Innovative Research on Mobile Terminal Mode of Mooc Information Platform in Universities

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Keywords: Mooc; Information platform; Mobile terminal; Mode innovation.

Abstract. Aiming at the characteristics of mobile terminal of mooc platform and the problems in existing mode and operation mechanism, this paper puts forward some innovative suggestions on the establishment and development of mooc mobile terminal of mooc platform in universities. On the basis of the related concepts and theoretical research on mooc, this paper analyzes the structure and characteristics of mooc information platform. This paper analyzes the changes in the number of users of the mooc platform in Chinese universities, takes “xuetang online” as the research object for concrete instance analysis, finds problems in the existing model, and proposes specific innovative suggestions on the mobile terminal model from the four aspects of course content, teaching method, course guidance tool and course assessment.

Introduction

Mooc, large-scale open online courses, is a new teaching model. In this model, the teaching process of the lecturer is made into video form and the course with teaching, interaction, test and other modules and the corresponding courseware are published on the Internet for all learners who can use the Internet to connect to the Internet to learn from for free[1]. Mooc has developed rapidly since it appeared. At the same time, its development has brought great challenges to the traditional face-to-face teaching model on campus and also exerted a significant impact on the in-depth development [2].

Information Platform of Mooc in Universities

Information Platform

Figure 1. The Structure of Information Platform of Mooc in Universities.
The Structure of Information Platform. The combination of mooc and information platform is large-scale online course learning platform. There are a large number of quality courses on the platform, which supports a large number of online users to use for free[3]. The platform is built by institutions such as universities and university associations, which explore high-quality courses and make them into video forms and upload the additional courseware to the website. The users of the course are students, teachers and various social workers with learning needs.

Features of the Platform. As a new teaching mode, mooc is well known for its characteristics of being free from time, place and space. In the specific implementation, the combination of universities and "mooc" lets us see more potential and advantages of mooc[4].

(1) Flexible Time
Learners can learn the courses they need or are interested in at any time without any restrictions. They can make full use of all kinds of fragmentary time to learn a lesson for about 5-15 minutes, which is very consistent with the characteristics of using fragmented time for learning in the age of big data[5]. Learners can use the limited time of fragmentation to recharge their learning.

Compared with traditional classroom teaching, mooc also has the advantage that learners can repeat the key contents in the class at any time and place and record the key contents temporarily.

(2) Good experience in class
Compared with the past open online courses, mooc has the characteristics of pertinence and customization. For the content in the class, students no longer feel that the teacher is teaching others, but the teacher is teaching you one-on-one and face-to-face. This kind of class experience is what the online open class could not bring to individuals in the past. It is not what the traditional class can bring.

(3) Location free
No matter be in any place, as long as learner's equipment has network function to be able to undertake good quality study process. There is no need for learners to sit still in class, which not only saves unnecessary time and money in the learning process, but also meets the learning requirements of some students who cannot come to class.

(4) Test the learning results at any time
The course setting is targeted at students to explain a certain question, so that students can clearly understand their learning overview and status and have a further understanding of the course[6].

(5) High quality and low price
If the learner does not take mooc for a certain degree or for a specific purpose, the study in mooc is free. If the learner wants to be officially accredited by a top international institution, the course may be charged a fee. But the cost is less than a fraction of the cost of the traditional education investment in universities. There are also free courses and paid courses on some platforms, so learners can choose courses that suit them according to their actual needs[7]. Mooc that is priced or even free is changing the scarcity of high-quality education resources in China, providing a quality learning platform for learners from all walks of life and from all walks of life.

(6) A wide variety of courses
There are numerous courses on the mooc platform in universities, including not only practical subjects but also less popular subjects such as philosophy and neo-confucianism, covering various fields such as computer, history, physical education, literature, management and art.

Mooc in universities has caused a great impact in the world with its advantages. However, the new teaching mode of mooc is not without shortcomings and there are still many problems to be solved in real life. According to the statistics at the present stage, mooc has gradually realized the sharing of high-quality teaching resources but there are still many shortcomings in teaching practice. For example, only a few students can complete the learning tasks according to the plan and students' utilization rate of resources is still low.

