Challenges and Changes of MOOC to Traditional Classroom Teaching Mode

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Abstract

MOOC, namely massive open online courses, called as Mu Ke in China, is a new teaching model whose emergence is a great challenge to the traditional classroom teaching mode. MOOC has many advantages which the traditional teaching mode does not have, but it also has many shortcomings and problems. On the basis of analyzing the advantages and disadvantages of Mu Ke, this article tries to achieve a high degree of integration of MOOC and the traditional classroom teaching mode, proposes the concepts of flipped classroom and SPOC, and explores a new teaching mode in order to realize the reform of credit system.

Key words: MOOC; Traditional classroom teaching; Blended teaching; Flipped classroom; SPOC

INTRODUCTION

Bill Gates said in 2010, "in the next five years, you will be able to find the best lectures online, and these lectures are better than that of any university." In 2012, the appearance of MOOC platform has presented in advance this picture. MOOC, namely massive open online courses, called as Mu Ke in China, is a new teaching mode whose emergence is a great challenge to the traditional classroom teaching mode. MOOC has the following characteristics. Massive: large-scale, reflected in the large-scale number of learners. There is no limit on the number of students and everyone can participate in the leaning open: reflected in the open curriculum resources. Everyone who can access to the Internet can learn the high-quality courses which are interest-oriented and free of charge. Everyone who wants to learn can come to learn. At the same time, "open" has become the premise to achieve "massive", which reflects the concept of "open education". Online: reflected in the online learning. Free from the restrictions of time and place, learners can choose to learn their interested courses as long as they can connect to the internet, and won't be locked out of the door of learning. Currently, there are many universities, institutions and organizations offering MOOC courses, and there are tens of thousands of learners worldwide participating in a variety of learnings in MOOC mode. These characteristics determine that MOOC has many advantages which the traditional teaching mode does not have, but it certainly has many shortcomings and problems.

1. MOOC HAS ADVANTAGES WHICH THE TRADITIONAL CLASSROOM TEACHING DOES NOT HAVE

(a) Presently the courses offered by MOOC are taught by famous lecturers in prestigious universities. For example, started by Stanford University and Massachusetts Institute of Technology, followed by our country's universities such as Peking University, Tsinghua University, Shanghai Jiaotong University, and Fudan University, etc.. These high-quality courses provide high-quality resources of prestigious universities to the students who did not enter these universities, solve the problem of lack of excellent teachers and that teaching quality is not high in colleges and universities, achieve the sharing of high-quality teaching resources, promote educational equity, and truly embodies the internationalization of Higher Education. Teachers can also be freed from the

heavy repetitive explanations of knowledge. They can devote more time with students in deep exchanges, understand students' doubts, and answer questions more effectively, thus truly improve their teaching quality.

(b) The online learning method of MOOC frees students from the constraint of time and place, enables them to choose the most efficient learning time within the MOOC release cycle, and to choose to pause, rewind, fast-forward or repeatedly watch the videos to reinforce learning according to their own understanding degrees. In the traditional classroom teaching, however, this obviously cannot be realized due to the fixed curriculum timetable. This is especially more attractive to the students who have grown up in the new media environment. Meanwhile, with the rapid spread of mobile terminal and rapid development of network broadband technology, smart phone clients and 4G network have been widely adopted, and MOOC platform (currently the most famous and most frequently used platforms which are from the United States: edX, Udacity, and Coursera) also supports mobile terminals such as IPAD and smart phones, etc., which has offered the possibility to achieve this kind of mobile learning in anytime and at anywhere. A survey shows that MOOC's most attractive feature is the free time and free place.

(c) MOOC's teaching content is free from the limit of teaching hours in the traditional classroom. A classroom teaching time is normally 40 minutes, and the teacher must arrange the teaching content within the fixed time, while in MU Ke a knowledge point is taught in a 5 to 8 minutes' video, and the teacher can shoot more videos for related knowledge so as to expand the breadth of knowledge and better meet students' quest for knowledge. The Discussion areas also strengthen the communications between learners and the teacher as well as between the learners themselves, helping them to develop thinking and creativity, and enhance their abilities to understand and utilize flexible.

(d) MOOC learners do not need a pass, so not only college students can learn it, but also a lot people who don't enter college for various reasons can realize their aspirations for learning, or some college graduates want to continue to learn after work, but there is no time to sit in a traditional classroom for lectures, or even college students who want to expand their knowledge, have the opportunity to learn knowledge at any time and any place. This more convenient learning way will certainly promote the social atmosphere for the formation of universal learning and lifelong education.

