

# Exploration on Application of International Open Courses in Sino-foreign Cooperation in Education

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**Abstract.** From initial open courseware to current MOOC, international open course has become the hotspot of sino-foreign cooperation in education. This paper introduces the development characteristics of international open course at first, then discusses the mode of introducing international open course in sino-foreign cooperation in education, and finally proposes the exiting problems of application of international open course.

## 1. The Development Characteristics of International Open Course

From initial OCW to current MOOC, born from connectionism and booming in behaviorism, MOOC has become the main mode of modern international open course. With the transformation of mode of international open course, its characteristics are also transforming gradually.

### 1.1 From “Large-scale Watching” to “Large-scale Online Learning”

From the view of quantity of courses, number of learners and investment of participating colleges and enterprises, the scale of both OCW and MOOC is developing larger and larger. Take MIT which launches OCW initially as an example, it only offers 32 international open courses initially, but it has offered more than 2000 courses by 2012, and the total number of visits to the official website of MIT open courses has exceeds 110 million person-times, and 1 million person-times visits per month on average<sup>[1]</sup>. By the end of 2011, the page view to the domestic “NetEase Open Course” basically has maintained about 1.4 million person-times per day, for the course of Happiness and Justice of Harvard University, the page view has exceeded ten million person-times<sup>[2]</sup>. As can be seen from the operation of Coursera on the largest MOOC platform at present, by the end of June 2015, Coursera<sup>1</sup> has offered 1045 courses, with more than 1300 learners and 121 partners. The initial international open courses are just some teaching videos used in class which are uploaded to the Internet as shared resources and have no requirements on whether learners watch online or when they watch. However, for modern MOOC, most of courses require learners to learn online simultaneously within stipulated time.

### 1.2 From “Recording Class” to “Providing a Perfect Curriculum System”

For the initial international open courses, what are uploaded mainly include recorded teaching videos and lectures. These resources provide learners with learning opportunities of making independent choices, and learners mainly learn through the method of “watching videos”. However, the recorded videos are so long that they are very boring to learn, which makes it more difficult for learners to learn specialized courses. While modern MOOC provides more perfect curriculum system. First of all, MOOC originates from learning theories, so the curriculum design follows the teaching and cognitive rules. Most course videos of MOOC are mainly short videos and have been carefully designed, which make them easy for learners to learn by themselves. Secondly, there is not only one teacher in charge of the courses of MOOC. In addition to one lecturer, there are also teachers especially responsible for homework and discussion. The course organization of MOOC emphasizes “inversion”, so it’s real student-centered learning design to realize problem-based or project-oriented learning. Thirdly, MOOC courses provide an online interactive learning platform for answering

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<sup>1</sup> <https://www.coursera.org/>

questions to courses, homework assessment and so on. So learners not only just receive traditional teaching form of “knowledge imparting”, but conduct “interactive” active learning. Learning is not a kind of individual behavior any more, and learners can get help more easily, so as to motivate the learner’s learning enthusiasm. Finally, the learners who finish MOOC courses and pass the examination can obtain the certificate. Initially, online learners mainly obtain the separately authenticated certificate issued by the educational institution. But now, American Council on Education has approved the credit recognition application of five MOOC courses on February 7, 2013 and calls on American colleges to recognize the credits of the courses of MOOC project<sup>[3]</sup>.

### **1.3 From “College Launching” to “Enterprises Promoting”**

International open courses are launched by colleges initially on the purpose of opening resources for free. Then, in order to share resources better, some colleges form alliances with the educational institutions. Now most MOOC platforms are promoted by profitable enterprises. Although MOOC still hasn’t any mature profit mode, some business groups continue to invest in MOOC platforms. Udacity has received accumulative financing of more than \$20 million, Coursera has received more than \$65 million, and edX has received financing of \$5 million once<sup>[3]</sup>. Under the promotion of enterprises, it’s easier to conduct commercialized operation to MOOC courses. On one hand, commercialized operation has higher requirements on quality of course, so most MOOC platforms have been establishing the evaluation system for courses actively. On the other hand, commercialized operation requires it to understand the needs of served objects. MOOC platforms can record learners’ learning behaviors and process in real time, so as to discuss the learning and cognitive rules based on the analysis of big data, and then to provide personalized learning mode for learners<sup>[4]</sup>. As it is required that large numbers of learners learn online simultaneously, which has high requirements on high concurrency, high expandability and real-time response capability of MOOC platforms, and these technical problems can only be solved under the promotion of enterprises.

