

The Construction and Research of Network Teaching Platform Resources of Advanced Mathematics

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Abstract: With the rapid development of information technology, “Internet + education” has gradually become an important means of modern classroom teaching. In the process of college higher mathematics classroom teaching, through the use of network teaching platform education platform to achieve teaching, not only can break the limitations of the traditional classroom. Moreover, it can provide more personalized and interesting training programs for the majority of students, and enhance the motivation of students' learning. This paper analyzes the advanced mathematics teaching model based on the network teaching platform, and details the advantages of the network teaching platform model and the teaching model. This paper also clarifies the important role of the network teaching platform in higher mathematics teaching, and proposes corresponding countermeasures to ensure the quality and level of higher mathematics classroom teaching.

1. Introduction

In the course of modern college mathematics classroom teaching, because students come from different majors and have different requirements for mathematics, it is necessary to analyze the individual characteristics of students to improve the comprehensive quality of students' mathematics. In the traditional advanced mathematics classroom teaching process, due to the large number of classrooms, the lack of effective communication between students and teachers, resulting in insufficient classroom interaction. Many students are unable to make full use of mathematical knowledge to solve problems in their study and life, which is not conducive to improving the comprehensive quality of college students. In the process of the development of information technology, the classroom teaching mode in Colleges and universities in China has gradually moved towards the development of network and digitalization. Through the use of network teaching platform teaching mode can not only achieve the optimization and integration of resources, but also can change the classroom teaching mode, so that students can choose their own interested teaching content on the network teaching platform. In the classroom with teachers and students for in-depth interaction to help college students improve their mathematics level. So that students can make full use of mathematical knowledge to express freely, can also develop students' innovative thinking, and cultivate students' ability of independent learning.

2. The Main Connotation of Network Teaching Platform and

The so-called network teaching platform can realize the sharing of educational resources and help most people to use the network for online practice. The construction of the network teaching platform is similar to the conventional college classroom design, but students are not required to obtain credits, only after completing the course learning can they obtain the learning certificate. Online teaching platform is more relaxed and free, which is very suitable for students who are interested in mathematics or need to improve themselves. The online teaching platform can not only provide students with free educational resources, but also reasonably formulate targeted courses based on the individual characteristics of students. For example, students can freely arrange course content and course progress according to their own learning habits and learning characteristics to ensure that curriculum education is personalized and customized [1].

Teachers do not take up precious class time to transmit information, but guide students to take

the initiative before class, use multiple channels to obtain knowledge, and discuss the collected materials with other students. Teachers can ask questions according to the knowledge and information collected by students to help students fully grasp the collected information.

After class, students can arrange the learning rhythm according to their own learning characteristics, learning style and reasonable arrangement, help students form personalized learning habits, and improve the personality characteristics of students' active learning [3].

The most important way is to use the teaching video to help students preview before class, and students should also have a general understanding of the key and difficult points of this lesson. In pre-class teaching, teachers can master students' knowledge of knowledge through a series of exercises, and can also design corresponding tasks to allow students to conduct in-depth research on what they have learned.

It is the product of the integration of information technology and classroom teaching. It can subvert the traditional classroom teaching concept, make students truly become the masters of the classroom, and teachers play a role of assisting and leading. Before class, students must analyze the key points and difficulties of questions according to the relevant knowledge they have collected. Communicate and ask questions with students or teachers in class to enhance students' initiative and enthusiasm in learning.

2.1 Main Advantages of Network Teaching Platform Mode

According to the model and definition of network teaching platform, teaching can not only break the problems of traditional classroom teaching. Moreover, it can also enable students to study anytime and anywhere, help students freely plan their study time, and fully improve their initiative and enthusiasm in learning [4]. In the new era, with the rapid development of global economy, the requirements for students' mathematical ability are also constantly strengthened. But in the traditional college mathematics classroom teaching, due to the lack of learning motivation, students can not fully use mathematics knowledge in the process of classroom teaching for in-depth communication and exchange. The lack of learning motivation leads to the lack of practice of knowledge, which is not conducive to the improvement of students' comprehensive quality of mathematics. Insufficient resources in the traditional higher mathematics classroom teaching mode have led to a decline in students' interest in learning. The application of the network teaching platform can effectively solve the above problems and help improve the level of college mathematics classroom teaching. With the support of the network teaching platform model, students can quickly obtain rich learning resources and promote educational equity. In classroom teaching, teachers can arrange teaching content flexibly and freely according to students' questions, breaking the immutable classroom teaching environment. In the process of classroom teaching, students give full play to their imagination and creativity to improve the overall quality of classroom teaching. The interaction between teachers and students, students and students can make the atmosphere of classroom teaching more active. Creating a very good teaching situation for students, making the teaching mode more convenient, can also help students make full use of mathematical knowledge and improve the overall learning effect of students.

