Application of a New Teaching Method Based on the Combination of MOOC and the Traditional Classroom

Fei CAI¹,a,*; Jun-Xian LIU¹; Hong-Hui CHEN¹

¹Science and Technology on Information Systems Engineering Laboratory, National University of Defense Technology, Changsha, Hunan, China

a caifei@nudt.edu.cn

*Corresponding author

Keywords: MOOC, Combination, Traditional Classroom.

Abstract. MOOC has gained a lot of attention since it’s applied in the field of education. It provides education researchers with a new way of teaching and learning. However, there are still some challenges and drawbacks when applying it in reality. In this paper, we propose a new teaching method based on the combination of MOOC and the traditional classroom, which can take advantages from both MOOC and the traditional classroom. We give the detailed steps of our proposal and hope it can be helpful for the improvement of education in our country.

Introduction of MOOC

The Concept of MOOC

MOOC, namely, Massive Online Open Course, is an online course, which can be used by the public. Most of the courses and studying materials on it are free to learners [1,2,3], which provide a wider, more open and flexible way for public education. It has three prominent features:

1. Massive: It is reflected in the large amount of MOOC subjects, curriculum classifications and participants;

2. Open: It is reflected through that no matter where the user is, as long as they can get connected to the Internet, he can participate in the course;

3. Online: It is reflected in that all activities that are done in a network environment with learners.

In 2012, Udacity, Coursera, edX, and Marginal Revolution University City were founded by the first-rate prestigious institutions such as Stanford University, MIT and Harvard University. They offered free and high-quality course content as selling points and provided extensive online support for learners. In our country, MOOC has been established, including MOOC college, MOOC online, China MOOC, Ewant, Share Course, Proera and so on. The establishment of these institutions has greatly promoted the development of online learning and gained a lot of attention of education researchers.

The Features of MOOC Studying

As a new way of learning, MOOC studying has some obvious features as follows:

1. Open: MOOC participants are not limited to the registered students in school, and they also do not need to pay tuition. It is convenient for everyone to share knowledge. The traditional teaching requires teachers and students to gather in a fixed place, which requires the cost of time and finance[4]. As a form of distance learning, MOOC has a major feature of time-space separation between teachers and students. It needs low cost and is conducive to individualized learning. Coupled with its rich and open learning resources, learners will enjoy themselves while learning.

2. Scalability: A teacher in a traditional class can only teach a limited number of students, which is not suitable for knowledge propagation. However, the "massive" class in the MOOC is designed for indefinite participants. A course on MOOC platform will last for 5-8 weeks and it consists of several small videos. Each video can be regarded as one class for a certain definition or principle. Also, there are some tests and homework after class [5,6]. Only when you finish all the homework and pass the
test, you can get the final certification of the course. As for the homework, it can be checked with automatic machine as well as peer review.

The Challenges of MOOC Studying

With the wide use of MOOC, it is faced with more and more problems and challenges, we conclude some main challenges in nowadays education:

(1). There is blindness in student learning. Existing MOOC course are chosen by students based on their willingness. However, many undergraduate students are not clear with their further learning plans, so they may choose the course with blindness. As a result, the students will spend a lot of time with little receive.

(2). Every MOOC platform has different level of curriculum, and there is not a clear relationship between those classes, so the students themselves are difficult to distinguish which is worth to learn.

(3). Students have difficulty sticking to the course. Despite the large number of MOOC registrations, however, some studies have shown that most students find it hard to stick with courses and exercises and opt out in the middle of the classes[7].

The Combination of MOOC and the Traditional Classroom (MOOC+T)

Based on the aforementioned analysis of MOOC, it is clear that MOOC has its advantages of open and scalability, which the traditional class lacks. However, there are also some advantages that MOOC does not have, such as the systematic learning with traditional class. So in this section, we propose a new teaching method based on the combination of MOOC and traditional classroom (MOOC+T), which can take advantages from both MOOC and traditional classroom. We will give a introduction of its detailed processes and analysis of its effectiveness.

The Main Process of MOOC+T

The main process of MOOC+T contains three parts: knowledge gain before class, knowledge internalization in class and knowledge application after class.

For the first part, teachers release the learning content and plans through MOOC platform. Students get those materials and finish the tasks;

For the second part, we take the use of traditional classes, in which there are many face-to-face interactions between teachers and students. Teachers can thus give more detailed instructions to students as well as supervise them to complete the course.

For the third part, it needs the MOOC platform to do online course, including: reviews of knowledge which is taught in class, student learning results, teachers and students exchange, answering questions, the application of knowledge, complement of the literature and case studies, Simulation and practice, writing essays and other tasks. Through collaborative learning, guided learning and other means, we aim to promote the students’ academic ability.

The total process can also be divided into online part and offline part. In other words, the first part and third part are based on online learning method while the second part is an off-line process.

The detailed process of MOOC+T is shown in Figure 1.
The Effectiveness of MOOC+T

The teaching method of MOOC+T can make use of the MOOC resources flexibly and at the same time intensifies the leading role of teachers.

On the one hand, it enhances the depth and breadth of the teaching content, deepens the degree of participation in the study, advances effectively the cognitive strategies, and improves the learning and innovation ability of graduate students.

In the other hand, it reduces the workload of teachers, as some work can be finished with automatic machines. So teachers can spend more time in exploring more effective teaching methods.

Summary

In this paper, we first analyze the concept of MOOC and its features as well as the challenges it faces in recent days. Then we propose a new teaching method based on the combination of MOOC and the traditional classroom, which can take the advantages from both MOOC and the traditional classroom. We give the detailed steps of our proposal and introduce the effectiveness when it is applied in the teaching process. We hope our proposal can be helpful for the improvement of education in our country.

References


