

Research on the Hybrid Teaching Model Based on MOOC and Micro-lecture*

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Abstract—This paper makes a detailed analysis on the hybrid teaching mode of MOOC and Micro-lecture, collates the advantages and disadvantages of the three modes, expounds the advantages of the combination of the three modes, and finally puts forward some suggestions and countermeasures for the development of the hybrid teaching mode. It emphasizes the effect of hybrid teaching model of MOOC and Micro-lecture that combines with traditional class to prove the effect of "one plus one is more than two".

Keywords—MOOC; Micro-lecture; hybrid teaching model

I. INTRODUCTION

The innovative exploration of the deep integration of information technology and education and teaching provides a great opportunity for China's higher education to "change track and overtake". On April 9, 2019, the Ministry of Education issued a notice, deciding to launch the "double-10,000 plan" for the construction of first-class undergraduate specialties, which is to build about 10,000 national first-class undergraduate specialties and 10,000 provincial first-class undergraduate specialties from 2019 to 2021. With the promulgation of policies, all universities have given great preference to the investment of network education and information education as well as teacher training, striving to make breakthroughs in this aspect. MOOC, Micro-lecture, hybrid teaching mode have attracted people's attention again. In recent years, MOOC has developed rapidly, platform resources are gradually enriched and applications are gradually increasing, while the development of Micro-lecture is relatively slow, most of them focusing more on central school and partial area. However, the hybrid teaching mode formed by the systemic combination of the two will give play to the effect of one-plus-one over two. The analysis is as follows:

II. DEFINITIONS OF MOOC AND MICRO-LECTURE, AND THEIR ADVANTAGES AND DISADVANTAGES

A. MOOC

MOOC, short for Massive Open Online Course, is interpreted in Chinese as "large-scale open online course". The term was proposed in 2008, and in 2012, Massachusetts

Institute of Technology (MIT) and Harvard made a jointly investment to create EDX, then the University of Texas and the University of California, Berkeley, successively joined it, making MOOC education sweep the world rapidly, and gradually introduced into China with rapid development.

1) Advantages of MOOC

a) *A large scale*: The three major MOOC platforms abroad has a registration of tens of millions, of which the largest platform Coursera has 37 million learners. There are many MOOC platforms in China, the largest of which is XuetangX, with 14 million registered users. By the end of 2018, the total number of worldwide registration exceeded 101 million people-times last year, and more than 900 universities around the world had offered about 11,400 MOOC courses. A large scale means vast students, vast participating institutions, vast courses suitable for team teaching, and a vast investment.

b) *Opening and sharing*: It is for a wide group, and to achieve a wide range of resource sharing. With the help of network and modern communication technology, MOOC is provided not only for students in school, anyone can attend, where many resources are free. The learning methods and modes are also open, and different modes can be adopted according to individual preferences. At the same time, opening also means it is for the public, objectively guaranteeing the quality of resources. Only good resources can really attract learners.

c) *Online education*: Anyone can learn any knowledge whenever and anywhere, which is the charm of online education. This form has changed people's traditional cognition and provided the basis for realizing continuing education and lifelong education.

2) Disadvantages of MOOC

a) *Scale can not determine quality*: MOOC has a large number of registrations, but only a small part of them are really learning and gained recognition, and many people of them just are satisfied with a smattering of knowledge and do not really complete the whole course.

b) *Repeated research and development of academic research and curriculum resources*: As the most profound technological change in the field of higher education in the past 500 years, MOOC has attracted the attention of many institutions and researchers. By the end of 2018, there were

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more than 12,000 articles about MOOC on CNKI (China National Knowledge Infrastructure), and there are many similarities among the articles and they are relatively focused on certain research thresholds. The researched and developed courses are mostly repeated, and the excellent MOOC courses selected in recent years also have largely repeated resources. This has resulted in the repeatability and varying quality of resources.

c) The arbitrariness coming with openness, in lack of necessary constraints: Classroom education has its inherent constraints and it makes students learn under the guidance of teachers; while web-based learning has its inherent freedom so some students are careless and sloppy, and it attracts students to make perseverance mostly by the charm of resources.

B. Micro-lecture

Micro-lecture is a structured digital resource that uses information technology to present fragmented learning content, process and expanded material according to the cognitive rules. The concept of Micro-lecture was put forward in 2008, and its basic ideas have been evolving, basically including the following points: based on a short video within 10 minutes, carrying out a short and concise teaching around a certain problem, which supports online learning. Micro-lecture began to rise in China in 2010, and became the hot topic for front-line teachers in the field of educational technology and basic education in 2011. Until now, Micro-lecture is still showing an unflinching trend, and gradually develops into the field of higher education and vocational education.

1) Advantages of Micro-lecture

a) Course period is short and time is fragmented: According to the research, the average time for adults to concentrate on something is only 10-20 minutes. Therefore, it meets people's cognitive rules and learning rules to control the time of Micro-lecture within 10 minutes, which is also conducive to people's learning by use of free time.

b) The theme is clear, which is conducive to the elaboration of a certain knowledge point: Micro-lecture resources do not need a lengthy harangue, but a specific explanation for a certain point of knowledge, which facilitates people's understanding, but also meets the attribute of learning accumulation, with many a little making a mickle.

c) Course making is relatively simple and resource utilization is high: Micro-lecture is different from MOOC course, and it has the characteristics of fragmentation. It does not need to pursue integrity, but it emphasizes the construction of minimized resources by the point-to-area function, making a convenient use and a high utilization rate.

