Design and Implementation of the Online Teaching Evaluation System for Blackboard Platform

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Abstract. With the development of national quality course construction, the construction of network course is also spread in various colleges and universities. Many schools have introduced the Blackboard platform (Blackboard platform for short), which can support millions of users, to develop online courses. At the same time, the evaluation of online courses has become an indispensable work for each school to standardize the construction of online courses. However, the author found that most schools still adopt the traditional method when evaluating the network excellent courses: experts fill in the form and staff make statistics. In view of this, this paper analyzes the significance of achieving online course evaluation based on Blackboard teaching platform, focuses on the Blackboard platform to build the course evaluation system objectives, design ideas and evaluation system module structure, and combines specific development and application practice. This paper introduces the work flow of building network course evaluation system by using Blackboard platform "self test and peer test" tool.

Keywords: quality course · Online courses · Curriculum evaluation system · Teaching platform

1   Introduction

In the implementation of national quality courses, various colleges and universities have also started the construction of online courses. Many schools have introduced Blackboard, an online platform that can support millions of users. At the same time, the evaluation of online courses is also an indispensable part of the construction of standardized online courses. However, the author believes that most universities still adopt the traditional way when evaluating the high-quality online courses of colleges and universities: experts fill in the forms and staff make statistics. This method of assessment is neither efficient nor environmentally friendly, nor does it conform to modern educational methods of online courses. Using Blackboard platform for evaluation can effectively save resources, save costs, and effectively improve the accuracy and effectiveness of evaluation. To solve this problem, the author has conducted a practical discussion on online course evaluation in Guangzhou City Vocational and Technical College through the mode of "self-evaluation and mutual evaluation" on Blackboard platform.

It is necessary to standardize the online standard and module division of the network excellent course resources in colleges and universities, and to achieve the online standard and module division of the network excellent course resources through the standardization and network management of the network excellent course resources, and to establish a set of perfect network support platform, so as to realize the unified network management of the network excellent course resources from declaration, evaluation to maintenance and application. Could this be a re-establishment of a reporting and evaluation system? Through the study of Bb, we can conclude that Bb's teaching system has a function of "self-evaluation and evaluation", which is originally intended to strengthen the feedback of students' learning strategies. Self-evaluation and mutual evaluation are divided into two stages: grading and written evaluation, while teachers in large classes can get more information from both aspects. In the process of study, they can get some useful suggestions from their classmates' feedback. The assessment can be conducted freely to ensure fairness. It is a prerequisite for teachers to evaluate students effectively. The evaluation of online teaching generally includes two aspects: one is the evaluation conducted in online teaching activities, aiming at improving and improving the teaching quality of online teaching [2]; The author puts forward that the important role of Bb platform in the evaluation of online quality courses is as follows: (1) Through the existing online teaching platform, online teaching quality evaluation can be realized without the need of new system construction; (2) There is no need to carry out key assessments at the same time and in the same place, which can save the work and money of professionals; (3) During the designated evaluation period, professional personnel can be online at any time to increase the effectiveness of the work; (4) The statistical ability of Bb network is very strong, especially in the test score center, whose statistical results are safe, accurate and easy to save, which is not available in the conventional assessment method [3].

2 Possibility and Significance of Online Quality Course Evaluation Based on Blackboard Platform

In fact, after the construction of online courses, some high-quality courses are formed by improving the existing online courses, which is the so-called "high-quality courses". Relying on Blackboard platform, Ocean University of China and Sun Yat-sen University have achieved certain achievements in the process of creating national high-quality courses [1]. Does this mean that we need to re-establish a system of declaration and evaluation? Based on the analysis of the Blackboard platform, this paper concludes the Blackboard platform's own "self-evaluation and evaluation" function, which was originally designed to strengthen the feedback of students' learning strategies. Self-evaluation and mutual evaluation mainly consist of two stages: grading and written comments. Teachers in large classes can better grasp students' learning status based on the feedback from the two aspects. For students, they can get some constructive suggestions from their classmates' feedback. Evaluations can be done selectively to ensure fairness.
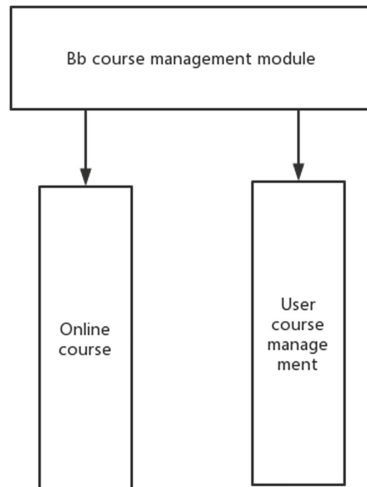
Fig. 1. System integration structure

3 Construction of Online Course Evaluation System Based on Blackboard Platform

3.1 Design Objectives and Ideas of Evaluation System

At present, many universities have a large number of online courses on Blackboard platform, and through various forms of assessment, access to a large number of excellent online teaching resources, or choose to participate in off-campus competitions or teach for other teachers. However, assessment in many schools is still carried out in the form of a pool of experts. According to the specific requirements of the Implementation Measures for the Construction of National Quality Courses and the actual situation of our school, this paper has formulated relevant standards and norms. Using the existing Blackboard platform and featuring "platform + module", an integrated system for management, maintenance, application and evaluation of online quality courses has been established. The structure is shown in Fig. 1.