2. MOOC FORCES THE PROMOTION OF TRADITIONAL CLASSROOM TEACHING QUALITY

Whether it is OCW (open course ware), OER (open educational resource), or MOOC (massive open online courses), the core change in this process is from the open educational resources to the open learning process. MOOC is more concerned about the open learning process, paying more attention to the implementation process of curriculum teaching and learning. MOOC is not just a resource, that's the most critical is the teaching and learning, participation and interaction.

(a) MOOC's online learning mode allows students not to have to sit in the classroom and stay with teacher to learn the most basic theoretical concepts. This poses challenges to the traditional classroom teaching and the teacher's classroom teaching content and quality. Meanwhile, MOOC's prestigious teachers' teaching allows students to experience the style of masters, and gives the opportunity to traditional classroom teachers to learn, to find the gap between themselves and the master, and to constantly improve their teaching methods. What the great era brings to education is to re-examine and reflect on teaching and learning, promote the intrinsic value of education, improve the innovation of educational mechanisms, and promote the progress of science and technology inside and outside education. Therefore, for teachers, MOOC brings an educational reform to raise the standard for teacher profession. In addition, in order to attract students, teachers must increase new and interesting knowledge, and continuously improve their teaching qualities.

(b) In addition to online learning, interaction and sharing is also the essence of MOOC. As the old saying goes, give a man a fish and you feed him for a day, teach a man to fish and you feed him for a lifetime. MOOC allows learners to acquire knowledge which interests them the most through a network of independent learning, and apply the knowledge. Traditional teachers should adapt and learn in this wave of MOOC, change from "teaching-based" to "learning-based", truly concern the needs of learners, enhance interaction with the students, share the learning experience, and strengthen the guidance to students on learning method rather than learning content. Students can improve understanding of the knowledge through solving other people's problems, can solve their own problems by asking questions, and can also share discussions to broaden their horizons and be inspired, so that they will be more aware of what they want to learn and can apply the knowledge which is associated with their actual needs. Students will take the initiative to learn, to read, to think, to communicate, and to compare, which will also change the traditional way of classroom teaching, making teacher to re-exam in the end what should teach to students, how to teach, and how to meet their individual needs so as to ultimately improve the teaching quality.

3. DEVELOPMENTAL DIFFICULTIES FACED BY MOOC

So far, there is not any college offering students with credits for MOOC learning. Degree award and credits

for certification of MOOC is a difficult process. MOOC development also faces many difficulties.

(a) Curriculum quality assurance issues. In MOOC massive online learning, student-teacher ratio is seriously overweight, which does not meet the requirement of teaching quality assessment. The teacher lacks the understanding of the attitude of learners as well as their acceptance degree, not to mention the effect of teaching; hence he cannot obtain a valid reference for the subsequent improvement of teaching quality. Moreover, when facing large-scale learners, the lack of diversity on teaching method may not be suitable for all learners. Although MOOC platforms are equipped with exercise areas and discussion areas, and some multiple-choice questions can be automatically marked, the subjective questions still need teachers to critique. If there is no tracking result for whether learners do the exercise or not and participate in the discussion or not, the teacher cannot mark each learner's subjective questions and answer forum questions. The limited teaching resource becomes an important factor to restrict quality assurance.

(b) With respect to free learning characteristics of MOOC, learners can freely choose to learn or freely choose not to learn, because what MOOC advocates are free, not strongly forcing anybody. Many people learn MOOC to recharge themselves and do not continue to learn. Statistics show that only 5% to 15% of the enrolled learners can persist to complete a course, and the attrition rate of MOOC is as high as 85% to 95%, which cannot be imagined in traditional classrooms. There the challenge was made: MOOC simply is not so massive. Meanwhile, MOOC reflects an active learning culture, but the lack of active learning is the current educational status that people have worried about. MOOC lacks monitoring and supervision to students' learning degree and learning quality, therefore teaching effectiveness cannot be properly achieved and the effectiveness of education is ignored.

(c) Although MOOC teaching is open for all people who are willing to learn lectures, there are only knowledge points to be taught, face to face communications and interactions between teachers and students in the traditional classroom teaching lacks. The important humanistic concern is absent, as well as the individualized teaching and students' personalization. In addition, MOOC misses cooperation between teams, face to face exchanges and community activities among students, which are not conducive to develop students' teamwork and communication skills. Shanghai and New York University President Yu Lizhong holds that the mission of a university is in a number of dimensions: to foster a global perspective, humanity, scientific vision, curiosity, and critical thinking, etc. Learning environment, group activities, community activities, social observation, practical experience and so on are an important part of university culture and university education. MOOC teaching does not focus on the comprehensive development of students, which deviates from the law of education.

