

Design and Implementation of Moodle Teaching Platform based on Hybrid Teaching Mode

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Abstract: The core of educational normalization is the deep integration of information technology and education and teaching. Based on the curriculum design of distance and open education, this paper combines Moodle, a popular curriculum design platform, with a hybrid-teaching model. From the complementary of online learning and face-to-face tutoring, this paper clarifies the inherent relationship of the hybrid-teaching mode. This paper puts forward the principles of Moodle curriculum design in accordance with the teaching mode of distance and open education, analyzes the design process of Moodle network course, and hopes that this paper can be a good starting point for the extensive open education teachers to carry out in-depth research.

1. Introduction

Modern information technology seems omnipotent, the crux of the problem is demand and application. The process of educational normalization in National Open University is the process of making clear the practical demands of education and teaching and realizing the two-way integration of technology and education seamless integration and deep integration by means of modern information technology. The course system construction of distance and open education is an innovative process, and curriculum design and development is an important content of curriculum system construction. This position requires teachers to be able to adopt new types of Design tools and advanced teaching ideas for curriculum design and development, constantly promote the process of education information. The teaching mode of distance and open education is a typical hybrid-teaching mode. Hybrid learning is not a simple addition of classroom learning and online learning, but a combination of the advantages of classroom learning and digital or networked learning. Moodle, with its advanced design concept, powerful function and flexibility of realization, becomes the preferred curriculum design platform for hybrid learning mode.

With the wide application of information technology in teaching activities, the demand for information teaching platform in colleges and universities is no longer to meet the main goal of auxiliary teaching, and the teaching platform has given more functions. Students' learning progress, online homework completion, online examinations, online learning discussions have become the focus of attention of teachers and students. In order to ensure the effect of students' online learning and to cultivate and improve the students' ability of autonomous learning, it is necessary to analyze and study the specific teaching mode and teaching methods, and to design a suitable teaching platform. Through the design of the mixed teaching platform, this paper realizes the study on the student line and the traditional teaching activity. Total management of movement from the practice of mixed curriculum reform in colleges and universities, it proved that this research is feasible. The main contents are as follows: (1) A complete student learning center is designed by analyzing the needs of hybrid teaching. From the point of view of demand, this paper designs learning activities such as online learning, traditional classroom learning, online examination, online homework, learning exchange and so on. This paper changes the model of the network-learning platform, which is purely curriculum centered, regards learners as the center, and realizes the students' autonomous learning and self-management in the mixed teaching environment. (2) Through the design of the hybrid-teaching platform, the traditional teaching and online learning realized on the teaching

platform. The design of the curriculum is more in line with the teaching process, the teacher arranges the students' online learning and traditional classroom teaching according to the order of the learning activities, and the students understand the learning objectives of different stages through the learning schedule management module. Teachers' evaluation of students' learning is more comprehensive. The online evaluation includes students' online learning, classroom learning and interaction. (3) The system adopts Moodle as the development platform, according to the modern software engineering design idea, through the requirement analysis, the system modeling, the system realization, the system test and the deployment process. . Through the design of each function structure and data flow, the functional requirement of each function module described, and the concrete design idea and function flow are forward for the function module of the hybrid-teaching platform. The learning center includes my curriculum, learning progress, my homework and exams, grades and related posts and other modules. (4) Moodle teaching platform based on open source has an open interface, which provides great convenience for the development of hybrid teaching platform. In this paper, context control and API interface definition used as technology development methods to realize hybrid-teaching platform. The construction of the construction of the platform provides a convenient scheme for the construction of the current hybrid-teaching platform in colleges and universities. On the one hand, the stability of the open source system maintained, and the secondary development carried out based on Moodle. On the other hand, it meets the individualized demand of the specific teaching environment. The construction of the platform makes it easier for teachers and students to accept and understand the learning content and progress, and improve the efficiency of students' online learning.

2. Brief introduction to Moodle

Moodle (Modular Object-Oriented Development Learning Environment) was originally designed, managed and implemented by Australian teacher Dr. Martin. Digammas based on social constructivism learning theory in an information environment The curriculum management system and the learning management system, developed to evaluate their own curriculum and teaching, are free and open source software that has been promoted in 175 countries and regions And applications that support 75 languages.

3. Advantages of Moodle in the course Construction of distance and Open Education

Moodle course is not simply to modify or upgrade the traditional network course, to negate and subvert the traditional network course, but to inherit and develop the traditional network course.

3.1 Advanced educational ideas.

The Moodle platform based on the theory of constructivist education, that is, teachers and students are equal subjects, in the teaching process, and they cooperate with each other, support each other, and construct knowledge together. The network teaching of constructivism innovate the traditional teaching idea of "teaching-centered" into "learning-centered", which is in line with the educational idea of "student-independent learning as the center" advocated by open education.

