use the knowledge, network and experience of the global community of *mooc learners* that are present in the mooc discussions forums. We analyzed aspects of these thesis project discussions, focusing on the interaction between master's student and mooc learners, and categorizing the different types of useful feedback from mooc learners. The analysis showed that although most interactions between student and each learner was very short, the format generated many kinds of useful feedback, such as suggestions for methodology and literature as well as numerous offers of assistance, collaboration or sharing of personal network.

Keywords: Massive Open Online Course (MOOC), Crowdsourcing, Online Communities, Feedback, Thesis Supervision, Hybrid Learning.

1 Introduction

Since the massive open online course (mooc) format rose to prominence in 2012, very little attention has been given to the possible benefits for ordinary master's students enrolled at the institutions offering these courses. The case study described here presents a format for leveraging the large professional communities that can form around moocs to help ordinary master's students get useful feedback on their research projects.

The case is based on a pilot study where students from the University of Copenhagen (UCPH) interacted with the learners enrolled in one of the UCPH's moocs offered on the platform Coursera as a part of their thesis project. The aim was to examine if the students can generate feedback and insights from this global community of online learners that go beyond what they can get from their thesis supervisor and other faculty at the home institution.

2 Methods

Our empirical data stems from three cases, each of which had a master's student start a new thread in the mooc discussions forums where he/she presented his/her own thesis project. To attract the attention of learners, the mooc course leader sent out an email (one for each of the three cases) to all enrolled learners which included a deep (direct) link to the new thread, where learners could read about the thesis project and add their own comments. Our data is the content of these discussions forum threads.

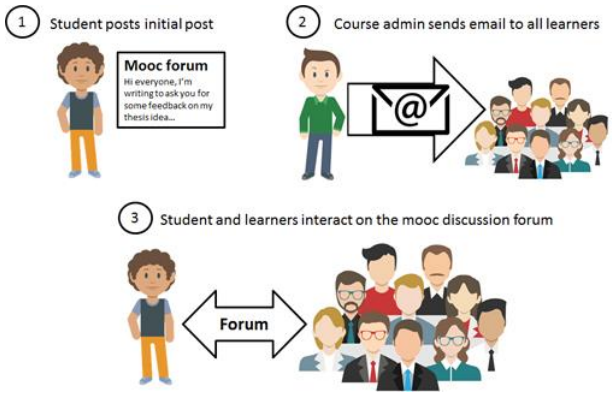

Fig. 1. The 3-step simple setup of the mooc forum as medium for crowd-sourcing feedback

The three master's students, which we will refer to as S1, S2, and S3, volunteered to be used as cases in our study. They were all enrolled in the 2-year study programme MSc in Global Health at the UCPH. This programme is concluded by a module where the students produce a master's thesis. They each participated in this case study when they were in the very early stages of their thesis process, having only rough ideas about topic and overall research question. All three cases were carried out in the online discussion forums of the mooc "An Introduction to Global Health". The mooc was run in sessions, each with around 20,000 learners enrolling for an 8 week long learning experience. According to data available on the course's analytics dashboards the mooc learners were predominantly female (ca. 57%), predominantly not students (ca. 60%), predominantly working (ca. 50% full-time and ca. 17% part-time workers), of all ages but with the most learners in the "25-34 years old" bracket (ca. 35%), and from 193 different countries.

3 Findings

3.1 Interaction between student and learners

To examine the nature of the communication between master's student and mooc learners we looked at the extent of dialogue in the discussions. Each discussion thread

consists of a number of small interactions, all taking their outset in the initial post, where the student described his/her thesis topic and research questions. The students only took part in the discussions in their own thread, so each thread had just one student interacting with the mooc learners. A discussion thread orders all posts/replies as pearls on a thread, with the initial student post as the first post. Aside from replying to the initial student post it is also possible to reply to individual posts. As a consequence the interactions in a discussion thread actually consists of a number of small isolated sub-threads all taking the initial student post as their outset. In all three discussion threads these sub-threads were very short and most often included just the student and a single mooc learner. Only rarely they included the student and two mooc learners.

There is great variation in the level of participation of both master's students and mooc learners between the three threads. S1 and S3 both reply to the majority of mooc learner posts, while S2 replies to less than a tenth of the mooc learner posts. This, however, does not translate into a lot of longer dialogues in the threads of S1 and S3, and it is not possible to conclude that the higher degree of participation by S1 and S3 lead to more comprehensive and useful feedback from the mooc learners.

Table 1. Number and type of the replies in the three discussion threads.

Type of post	S1 thread	S2 thread	S3 thread
Learner's first reply	54	23	9
Same learner's second reply	2	0	3
Different learner's reply	2	2	1
Total number of posts by learners	58	25	13
Student's reply	44	2	6
Total number of replies	102	27	19

The large difference in number of learner replies is likely connected with the thesis topic, and how well it resonated with the learners on the course. We base this on the fact that the proportion of learners posting in the thread, out of the number of learners viewing the thread (opening it in their internet browser), is almost the same for each thread (7-9%).

3.2 Types of feedback

To examine the usefulness for the students we sorted the feedback into a number of categories. These categories were not decided beforehand, but were identified after careful examination of the data. Of these categories we focused on the ones that can be seen as 'useful' from the perspective of the student who is working on a thesis project, such as suggestions for methodology, informants or literature. One post from a learner can be tagged with several categories, if it for instance suggests both relevant literature and a key informant.

Table 2. Number of posts tagged as containing each category of useful feedback.

Categories of useful feedback	S1 thread	S2 thread	S3 thread
Suggesting literature or existing data	18	2	4
Suggesting method or research design	12	0	2
Suggesting relevant informant	4	2	2
Giving input to conclusion or discussion	1	2	5
Offering to share personal network	5	0	0
Offering support or collaboration	9	1	2
Sum of useful feedback	49	7	15

There is some variation between threads in regards to which kinds of feedback the students got. It is our impression that this is largely due to the different nature of the thesis ideas. S1 was planning field work in Ethiopia, and got more feedback related to methodology and local network. S3 was planning a desk study, and got more feedback related to discussion of the research question. If you divide the sum of useful feedback with the number of replies in each thread you get a sort of average usefulness of the posts in each thread. These numbers are 0.84, 0.28 and 1.15 for thread S1, S2 and S3 respectively. The outlier here is the thread of S2 where the 25 posts by mooc learners only included seven instances of useful feedback. This does not seem to be caused by the S2's lower level of participation in the thread. In fact, our interpretation is that the low quality of the learner posts was causing the student to participate less. We base this on the fact that in the other two threads it is exactly the useful bits of a mooc learner's posts that prompt the master's student to reply, simply because useful feedback calls for a "Thank you" or leads to a follow up question, whereas it can be hard to figure out what to reply to a not so useful post.

4 Conclusion

Our findings show that the mooc discussion forum is a useful medium for generating feedback that is valuable for the master's student's thesis writing. The interactions between master's student and mooc learners were short, and almost all interactions were between a student and just one learner. In discussions where the master's student was more active we found that there was more useful feedback. We identified a number of categories of useful feedback, including suggestions for literature, ideas for research design, or offering to share personal network.

The format seems flexible and suitable for different kinds of projects, including both field work and desk study based thesis projects. Further research is needed to identify the best format for the student to start the discussion in a way that ensures that feedback that is generated from the learners is useful for the thesis writing process. The willingness of mooc learners to participate in activities of students in the ordinary education system opens up new opportunities for creation and sharing of knowledge in a global ecosystem including both practitioners and students.