(d) Due to the open characteristics of MOOC, the current courses are all free, but teachers' production of course videos, launch onto website, design issues, discussions, and network maintenance require a lot of time and investment, and the benefits are relatively few. The teaching quality assurance must be in need of capitals. The three MOOC platforms before mentioned - edX, Udacity, and Coursera are operated by independent third parties outside of college. Where do their funds come from? Whether can they ensure the sustainable development of MOOC? Should the courses charge directly, or from supports of other parties, or to charge for providing students with credit certificates after their credits have been recognized are the current problems to be solved.

(e) MOOC platform just offers courses but does not systematize them. It does not put all courses of a major together to form a system. In the traditional university teaching, for all courses in the university for four years, there are strict curriculum systems and timetables stipulated by professional development programs. The collection between courses is very clear, as well as the location of every course, by which students will be reasonably led. MOOC platform is difficult to achieve this.

(f) Credits certification cannot be achieved solely by MOOC platform. The issue of integrity is difficult to be solved. On the virtual network platform, there is no face to face teaching between the teacher and students, any exchanges and examinations, so how to ensure that the learner behind the computer is the one who has registered and wants to get credit is a question. Under the current background without stimulus of credits, a lot of people learn MOOC with a simple intent of learning some knowledge of their own interest. If the purpose is to obtain credits, learners will have a strong utilitarianism, namely learners' motivation is to obtain knowledge or obtain credits and certificates. No matter how advanced teaching techniques are, learners need to have a right motivation, and only a right motivation can lead to a strong desire to learn. If the purpose is to obtain credits and certificates, the current MOOC learning platform lacks the evaluation mechanism. A complete teaching process should be a closed loop including curriculum design, teaching design and evaluation. MOOC platform is able to provide curriculum design and teaching design, but is in lack of assessment, in this case the credit certification might cause the problem of replacing others to learn or to enter exams.

4. A HIGH DEGREE OF INTEGRATION OF MOOC AND THE TRADITIONAL CLASSROOM TEACHING MODE

National Medium and Long-term Educational Reform and Development Plan (2010-2020) have pointed out that,

"develop e-learning courses, innovate online teaching mode, update teaching concepts, and improve teaching methods to improve teaching effectiveness." Ministry of Education in *The Informatization of Education for Ten Years (2011-2020 Years) Development Plan* has also pointed out that, "information technology has a revolutionary impact on the development of education," and has proposed to promote the bidirectional integration innovation of information technology and education in various majors. As a new teaching mode, MOOC represents a new information technology. Its emergence brings great changes to the traditional classroom teaching mode, and the potential impact is worth studying. Though MOOC will gradually affect the traditional classroom teaching, it will not completely replace the traditional classroom. The arrival of MOOC is to help the traditional classroom teaching rather than to destroy and subvert the traditional classroom. It works only as an effective supplement to the traditional classroom, helping to meet the changes in the Internet age. Because MOOC provides only common educational resources, playing the role of imparting knowledge in the teaching activities, but its loose, voluntary form of learning is not mandatory. Students lack the necessary supervision, which leads to the phenomenon of "the chosen course has not been studied, and the studied course has not been credited". The traditional classroom teaching can provide accurate and individualized educational resources, impart personalized teaching, solve students' doubts, and enhance monitoring on students' learning process. Based on the respect to learners' autonomy, a highly integrated teaching can provide students with an interactive communication platform which is free from the limit of time and space, so that students can experience the efficiency and convenience of online teaching anywhere, and break the traditional "face to face" teaching limitations. Meanwhile, through the traditional classroom teaching, management on students' self-control and learning ability can be enhanced. The two can complement each other, make up each other's deficiencies, and achieve the desired results. In this regard, many domestic universities have embarked on a journey to explore new teaching modes, out of which the most representative is the "flipped classroom" triggered by MOOC. High-quality MOOC has been introduced as a supplement to the traditional classroom teaching mode. Students study online courses through MOOC video before class and master knowledge, in the classroom, the teacher spends only a small amount of time to review the basic knowledge, and spends more time on discussing the teaching content with students face to face, therefore, the teacher's preparation way is different from the past. In the traditional classroom, preparation is to prepare what to teach, while in flipped classroom preparation is to prepare what to ask. "In the traditional classroom, the teacher imparts knowledge in class, and students do exercises after class. Students do not have the opportunity to be curious and think; in the flipped classroom students conduct self-study before class, and partially resolve problems through self-study. The other part of problems is to be resolved by discussing with the teacher in the classroom, which actuates students to think more deeply. The classroom focusing on "teaching" is transformed to the classroom focusing on "learning". The interaction between form and content can be achieved. It can also be understood that students study theoretical knowledge before class, discuss and share learning results in class, so that the one-way imparting of knowledge in the traditional classroom has changed to be the interactions between teachers and students, and between students themselves.

