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Research Article

Application of the MOOC Mixed Teaching Method Under the Background of Internet + Education*

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Abstract

The MOOC teaching in colleges and universities in China is currently facing a dilemma of poor performance, and it is urgent to explore new methods to improve teaching results. Thus, based on the idea of mixed education, this paper puts forward the suggestions on improving the MOOC teaching method in colleges and universities. The results show that the improved teaching method has achieved good results, and the satisfaction of college students to the MOOC teaching has increased greatly. Furthermore, compared with the general MOOC teaching method, the advantages of the mixed teaching method are mainly embodied in the two aspects of timely feedback and strong interactivity, which together improve the practical effect of the MOOC teaching. The above conclusions provide some useful suggestions for the improvement of the MOOC teaching methods in colleges and universities in China.

Keywords

MOOC • Mixed Teaching • Internet • Education.

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The development of Internet information technology has made the access to knowledge more and more diversified (Veletsianos, Collier & Schneider, 2015; Longstaff, 2017). As the product of internet information technology, the teaching form of MOOC has been introduced into the teaching of colleges and universities in China in recent years. It can be said that MOOC breaks the universal limitation of teaching time and space in the traditional higher education in China (Vu, Pattison & Robins, 2015) and provides more abundant learning resources to college students (Brusilovsky, 2017), with free learning time and learning space that is no longer limited to the classroom. However, in recent years, many studies on MOOC have shown that MOOC education has changed from climax to trough in colleges and universities in China, but some students cannot guarantee the learning effect after registration of MOOC, with a drop-out rate as high as 80% in some areas (Chang, Hung & in, 2017). The above-mentioned problems show that MOOC, an Internet-based teaching method, has played a positive role in breaking the time and space limit of teaching, but there are still problems (Baturay, 2015; Marr, 2013).

Generally, the main source of such problems is the overemphasizing of "cloud education" using internet technology, while ignoring the high-frequency communication and feedback needed to make up education (White, 2013). Under this background, based on the background of "Internet + education", this paper studies the necessity of the mixed teaching method in MOOC education, and provides relevant suggestions for the development of MOOC education in colleges and universities in China.

Present situation of MOOC education in colleges and universities in Jilin province

In order to more accurately grasp the problems existing in MOOC education in colleges and universities in China, this paper first examines the present situation and the main problems in the MOOC education faced by colleges and universities in Jilin province. The investigation method adopted in this paper is mainly questionnaire survey method. The investigation scope includes 15 universities in Jilin Province, 1,327 questionnaires are issued, and 971 valid questionnaires are collected, with a validity rate of 73.17%, which complies with the relevant requirements for carrying out the research.

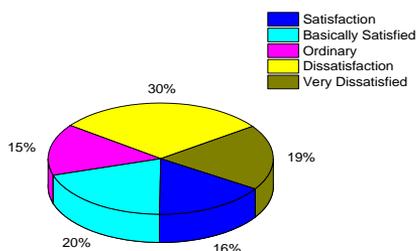


Figure 1. Course satisfaction

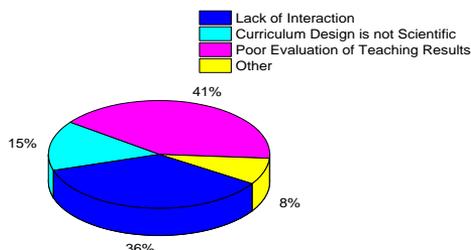


Figure 2. Reasons for dissatisfaction

Figure 1 and Figure 2 respectively show the satisfaction of college students to MOOC education and the reasons related to the dissatisfaction of college students to MOOC education in the survey. As can be seen from Figure 1, 16% of the students surveyed are satisfied with MOOC education in college and universities, 20% are

basically satisfied, 15% students hold general opinion on MOOC, 30% are dissatisfied with MOOC education and 19% are very dissatisfied with MOOC education. It can be seen that the proportion of students who express general or unsatisfactory attitude to MOOC education in college and universities is as high as 74%. Figure 2 show that there are three main reasons why college students are not satisfied with MOOC education, namely, lack of exchange and communication, poor curriculum design and poor learning evaluation effect. Among them, 36% of the students who think it lack of exchange and communication, 15% for poor curriculum design, and 41% for poor learning evaluation effect.

