Ways of Enriching MOOCs for Higher Education: A Philosophy Course

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Abstract. Using Massive Open Online Courses (MOOC) in higher education poses new challenges that include the following: an increase in the number of students taught by one teacher, which makes it difficult to individualize the tasks, the easy access to other students' answers due to the social media, the lower engagement of students when studying online. In the situation of the complete transition to e-education due to the 2020 pandemic, teachers were forced to solve these problems in the electronic environment. This article presents the case of enriching the online Philosophy course given to students of Peter the Great St. Petersburg Polytechnic University by creating new assignments in various forms: video blogging, multimedia projects and in-depth study of philosophical texts. In this respect, the current situation becomes advantageous and allows the lecturers to achieve better results due to the availability of all ideas and experiences and the collaborative activities of the students. The variety of approaches used in studying the Philosophy course confirms the important role of the teacher in e-learning.

Keywords: E-learning · Higher education · Course of philosophy · MOOC

1 Introduction

Active development of electronic education introduces a great number of challenges [1–6] to university lecturers. Massive Open Online Courses (MOOC) radically changed the conventional educational model at universities [7]. The current model of MOOCs given at universities is the so-called hMOOC (from hybrid) or MOOC 3.0 that combines the connectivist course in terms of collaborative pedagogy and the extended course - a rigidly structured course using traditional instructional methods: presentations, assignments, tests), which is embodied in blended learning, flipped class, and other options for using MOOC additionally as a “textbook” or in combination with traditional classes [8–10]. The use of MOOC as an integral part of university education required a revision of the approach to teaching, focusing on the fundamental knowledge, skills and abilities that are most difficult to develop in the online environment, within the given number of academic hours allocated for face-to-face classes.

An unexpected and sharp transition from blended learning to online learning caused by the 2020 pandemic has brought about a new problem to the lecturers: how to help...
students develop their learning and intellectual skills online. One of the obvious solutions was the transition to communication technologies that use video communication (such as the corporate platform Microsoft Team, Zoom, Skype, etc.), which allows us to establish quite an adequate analogue of face-to-face classes.

However, a number of teachers had to solve this problem without using video communication. This experience is all the more interesting because it can show the future development of e-learning and the role of the teacher in the new digital reality. This study examines the experience of supplementing the MOOC philosophy course with new learning formats for the students of Peter the Great St. Petersburg Polytechnic University.

2 Literature Review

The use of MOOC in higher education can be quite beneficial as it allows the universities to save money and classroom fund, reduce the workload and/or a number of teachers. The reverse side of using online courses is associated with the lack of individual work of the teacher with the student, the need for a higher level of self-discipline and the difficulty in evaluating the performance of the student. Among the main negative sides of using MOOC at the university, the researchers highlight the lack of monitoring, high abandonment rate, the need for the student autonomy and inadequate evaluation system [11]. Within the system of blended learning, students showed a lower level of overall satisfaction and a lesser number of skills that they felt they had learned [12]. The most inadequate are the results of using MOOC when teaching social science and professional studies courses [13].

New areas of work on mass courses will be the following:

- the development of collaborative learning, in which students play a large role in the educational process. Some researchers have noted the positive trends in the joint study of MOOC videos by students [14]. The social media can play an important role in this process and make it possible to organize social interaction. The experience of using social networks to enhance interaction and engagement of students, to encourage peer-support is widely reviewed in the literature - Facebook [15, 16], Twitter [17], blog [18, 19], WhatsApp [20, 21]. Andersen, and Ponti have analyzed the online nonformal course emphasizing teaching and learning by peers and for peers, where everyone can act as an organizer and as a participant in the course, and vice versa [22];

- individualization using personal learning environments [23], such as artificial intelligence, intelligent tutors and adaptive controls, and aMOOC (adaptiveMOOC) [24]. Within this model Sonwalkar offers a multi-dimensional framework to organize learning objects developed in text, graphics, audio, video, animations, and simulations in the five learning pathways conforming to the pedagogy of apprentice, incidental, inductive, deductive, and discovery learning models, also by adding social learning via blogs, Wiki, podcasting, YouTube and interaction with a teacher [24].