However, the number for the traditional classroom teaching is generally no less than 30 people. If it's to be performed by one teacher, it is hard to flip up and the discussion does not have enough time. On this basis, some universities advocate a concept different from MOOC, holding that universities should construct SPOC (Small Private Online Courses) to truly solve the practical problems of teaching. Teacher produces teaching videos for students to watch before class, or students can even communicate with each other or consult other needed material before class. In class, students are divided into small groups, using the "brainstorming". Each student should speak and put forward his own ideas. The group shall decide which questions are the most important, and have in-depth discussions, so that students can improve the autonomy and collaborative ability for learning. Under this teaching mode, teaching resources are changed from textbooks to be excellent teaching video provided by MOOC platform. The teacher is changed from the dominator of classroom teaching and imprinter of knowledge to the guide for learning. Students are changed from the passive recipient of knowledge to the dominants that process, absorb and apply the knowledge and information. Therefore a teaching mode that the teacher is the dominant and students are the main body has been formed, which promotes students' independent learning and cognitive ability of ubiquitous learning. Not only the interactions between teachers and students are increased, but also the interactions inside the students become more than before, so that the teacher can learn more about student, and make the classroom more personalized. Students can learn more deeply, and the multiple interactive modes of on-line discussion forum and off-line classroom discussions can be achieved. This kind of mixed teaching mode provides a new way of the knowledge dissemination and learning mode for the traditional classroom teaching, not only allowing students to enjoy high quality teachers and knowledge structure, making students more involved in order to improve their mastery and use of the knowledge, but also using the real

classroom teaching system to let students conduct group discussions, as well as face to face communication with teachers, to enhance monitoring of the learning process and the evaluation of learning outcomes and teaching effectiveness, so as to resolve the current supervision and evaluation problems in MOOC learning. Students can learn the curriculums at their own pace, and teachers are able to better understand the needs of students, and pay more attention to collaboration and mutual learning in class. This mode provides an environment and possibility for the realization of individualized learning, which more fits the ideas of higher education reform.

5. TO TRULY IMPLEMENT THE CREDIT SYSTEM REFORM

Guangdong Provincial Department of Education recently has issued *Opinions on the Implementation of the Credit System Management of Universitie*s. The opinions point out that: to give full play to the role of information technology in promoting the deep integration of information technology and teaching, accelerate the digital transformation of curriculums and majors, build high quality informationalized educational resources, make use of off-campus MOOC platform, curriculum learning websites, and micro-class, etc.to innovate informationalized teaching and learning, and advocate that universities shall explore mutual credits recognition on internet-based learning platform such as MOOC. Meanwhile, the Opinions also advocate to explore off-campus enrollment, encourage joint classes by the universities in one region, and promote the sharing of teachers and curriculums and the recognition of credits.

Credit system is the teaching management system based on the course selection system, which calculates students' learning accomplishment based on the unit of credit, and takes the acquisition of the minimum necessary credits as the standard for graduation. However, which courses can be recognized with credit in this way, and what is the recognition standard should go through a rigorous authentication. Some colleges and universities have launched the public online video elective courses. Students watch the video of elective courses provided by Superstar Company, complete exercises of relevant sections, and participate in the online exam in the "exam" option of the navigation bar within the specified time. Students can arrange the course of study according to their own learning progress in the specified open period. Through the e-learning platform, students can achieve online questions, discussion, homework, assessment, exam and other processes. The course final test result is determined by four parts: watching the video (40%), homework (20%), online examination (30%) and online discussion Q&A (10%). If a student gets an evaluation score higher than or equal to 60 points, he obtains the course credit as the credit of a university public elective course. However, there are students in each semester lose the exam opportunity due to watching the video not up to the standard or forget to take the exam. They cannot obtain the credit. It can be seen that without a proper guidance and supervision mechanism, the success rate of this learning approach is no more than the traditional classroom teaching.

CONCLUSION

To adopt the blended teaching approach, we should combine online and offline methods, introduce comprehensive monitoring mechanism, put the knowledge impartment process outside the classroom, and make students have more freedom in their own way to accept the new process. We should put the knowledge internalization process inside the classroom, let the teacher answer questions, allow students to independently choose the teaching time and instructor, and break the traditional grade teaching state. Due to the different students' qualification, they required time to accept knowledge is not the same, which gives students more freedom, and their learning will be more efficient. For the students who have spare learning capacity, they are free to choose and can better arrange their own learning. If they complete all required credits they can be graduate earlier. In special circumstances they can also apply for a temporary suspension, and complete their studies in phases, thus a flexible educational system can be established, and the reform of the credit system can be ultimately realized.

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