

## Research on the Influence of MOOC Development on Chinese University Teaching and Students' Learning

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**Abstract:** Although the current MOOC has the key features of disruptive innovation, it combines the new business model with the corresponding technology and has a huge impact on the traditional higher education market. However, due to the particularity and complexity of the education system itself, MOOC has a bearing on traditional higher education. This devastating effect still needs to be carefully examined. Higher education institutions can actively respond by exploring teaching reforms in higher institutions from the perspective of sustaining innovations, as well as commercial operating models that are consistent with their own characteristics of sustainable development.

### 1. Introduction

MOOC (Massive Open Online Course) is a large-scale open online course. Translating it into "Music Lessons" in China is a new course model in the field of open education. "It is composed of many learners who are willing to share and collaborate in order to enhance their knowledge." [1] Massively speaking, Massive refers mainly to the large scale of students and the large number of participants. On the other hand, it also means that the range of curriculum activities is large. Open means that this course approach is open. Learners may come from all over the world, and they can participate in courses for free and enjoy all resources. Online courses mean that learners must participate in courses through the Internet compared to traditional classroom learning. MOOC has brought great challenges to traditional education due to its ease of use, low cost, wide coverage, and rich learning resources.

In 2001, MIT released a large number of courses on the Internet to provide free high-quality teaching resources for learners around the world. MIT's innovations have attracted the attention of major universities around them. Since then, Harvard University, Yale University, Stanford University and other famous universities have joined this ranks, officially opened the prelude to the open education resources movement. According to statistics, only over 2,000 courses at MIT were launched for learners to learn, and their visits exceeded 1.25 billion. In 2007, Salman Khan established the "Khan Academy" and explained the contents of different disciplines with a short video of about 10 minutes, and answered the questions raised by people. It has been recognized by more and more people. In 2008, Canadian scholars Dave Cormier and Bryan Alexander coined the term MOOC and used them to describe George Siemens and Stephen Dangs. (StephenDowns) designed the "Connectivity and Connected Knowledge" course. [2] This course combines open teaching content and teaching ideas of the time and supports learners to participate in learning in various forms. With the MOOC's proposal, higher education circles including Stanford, Harvard, and Massachusetts Institute of Technology raised the MOOC boom. Among them, the "Introduction to Artificial Intelligence" course set up by Stanford University is the most representative, with more than 150,000 registered and involved. In 2012, the three major MOOC platforms, Udacity, Coursera, and edX, were established. According to incomplete statistics, as of November 2013, the three major MOOC platforms in the United States provided nearly 600 courses. These courses cover multiple languages, about 30 subjects, and involve millions of participants.

## **2. Feature Analysis of MOOC**

The MOOC was first developed on the basis of the concept of China Unicomism. The basic idea of China Unicom's learning theory is: "Knowledge is connected through the Internet. Learning is the process of connecting knowledge points and information sources using the Internet. Learners actively study according to their own needs. Learning is the process by which learners acquire knowledge, and then through the network to connect the knowledge learned by learners to the Internet, to provide people to continue learning." [6] MOOC as a new form of online education development, compared with the previous online education, has its own Features:

MOOC has a complete curriculum structure. As a new curriculum model, MOOCs have a complete curriculum structure that is not available in the general online curriculum. The MOOC course has the basic elements of a regular course: teaching objectives, knowledge presentation, section exercises, classroom feedback, and evaluation. It is no longer just a platform for one-way users to provide learning resources. Users, users and teachers can interact with each other. Teachers regularly publish educational video materials, arrange assignments, and organize class discussions every week. Learners independently choose time to complete MOOC courses that they are interested in, take the final exam, and obtain a certificate [3].

The MOOC curriculum is open and large-scale. Openness means that this course approach is open. Learners can register for free and enjoy all course resources. The learning of MOOC is not limited by factors such as space, number of people, region, country, etc. Any person who has a network at any time and anywhere can conduct online learning. At the same time, MOOC learners can also choose to use a variety of tools or platforms to participate in learning based on their own interests and hobbies, and have strong autonomy.

The MOOC course is short and fragmentary. Psychology studies have found that the maximum time a learner has to focus on during the learning process is only 7 minutes, which means that the learner has the highest learning efficiency during this period. According to this principle, the MOOC curriculum design is mainly based on the teaching of knowledge points. Teaching videos are brief and each video is not more than 10 minutes.

MOOC curriculum introduces the evaluation method of learner mutual evaluation. Due to the openness of the MOOC curriculum, there are many participants in each course. If the traditional teacher evaluation method is still not feasible, it is impossible for the teacher to evaluate each learner. Therefore, students are introduced to each other to solve this problem [4].