Another model, the adaptive hybrid MOOC, provides individual learning by adapting the activities, contents, examples and even evaluation to the profile of each participant [25]. The main features of this model are the following: selection, organization and sequencing of resources. Sein-Echaluce, Fidalgo-Blanco and Garcia-Peñalvo
propose ahMOOC that combines leaning resources, adaptive modules (responsible for interacting with users) and social network (all users share the same social network, where they can interact with each other) [26]. ahMOOC provides the options focused on certain content and access to specific materials, with the possibility to customize the course based on the user profile [25].

While using MOOC Bralić and Divjak propose keeping a learning diary to showcase the understanding of the content and provide insight for qualitative analysis based on a set of questions that the students were required to answer [27]. For the remaining face-to-face activities it is proposed to use the Discussions for deeper understanding of the course topics/requirements and Feedback on assignments [28], to reinforce, contextualize and discuss the key messages of the MOOC [29].

3 Cases of Enriching MOOC Philosophy Course

Transition of the blended learning format into a remote format in connection with the 2020 pandemic has intensified the search for the type of assignments within the framework of the Philosophy course that would allow teachers to evaluate the real knowledge and skills of students. Unlike the formal automatic verification of tests for the MOOC course, these tasks were created individually by the teachers and checked by them manually. Each teacher worked with approximately 300–500 students.

The main challenges that teachers faced when organizing on-line classes in addition to MOOC Philosophy were the following:

– the complete immersion in the Internet reality, where the difference between the simple transfer of information and its understanding is often lost. Due to the accessibility of information on the network, students have a feeling of possessing the knowledge without deep understanding of the subject. Availability of information on the network allows students to give the correct answers to traditional questions on the course using the search, without thinking them over.
– a large number of students per teacher does not allow teachers to develop an individual task for each student. Social media allows students to share tasks and answers easily, so tasks can be performed independently.
– the time to complete the task is limited by several days or weeks, which organizes students’ work and does not allow them to put it off until the last moment, which is common practice in conventional format of learning. However, this approach deprives e-learning of the flexibility appreciated by the students.
– ensuring engagement of students. The transition to online studies required greater concentration and motivation of students to continue their studies. The possibility to make assignments more attractive for students would help to keep their interest in learning.

As a result, the authors have developed several practical solutions that can be used to supplement MOOC with new learning activities.
3.1 Video Blogging

Case of the Peter the Great St. Petersburg Polytechnic University Institute of Energy. There are more than 400 first year students at this institute and they all take a blended Philosophy course. It implies that most of students’ learning is done by themselves, with only two lectures and four practical classes given during the semester. Full-time performance is high, with less than 10 percent of students’ truancy. This indicator remains unchanged for 5 years. During the transition to distance learning in March 2020, the teacher asked students to write the essays as monthly reports on the work done. An essay as a type of the composition that expresses the students’ personal impressions and their views on a specific topic or philosophical work is suitable for developing students’ critical thinking and writing skills. The author’s view in the essay is not positioned as the only true one, as the main task of this type of work is aimed at developing students’ creative potential, rather than at reproducing “other people's thoughts”. Students were given the following task: to choose one of the philosophical works suggested by the teacher (a number of philosophical works from Antiquity to the 20th century, covering main subject areas) and to write an essay which would include the following sections: 1) the problem statement, 2) conceptual analysis – definition of the main concepts and their analogies with other philosophical works, 3) the student’s own point of view supported with arguments. After the first deadline at the end of March, it became clear that this format of work was not suitable, only 70 essays were submitted, a third of them did not meet the requirements (they contained plagiarism, did not disclose the topic, etc.). At the same time, students began to send requests for further work in webinar format, for the possibility of submitting an essay in the form of a video, and asked for additional consultations on social networks.

