

## MOOC: A Crisis or an Opportunity for Chinese General Education Curriculum? MOOC's Implications for Chinese General Education Curriculum Development

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Received 22 March 2015; accepted 7 May 2015  
Published online 26 June 2015

### Abstract

In recent years MOOC as a new curriculum model influence the development of higher education, it has a distinctive feature of digital information, have unique advantages with respect to the traditional online courses: improved learning, curriculum management system of good interaction and a rich learning experience and so on. Compared to the general education curriculum also has a better design and management systemic. MOOC give the “double-edged effect” on the Chinese higher education and general education had a greater impact, general education curriculum is necessary to face the reality of the existing bottlenecks, confront new ideas and challenges that MOOC bring to. Even the traditional teaching methods will not be replaced by MOOC, general education curriculum of Chinese can be absorbed MOOC's development experience, reflection of immature at MOOC construction for the development of general education courses to provide rational thinking trial.

**Key words:** General education curriculum; General education; MOOC; Network courses

Li, J. (2015). MOOC: A Crisis or an Opportunity for Chinese General Education Curriculum? MOOC's Implications for Chinese General Education Curriculum Development. *Cross-Cultural Communication*, 11(6), 64-69. Available from: <http://www.cscanada.net/index.php/ccc/article/view/7218>  
DOI: <http://dx.doi.org/10.3968/7218>

### INTRODUCTION

In recent years, MOOC as a new face of course industry is frequently reported in media, education community

and academic articles. As we recognize MOOC and study MOOC until some domestic universities try to join the camp among MOOC, MOOC in China is going through a bold exploration from theory to practice process. Under the impact of the wave by MOOC, courses of MOOC will eliminate parts of the inferior course, led to update and upgrade the existing curriculum, general education curriculum can also take advantage of its own to re-examine and look for new development opportunities.

### 1. MAIN COURSE PLATFORMS AND CHARACTERISTICS OF MOOC

MOOC (Massive Open Online Course) as a new form of network programs attracted attention in the field of international education. MOOC is an educational model, in theory there is no limit on school enrollment; It is open, allowing anyone to participate, usually without any cost; It is online, learning activities carried out by the World Wide Web; It is a tape of course, in the provision of learning areas around a set of learning objectives to organize. Even if there is still not a clear model of MOOC, MOOC is promote many of the practice of higher education to re-examine, including the role of faculty and institutions, as well as criteria for certification and credits granted. MOOC as an Internet online course, not only as a type of course is but also to exchange resource, and it must be based on the mature IT infrastructure, in order to make an impact in the world. Three of the most representative online learning platform Udacity, Coursera and edX were established in 2012 marks the era of MOOC arrived, this three platform became the main medium to promote MOOC developed (Table 1). Three course platforms with corresponding operating modes, involving the learning mode, teaching mode, line interactive after-school and student requirements and so on.

**Table 1**  
**Basic Information of Udacity, Coursera and edX**

Platform name	Certificate type	Certification credits	Curriculum construction way	Number of courses	Classification of course
Udacity	Free course + payment certificates	Part of the courses	Cooperation of part-time teachers, colleges and universities, the software company	43	Computer science, mathematics, business, physics, statistics, etc.
Coursera	Free course + payment certificates	Part of the courses	Cooperation with universities, school development production course	751	25 categories (computer science, life sciences, Humanities and Social pedagogy, art, etc.)
edX	Free	None	Cooperation with universities, paid to assist in colleges and universities	333	Computer science, electronics, chemistry, Humanities and Social Sciences, etc.

*Note.* The table statistical data ended up January 30, 2015.

### 1.1 Main Course Platform of MOOC

Udacity was founded by professor Sebastian Thrun from Stanford, and all the courses in Udacity are free, after registered and examination, learners can access to the website to get a certificate for free, students who need college credit certificate will have to choose to pay for certification exam. Although Udacity is the minimum number of sites in the three major platforms commenced, but Udacity has its own learning management systems, programming interfaces, and social elements. Courses to be concise features, including a plurality of cells, each cell contains multiple knowledge blocks, each block has a corresponding practice knowledge and provides printable very detailed lecture notes. Course there has much strong “traditional classroom” color: Content is divided into units, to provide a clear framework for the content of classroom practice and feedback to explain, there is homework and a final exam, usually combined scores and final grades will decide whether to grant request certificate. In its first round of operation, there are clear and strict requirements in courses’ starting time, ending time and the time of homework submit.