3.2 Construction of Evaluation System

Online evaluation is the inevitable trend of the development of online course evaluation, and online course is based on the Internet development and application, how can miss this platform? On this basis, an online course evaluation system based on the black box platform is established, which includes three levels: infrastructure, management and user. The architecture of the system is described in detail in Fig. 2.

(1) Infrastructure layer

Blackboard platform has laid a solid foundation for the establishment and improvement of the evaluation system of online quality courses. Blackberry teaching software
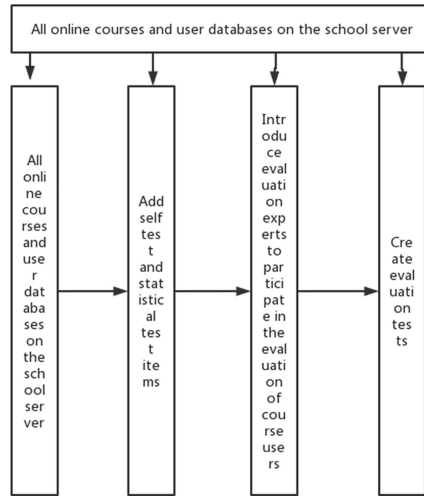
Fig. 2. Model of online course evaluation system

through a self-defined way to achieve unified authentication of users, avoid multiple systems repeatedly login, improve the speed of the system; Considering the secure communication between different systems, a seamless integrated environment is realized. In order to carry out "online quality" course evaluation work, the hardware, software and technology have a good support. This system realizes all online teaching and user database on campus server, and has the ability of automatic management.

(2) Management

On the Blackboard platform, the platform management personnel first established a website named "online course process Review (Price)" (hereinafter referred to as "evaluation course"), the website is a website, mainly used for evaluation of online courses, including evaluation criteria, evaluation process, entry evaluation and so on. Using its own "self-test and peer test" software, in the second type of the establishment of "self-assessment and mutual assessment" for online teaching evaluation; This "review course" brings professional and evaluative users to the console; Establish assessment items in Self-testing and Peer Tests for professional marking and written comments.

(3) Use layer

At designated intervals, participating students are allowed to self-assess their courses, the first phase, after which the system will set the platform as students who are not allowed to take the exam, and then proceed to the next phase of "expert evaluation," in which the subjects are graded and commented on by professionals. At the end of the professional assessment, the marks and grades for each subject can be queried in the Marks Management system. The network evaluation can accommodate all participants, and the evaluation process is more transparent. The effect of the evaluation can be viewed in real time in front of teachers, which provides a basis for future teaching reform.

3.3   Workflow and Implementation of the Evaluation System

The design process of expert online evaluation system is shown in Fig. 3.

The online evaluation system of network courses is mainly realized through three steps: (1) system deployment. First of all, complete the creation of the homepage of "evaluation course", add self-evaluation and mutual evaluation items, register expert users and participating users to the homepage, and establish the test questions.

Online review, as shown in Fig. 4.

Email the user name and initial password of the expert. Log in to Blackboard platform, "Online Course Review" will be displayed when registering for the course. Select the "Expert Review" button from the navigation on the left side of the course homepage to enter the evaluation course. Evaluate and score the self-evaluated courses according to the evaluation criteria, input comments in the feedback box, and save the submission. Complete the above operations, return to the previous level, continue to the next course evaluation review. (3) Automatic unification. After all the evaluation is finished, the system will automatically control the score in the achievement center.
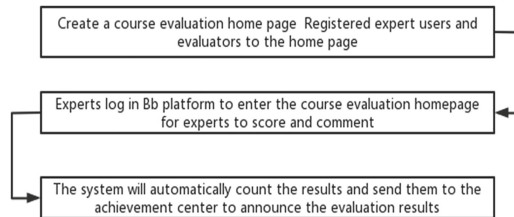
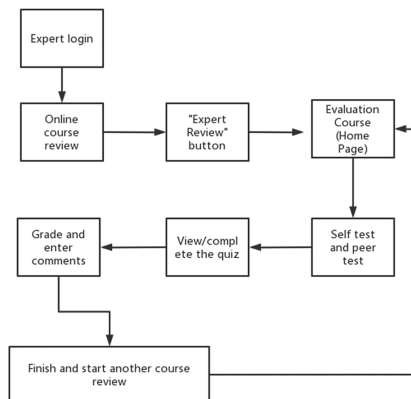**Fig. 3.** Workflow of the evaluation system

Fig. 4. Online review process

4 Conclusion

With Blackboard, the online course evaluation system can be integrated from the aspects of online course application, course approval, course evaluation, course management and maintenance. On the one hand, the construction results of online quality courses can be presented, and the evaluation mechanism of online quality courses can be optimized for expert review; At the same time, through online application, online teaching resource evaluation, online publicity and other ways, it is also helpful to improve the fairness and transparency of online quality course evaluation. In addition, the system can not only evaluate the online courses, but also provide an expert demonstration and evaluation system for the establishment, acceptance and achievement evaluation of the school's scientific research projects. At the same time, it can also carry out the project management of the school's fine courses, which has great reference value for the school's teaching and research work.

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