Application of WeChat Public Platform in College Blended Teaching

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Abstract: The blended teaching mode can integrate the advantages of traditional classroom teaching with the advantages of massive online teaching resources in the context of mobile internet, thus maximizing learning efficiency. Based on the WeChat public platform, this paper designs an online learning platform suitable for blended teaching mode, expounds its system architecture, main functional modules and usage scenarios, and provides useful reference for the practical application of blended teaching in college teaching process.

1. Introduction

The blended learning model is mainly aimed at the lack of effective after-school tracking methods for the traditional classroom teaching mode, which is single and cannot effectively utilize modern information technology and students' social network resources. The blended learning model requires students to be the center of the whole teaching process, focusing on the construction of open, shared and discussion-oriented teaching resources, finally achieving diversification and individualization of learning, which is in line with the new trend of higher education reform and social development trends [1].

Through literature research, it is found that the current research on blended learning is divided into two major directions, namely theoretical research and applied research. Theoretical research mainly focuses on solving three Ws, namely "What (what is blended learning)", "Why (why do blended learning)" and "Which (which factors are mixed)" [2], for these three problems the academic community can basically reach an agreement. Compared with theoretical research, scholars are now more enthusiastic about applied research, and the current application research mainly has the following two problems. Firstly, researchers generally pay more attention to process design, and ignore the analysis of application effects. Secondly, most of the online platforms selected by the current blended teaching are based on the existing MOOC class video websites. The resources are relatively single and the information is complicated and cannot be deeply integrated with the specific teaching courses. In contrast, the current popular new platforms are rarely used in blended teaching, especially mobile Internet applications represented by WeChat, Weibo, and mobile APP. This shows that in the application research of blended learning, the selection of learning platforms still needs to be innovated, and the design and development of the platform needs to be improved [3-5].

Based on the above research results, this paper proposes a blended teaching model and application platform based on WeChat public platform, in order to solve the above problems and promote the practice and application of blended teaching.

2. Development of teaching mode

2.1 Traditional teaching

In the traditional teaching mode, teachers, textbooks and classrooms are the center of teaching. during the teaching process, teachers mainly write syllabus and lesson plans in advance with

reference to the content of textbooks. Students are given face-to-face explanations and indoctrination according to the plan, and students are passively accepted. The shortcomings of this teaching model are very obvious, because the ultimate goal of teaching is to enable students to master and apply relevant knowledge, but students who are cognitive subjects in this mode are always passively accepting knowledge throughout the teaching process. In addition, the current distribution of college students is more intensive, and the speed of class is much higher than that of the middle school period, which makes it easy for students to lose the enthusiasm for learning, thus losing the initiative of learning and forming a vicious circle. On the other hand, in the traditional teaching mode, the guidance and related materials that students can get before and after class are very limited. For the content that is not timely absorbed in the class, it is easy to form a knowledge gap, affecting the next stage of learning, and thus affecting the overall learning result.

With the rapid development of the economy and society, the society will have higher and higher requirements for talents. Students must not only master the limited knowledge taught in the classroom, but also need to learn more about employment and further study, and improve creativity and innovation. Teaching mode is even more difficult. Therefore, it is imperative to change the traditional teaching mode and create an efficient classroom model that adapts to the new situation.

2.2 E-Learning Teaching

E-Learning, or Electronic Learning, emphasizes the use of digital information and Internet technology to guide education implementation. With the popularity of the internet, the online learning environment contains more and more data, archives, programs, teaching software, interest discussion groups, news groups, video open classes and other learning resources, forming a highly integrated and integrated resource library. E-learning provides learners with a new way of learning that enhances the feasibility of learning anytime, anywhere, thus providing lifelong learning [6].

As can be seen from the above introduction, E-Leaning relies heavily on internet technology to build an online learning environment, trying to move traditional teaching to the internet, so that everyone can choose their own learning resources for more efficient and personalized learning. This kind of thinking solves the problem that the traditional teaching mode has few resources, lack of individuality, and students' interest in learning. However, it is unrealistic to use the E-Leaning mode to completely replace the traditional teaching mode. Firstly, the quality of resources in the network environment is uneven, learners do not have enough professional ability to distinguish between good and bad resources; secondly, there are few systematic resources to make learners gradual, but may reduce learning effects; The instructor's targeted guidance will also greatly reduce the learning effect.