Coursera was founded by Andrew Ng and Daphne Koller from Stanford University in early 2012, the profitability of the site, a lot of American Ivy League universities such as Duke University, Johns Hopkins University, California Institute of Technology, Columbia University, the University of Washington, Columbia University, University of Toronto, University of New Mexico, Hong Kong University of Science and Technology joined the Coursera camp, we can see the construction of Coursera is focus on the advantages of cooperation with top universities over the world. Learners of Coursera need to be fixed 4-6 weeks of learning process, through the course of video, reference materials, educational software and other aspects of the synergy to do to complete the online teaching and online Q & A. Curriculum evaluation, including the completion of software test and homework exercises, each five students give score to a student’s written work and discussed through meet-up groups offline.

EdX injection was founded by the Massachusetts Institute of Technology and Harvard University in April

2012, on the basis of the development plan of MIT and Harvard MITx online teaching programs on the network. Besides the online courses, MIT and Harvard University will share this platform use to promote information technology in terms of teaching methods, but also to strengthen students’ evaluation of the effect of the course online. Though edX courses commenced institutions can obtain a certificate signed by the assessment guitar lessons, but it does not get the appropriate credits. Course arrangement of edX is about 4 to 6 weeks, teaching mode in advance in accordance with the outline of the course content, than study with course video, discussion and online interaction, and finally through software testing homework and take exam.

### 1.2 Difference Between MOOC and the Traditional Network Course

Traditional network course is put the teaching video on the course website for students to watch, is a simple reproduction of the course content and materials. But not easy to find the course schedule, master knowledge and focus on class, plus the lack of actually participate in the interactive link, after class feedback and evaluation of the relatively weak links, learners’ learning burnout are more apparent, for students’ learning self-consciousness also has very high requirements. MOOC is presented classroom online, classroom activities to be realized online, teachers can put online video as an online teaching links, first require students to extracurricular have a “lecture”, is focused on in-depth classroom sharing, discussion and problem solving. Unicom doctrine considers that knowledge is the link of the network, learning is a process of connecting specialized nodes and information sources (Siemens, 2005). Therefore, as the theme to the doctrine Unicom, it’s a big different with traditional Network Courses design and course of MOOC. The difference in a learning mode. Traditional courses will do a limited range of knowledge, learning content is pre-established, teachers are centers of learning and interaction; MOOC will provide teachers with materials as the starting point for learning, learning is the dynamic extension of assembling, the learners is the center of the interaction, play a role of teachers also friends.

Downes (2014) who summed up the MOOC is based on a few basic principles: aggregation, mixing, switch and promoting the sharing to complete their educational mission. Learning to be course of information and construction experience, through the platform in the exchange of different cognitive form new knowledge, and to share in the form of new resources. (a) The difference of management models between traditional network courses and MOOC. Traditional network courses are mostly reality taught with “Playback” for a more lenient course management, less for the specific management measures. MOOC platform has its own set of management procedures, requirements of assignments and have course examination for learners. (b) The difference between learners’ learning effects and learning experiences. Network Courses provide teachers in the classroom are just a video, lack of interactive participation, students’ learning enthusiasm is low. MOOC curriculum development processes at doing well designed, from prepare before class to the detailed teaching plan, from the actual operation of feedback to the course of the follow-up arrangements, as well as after-school public communication platform, MOOC has clear process.

Although the existing Network Courses also has some MOOC’s characteristics, such as famous teachers’ effects, rich course materials and improvement curriculum platform, but did not set a huge wave as MOOC. Produce such a sharp contrast on the number of groups of learners, first reason is because MOOC is not only to meet the learning needs of college students, the audience also includes about to enter college learners, researchers learners and lifelong learners, such as different types of roles, a total of nine kinds of learners (Kitsiri, 2014). The second reason is because MOOC prominent feature is showing the charm of a new teaching that organic integration of the learning theory and online education. Such as teacher’s teaching style, “length of online video is suitable for amateur to learn”, curriculum platform can effective links the study and working life, all of which are consistent with the specific teaching of adult self-learning implementation strategy. An important factor to promote student learning into MOOC is the design of MOOC’s “micro curriculum” model implicit “student-centered” curriculum.