2) Disadvantages of Micro-lecture

First, Chinese scholars and learners have relatively low awareness of Micro-lecture, which needs further promotion.

Second, curriculum resources are less and platform support is less.

Third, there are also certain requirements for producers in technology and knowledge, and a good Micro-lecture needs to be put in a lot of energy.

C. Hybrid Teaching Model

Hybrid teaching is a kind of "online" + "offline" teaching mode, which combines the advantages of online teaching and traditional teaching. The systemic combination of the two teachings in organizational form, can guide learners learn from shallow to deep. It is a feasible new mixed teaching mode that systemically combines MOOC with Micro-lecture and then is carried out with traditional classroom teaching in parallel in two ways.

III. ADVANTAGES OF THE HYBRID TEACHING MODEL OF MOOC AND MICRO-LECTURE

A. Combination in Size and Function to Achieve Mutual Supplementation

The large scale of MOOC and the short and concise feature of Micro-lecture can ensure the point-and-sphere integration of network resources, achieving the breadth of education by use of MOOC, and the accuracy of education by use of Micro-lecture. Under the basic guarantee of classroom teaching, students can carry out preview, review, practice, research and development through the network platform. Specifically, they can make a systematic learning of chapters through the video courses provided by MOOC platform, complete homework, question discussion, teacher's question answering, assessment and others; for the typical problems in the learning process, they can make a fine learning by construction of Micro-lecture courseware, mainly based on a learning by small video, and also supported by an online communication of Micro-lecture.

B. The Integration of Comprehensiveness and Enthusiasm

MOOC curriculum requires integrity and systematic knowledge, which reflects the comprehensiveness of a course. It is difficult for students to insist on learning in independence, while Micro-lecture is characterized by a detailed interpretation of specific knowledge points, by a relatively short, and by a relatively more interestingness in design, so that it can attract students' attention, improve students' interest in learning, further improve the efficiency of learning and ensure the effectiveness of learning. In classroom teaching, it is difficult for students to have more time to study MOOC, and Micro-lecture is more suitable to make a combination with classroom teaching, while students can use MOOC platform to make a learning assistance in their spare time.

C. The Integration of Universality and Effectiveness of Resources

Classroom teaching usually provides only one teacher in class, while network teaching can have more "teachers", and in the society of information explosion, only more options can make a find of the best combination. With the attention of the public, the resources of MOOC platform are growing at a very fast speed, and Micro-lecture is the best choice for classroom

teaching. Under the guidance of teachers, students can better grasp the latest knowledge according to the network resources.

IV. SUGGESTIONS ON THE DEVELOPMENT OF HYBRID TEACHING MODEL OF MOOC AND MICRO-LECTURE AND ITS COUNTERMEASURE

A. *The Reform of Teaching Mode Needs the Support of Teaching Authorities and Teaching Institutions in Policies*

The traditional teaching mode has been implemented for many years and has achieved plentiful teaching results; the emergence and development of the new teaching mode should rely on the traditional teaching mode and gradually develops and grows. In recent years, people have realized the great benefits of network teaching, but it is still in the early stage of development to fully combine with the traditional teaching mode and to make them complement each other. In the simplest case, students learn a course in class, and after they acquire enough class hours and enough credits, they can get the certificate of completion for the course. While the completion of study by online learning needs the confirmation and permission of the competent educational authorities to determine the acquirement of learning by online are equivalent to the credits required by traditional teaching; otherwise, if students spend a certain amount of energy on online learning, but they can not obtain the corresponding qualifications, this will greatly affect the enthusiasm of students in learning and will also seriously affect the development of online education.

B. *To Rationalize the Platform Resources and Increase the Effective Construction of Resources*

The MOOC platform is on the rise of development, a large number of curriculum resources are mushrooming under the encouragement of national policies, and the Micro-lecture resources are also increasing in a certain range. However, the repetitive construction of curriculum, the low-level construction of individual curriculum and the limited utilization of resources may seriously affect the development and use of network curriculum. The diversity of the platforms will inevitably lead to a repetitive construction of resources; the different management of the platforms may result in the coexistence of free resources and charge resources; and the resource level of the platform may also result in the online bird courses due to regional and economic conditions. Therefore, it is suggested to carry out reasonable norms in the gradual development, actively build quality courses, make the investment of funds have a certain directivity, create gold courses at full blast and avoid bird courses, and make effective the resource construction.

C. *To Strengthen Teacher Training, Increase Academic Exchanges and Improve the Overall Level*

Modern education is not just the teaching process of blackboard and chalk, and teachers must constantly improve their knowledge and skills; while training and academic exchange are the most reasonable schemes. Teachers also must constantly improve the level of courseware production and conduct an in-depth research of teaching, to develop the MOOC courseware and Micro-lecture courseware suitable for

their students, as only the most suitable are the best. Through such a process of development, the overall level of education will be improved continuously.

V. CONCLUSION

The reform of hybrid teaching mode that combines MOOC with Micro-lecture becomes a research direction of new teaching mode reform, and it has achieved certain results through the early development. Therefore, more researchers should join in the reform to promote the further development of online education.

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