In China's colleges and universities, it is undeniable that the objective reason for the poor effect of MOOC education is the lack of practical conditions, technology and funds in many colleges and universities, and the educational thinking based on the Internet has not been completely followed. These factors together result in the imperfection of the educational system mechanism of MOOC education in colleges and universities, which is not highly recognized within the teachers and students. However, it takes a long time to change the hardware facilities and thinking. This paper focuses on how to strengthen the interaction, scientificity and evaluation and feedback of MOOC teaching according to the results of the above investigation without changing the hardware facilities in the short term.

Design of MOOC mixed teaching method

As mentioned above, according to the results of investigation and research, colleges and universities should strengthen interactive education, scientific curriculum design and evaluation and feedback in terms of MOOC education. In this section, we will design a MOOC mixed teaching method for the above-mentioned cases.

Mixed teaching is widely used in the fields of school education and enterprise training. By definition, mixed teaching refers to a flexible combination of multiple teaching methods in which learners can share knowledge and experience in a variety of teaching environments (Wilson & Gruz, 2015). From the perspective of teaching effect, mixed education combines the advantages of distance network education and classroom education, and has more advantages over any single teaching method (Metcalf & Sastrowardoyo, 2016).

Basic requirements of MOOC mixed teaching method

The MOOC mixed teaching method should meet the following three basic requirements: (1) the combination of network teaching and local teaching; (2) the combination of teachers as a leading role and students as main body; (3) the combination of autonomous learning and cooperative learning. Among them, the combination of the network teaching and the local teaching requires to break away from the general MOOC teaching method focusing on the network teaching, should take online teaching, and then carry out communication and feedback in the local or classroom; the combination of the teachers as a leading role and the students as main body requires that the students should be motivated to study after the teacher's teaching, which requires that the scientificity of curriculum design should be increased; the combination of autonomous learning and cooperative learning requires students to strengthen communication with other students at the same time of autonomous learning, which can be performed online or offline.

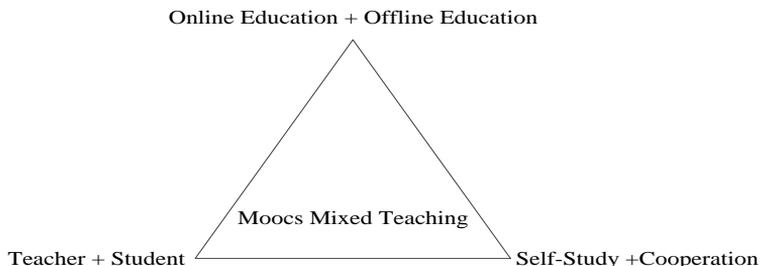


Figure 3. Basic requirements of MOOCS mixed teaching

Teaching methods and process design

Based on the above three basic requirements, this paper designs the following mixed teaching methods and process, firstly to analyze the objectives and contents of the MOOC teaching, and the contents of the teaching should meet the requirements of the objectives; subsequently, in the specific teaching stage, mixed education will still mainly use online teaching. At the end of the first lecture, the university will convene students in the classroom at a certain time to exchange and practice the contents of the study. At the end of the course study, teachers will first divide the teaching content into different topics, organize the students to discuss on-line or off-line, organize the examination in an off-line way, effectively feedback the learning effect, and prevent the cheating in the on-line examination. The concrete mixed teaching method and process of MOOC are as follows.