The group was established in a social network to identify the most optimal format for monthly reporting in the process of informal communication. There were additional materials uploaded in the group including games, puzzles, thematic lists of the sources, and individual consultations were held, which ensured better involvement of the students. Two hundred sixty students’ works were submitted in April. However, this entailed another problem, as it is difficult to check such a large number of creative works within a short time and provide the necessary feedback. For the solution to the problem not to be too fast and spontaneous, the analysis was made of students’ feedback on the course over the past four semesters. Monitoring of students’ satisfaction with the Philosophy course has collected more than 1000 reviews from SPbPU students. Many of them suggested making the seminars more interactive, including teamwork and situational games. It is impossible to imagine engineers of the future without a creative mentality, as the communication speeds in a modern information society require the developed critical thinking skills. The development of soft-skills is the responsibility of the humanitarian sector of educational programs. Thus, the solution was found for students to make presentations of individual topics of the course in the new format. Now almost any task can be presented on social networks in the form of the video blog which is quite popular with young people. The idea was approved by the students, and more than a hundred works were sent with the hashtag #non-vacation. Thus, the teacher managed to keep the traditional form of the test work, adding the form of a video, while students developed additional communication skills as well as self-presentation skills.
Watching and discussing videos helped not only to diversify educational activities, but also to increase academic performance. Only 10% of the students did not submit the assignment in May, which corresponded to the average values (before the pandemic). The results at the exam also improved, there were practically no unsatisfactory marks (the average figure over the past five years was 15%). The exam in this course is quite extensive, including more than 80 questions, the study of which independently is quite a difficult task as it requires revising a large amount of additional literature. Numerous views of classmates’ videos have become an active learning method for students, helped them to study the material, get additional information on the course and create a collective video summary to revise for the exam. Figure 1, 2 shows examples of students’ work in the video format (print screens from social networks), reflecting the creative potential of the students. The students, whose images are shown in the photo, gave their consent to the use of personal data in the media and scientific publications covering this video blogging project.

Fig. 1. Video on the exam topic «Social and Natural Being» posted on the social network

3.2 Multimedia Projects

While working with large groups of students in terms of individual supplementary tasks poses a serious problem for teachers, it also presents an opportunity for large projects. Several projects with different start and end dates, with the tasks of varying degrees of complexity, can solve the problem of individual and flexible learning. Within the project, students themselves could set the deadline for their part of work. This helped to develop self-organization skills and minimized unfulfilled tasks. If a student did not complete the tasks within the deadlines set by himself, another participant could complete the task.
The first stage of the project usually involves the collection and primary processing of information; at this stage a large data bank is created by the combined efforts of a large number of students. Information is collected and analyzed in an open form - students can see the work of their group mates and the teacher’s feedback, which contributes to learning “from the mistakes of others”. Further processing requires more complex skills and is carried out by the students with the advanced skills. At the same time, everyone can find the task of the appropriate level of complexity.

As part of the Philosophy course, three types of projects were implemented:

a) educational;

b) research;

c) informational.

a) Educational projects are aimed at creating a product that serves to learn the Philosophy course in the form of a game, e.g. online quizzes on Philosophy similar to the TV games such as “Who wants to become a millionaire?”, etc. At the first stage, students participate in the creation of an extensive bank of questions. Then, the questions are grouped by the degree of difficulty and special software for the game is designed. The options for implementation vary from power point presentation to using various programming languages.
An example of a more complex version of the game is “Guess the philosopher”. Here, the teams picked up a variety of clues, according to which other teams had to guess which philosopher was in question. It was suggested to choose a movie character, a picture, a material object with which the philosopher is associated.

Acting as a “teacher” asking questions, students go deeper into the material and do some analytical work. Such edutainment makes the final game more challenging, encouraging students to get involved in it. According to this principle, the following games were created: “Whose statement: philosopher or rapper” (Fig. 3), “How to help philosophers get to the other side of the river so that they do not quarrel?”, etc.

![Fig. 3. Page from the game “Whose statement: Rapper or philosopher”: Who said “Loneliness is wisdom: Pharaoh or Confucius?”](image)

b) Research projects are based on the collaborative work. For example, students collected the material related to the Covid19 pandemic on the news and social media. Further, various criteria and analytical categories were developed using various philosophical concepts. Hypotheses about changes in public attitudes were built by the students and utopian and dystopian development scenarios were developed. Relying on the analysis of individual subtopics, students wrote several scientific articles for publication with multimedia presentations.

c) Information projects are designed for a wide audience. The results of the work are presented on social networks or special websites are created. One of the projects Philosophical Petersburg is a map where places of the city associated with a certain philosophical concept are plotted. At the first stage, everyone was given their tasks, then through discussion the places were selected that were most interesting from the
point of view of philosophy. Finally, the results of the work were presented in the form of an interactive map based on the site builder (Fig. 4, 5).

