Design and Innovation of Online Course Construction in Chinese Universities

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Abstract. Online course is a new thing in the history of higher education development, which provides a brand-new paradigm of curriculum reform for colleges and universities. At present, the main application modes of online courses in China are the conventional MOOC mode, the commercial MOOC mode and the SPOC mode. Combined with the practical experience of online courses, the paper proposes an improvement strategy for online course design. With the deep integration of information technology and education, the construction and application of domestic online courses should be innovated in three aspects: teaching mode, service mode and management mode.

1. Introduction

As a new type of productivity, the Internet is promoting optimization and innovation in all fields, and education is no exception. How to construct an educational ecology suitable for the Internet age have become a major challenge and a common topic for the development of education. Education informationization has become the inevitable response and choice of education to meet the challenges of the Internet era. With the gradual deepening and development of education informationization, education is also moving towards the direction of openness, personalization and intelligence, and gradually entered the stage of deep integration of education and information technology. As a typical practice of educational informatization, online course is changing the traditional educational concept and teaching form.[1] In 2015, the Ministry of Education issued the "opinions on strengthening the application and management of online courses in Institutions of higher learning", guiding universities to make full use of information technology, realize the deep integration of "Internet +" and education, speed up the application of online course construction, and force colleges and universities to improve teaching mode, update teaching methods, and improve the teaching quality in all directions.. How to build online courses has made many useful attempts and explorations in Universities in China. To explore the internal relationship and deep mechanism of the application of online courses in domestic universities, help to understand the differences of educational culture, educational conditions and educational management modes faced by the localization of online courses in Colleges and universities, find the growth point of sustainable development of online courses, and explore the online courses of domestic universities in the era of "Internet +". [2]

2. Application Mode of Online Courses in Domestic Universities

The purpose of building an online course is to use it effectively, and any construction not for the purpose of application is meaningless. Therefore, we must first consider a series of questions: why should we build this online course? How to develop teaching application after construction? There are several common application modes of online course teaching in China.[3]

One is the conventional MOOC mode. This mode is in accordance with the original ideal of MOOC. It is free and open to the public, to achieve the popularization of elite education. Regular online publishing of course video, and organize a variety of online learning activities, according to the scheduled completion of the course teaching. With the increasing number of learners, a corresponding number of teaching assistants should be provided in a certain proportion. Such a
practice is obviously uneconomical or even hard to achieve. Because the dropout rate is too high and the investment is not rewarded, it is difficult to achieve sustainable development.

The two is the SPOC mode. This mode is to introduce the conventional MOOC into schools, open only to students in schools, and the curriculum is generally organized and developed by schools or educational institutions. There are two types: one is pure online learning. That is to say, students can learn independently through online video courses, and complete the exercises arranged in the course, so that they can get a certain credit. The number of such courses can reach several hundred or so. Schools usually arrange a small number of teachers to organize and manage, and sometimes organize a small number of offline communication and interaction. Examinations can be conducted online or offline. However, most of the SPOC based on online learning remain at a relatively shallow level, which is difficult to fully guarantee the quality of learning and largely depends on students' autonomy and self-discipline. The other is the flipped class model. Students not only need to learn online courses, but also must participate in classroom teaching activities organized by teachers to combine online learning with classroom communication, to achieve in-depth learning, the number of people generally in dozens to more than 100 people, assessment and evaluation of the general off-line based. SPOC in school combines the advantages of online learning and off-line classroom teaching, which can effectively solve some problems existing in the conventional course. Its completion rate is very high, the supervision of learning is in place, learning efficiency is high, credit and achievement credibility is also high.[4]

The three is the commercial MOOC mode. This is the mode adopted by some online education companies. In collaboration with renowned school teachers, online education companies have recorded a large number of MOOC videos, supplemented by some self-test questions, and then sold them to other schools for commercial use. Schools that have purchased the courses can carry out either on-line teaching alone or in combination with off-line flipped classes. Its essence is the commercialized operation of SPOC in schools. Because many schools use it at the same time, and have a certain degree of flexibility, it can also achieve the goal of large-scale and open class.