Making mooc need to be supported by professional technology. A mooc course cannot be completed by one person. IT requires the active cooperation and joint work of photographers, teaching designers, IT experts and platform experts. A professor at Tsinghua University said in a
report that the mooc course they offered was co-produced by 16 people but felt inadequate. Of course, that doesn't include people like teaching assistants who help students. So the cost of a course is huge.

Practical courses are not available. While vigorously developing remote education, the disadvantages of remote education itself cannot be ignored. Mooc can provide a more convenient way for students to learn, but for courses requiring practical operation, the remote education provided by mooc does not allow students to experience the fun of experiment and practice. If students continue to learn in the form of video, students' interest in learning will inevitably be reduced and affect the improvement of students' practical ability even lead to the phenomenon of “paper talk” with solid theoretical foundation but poor practical operation ability.

It is difficult to guarantee the authenticity of evaluation and test. In the traditional classroom teaching mode, teachers can assess students' mastery through classroom discussion, extracurricular tutoring, writing papers, quizzes and exams. But internet-based mooc are hard to do. For this reason, both the mooc suppliers and the mooc teachers have made arduous explorations, but the results are not good. One of the biggest difficulties is that students' dishonest participation in the evaluation cannot be effectively avoided. Learners involved in the test said it was easy to use search engines such as baidu to find the correct answer.

Students don't interact well with teachers. Although students and teachers are face to face in mooc but they do not appear at the same time. The teacher could not answer the students' questions in time and could not understand their real thoughts. In the traditional classroom, students can actively speak when they encounter problems so that teachers can understand students' ideas in the teaching process and make appropriate adjustments according to students' characteristics.

Innovative Analysis of Mobile Terminal Mode of Mooc Information Platform in Universities

Innovative Background of Mobile Terminal Mode

Nowadays, mobile terminals are attracting more and more attention, not only because of the popularity of mobile terminals, but also the progress of communication technology. However, the convenience and network features of computer terminals are inferior to those of mobile terminals. Mobile terminal mooc platform supports learners to learn contents they are interested in at any time and any place, which greatly improves the learning efficiency and makes effective use of small time that is not usually noticed to recharge knowledge.

However, there are still many problems in the operation of mobile terminal devices. Mobile terminal is simply to transfer the courses on PC to mobile terminal. But it is not adjusted and innovated according to the changes of devices. Therefore, the innovation of mobile terminal mode should discard the disadvantages of PC terminal, solve existing problems in the operation of mobile terminal, fully improve learners' learning effect and truly give play to the advantages of mooc.

Compared with PC terminal, mobile terminal has the feature of rich situation and breaking the limit of time and space. The mobile terminal mode should be set to give full play to mooc mobile terminal advantages.

The Concrete Analysis of Mobile Terminal Mode Innovation

The Main Content of Course. In view of the problem of unreasonable curriculum setting in the existing mode, the curriculum setting and classification should be scientifically divided. Chapters should be presented in a concise manner in the table of contents, not simply divided into unit 1 and unit 2. This not only saves the time for learners to find key chapters, but also increases the logical feasibility of the course.

Due to the characteristics of mobile terminal users and devices, we should make flexible changes of courseware and class hours according to the characteristics of mobile terminal. The mobile terminal does not have a large display screen and students do not have to worry about traffic expenditure. So the courseware and video can’t just copy the traditional face-to-face teaching mode, but should be reduced appropriately. In making courseware, make sure people can see clearly when using mobile devices.
The feature of mobile terminal is moving. So for courses in the form of video, audio version can be launched according to the characteristics of the course to help learners achieve the purpose of learning when it is not convenient to watch video. In this way, it can also improve the utilization rate of the course and enrich learners' leisure time.

**Teaching Method.** The characteristics of the synchronous mooc mode require the students to complete the courses within the specified time before they can obtain the official certification, which means that the learning mode has no real advantage of the mode anytime and anywhere. It is not good for some participants who have flexible hours and want to dominate their learning practice. Therefore, synchronous mooc and asynchronous mooc can be combined to satisfy those with irregular time and create more real virtual classes.

**Course Guidance Tools.** It is necessary to improve the stability of the course operation and the periodic memory of the course learning. Sometimes, there will be various emergencies such as disconnection from the Internet. At this time, if the course starts to play again, it will often happen from the beginning, which will waste the time of learners. To enhance the memory of video play, learners can choose to play from the time of disconnection or start from scratch.