2.3 Blended Teaching

As E-Leaning gradually entered a low tide, people's reflection on the purely technical environment made blended learning quickly become a new hot spot in the field of education. Blended teaching is an online plus offline teaching that combines the advantages of online teaching and traditional teaching. Through the organic combination of the two teaching organization forms, the learner's learning can be led from shallow to deep learning, forming a knowledge system. Professor Curtis Bunker of Indiana University in the United States gave the following definitions of mixed learning in his "Mixed Learning Handbook": Blended learning is a combination of face-to-face learning and computer-assisted online learning. Professor He Kejia redefines the concept of mixed learning in combination with China's specific research practice. He believes that blended learning is "to combine the advantages of E-Learning advantages of the traditional way of learning together; the initiative is necessary to play a teacher guide, inspire, monitoring the teaching process leading role, but also fully embodies the student body as a learning process, enthusiasm and creativity [7]. In the blended teaching, the formal learning in the class can be combined with the informal learning outside the class, and the systematic learning method in the class can be combined with the learning method of the extra-segment fragmentation. The learner's self-learning is combined with the team's collaborative learning. It can be seen that the mixed learning approach is very flexible, able to meet the different needs of the learners, helping them to gain better learning results in the learning process.

3. System Design

3.1 WeChat public platform

WeChat is the most widely used social software in China, and the WeChat public platform, is divided into three types: subscription platform, service platform, and enterprise platform. It is attached to WeChat and provides information and sharing to individuals or enterprises. Processing platform. It has a built-in browser core that can access web pages or customize menus to some extent instead of mobile apps. WeChat public platform has been widely used as soon as launched. It has a wide range of applications in all walks of life, which greatly facilitates the daily life, operation and office of businesses, enterprises and individuals. Using the characteristics of the WeChat public platform to build an online platform for blended teaching has the advantages of easy access and high user dependency [8].

3.2 System architecture

In addition to the simple use of WeChat's own friends chat, WeChat group, circle of friends, link sharing, etc., the teaching platform can also be customized with the officially developed secondary development SDK to better integrate with the blended teaching mode. This paper mainly introduces the second type of mode. The functional modules of the system are shown in Figure 1.
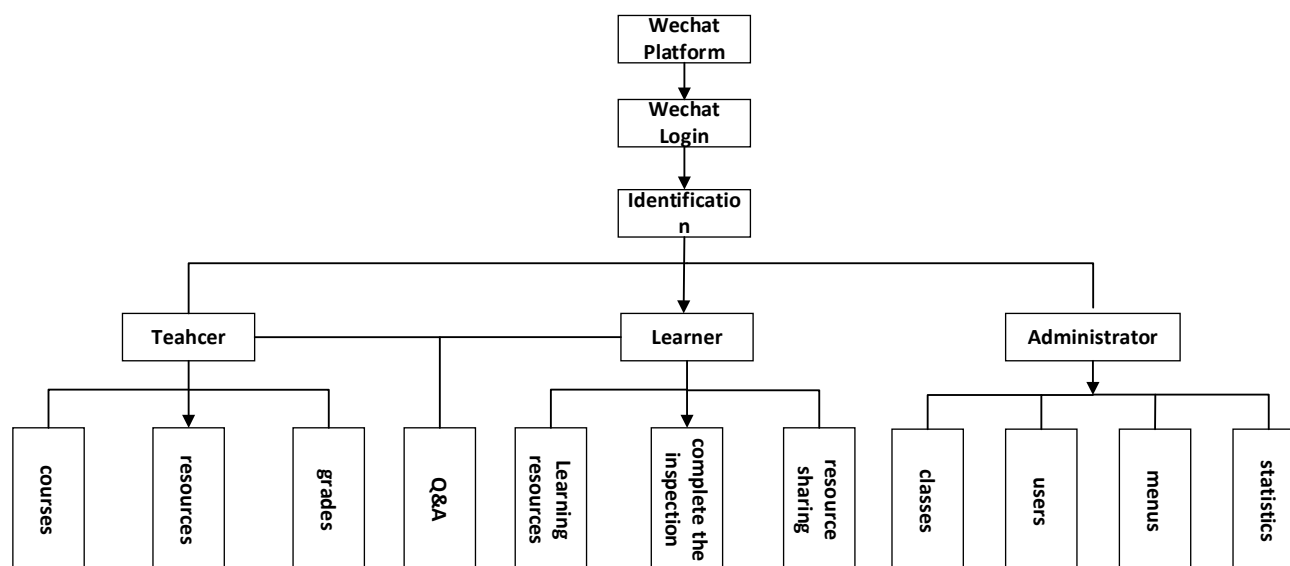