3. Principles of Online Course Design

3.1 Practical Curriculum Contents

How to realize the practicability of curriculum content? First of all, we can introduce learners to the cases closely related to their daily life, adopt task-driven teaching method, introduce the curriculum in the form of questions, and consult, analyze and discuss the case with learners together, so as to construct curriculum content. Secondly, before the beginning of the course, the learners are asked to share their experiences and insights in the forum in the form of tasks, which provide the learners with the opportunity to recall and share their own experiences and understand the experiences of other peers. In addition, you can create online discussions, use discussion boards, videos or audio to introduce cases or share stories with learners. According to this principle, when designing the content of online courses, we should fully consider the problems closely related to learners’ life and experience so that they can resonate with each other so as to stimulate and maintain learners’ interest and actively participate in solving problems.

3.2 Generating Curriculum Resources

Online course learning is a continuous development process. Therefore, the resources provided in the online course must also be generative. That is, resources generated in the learning process. Generative resources in online courses are different from the traditional presupposition resources. It refers to the information formed by the participants in the course of completing the learning activities accompanied by the teaching activities. In the process of learning, any post, journal, assignment, answer and so on may help learners to achieve curriculum goals. The construction of online curriculum resources should be more in line with learners’ wishes rather than teachers' wishes, and should match the teaching process. In online course learning, teachers should not only pay attention to the acquisition of learners' knowledge and skills, but also pay attention to the creation and
development of knowledge between teachers and students in the process of teaching, so as to make curriculum resources develop dynamically and continuously to meet the needs of learners' autonomous learning. Online course resources are constantly formed and enriched in the teaching process, not only for learners to browse, download, but also to ensure that learners participate. The new knowledge, experience, emotional attitude and values produced by teachers and students due to their own understanding in the process of teaching can become curriculum resources, and make students potential developers of online curriculum resources.

3.3 Simplifying Course Content

Throughout the domestic and foreign high-quality online course cases, can better explain and simplify the course content, use simple words to express, and with graphics/images, animation and other elements of learning to present the relationship between content. For the presentation of curriculum content, learners' internal cognitive load should be reduced. Online course design can reduce learners' internal cognitive load from the following aspects:[5]

One is to reduce irrelevant information on screen. Redundant information on the screen will interfere with the learning effect of online learners.

The two is to use diagrams to explain abstract content. Charts can be used as a learning strategy to promote meaningful learning, integrate old and new knowledge and construct a knowledge network, so that learners can grasp knowledge as a whole. Use charts to show the contents of complex courses, making the content intuitive and easy to understand.

The three is to add annotations. Mark the key content and set up reminders to improve learners' learning efficiency. Putting relevant explanatory words in the proper place of the chart can help learners understand the content of the chart, reduce learners' unnecessary guesses about the meaning of the chart, and thus reduce the cognitive load of working memory.

The four is to minimize the curriculum structure. In online curriculum design, teachers should follow the principle of modularization, allowing learners to refine knowledge points and focus on important knowledge in a short time. In other words, the course content should be presented in small modules, each of which usually involves only one point of knowledge and can be explained in 5 to 10 minutes.

3.4 Emphasizing Social Construction

Online course content should be combined with practical information, and provide enough time and space for learners to express their views. When learners cooperate to solve a challenging problem, they will constantly communicate and share ideas to solve the problem. This will not only broaden their horizons and learn to look at the problem from many angles, but also reflect on their own learning methods and ideas and make timely adjustments. The easiest way to guide learner-to-learner communication is that the teacher publishes assignments and tasks on the discussion board and sets the time for completion, requiring the learner to evaluate the views of other peers on the basis of completing the tasks and assignments. At the end of the activity, teachers can comment on learners by discussion boards or email boxes, which can not only promote the communication between learners, but also increase the participation of learners in the curriculum. Communication and discussion can give learners inspiration and improve their thinking. In the virtual environment, the permanent separation of time and space is an insurmountable gap for learners. Therefore, teachers should attach great importance to the communication guidance for learners, and provide various network tools to promote learners' emotional communication and knowledge sharing while effectively solving problems.