![Interactive Map of Philosophical Petersburg](image.png)

**Fig. 4.** Home web page of the site *Philosophical Petersburg*: when you hover over, the spot Raskolnikov's house or Joachim's house is highlighted

### 3.3 An In-Depth Analysis of the Text

A simple and effective way to solve the problems of mass online courses is the so-called “text trap” method. The student is given the task to read the relatively small works of certain authors and answer a number of questions. Moreover, most of the questions in the assignment (approximately 2 thirds) should be relatively simple, i.e. the correct answer to them should easily be found in the text and on the Internet. The latter is not necessary, but rather useful, as it creates an illusion of the simplicity of the assignment, thereby attracting students to work and keeping their interest even after the first mistakes. Most of the assignment (about a third) should consist of trap questions that may seem simple at the first glance. In fact, the quick answer ostensibly supported by the passages from the text is doomed to be wrong, while you can only find the right answer after the thoughtful study of the whole text. The traps are made in such a way that both students and authors of numerous articles on the Internet “get into them”, and even the professionals cannot easily find the right answer. Thus, by the time the student realizes that he has fallen into such a trap, his efforts will be so great that he will most likely complete the work, which he would probably not do if he could immediately appreciate the complexity of the task. Therefore, a 1/3 proportion is recommended here. These training traps can be based on the works of philosophers whose ideas were either not universally recognized in their time, or ceased to be such later. Both ways let us hope that the most important ideas of these authors will be highlighted in our learning materials.
1) If the author considered his principles to be innovative, he will first introduce his concepts and give them clear definitions and names, and only then involve the students in discussions about these notions. Thus, the simplest training trap can be obtained, since the names of the terms and their definitions will be biased in the text relative to each other. A lazy student, given the task of defining these terms on the basis of the text, will most likely go the opposite way: first he will find the indicated names in the text, and then take for “definitions” those secondary comments that he will find next to them in the text. The teacher will tell him that the definitions are incorrect, but he will not tell the student where and how to find the correct ones. As a result, the student will be able to complete this task only after reading the whole text thoroughly.

For example, the task is given to read the work of F. Bacon “The New Organon”, where the author discusses two main methods of inductive cognition, anticipation and interpretation, one of which is traditional, but imperfect, while the other is true, but unknown to science of that time. Names of the methods are given in the preface, but without definitions. Then the author introduces the essence of both methods, gives them definitions in aphorism XIX, and then gives them the names in aphorism XXVI. But he will no longer provide them with definitions (as they are given above), but with the estimates and side arguments, which can be taken as prompts.

As a result, almost all students who were given the task to define the concepts of anticipation and interpretation first identify in the text of «New Organon» only the assessments that F. Bacon gave to these methods in aphorism XXVI, since the relevant
names are mentioned there. Only after 2–3 months of work, after 5–6 corrections, some of the students manage to find the necessary fragment in the text and associate the terms with the definitions.

2) If the author considered his principles too traditional and understandable for all adherents of his paradigm, without taking into account the adherents of other paradigms, it is likely that he will not give a definition to these principles, but immediately start the discussion about their essence. Then an even more sophisticated training trap can be created, and it becomes possible to obtain the desired definitions in the author’s text only by correlating various hints and specific examples of the application of these principles. Finding the exact answer by simple request on the network will be easy only if all these ideas are still popular. However, if the principles under study have long «gone out of fashion», it will be difficult to find a professional answer, and the student who will cope with this task, deserves a high grade.