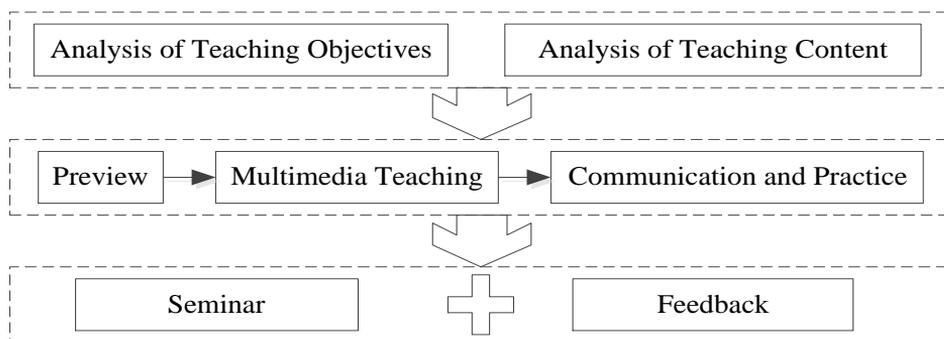


Figure 4. Mixed teaching design

Evaluation on the effect of the MOOC mixed teaching method

After designing the mixed teaching method, the paper still chooses 15 colleges and universities selected before in Jilin Province for follow-up investigation. These 15 colleges and universities first carried on the one-semester mixed teaching method reform, and uses the above mentioned method for teaching. At the end of the term, the paper adopts the method of questionnaire to investigate the teaching effect.

Figure 5 shows the surveyed students' satisfaction after a semester of MOOC mixed teaching. As can be seen from the figure, 24.24% of surveyed students are satisfied with the MOOC mixed teaching method, and 47.47% are basically satisfied, 8.08% have a general evaluation on the MOOC mixed teaching method, 11.11% are dissatisfied with the MOOC mixed teaching method and 9.09% are very dissatisfied with the MOOC mixed teaching method. It can be seen that the proportion of students who are satisfied with or basically satisfied with the MOOC education in colleges and universities has increased from 36% to 71.71%, and that the proportion of students who are dissatisfied or very dissatisfied has decreased from 74% to 20.2%, which indicates that the mixed teaching method has greatly improved students' satisfaction with the MOOC teaching.

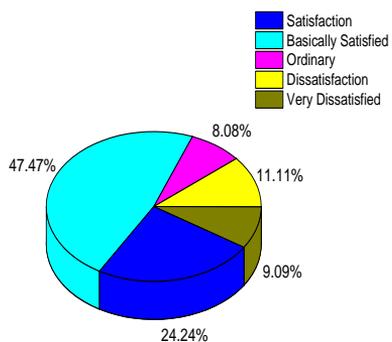


Figure 5. Course satisfaction

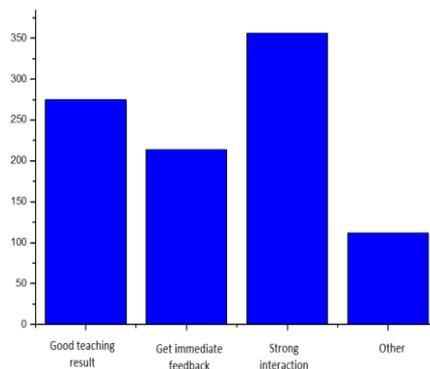


Figure 6. Reasons for Satisfaction

Figure 6 shows the basic reasons why college students are satisfied with the MOOC mixed teaching method. From the results of the investigation, it is found that 275 students express that the MOOC mixed teaching method effectively improves the learning effect of the course, 214 students express that the MOOC mixed teaching method can provide the teaching feedback in a very timely manner, 356 students say that the MOOC mixed teaching method has stronger interactivity, and 112 students think that the MOOC mixed teaching method has many advantages in other aspects.

Conclusions

The MOOC mixed teaching method has a great advantage in breaking the limitation of traditional education in terms of time and space. However, according to the actual application situation, the effect of the MOOC education is not good, and many students are not satisfied with the way and effect of the MOOC education. Under this background, this paper introduces the mixed teaching method into the MOOC education of the higher education, and takes colleges and universities in Jilin Province as examples to test the practical effect of the MOOC mixed teaching method. The main conclusions of this paper are as follows:

- (1) At present, the problems of MOOC education in colleges and universities in China are that the interaction is not strong, the design is not scientific and the feedback on the teaching effect is not good, so it is urgent to improve the above three aspects.

(2) According to the requirements of the combination of network teaching and local teaching, the combination of teachers as a leading role and students as main body, and the combination of autonomous learning and cooperative learning, the MOOC mixed teaching method has achieved a very good effect, with students' satisfaction exceeding 70% and dissatisfaction greatly reduced.

(3) According to the investigation results, the main reason for the good effect and high satisfaction of the MOOC mixed teaching method lies in strengthening the feedback of the curriculum and greatly improving the interaction.

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