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## **2. THE IMPACT TO THE GENERAL EDUCATION CURRICULUM FORM MOOC’S OWN ADVANTAGES**

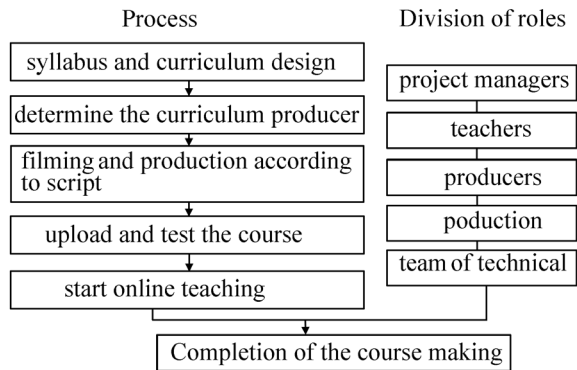
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The promotional of Chinese general education curriculum was from 1990s, it has been experienced by people’s questioned in the medium term. In recent years, the steady development of general education in the process of Chinese localization through the rigors of the time. Since 2012 there is still some of the impact from MOOC

to the international higher education. General education curriculum should not only realize the real bottlenecks in the development of itself, but also need to realize that impact of the MOOC to traditional university curriculum construction, curriculum implementation, curriculum course evaluation and management, etc.. MOOC not only involving many kinds of professional courses, also teaching the contents about general courses, learners can share the rich resources of general education courses online. In addition, the convenience, high efficiency and interactivity of MOOC’s characteristics to attract a part of college students, college students become the main study group in MOOC. Except to face the pressure of professional courses, general education courses will both have to face new challenges from MOOC.

### **2.1 The Refinement Design of MOOC’s Course Is Promoting Its Implementation Efficiency**

Each course opening in MOOC, needs chief teachers, technical team of curriculum production and the resources of colleges such as aspects of the division of collaboration, so MOOC need to spend more human material and financial resources than ordinary online courses. As the cost of making MOOC is higher, in order to attract more learners, the work about evaluation of curriculum, course content ,the expected learning effect and other aspects must be considered carefully before set up a new course. In May 2013, Tsinghua university announced to join edX and set up a MOOC website named “xuetangX online”, not only to introduce and translate the part of the curriculum from edX, also began to independent research and development of MOOC courses. Such as the course that circuit theory, Chinese history of architecture, data structure, cultural relics and Chinese culture, financial analysis and decision-making, etc. Take “xuetangX online” for example to recognize the division of roles and process, and how to set up a course in MOOC (as shown in Figure 1). Before each course set up, teachers have to draw up syllabus and curriculum design, after that project manager arrange all aspects and coordination of school, contact with teachers, curriculum publishing platform, producer, technical team to ensure that the flow of information in the transfer process, supervision the schedule and budget of course production. At the same time, project manager also play the role of “housekeeper”, responsible for timely data analysis and collation course, feedback to the school and teachers, and contact with course publishing platform, curriculum marketing and publicity together to expand the influence of the curriculum. Therefore, the project manager and the chief teacher are the “designer” and “soul” of the course. In addition, the producer is responsible for presenting the course content with a camera and teaching techniques, coupled with division of labor crew of assistant team, course test volunteers, and technical team to complete a MOOC’s course production.



**Figure 1**  
**Courses Production Process and the Division of Labor by “xuetangX”**

Design of MOOC’s course content is concise, accurate, clever idea, makes every effort to finish the learning task within the allotted time. Elements of the course includes two categories, video and the non-video unit: video unit is the main carrier of curriculum content, demo videos can explained handwritten lecture, live action, cartoon demonstration and insert short film project, reflect the course characteristics and teaching style. The unit of non-video is taking charge of the interpretation of teaching, set up a special module, enhance the learning engagement and interactivity, can help the video study. MOOC from development of design in production, therefore, teaching processes are interlinked. MOOC is not a simple “video + choice” course after class, design of a module of the non-video unit has played a very important role in connection.

Compared with MOOC’s research and its development process, set up by general courses may appear a bit casually. According to state regulations content of compulsory courses in political and English is fixed, so the quality of general elective courses more can reflect the true level of the general curriculum of each school. In many universities the tasks of set up general education elective courses are assigned to each faculty or institute, the teachers in each faculty to apply for course according to their professions and interests. This “set up course according to teachers’ attitude” lack the necessary verification link of courses, it is difficult to seize the spirit and requirement whether meet the general education courses offered, so cause a phenomenon that such as fishing technology, jewelry appreciation and so on, this general education courses complete cannot be classified as general education course.