4. Innovation of Online Course Construction Application

The advent of the "Internet +" era and the new normal of China's economic development put forward new opportunities and challenges for the reform and development of higher education. The construction of online courses within the framework of traditional education has been unable to meet
the needs of the times. "Internet +" provides internal support for the development of online courses.[6]

4.1 Innovating Teaching Mode

The deep integration of technology and education has always been accompanied by the development of educational technology. With the increasing enrichment of the theory and practice of online course teaching, the current focus of attention has shifted from the emphasis on hardware and resource construction to the effectiveness of online course in practice. As far as the current situation of the construction of online courses in Colleges and universities in China is concerned, the teaching mode of online courses is still based on knowledge transfer strategy and behavioral teaching mode. The era of "Internet +" has a significant impact on the goals, contents, methods, environment, teachers, students and evaluation of online courses. The change of teaching elements drives the innovation of teaching mode. To realize the innovation of teaching mode, it must be solved by the deep integration of technology and education. The innovation of teaching mode in online course should break through the simple superposition and integration of education and technology, and turn to the deep integration of education and technology. First of all, we should overcome the simplicity of the curriculum content and the presentation type of resources. On the basis of emphasizing the richness of resources, we should pay attention to the development and design of curriculum auxiliary resources, so as to better assist students in independent learning. Secondly, we should pay more attention to the interactive design of courses, and provide rich and specific online course platform and operation guide to ensure effective interaction between learners and learning platform. At the same time, attention should be paid to the development and design of diversified learning activities to ensure the interaction between learners and learning resources, teachers and learning partners.

4.2 Innovating Service Mode

Under the background of the "Internet +" era, online courses must be built on the Internet to achieve integration of educational institutions, regional integration and industry integration. Only under the premise of integration can we achieve multi-angle, multi-level, diversified education ecological construction. As the starting point and essential factor of the reconstruction of the digital education ecological system, the Internet has promoted the reform of the main body of running a school, academic subject, educational content and their relations in the education system, and provided the internal possibility to innovate the service mode. The new demand of the new normal economy for the cultivation of talents in higher education promotes the transformation of online curriculum service model to public service from the external aspect. To achieve this goal, we need to achieve breakthroughs in two aspects to achieve the innovation of service mode. [7]First, the construction of online courses in China should adopt the concept of "top-down" and "bottom-up" combination. The government gives macro guidance, policy and financial support, encourages colleges and universities to participate in the development of online courses, and promotes the quality and scale of curriculum construction. At the same time, colleges and universities as the main body, better grasp the actual needs of curriculum applicants; give play to the social service function of colleges and universities. On this basis, social forces are encouraged to participate extensively in the development, promotion, evaluation and application of online courses, so as to form a diversified and sustainable development model of online courses in domestic colleges and universities. The second is to break through the existing higher education system under a single educational institution or university to provide education services independently. Supported by relevant policies, we should promote the synergy and integration between universities and educational institutions, regions, educational industries and other industries.

4.3 Innovating Management Mode

Under the influence of the traditional teacher-led teaching model in China, the learner-centered teaching model advocated by online courses has been restricted to a certain extent. As far as the localization of online courses in Chinese universities is concerned, we should not abandon the foundation of Chinese excellent traditional culture completely and oppose "re-education" and
"re-study", but "re-study" on the basis of "re-education". Firstly, the government and universities should formulate the relevant guarantee system and incentive measures for the construction and development of online courses with Chinese characteristics, create a good environment for the construction of online education, and effectively mobilize the enthusiasm and initiative of teachers in the construction of online courses. Secondly, we should make full use of online courses to carry out mixed learning, flip the classroom and other teaching methods, and give full play to the advantages of high-quality education resources and the guiding role of teachers, to achieve the sustainable development of online courses. Thirdly, it is necessary to set up an efficient teaching team to help teachers get rid of trivial affairs, reduce the workload of teachers in the links of information push, learning support, learning monitoring and learning interaction, so that teachers have more energy and time to pay attention to the learning process of learners and develop deep-seated interaction with learners. Share. Finally, the curriculum construction should be rooted in the real teaching practice, in order to facilitate teachers to express application demands and share experience.

5. Conclusion

Since 2013, with the application and development of online courses in Colleges and universities in China, online open courses represented by MOOC have been widely popularized and applied in Colleges and universities in China. "Application-driven, build-to-use" has gradually become the core of the concept of College Online Curriculum Construction at this stage. At the same time, micro-course, flipped class, SPOC and other online curriculum innovation practice with its applicability and practicality as the focus, rooted in real teaching practice, has become the other beginning of the concept of online curriculum construction in domestic universities. Throughout the development of online courses in Colleges and universities in China, its essence is from the integration of information technology and curriculum to the process of integration and development. The integration of new technology into education and teaching is not only a long-term process, but also a progressive development process, which is deepened with practice and reflection. The foundation of educational informationization lies in education rather than information technology. Only when information technology and education are deeply integrated can information technology become an integral part of the education system and the positive role of education informatization be highlighted.

Reference


