Exploring the School-running and Educational Administration Mode in Open Higher Education

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Abstract. After analyzing the impact of MOOC on higher education, we propose a new teaching mode of higher education. This mode will promote the education mode transition from exam-oriented to quality-oriented, from teacher-based to student-centered and the education thought transition from professional to general of our country. To solve the most crucial issue of the mutual recognition mechanism of credits in MOOC sharing process, MOOC alliance credit mechanism based on the level of mutual recognition mechanism is established. The MOOC teaching quality certification standard is established. According to the MOOC practice, the MOOC recognized by the school is included in the training and teaching plan. MOOC teaching effect evaluation method and attending online course credit recognition method of student are formulated.

Introduction

John Hennessy, president of Stanford University, publicly announced that the development of MOOC (Massive Open Online Course, also known as Massive Open Online Coupons) is a digital tsunami that will sweep away traditional university education. The new online education service mode represented by MOOC provides free and open online courses for the general public. It challenges the traditional education mode and makes students’ learning autonomy more stronger and personality more distinctly. At present, MOOC has become the newborn thing of many universities in the world to study and deal with \cite{1-4}. The further development of MOOC has promoted the emergence and maturity of university course alliance.

China’s universities have also started the MOOC process. In January 2013, CUHK joined the Coursera platform. As Asia's first MOOC, the “Science, Technology and Society in China” course taught by Naubahar Sharif of the Hong Kong University of Science and Technology was put on the Coursera platform in April 2013. In May 2013, Peking University and Tsinghua University joined edX. At present, over ten Chinese courses which have been put on obtained much attention.

MOOC’s large-scale, completely open, completely online and other characteristics have brought a good vision for quality education, but at the same time some problems still exist. Differences in learner ability, the communication limitations between teacher and student, and difficult learning outcomes evaluation all contribute to the low completion rate of MOOC. In recent years, Flip Class has become a teaching model concerned by the global education community because it breaks the spatial order of knowledge reception and knowledge internalization and possesses the advantages such as increasing classroom interaction and realizing individualized learning of students.

However, the blind copying of MOOC teaching mode not only can not solve the original problem well, but also introduces the shortage of MOOC. Higher education teaching must use recreational mode of MOOC in order to bring new education to higher education. Whereas, no matter from the above research literature, or from the perspective of experts in related fields of education or practice, the direction of teaching reform in higher education based on MOOC concept must be open \cite{5-6}. To this end, we will establish MOOC educational administration mode of colleges and universities,
optimize the relevant teaching management system, related teaching service system and other measures. It gives full consideration to optimize the teaching management service mode, and explore school-running mode and teaching system in open higher education.

Establishing MOOC Educational Administration Mode in Open Higher Education

Combining the characteristics of MOOC and the higher education administration mode, this paper establishes a professional MOOC-based curriculum system and optimizes the teaching management mode, and then establishes the university teaching administration mode oriented to MOOC teaching. As shown in Figure.1.

![MOOC Education Management Structure Chart](image)

Figure 1. MOOC Education Management Structure Chart.

Optimizing the Relevant Teaching Management System

If MOOC teaching or other information-based teaching mode is developed in colleges and universities, it is necessary to optimize and reform university teaching service system and management mode:

1. In order to adapt to the current open education of MOOC, colleges and universities should change the teaching system and policy of their own schools according to their own actual conditions, school-running standards, school-running characteristics, and determine the recognition of learning outcomes of students in their respective schools, the scope of credit transfer for related courses, the standards, execution time and method. In particular, we should consider the teaching management system, the curriculum certification system, the mutual recognition of credits system, and the components of the course examinations. At the same time, MOOC-oriented teaching norms should be established, the standard of academic degree awarding should be specified and the proportion of the total number of credits in MOOC should be determined, which should be suitable for its development according to the school's school-running characteristics.
(2) Through the introduction of MOOC teaching, the existing credit system in colleges and universities should be optimized, the credit requirements of our students for qualifications and degrees, including course name, teaching content, number of credits, credit structure, the credits ratio, the identification methods and assessment methods, etc. of MOOC credits should be specified. We need encourage students to pass the MOOC learning exam to get the credits.

(3) Colleges and universities may consider the MOOC-based flexible credit system, relax the study period, facilitate students to choose courses flexibly, and explore the registration mode on the courses.

(4) Colleges and universities can optimize the course selection mechanism. Relevant departments encourage conditional colleges and universities to allow members of society to register the curriculum to study at school, open online courses to the community and expand the audience coverage of higher education courses.

(5) Optimize the cost sharing mechanism for learning and explore credit charge to facilitate learners to learn at different schools and at different times.