**2.2 Systematic of MOOC’s Course Management Guarantee the Effectiveness of Its Operation**

MOOC as a new model of online education, there are three core elements: platform, course and mechanism. Among them, the platform is the foundation, curriculum is the core, mechanism is the guarantee, three are indispensable. MOOC can be put into the number of learners, in order to ensure orderly conduct of the course, we must set up

a relatively perfect management and evaluation system. First of all, for the requirements of the courses’ completed degree. After signing up for a course, students have to finish the course content in a limited time. Secondly, for the requirements of learners’ participation. Collaborative learning is a very important form of learning in MOOC, the students in the class need to be synchronized to participate, discussions and finish the exercise online. MOOC platform also has a team task of learning and mutual cooperation ways of evaluation. In addition, like the form of “Flipping the Classroom” in MOOC, needy students watch the video and reference Material before class. Teacher focusing on knowledge point, emphasized students self-study ability, improve the efficiency of classroom discussion. Thirdly, for the requirements of curriculum evaluation. MOOC generally have multiple evaluation methods, such as process evaluation, self-evaluation, learning community evaluation and so on. Certificates or credits the learners need course, you will need to pass offline test and artificial invigilation.

Except the compulsory curriculum has special teachers and curriculum arrangement in colleges, students are likely to choose the general courses which adopt by free elective. Because of the lack of the necessary selective guidance and shunt, often appear that easy credit courses and courses teach by famous teacher are full, but the number of students in “to be in disfavor” elective courses are few. Colleges are usually by increasing the number of elective courses to relieve the contradictions of course selection, it is common to see that more than 300 general elective courses in Chinese colleges and universities. The blindly pursuit of the number of courses will inevitably result in course quality landslides, fall into the dilemma of course management .General Courses is usually teach by traditional large-class lectures, there are few opportunities for interaction between teachers and students, lax discipline in class, in order to reduce the students’ studying burden there is few homework after class. Students often cram attitude to deal with. Besides, the evaluation methods are relatively simple, getting a score in two forms by assessment or examination, students often cram for the test. Thus it can be seen, general education curriculum want to achieve expected results, not only need to increase its influence in the course, but also need to strengthen the management in specific ways.

**3. OPPORTUNITY: TAKE MOOC’S RESOURCES AND USEFUL EXPERIENCE TO PROVIDE REFERENCE FOR THE CONSTRUCTION OF GENERAL EDUCATION COURSES**

From the new wave of MOOC, MOOC give the impact and inspiration to Chinese university to reflection how to

utilize the abundant resources and beneficial experience of MOOC and start further exploration. With the Tsinghua university, Beijing university, Fudan university and Shanghai Jiaotong university announced to join Coursera and launched the "Chinese university public class" in 2013, MOOC has become a new impetus to promote the China's higher education internationalization.

### **3.1 Using the Experience of MOOC to Improve the Quality of General Education Courses**

General Education courses are generally taught in the traditional form of large-class, with the development of education technology in recent years, some colleges and universities in China try to launch a number of online general education courses. And use MOOC's characteristics of large-scale and technical meet the needs of students learning in general education courses. Take MOOC of Peking university as example: Peking university has 35 courses on MOOC's platform (include edX, Coursera and "xuetangX online"), involving the humanities, natural sciences and information science, not only included professional course, also included the content of general courses. There are two main modes of teaching MOOC in Peking University: one is the online teaching combine online discussion, teachers have lectures online, students need to complete exercises online and participate in discussions, this form is more suitable for large numbers of students in elective courses. The other is similar to the "flipped-classroom", teachers do not teaching online, class mainly use for discussion and review knowledge point, this form need students familiar with learning materials and self-study before class, this form is suitable for small numbers students in class. Because of identity emphasized, students from Peking university must register on the educational administration system first, and combining with the discussion in the class, learning performance and quality of homework completion, after students through all the inspection and the formal offline examination, can get course credits and certificates. Learners who do not sign up in educational administration system when they are finished all the homework and reach the test level can get a credential. It is worth attention that Tsinghua University's "basic principles of Marxism" have officially commenced in September 2014, has attracted more than ten thousand learners, received good response. The score including online learning (60%) and exam (40%), students can get Tsinghua university's credits by the organization of the offline test.