## **2. Exploration on Application of International Open Course in Sino-foreign Cooperation In Education**

### **2.1 Introduce MOOC and Innovate Teaching Mode**

The purpose of sino-foreign cooperation in education is to cultivate international talents, while traditional teaching mode mainly selects English teaching materials and teaches with English or bilingual teaching method. Be fixed and single, the traditional teaching mode emphasizes more on the process of “teaching” while fails to motivate learners’ learning initiative. Besides, the curriculum design is not internalized truly, which go against the cultivation of international talents. Curriculum internationalization is to take the internationalization of course content and form as direction and take students being able to be competent the specialized social work of the internationalized and multicultural environment as the goal to specially design the courses for domestic and international students<sup>[5]</sup>. International open courses are international and open, and the blended teaching of introducing international open courses in combination with traditional teaching mode will be the development direction of international education in the future. Our institute has once introduced open course ware from Stanford University called *Programming Methodology* for the major of Computer Software based on the course of *Fundamentals of Programming*. We applied part of teaching videos, and required students to learn after class. We just taught key points in class and interacted with students through designing some questions<sup>[8]</sup>. As can be seen from the teaching effect, most students rarely watch the videos of other chapters except the content specified by teachers. For the reasons, on one hand, these videos are too long, some ones even take as long as more than one hour. Besides, the content is mainly recorded classroom teaching which is very boring, so the students lack learning motivation and can’t insist on learning. On the other hand, the students are weak in English. Most students reflect that it is difficult to just listen to the teaching content of the videos without looking at Chinese captions. But if they concentrate on looking at captions for a long time, it’s easy to feel tired. However, they may not be able to keep up the pace of the course if there is any ease. The development

trend of international open course is from OCW to MOOC. MOOC is not only a kind of resource, but also an interactive platform for massive online learning designed by excellent teachers and professional teams<sup>[6]</sup>. MOOC emphasizes more on interactivity of learning, in addition to short videos, it also provides homework, examinations, question-answer platform and online interaction, and this kind of method can motivate students' learning initiative more easily as well as be helpful to their deep learning. Besides, among MOOC courses, the most popular one is "Flipped Classroom", which requires that students watch teaching videos and learn new knowledge after class while teachers interact with students in class for answering questions, discussing and extending learning. How to introduce MOOC to innovate current teaching mode in sino-foreign cooperation in education is a problem worthy of being considered and explored in international education.

## **2.2 Incorporate MOOC Courses of International Famous Colleges into Current Curriculum Program**

In sino-foreign cooperation in education, MOOC courses of international famous colleges can be incorporated into current curriculum program directly, and the effective method is to clearly stipulate MOOC courses of international famous colleges as elective courses in the talent training programs. MOOC offers a huge number of courses covering very wide range of disciplines and professional majors. For one form, students can independently choose the MOOC courses of international famous colleges according to their own majors and interests. Through taking the MOOC courses of international famous colleges, the students can contact the leading fields of their own majors or related majors, directly listen to the online courses taught by foreign experts and scholars in related fields, so as to develop students' international view and learn the teaching method of international famous colleges. Through participating MOOC platforms, finishing homework, examinations and discussions, the students can expand their learning ways and learning methods, improve their knowledge structure, improve the capability of acquiring knowledge and applying information technology, as well as improving their English level, so as to lay foundation for studying abroad in the future. On the other hand, students and teachers can register for the courses simultaneously. The role of teachers is changed to guide or coach students to learn, in this way, students shall hand in their homework on time according to the requirements of MOOC courses, and teachers will apply the feedback system to check their homework submitted by the students who have registered in the platform as well as monitor the students' learning condition. Whatever the form is, the credits shall be subjected to the final assessment results of MOOC courses in the end.