Optimizing MOOC-based Teaching Service System

In the process of constructing the MOOC alliance platform, colleges and universities are faced with the optimization of related teaching management systems. The following key issues concerning education service system should be considered:

Establishing a Pilot Scheme for Credits Recognition among Colleges and Universities. Support higher education institutions at the same level, in accordance with the principle of voluntariness, through the mutual selection and recognition of courses, the establishment of public courses, student exchanges, and joint training to expand opportunities for students to study in external schools. Simplify the course certification process, increase the scope of the course of recognition. Encourage different colleges and universities to jointly formulate talent training programs, curriculum standards, to carry out mutual recognition of credits. Promote qualified institutions to open highly qualified and standardized courses to the society through Internet online. During the pilot phase, register by course and pay by courses credit.

Credits Mutual Recognition of Various Types of Colleges and Universities to Promote Credit Recognition and Conversion. Institutions of higher education need to speed up the reform of teaching management system focusing on the credit system. Based on the recognition and conversion of credits among colleges and universities, some pilot projects can be selected in the early stage. School can set MOOC teaching quality standards according to the MOOC practice. MOOC identified through the school will be included in the training programs and teaching plans. MOOC teaching effectiveness evaluation methods and credit recognition for online courses will also be formulated.

All kinds of college students learning MOOC courses and meeting certain requirements, identified by the school, can obtain the corresponding course credits. Colleges and universities evaluate the consistence of MOOC and school curriculum by examining MOOC curriculum teaching objectives, teaching content, teaching hours, the difficulty of assessment.

Institutions of higher education autonomously make MOOC course certification methods, and standardize the detailed certification process, specify the types and quantities of MOOC courses and the highest percentage of MOOC course credits. Timely summary, updating, publishing the list of identified MOOC courses, implementing dynamic management to create conditions for students to obtain the appropriate credit by learning MOOC course. At the same time, we can adopt the method of blended credit system for credits. Students must not only obtain MOOC course certification, but also pass the traditional classroom unified examination before they can get course credits.

Teaching Test Separation. In the process of teaching, MOOC's success relies mainly on two major shifts: "The shift from teacher-centered to learner-centered and from traditional to efficient". MOOC's curriculum resources come from "prestigious schools and famous teachers". For the top universities, MOOC means separation of some of its traditional teaching businesses, such as course selection, teaching and evaluation, etc. For non-top universities, they will break the limitation when opening some courses. According to the courses which are provided by university MOOC alliance,
they can develop a new evaluation system to achieve "separation of teaching and testing". Colleges and universities participating in MOOC alliance have incorporated MOOC into their own curriculum system and credit system, and reorganized them.

**MOOC Union Schools’ Free Exchange of Credits.** Schools participating in the MOOC alliance are free to exchange credits. Some students in the alliance are not interested in the public elective courses offered by their own university or find that they are not satisfied in teaching contents and teaching methods although interested in the course. MOOC platform is free to let them choose their own courses of interest. After completing the course, the recognition of the course can be directly interchangeable credits. While meeting the self needs of students as a starting point, promote students to broaden their horizons, active thinking, tap talent potential and promote students' all-round development and self-realization.

For those universities that have not participated in the construction of the MOOC alliance platform, they should also boldly try to open the restrictions of the credit system and give students the opportunity to break through the walls of colleges and universities and share quality education resources. They should also recognize the certificates and credits of some MOOC courses.

**Establishing MOOC-based Curriculum System**

The MOOC-based professional curriculum system should be established for the current MOOC curriculum resources lacking of integrity.

To use disciplines as modules, we need to combine the MOOC curriculum with traditional teaching. On the "Chinese MOOC Platform", colleges and universities should guide students to carry out "MOOC" courses according to the order of courses determined by the professional system and guide students to select high-quality MOOC courses or put their own "MOOC" into the school curriculum resource sharing platform. Teachers can also select courses on the MOOC platform to upload to the school curriculum resources platform so that students can choose the time outside to complete. In the classroom, students can carry out "inquiry-based learning" and autonomous practice activities under the guidance of teachers so as to ensure the practicability of MOOC professional curriculum system.

**Optimizing the Teaching Management Mode-service Mode Change**

In the process of teaching management, it introduces the management methods and methodology of big data, supports the teaching management and evaluation with data mining, learning analysis and other techniques.

MOOC, through the excavation and analysis of massive learning data, tracks learners' online learning behaviors, designs and explores flexible instructional design links to guide students' active learning and thinking, and adjusts teaching strategies.