Although the time of MOOC which developing in China is short, the effect has not yet to test, but a number of Chinese universities as MOOC's "forerunner" provide a new way for the construction of Chinese general education curriculum. Firstly, the importance of education technology development, improve the teachers' information literacy. During the times of information

technology, we must pay attention to integrate with education technology, update and apply theory to practice. Therefore, we approve for universities to carry out and development online course platform, promote students use a variety of social software in online courses for discussion and communication. Teachers should improve their educational information literacy, in addition to their original written skill, courseware making and other skills, they can learn how to use the teaching videos and establishment method, in order to promote the school's online course construction work. Secondly, learning from MOOC's strong point and teaching advantage to promote the effect of a curriculum. Take the advantage of online teaching convenience and efficiency, relieve the contradictions of course selection, let more students can have the chance to participate in the courses which they like. Using the resources of MOOC such as micro video display, animation show to expand and enriched the contents of the classroom teaching and daily teaching. Curriculum evaluation can be involved with the students' homework, online reading and offline discussion, reports and test scores. Thirdly, encourage teachers to adopt by flexible and varied teaching methods, make students learning in many ways. According to the number of students and situation, teachers can combine the daily teaching with online teaching. Students are promoted to participate in the course forum and participate in class discussion between teacher and students, not only to adapt to the general teaching mode of teaching, also learn to use modern education technology for knowledge acquisition through the online course, cultivate students' autonomous learning ability and the ability of knowledge management.

### **3.2 It Is Necessary to Rethink the Weakness of MOOC to Avoid the Same Mistakes in Construction of General Education Course**

First of all, we must keep calm to face the challenges from MOOC and network course. On the one hand, universities should have the courage to accept new things and have the faith to start an education reform. On the other hand, keep cool posture analysis of the pros and cons development experience of MOOC reasonable use. MOOC is still in the early stage, remains to be perfect and maturity, it has a lot problems to overcome, such as credit certification system is not perfect, high rate of drop out and course completion is low (only about 5%-7%) (Zheng, 2014). Learning in simple virtual class, in some aspect it increases the difficulty of monitoring in the students' learning process. For non-native English learners have higher requirement in language, knowledge in online courses is highly concentrated, truly understand the courses need students have a lot of extracurricular expanding supplement. Therefore, we don't need to worry to facing the query that whether MOOC will instead of the traditional university education, because "the creative ideas in their (teachers) mind must through the form of speech or individual

discussions and direct communication with the students to elucidate.” (Whitehead, 2014)

On the other hand, we should avoid to the misunderstanding of “video only”. In order to implement the MOOC, teachers put the main energy in the field of making video, this is also a mistake. Video is important, but the teacher still is the mainstay of the classroom, the key factors of use a video are the work of teachers how to dominate spare time in the class. Having a conversation in class, teachers need to prepare and observe carefully, only in this way teachers can really teach students in accordance with their aptitude. A reason for MOOC’s success is the “absorption” of students that improve the learning efficiency during class interaction. Construction of the online general curriculum, is not a simply that video recording instead of classroom teaching, but the first thing to consider whether the course is suitable for online teaching. In the early stage a new course is needed to design, find some volunteer to test course, the course will open after this preliminary work done. Besides the online attempt, we also should pay attention to students’ feedback information to improve course effect in the daily teaching.

Thirdly, the concept of service is emphasized in curriculum construction. The emergence of “course market” is not an accidental phenomenon, facing the abundant curriculum resources, learners are always tend to choose the course of higher public recognition, authority and the good teaching quality. As a result, high quality is the foundation of general course in the long-term development, at the same time colleges can provide better services to attract more learners. Schools offer online courses focus on the high quality resources for promotion and publicity is the campus, for some normal colleges and universities, the first job is shared with other colleges. It means the school needs necessary financial support and improves the teaching quality of education.

Convenience of technology is another important factor of learners to accept online courses or not. With the development of MOOC, in some degree increased the learners’ digital divide, also a good course platform can make the student who has basic information technology skill in learning progress smoothly. If a course platform has the advantages of fast response, simple operation page, the specific process guidance, and multi-channel interaction, plays a promoting role in learners’ willingness, this is also the basic requirements for online courses. In addition, the standardization of the management and achievement of institutionalized, to ensure the management of normalization and institutionalization of score identified.

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## CONCLUSION

In summary, online course is largely based on the interest of learning, it takes a big challenge to the learners’

learning concept and learning style. The development of economy, the progress of science and technology brings the progress of teaching methods, the education of technology used in the social media tend to be the mainstream, use the new technology to improve the learning efficiency and teaching process is also a trend of education research.

When we communicate with each other, we can never ignore the value of education’s process, in the deep level “communication” the large-scale online teaching of MOOC is far from the traditional classroom. So I think the online general education curriculum can give useful supplement in daily teaching, face to face teaching mode is still the dominant. MOOC is a big reform of the teaching methods in colleges and universities, it is an opening of education resource. We could take an open attitude to accept new learning concept and regard learning as a way of life.

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