Fig. 1. The architecture and models of the system

After entering the public platform, what need to do first is to use WeChat to bind the student or teacher number information. After complete the binding for the first time, users can enter the system whenever they need without binding. The platform judges the user's role through the user data pre-stored in the background database, and enters different pages to complete different functions. The system is divided into three roles: teacher, learner and administrator. The functions and interfaces are diverse from each other.

3.2.1 Teachers module

Teachers use the system mainly to complete the course, the maintenance of resources, the release and the score of the results, as expounded below.

(1) Course management. Firstly, establish the basic information of the course, such as the course name, course description, course objectives, assessment methods, etc. After saving these information, the class that has been imported in the system will be associated. teachers can also modify the information, stop the class and do other operations on the course they have created.

(2) Resource management. Resources include text, audio, video, pictures, hyperlinks, word attachments, etc. After editing the resources, select the courses to be linked for publication. After the

release, all students in the class corresponding to the course are released can view resources. Teachers can choose to make the resource public so that the resource is visible to all logged in users. In addition, teachers can set up assessments in the resources. As for the content of the assessment, students must answer and submit them in the system.

(3) Grade score. The assessment content of the release will be fed back to the teacher after the student submit. The teacher can score the evaluation as a reference for the learning effect and a reference for the final grade of the course.

3.2.2 Learners module

After learners log in, they mainly completes the study of learning resources, the assessment of the assessment content, and the sharing of existing resources.

(1) Resource learning. Learning for the learning resources released by teachers, the forms may be pre-study before class, review after class or supplement and expand for classroom knowledge points. The system can record the process of learners' learning.

(2) Respondence. For the content of the assessment issued by the teacher, these assessments may be published in the class or under the class. The student must complete and submit the answer within the specified time according to the teacher's request. After the submission, the teacher can score to understand the student how well they master the knowledge of the corresponding knowledge points.

(3) Resource sharing. Learners can also upload and share the review materials related to the course in the class. The resource sharing published by the learners need to be reviewed by the teacher before they are visible to others.

In addition, teachers and learners can also use the platform to conduct interactive discussions and Q&A on a certain resource and topic, and the system can record the discussion process.

3.2.2 Administrator module

The administrator mainly completes class management, user management, custom menu management, and statistical analysis.

(1) Class management. The administrator can add, delete, and modify all classes in the school, and also export the class information from the educational system and import it in our system. After the class information is perfected, the student information corresponding to each class should be managed and maintained accordingly, so that teachers can associate with the class while maintaining the course.

(2) User management. Maintain the account and basic information of the student user and the teacher user, and perform operations such as user disablement and password reset, and handle problems related to the user's login and use of the account encountered in the system.

(3) Custom menu. The custom menu function of WeChat public platform is greatly convenient and can enrich the functions of the system based on the customizable nature of the public number system. The WeChat public account supports up to 15 menu items. The administrator can adjust the menu at any time according to the system usage, which improves the flexibility of the system.

(4) Statistical analysis: Through the system background administrator, the statistics of the number of resources, the number of classes, the class of courses, etc. can be counted, and the relevant results, such as the assessment results, can be exported and printed, making the system more convenient and flexible. Moreover, the system itself can be optimized and adjusted based on statistical results and user usage.

4. Summary

This paper expounds the development of the blended teaching mode and the teaching idea, which takes the real classroom teaching as the center and uses online learning as an auxiliary means, and makes complementary with each other and multi-method integration in order to enhance the teaching effect. Based on this idea, an online learning platform based on WeChat public platform is proposed. The system architecture, function modules and usage scenarios are elaborated, which provides useful reference for the teaching design and practical application of blended teaching.

In future research, we will implement the platform with web design language such as PHP and JavaScript based on the architecture mentioned above and put it into actual teaching for testing and optimization.

Acknowledgement

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