3. The Main Advantages of Higher Mathematics Teaching Mode Based on Network Teaching Platform

3.1 Increase Flexibility in Advanced Math Classes

In the process of advanced mathematics classroom teaching, due to the large number of students and the large classrooms, it is difficult to conduct teacher-student interaction. By applying the network teaching platform teaching mode, it can effectively break the relatively single way of obtaining information and enhance the interaction between students and teachers in the classroom. Teachers can also make full use of high-quality educational resources to help students answer questions, guide students to make full use of extra-curricular time for learning, improve the level of classroom teaching, and enable students to comprehensively improve their understanding of

mathematics [5].

3.2 To Ensure That the Content of Higher Mathematics Classroom Teaching is More Abundant

In the process of higher mathematics classroom teaching, because mathematics is a foreign language, every student's acceptance is different. Teachers can not fully take care of every student, which will seriously affect the efficiency of classroom teaching, heavy student learning pressure, and lead students to participate actively.

With the rapid development of quality education, college mathematics classroom teaching must also change ideas in a timely manner, make full use of computer network information resources or multimedia technology to ensure that students can improve their initiative and enthusiasm. The teaching mode based on the network teaching platform can not only enrich the content of classroom teaching, but also provide more abundant teaching resources for students, ensure the synchronous updating of courseware, and create a very good learning environment for students in higher mathematics [6].

3.3 Fully Embody the Student-Oriented Teaching Concept

In the traditional classroom teaching mode of higher mathematics, students can only accept the knowledge passively because of the singleness of knowledge transmission. Under the new situation, the application of network teaching platform can change the mode of classroom teaching, enable teachers to actively guide students to conduct in-depth exploration of related issues, and enhance the interaction and communication between teachers and students. Teachers can also collect curriculum resources based on teaching objectives and teaching content and upload them to the Internet platform to help students make arrangements based on learning objectives. Enhancing students' initiative and enthusiasm for learning, and giving full play to the advantages of the online teaching platform.

4. Strategies for the Reform of Higher Mathematics Teaching Models Based on Network Teaching Platform

4.1 Use Motivational Language to Promote More Harmonious Classroom Teaching

In teaching, teachers must use motivating language to actively guide students. Through proper encouragement, students' self-confidence can be improved. In this way, students' interest in learning can be activated, and students can become interested in mathematics. Teachers arrange teaching tasks or ask related questions, and students complete the inquiry through group cooperation [7]. In this process, students can discuss the questions raised by the teacher with the members of the same group, and they can also raise the problems encountered by individuals in autonomous learning before class with the classmates. Then, teachers can use the time of students' cooperative exploration to learn, go to each group, and provide personalized guidance according to the questions feedback from each group of students in the previous learning task list, answer questions for each group of students, and implement teaching according to their aptitude. After the completion of personalized guidance and help, each group of students is required to send a representative to report the learning achievements and consolidate the teaching focus and difficulties of this lesson. The teacher will then combine the questions raised by each group with the important knowledge points of this class, systematically sort out and focus on the explanation, and summarize the whole learning process of students. At last, the teacher evaluates the course as a whole according to the students' individual and group completion. Multi angle and multi way evaluation method is adopted to reflect the assessment of students' attitude, progress and mastery in the whole learning process.

4.2 Innovation Spirit is an Important Driving Force for the Construction of Open Class

In the process of building an open and harmonious classroom, teachers must actively cultivate students' creative ability, so that students can develop a good spirit of innovation. For every student, their imagination is extremely rich, and they will have a strong curiosity about the world. In

teaching, only by letting students fully exert their imagination and creativity, and constantly trying, with more possibilities, can students be brave in thinking, innovate continuously, and actively improve students' learning initiative.

4.3 Let Students Become the Main Body of Classroom Teaching

In the process of teaching, only by being truly student-centered, can we correctly handle the relationship between teachers and students according to the different psychological and personality characteristics of students. Teachers should actively play a guiding role in classroom teaching, and allow students to have a deep understanding of mathematical knowledge through appropriate questions, supplements, and explanations. By asking questions, students can have a stronger interest in mathematical knowledge and feel the unique charm of mathematics. Aiming at the popular and easy to understand mathematical software “matlab”, this database is used to store the mathematical experiments of various chapters in various higher mathematics courses, to write some programs, and to leave the experimental topics for students to write independently.

4.4 Establish a Good Relationship between Teachers and Students

When creating a harmonious new classroom, a good teacher-student relationship can make the whole classroom atmosphere more relaxed and joyful, and students can also create freely without the oppression of teachers. Teachers are the only source of knowledge for students, and ensuring equal rights of teachers and students is an important basis for classroom teaching [8].

5. Conclusion

All in all, the most important thing in the construction of advanced mathematics based on the network teaching platform is to be student-oriented. According to the analysis of students' personality characteristics and interests, we can comprehensively cultivate students' aesthetic quality creation ability, so that students can continuously improve themselves in a harmonious classroom environment, and lay a good foundation for students' learning and growth.

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