3.2 Powerful design function.

The Moodle course combines resources and activities to form an organism in the teaching process. Moodle provides users with a "buffet" design of teaching resources. Teachers can choose the appropriate media types and design tools for the characteristics of the curriculum. We can design flexible teaching activities after learning resources.

3.3 Popular design tools.

The Moodle course breaks through the defects of the traditional network course "expert design" and "code realization", liberates teachers from the professional field of information technology, and focuses on curriculum design and the reconstruction of learning resources.

3.4 Rich interactive learning activities.

Moodle provides rich and practical interactive learning capabilities: file management, assignment upload and feedback, Wiki collaborative learning, topic discussion, chat, discussion boards, quizzes and feedback. Teachers and students carry out rich teaching activities through various interactive functions. In the aspect of resources, it realizes the highly sharing of files, and supports flash animation, audio and video multimedia material. In the aspect of real-time interaction, synchronous text interaction can be realized through chat tools, and interactive content can be recorded.

3.5 Perfect teaching evaluation.

Teaching evaluation is an indispensable link in the teaching process, and evaluation activities can permeate every link of teaching. Using Moodle modules such as homework evaluation, discussion area, voting and so on, the classroom interactive evaluation can be carried out. The main body of the evaluation can be students, teachers, study partners, etc. The content of evaluation can be independent learning level, problem solving ability, etc. Ability to collect and organize information, learn emotional attitude, etc. Not only quantitative evaluation and qualitative evaluation coexist, but also relative and absolute evaluation.

4. Rational regression of mixed Teaching Mode

With the rapid development of information technology in higher education, information technology is changing the learning style of learners at an alarming speed, but after the upsurge of research and practice recedes, people gradually return to rationality. Traditional online courses have rich multimedia resources, friendly interaction and other unique advantages, but in guiding learners to take the initiative to participate and teaching evaluation, but also cannot completely replace the classroom teaching of teachers. Without the participation of teachers, the learning effect is not as ideal as expected. Under this background, the concept of hybrid learning or hybrid teaching emerges as the times require, and the teaching model of distance and open education is a kind of code. Type A hybrid teaching model.

5. Hybrid Teaching Model based on Moodle Network course

Moodle inherits and develops many advantages of the traditional network course, and makes up for the traditional network course teachers and students. The online teaching module of Moodle adopts the dynamic modular design of free combination, which has the "popularity" of the network course development and design. The rich learning activities embody the advanced concept of process learning, and inherently unified with the teaching ideas advocated by distance open education. The continuous improvement of Moodle has laid a good foundation for the realization of hybrid teaching mode. Moodle the hybrid teaching model under the platform is shown in figure 1.

In the hybrid-teaching mode based on Moodle, the traditional teaching and network teaching combined organically, and the students complete the learning process with the cooperation of the real classroom and the virtual classroom. The real classroom is the teacher direct guidance place to the student, mainly completes the important difficulty explanation, the independent study method guidance, the mixed teaching method training and so on, the teacher occupies the leading role, completes through the face-to-face instruction form. Virtual classroom is the indirect guidance place for teachers to students. It mainly completes the use of online learning resources, the participation of learning activities, the participation of discussion and answer questions, the implementation of learning evaluation, etc. Students play a leading role in Moodle Completed under the web course. Teachers play an important role in both real classroom and virtual classroom. Teachers are not only the tutors of face-to-face instruction, but also the designers of Moodle curriculum and the guide of students' online learning, as well as the evaluators of students' learning process. Real classroom and virtual classroom play a unique role, teachers play an important leading role in the two classes, face-to-face tutoring and Moodle network courses complement each other, forming an organic teaching process.