## **2.3 Develop International MOOC Courses**

Open Course Ware appears first in the west, and then is introduced into China. For MOOC, domestic colleges respond quickly this time and launch their own localized MOOC courses gradually, hoping to take this opportunity to expand their influence. In sino-foreign cooperation in education, curriculum design shall be internationalized. Development of international MOOC courses has very high requirements on teachers' English level, teaching capability and professional technical capability. So, in order to develop international MOOC courses, the following problems should be solved: (1) Provide a platform that supports large-scale online learning. According to the characteristics of the MOOC courses, the establishment of MOOC platform has the requirements on high expandability, concurrent access, quick real-time response and system stability. Some domestic famous colleges have established cooperative relationship with three MOOC platforms including Coursera, Udacity and edX. Among the three platforms, only edX is a non-profit one, and general colleges can develop their own MOOC courses on edX platform. (2) Scientifically establish working teamss, including teaching resource development team and technical support team. The main task of the teaching resource development team is to conduct curriculum design and implementation based on learning theories, including designing knowledge points in short videos, designing homework and examinations, designing teaching methods, guiding experiments and answering questions online. The technical support team should help the teaching resource development team complete curriculum design, such as video recording. On the other hand, it should apply the learning analysis technology to analyze and mine the interactive data of MOOC platforms as well as explore learning and cognitive

rules, so as to provide data foundation for the teaching resource development team to establish later courses.

### **3. Problems to be Solved**

#### **3.1 How to Improve the Completion Rate of Courses**

According to previous research data, the ratio of large-scale learners registering for MOOC who can complete their elective courses is not more than 10%, or even less<sup>[7][9]</sup>. The researchers try to find the MOOC learners' online learning behaviors and rules that lead to low completion rate through deeply tracking and analyzing. The research result shows that, MOOC learners can't insist on completing the courses due to many factors, and learning initiative is considered as the key factor that affects the completion rate of MOOC courses<sup>[8]</sup>. Associate professor Wang Minhong from Institute of Education of University of Hong Kong thinks that electronic learning revolution makes learners undertake more responsibilities for their learning. So, for the large-scale learners who participate in MOOC courses, they have too high degree of freedom without any constraint. Sebastian Thrun, the founder of Udacity thinks that customer loyalty to free products is lower than that to paid products, and Udacity will charge to improve learning effect and completion rate of courses "through increasing MOOC peripheral services", such as offering course tutoring service, and that "the completion rate of courses has reached 60% through new modes". So, it can be considered to make corresponding policies and improve perfect services to enhance the completion rate of courses for introducing MOOC course in sino-foreign cooperation in education.

#### **3.2 How to Realize Authentication of Learning Outcome**

Most MOOC platforms can issue course certificates for the learners who complete the courses. The certificates represent recognition to the students' learning performance and can stimulate their learning motivation to some extent, but these certificates haven't been recognized officially by colleges and the society. American Council on Education has been promoting the credit authentication of MOOC actively, some courses have gained recognition at present and some colleges have recognized the MOOC credits acquired through Coursera<sup>[10]</sup>. However, these certificates still haven't recognized by all colleges, there are still many difficulties in granting credits. According to the report of American Sloan Alliance, the fundamental cause of having difficulties in authentication of learning effect lies in their worries about MOOC online learning quality and chaos of traditional degree awarding. Chinese education authorities are also focusing on promoting the authentication, accumulation and transformation of various kinds of learning outcomes of all levels and provide good policy environment for MOOC credit authentication, but the construction in authentication of learning outcome is still in the research and design stage. Though sino-foreign cooperation in education can be affected by the education authorities' making related policies and systems on granting credits and degree, it still can take advantages of international education to explore an effective reform path first in realizing authentication of learning outcome.

### **4. Conclusion**

Sino-foreign cooperative education has the development potential in educational market both at home and abroad. The purpose as well as the key factor of its health and sustainable development is importing foreign high-quality educational resources; And the main reason of its potential as well as succeed is that the effective absorbing and using of foreign resources. The international open course is internationalized, advanced, and systematic, and completed which are perfectly suit to being the effective supplement of importing of foreign high-quality educational resources of Sino-foreign cooperative education and can conduct integrated course system for Sino-foreign cooperative education so as to take full use of the foreign advanced course. From OCW to MOOC, the foreign open course shifts its learning center. As a result, we should pay more attention to reform, to explore the new educational model broadly, and to gradually transfer the "teacher-center" model education to "teacher leading, students participating" model, namely "two-center" model, thus promoting further

development and reform of Sino-foreign cooperative education, as well as integrating the Chinese higher education to the International higher education market.

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