## **3. MOOC Destructiveness and Innovation in Higher Education**

The current development characteristics of MOOCs and possible future MOOC trends. As shown in the figure, MOOC currently creates a new market, and the target users are non-consumer customer groups of higher education. For these customer groups, MOOCs have made it easier and cheaper to provide expensive and complex education. This is usually achieved by providing free courses for another group of different learners or meeting the new needs of existing students in higher education institutions. For example, unlike the traditionally complete and complicated undergraduate and postgraduate degree programs, the open courses provided by MOOC institutions are single-function courses. Students can obtain course certificates without completing the entire program. In addition, MOOC institutions such as Coursera, Udacity, edX, etc. will also charge a certain fee when students acquire a course certificate, but these costs are very low compared to the cost of obtaining a degree certificate. In the future, MOOCs may continue to improve and improve product performance and services as time progresses, and then begin to advance into the traditional high-end market of existing universities—degree awards. In other words, if the MOOC can develop to learners to complete all degree programs and obtain a degree certificate, then MOOC will affect the enrollment of traditional higher education institutions and will have a huge impact on the traditional market of higher education. As for the maintenance innovation in this figure, it can be seen as a variety of reforms within higher education institutions to further improve the quality of

education. For example, Chinese universities are gradually advancing the informationization of higher education. The purpose of this work is to promote the modernization of educational content, teaching methods and methods, innovate personnel training models, promote innovation in cultural heritage, and promote the overall improvement of the quality of higher education.

#### **4. Ways to Integrate MOOC with Traditional Classrooms**

The traditional classroom model is mainly the teacher's explanation of knowledge in the class. The students under the class practice to consolidate and internalize the learned knowledge. In contrast to flipping the classroom model, it is mainly to allow students to learn the knowledge to be learned under the course of the lesson and to complete the internalization of knowledge through discussion. This teaching model stimulates the learner's autonomy, enthusiasm, and initiative. Using the flipping classroom teaching mode, students are allowed to self-study through the Internet to select high-quality MOOC curriculum resources and solve problems left in the classroom through discussions in the classroom. When teachers organize class discussions, they must take into account the individual differences of each classmate, and adopt a group discussion mode for learners' learning. Students with strong self-learning ability and poor students with self-discipline are grouped into one group. They are strong and weak, thus stimulating the entire group to actively participate in learning and participate in discussions.

The traditional classroom teaching activities are single and the learning methods are boring and cannot promote the overall development of students. Teachers can integrate MOOC into their own classroom teaching according to the classroom, students and teaching needs, form a combination of online and offline learning modes, enrich the teaching activities. Teachers can organize the students to make some related videos for the classroom content so that the learners can participate together and play the initiative and initiative of the students. This will not only enhance students' understanding and memory of knowledge, but also enrich students' emotions. Through learning to explore and establish certain online platforms, provide learners with an opportunity to freely express their own opinions and ideas without time and space limitations [5].

First of all, from the perspective of teaching content and teaching resources, because MOOCs bring together global learning resources, information types, and information volumes, learners often do not know how to choose. Therefore, how to effectively use MOOC curriculum resources is crucial. Secondly, from the perspective of teachers, teachers should change their roles, guide students to choose the right resources, and guide them in autonomous learning. The teacher first briefly introduces the knowledge points to be learned, then according to the student's situation, provides high-quality teaching resources and guides students to self-study. Based on the teacher's choice of teaching resources and pre-school self-study guidance, students complete self-study through the MOOC through the MOOC during the prescribed time period and complete the MOOC course matching exercises. Because there is no fixed class time, students can choose their own study time, rationally arrange their own study time, and control their learning progress according to their actual situation, which has great autonomy and flexibility.

Since not all learning resources are suitable for MOOCs, such as courses that require self-experience and hands-on practice, putting all courses in MOOCs indiscriminately does not make MOOCs better developed. Instead, it may be to some extent. Affect the learning efficiency of MOOCs. This is a problem that has existed in the development of MOOC so far. Therefore, the development strategy is that teachers should not only consider the quality of the curriculum before the course goes online, but should also study whether the course is suitable for online learning, that is, strengthen the review of the curriculum; meanwhile, it is already online. The course also investigates how the learner's learning feedback is, and if the effect is not satisfactory, the curriculum must be redesigned, and even cancel the course. Udacity had cancelled an elaborate math course because of the low pass rate of the course. Therefore, we must learn lessons from the MOOC curriculum construction in universities in our country. Do not push forward blindly or inefficiently.

## 5. Conclusion

MOOC provides open, flexible, and high-quality courses for people in a free or inexpensive way, making higher education more open, meeting the new needs of new groups in the higher education market, and promoting the innovation and transformation of institutions of higher learning. The thinking and discussion have promoted the exploration of new teaching methods, business models, and flexibility in institutions of higher learning. Analysing MOOC from the perspective of destructive innovation theory can not only see some characteristics of MOOC's destructive innovation, but also the particularity and complexity of MOOC as a destructive innovation force in education system. In the reform and development of higher education, MOOC provides opportunities for institutions of higher learning to explore new funding operations, quality assurance and credit certification models.

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