Based on the analysis of data, we can accurately grasp the learning needs of students, recommend different learning resources to students, improve the teaching content and teaching methods, and make these be the basic basis for the development of personalized online courses platform so as to achieve "Individualized" style of personalized service.

In daily teaching process we can also obtain a huge amount of data. The study of these big data analysis and the optimizing of the existing teaching management are conducive to standardize management, teaching order, and build a smart classroom and a smart campus to promote the profound changes in school teaching management as a whole.

**Exploring Open Higher Education Mode and Teaching System**

**Establishing Open MOOC-based School Running Mode**

The teaching trend of higher education must be open-ended. In view of the loss rate of students in MOOC course, lack of necessary support in students' learning process, the difficult for learners to defeat their inertia and other issues, all sorts of problems in the process of opening up have brought a lot of reference for the liberalization of higher education. In an attempt to liberalize the teaching
process, there is a need for more and more comprehensive learning support services for learners in higher education. These services are proactive in order to seize the learner's mind and promote learners' confidence and interest, reduce the loss rate, etc. Only by doing so can we truly open up the teaching of higher education with the guarantee of teaching quality.

Therefore, based on the role of MOOC platform in opening up higher education, we should further improve the quality and level of running a school.

**Consolidate the Foundation of Information-based Education.** Through the establishment of information technology system platforms, achieve the integration of teaching, management, and services, achieve registration, learning, examination, and other one-stop online services. Adjust the mode of running schools, improve service functions, form a network of learning centers with reasonable layout.

**Build Quality Courses.** Carry out various types of high-level online education and cooperation, share high-quality curriculum resources. Optimize the course content presentation. Strengthen the selection, management, and supervision of curriculum resources to ensure that the content of the course is in line with the party's and state's lines, guidelines, policies, and laws and regulations.

**Innovative Learning Model.** Improve the registration system to facilitate learners to register at any time. Accelerate the reform of the credit system. Improve the system of autonomous choice of course. Improve online autonomous learning rules.

**Strengthen Quality Assurance.** The establishment of school teaching quality assessment systems strengthen the teaching learning process of monitoring and evaluation. Improve the course exam system to ensure that the exam is scientific and safe. Publish annual quality reports and accept social assessment and supervision.

**Establishing a Teaching System Based on the Unicomist and Open Higher Education**

Unicom learning theory is an important theoretical basis of the current MOOC and an important feature of the development of MOOC. It believes that knowledge is networked and learning is a process of connecting specialized nodes or collecting sources of information. Emphasize that the mastery of learning is in the learner's own hands. Personal knowledge forms a network that is organized into various organizations and institutions, in turn, the knowledge of the organizations and institutions have been fed back to the personal network to provide individuals to continue learning. This cycle of knowledge development (personal to cyber, to organizational) enables learners to keep up to date in their respective fields through the connections they have established.

For this reason, we can concentrate our learning on the connection of the specialized knowledge series. Helping each other, forming a learning group or learning mutual aid echelon, and related teaching assistants should be involved in so in many ways to ensure the sustainability of this teaching mode. At the same time, we can integrate social networking circles, expand the learning experience, gradually establish a teaching system of open higher education, and design resource openly. Open and innovative teaching based on the unicom learning theory is a new exploration of web-based teaching and traditional teaching. Use advanced teaching theory and real Internet thinking so that students, teachers, and resources can really achieve interoperability.

Open teaching mode no longer emphasizes the teacher's centrality. The construction of resources is not limited to the teachers themselves and can be any learner who learns knowledge. After teacher's examination, teachers and students form a New situation so as to build a combination of virtual community environment and the impartation of real knowledge based on learning.

**Summary**

This paper aims to establish an open educational mode of higher education based on MOOC platform. The mode gives full play to the opening higher education. Firstly, it optimizes the existing credit system in colleges and universities, implements flexible credit system based on the MOOC credit system and relaxes the learning years. Secondly, it optimizes the course selection mechanism and the learning cost-sharing mechanism, and meanwhile opens online courses to the community. Thirdly, it establishes a pilot scheme for credit recognition among colleges and universities. All colleges and
universities can base on the courses offered by the MOOC alliance to formulate a new evaluation system to achieve "separation of teaching and testing". In accordance with the MOOC course system and credit recognition and conversion rules, it achieves free exchange of credits among MOOC Union schools. In the course composition of the system, schools admit the MOOC platform course certificate and credit to further improve the quality and level of running a school, promote more colleges and universities to admit the open university credit so that we can create more opportunities for more learners to receive higher education. In the process of teaching, only such reforms can be carried out to ensure the quality of teaching and truly realize the open teaching of education.

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References