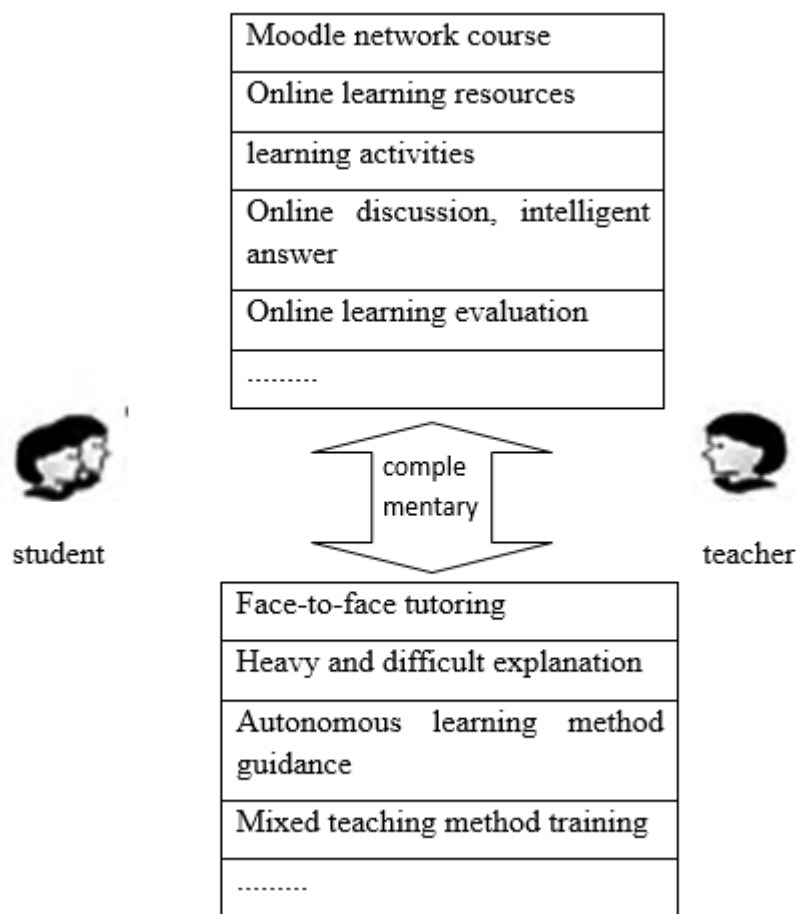


Figure 1 schematic diagram of hybrid teaching model on Moodle platform

6. Design principles of 6.Moodle Network course

6.1 The principle of interactivity.

Give full play to the powerful interactive function of Moodle. It can be the interaction between the online course system and the learners, the interaction between the learners and the learners in the process of learning. The Moodle network-teaching platform provides many kinds of activity modules, which can well embody its interactive principle.

6.2 Principle of complementarily.

The so-called complementarily principle is the complementarily of online learning and face-to-face tutoring. The network teaching based on Moodle emphasizes "people-oriented" and "student-centered", which is beneficial to the cultivation of students' creative thinking, but it also has some shortcomings. Deficiency is some extent weakened the role and role of teachers. The neglect of teachers' leading role makes it difficult for students to transfer their emotional factors in the classroom, is not conducive to the imparting of systematic knowledge, and sometimes deviates from the original educational goals. The Information Teaching Model of classroom Auxiliary Teaching based on Moodle Network course the two methods can combined organically to form an effective teaching model with complementary advantages.

6.3 Teacher-led principle.

Pay attention to the leading role of teachers in the mixed teaching mode. In the design of hybrid learning based on Moodle platform, teachers should be able to consider the combination of teacher-led learning and students' autonomous learning, and make up for the deficiency of student-centered lack of active guidance. Under the Moodle network curriculum, teachers need to

play a leading role in the teaching of tutoring in person, but also need to play a unique leading role in the learning process of online courses through clever design.

6.4 Principle of teamwork.

Moodle liberates the teachers from the "shackles" of technology, but does not mean that the role of teachers weakened. The teaching team was a new mission. The members of the teaching team are mainly made up of course teachers with special abilities, which play an important role in the design of teaching strategy, the design of teaching resources, the design of teaching process, the design of teaching evaluation and so on.

7. Design and Analysis of Moodle Network course

According to the characteristics of hybrid teaching mode of open education and the principle of Moodle course design, the design of Moodle network course can be analyzed. Distance and open education are the teaching process that combines classroom teaching and network teaching organically. The instruction course in classroom teaching includes online learning and training, whose main function is to guide students to make necessary preparations for self-learning on the Internet. The first thing students see is the curriculum interface. When designing style-interface navigation, students should start from their psychological characteristics and cognitive level, attract students' attention and stimulate their interest in learning, to show the beauty of online teaching. The text teaching material and the online resource have very strong complementarity, before designing the online teaching resource, we should carry on the effective conformity and the reconstruction of the text teaching material, highlight the charm of the rich media on the net, but not simply "the content move"; The important and difficult tutoring is an important part of classroom teaching. Many obstacles encountered by students in the process of online learning solved through face-to-face instruction. Skillfully use the course function in the design of the online learning process, embody the heavy and difficult learning process, and stress the guiding role of the heavy and difficult tutoring course; use the diversified practical interactive function of Moodle to carry on the interactive communication link in the necessity. Timely design, create interactive affinity, and achieve interactive discussions with the classroom complementary effect.

8. Conclusion

Educators because of its advanced educational ideas, novel design methods, and rich teaching feedback and so on have favored Moodle. Although Moodle will encounter various kinds of resistance in the process of popularizing, however, it is not an empty name as an Aladdin lamp in the teacher's hands. It is believed that with the joint efforts of open education practitioners and researchers, the difficult problems in the development of distance education will be solved, and the Moodle network course under the mixed teaching mode will certainly be able to promote the process of education information in National Open University.

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