Compared to the PC, almost everyone in mobile uses their own devices to learn. Each device has distinct personal characteristics. In this way, the background can better summarize the curriculum preferences of each person in the process of operation and carry out personalized and customized push according to the preferences of learners, saving the time spent by learners to collect their favorite courses.

**Course Assessment.** Learners should answer the questions independently and take the test in good faith. We should actively carry forward the spirit of honesty in examination, strengthen the background monitoring and avoid the situation that students adopt improper means to answer questions in order to pass the test.

In order to give full play to the advantages of mooc information platform that is not restricted by time and space, this paper proposes the following Suggestions for mooc information platform mobile terminal mode innovation:

1. According to the characteristics of mobile terminal, change the courseware and duration of the courses on the information platform.

Mooc is a situational online course designed for independent knowledge with video as the carrier. In order to achieve a good learning effect, new ideas should be introduced in the course setting.

The first is to design the teaching content scientifically. In order to break the traditional assembly line teaching mode, the course system should be reconstructed according to the knowledge module first and the course should be divided into several relatively independent knowledge points. In this way, learners can learn according to their specific needs and improve the accessibility of the course without wasting time in unnecessary courses.

The second is to minimize the size of courseware. The mobile terminal is free from the limitation of location, which means learners should use their mobile data to view the course in areas without wifi, so this should be taken into consideration in the course courseware setting. On the premise of ensuring the effect of watching, the makers try their best to reduce the size of the course and save the flow cost of learners as much as possible.

The third is to make short and concise course video. In order to fully consider students' attention to lecture, the course should be fragmented. Video corresponding to each knowledge point should be about 8 minutes, which requires the course production team to make more efforts in video content design of each knowledge point.

2. Improve the quality of platform background operation.

Good background operation and technical support can not only guarantee the learning quality of learners, but also reduce unnecessary trouble for teachers. Teachers should timely communicate with the backstage operation management team according to their own problems in teaching and the problems reflected by students. The operation team should also solve the problems found by teachers and students in time and constantly improve the construction of each course. At the same time, the back-end run team should also strictly test everything on the platform. In addition, the
design of the platform should be simple, intelligent and easy to operate. The convenient operation can attract older teachers with rich teaching experience to participate in the curriculum construction. Intelligent operation can not only reduce the workload of teachers, but also bring convenience to students.

(3) Increase communication channels.

The first is to add the barrage function, which ensures that students share their immediate problems and feelings during the real-time promotion process of video course. Learners can see other learners' feelings and problems and have a deeper understanding of the content of the course.

The second is to add a learner exchange area. In many courses offered by mooc, students ask questions based on their own doubts, and the teacher team will answer them in the discussion area. However, this mode of communication is too single, and teachers often do not have enough time to answer every student's questions. So setting up communication areas can make learners help each other. Since both of them are learners, they can analyze problems from the same standpoint and angle.

(4) Make personalized course recommendations.

Most learners will use their own mobile devices to learn mooc courses, so the back end of the platform can analyze learners' preferences based on their browsing history. When the courses are updated, the back end can push them to help learners timely accept the content they are interested in.

Summary

Mooc, large-scale open online courses, is a new teaching model, which has aroused hot discussion since its emergence. Based on the advantages of the mooc platform, many colleges and universities have actively developed the mooc platform of each school during the upsurge and established the university alliance to jointly build mooc platform. With the increasing number of mobile terminal users and the advantages of mobile terminal that is easy to carry and view at any time, the mobile terminal construction of mooc information platform in universities is attracting more and more attention.

Aiming at the characteristics of mobile terminal of mooc platform and the problems in existing mode and operation mechanism, this paper puts forward some innovative suggestions on the establishment and development of mooc mobile terminal of mooc platform in universities. On the basis of the related concepts and theoretical research on mooc, this paper analyzes the structure and characteristics of mooc information platform. This paper analyzes the changes in the number of users of the mooc platform in Chinese universities, takes “xuetang online” as the research object for concrete instance analysis, finds problems in the existing model, and proposes specific innovative suggestions on the mobile terminal model from the four aspects of course content, teaching method, course guidance tool and course assessment.

Acknowledgement

National Natural Science Foundation of China (NSFC). China Postdoctoral Science Foundation.

References