For example, the task is given to read the work of R. Descartes «Reflections on the First Philosophy», where the author discusses innate ideas and shows the principle of their derivation on the example of the ideas of God and soul, i.e. own consciousness. The problem is that the concept of *innate ideas* was not invented by R. Descartes himself: it goes back to Plato and Anselm of Canterbury, i.e. to the representatives of extreme realism. In the teachings of Plato and Anselm, the very principle of deriving innate ideas, and examples of its use to prove the existence of God and soul, were set and it was stated that doubting these ideas inevitably contradicts either itself or the definition of the subject. In both cases, it is unthinkable; therefore, both ideas are innate to thinking. As an advocate of this rationalistic tradition, R. Descartes did not consider it necessary to focus on the definition of this principle, understandable to all rationalists, instead, he took up the description of what is inherent in innate ideas, by virtue of this principle.

As a result, almost all students who were given the task to determine the principle of deriving innate ideas gave only descriptions of their properties in their answers, but not the main criterion by which one could understand: are these properties inherent in ideas or not? It took the students approximately as much time to get the exact answer to this question as to pass the trap in the work of F. Bacon, i.e. about 2–3 months. It turned out to be difficult to find an answer on the network because the influence of R. Descartes on modern mathematics does not go beyond mathematics. Few people connect the concept of «identical truth», accepted in mathematics, with its Cartesian analogue: the concept of «innate ideas». In modern Philosophy, realism and rationalism are no longer relevant. Representatives of the dominant philosophical subcultures are usually dissociated from rationalism. If they mention the theory of innate ideas, they do not delve into its justifications.

Moreover, if a student manages to independently define this principle on the basis of R. Descartes’ texts or the comments on them found on the network, his first formulations tend to be inaccurate and require correction. If the mistake is not too serious, the correction should not be done immediately: it is advisable to encourage the «pioneer» by accepting his work and wait until his conditionally correct answer is found in
the works of his group mates. Then it should be announced that this inaccurate answer was forgiven only to the «pioneers» and the others are bound to come up with a more precise answer. In this case, the team work of students will continue for another month, and their intention to copy each other’s answers will turn into real intellectual co-creation.

The advantages of using this method are as follows:

1) it does not limit the fulfillment of the assignment to a strict deadline, all students are allowed to solve each problem throughout the semester; at the same time it does not require a large number of assignments, because the focus is made on a deeper analysis of each work;
2) it does not require the control over plagiarism of students’ work, since the very possibility of finding the right answer in other students’ work is problematic and the solution is found by the end of the semester, after the repeated attempts to solve the task independently;
3) some students manage to cheat and get the correct answer without working independently. This problem is easily solved by introducing more strict evaluation criteria and an increased number of clarifying questions on part of the teacher. If such questions reveal a student’s misunderstanding of the text, he is obliged to continue correcting the mistakes.

4 Conclusion

New forms of teaching and learning call for new solutions. The challenges that the teacher has to cope with in e-learning environment make it necessary to restructure the system of teaching classical disciplines. The inclusion of MOOC courses in the university teaching system requires new approaches and ideas that would keep the high value of university education in the new information society. The availability of information on the Internet, social networks and various messengers allows us to share tasks and solutions and provide new opportunities.

Working with large students’ groups allows the lecturers to create large volumes of team work and implement holistic projects during the semester. Active use of social media by students allows them to take into account other students' achievements and their mistakes, and to implement projects in an online environment. This approach can be made individual by using several options for assignments, and students can get involved in any of them to a certain extent. Different time limits for fulfilling the tasks give the students flexibility in organizing their work and allocating time and efforts for each specific task. Submitting assignments in an open format, which is unusual in traditional training, implies that the material is used not for copying, but for the sharing the experience.

Authors of the projects for the future development of MOOC courses in higher education tend to use the possibilities of data mining, artificial intelligence, organization of student communication channels, with the teacher’s role diminished, if not completely ignored. However, in the current situation the role of the teacher becomes
especially significant, which is also confirmed by the wide range of tasks for students’ intellectual work in the framework of the Philosophy course, and some of these tasks are presented in this article. These examples show that the development of tasks for the period of online training was influenced by the personal style, teaching methods and scientific interests of the teacher. It seems that in the future the teacher will play the crucial role in the difference between free and universal electronic education and elite education.

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