The Practice and Thinking of the Higher Mathematics Flipping Classroom Based on Moo

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Abstract: How to apply Internet technology to the classroom in the course of higher mathematics teaching is a problem worth studying. "Mu-class" is actually a wide range of online courses (Massive Open Online Courses), it exists in the meaning of "bring the world's best educational resources to all parts of the world" advanced concept, until today Mu-class is still popular around the world. The importance of Mu class also lies in its abundant teaching resources, which breaks the space limitation of traditional teaching. This is a kind of teacher creation learning video of "flipping classroom" in China at present, students watch it at home or after class, and can carry out operation practice completely, return to classroom teachers and students face to face communication and complete homework teaching table. The appearance of "flipping classroom" replaces the lack of traditional classroom teaching, highlights the main position of students and promotes the transformation of teaching methods. This paper focuses on the practice and thinking of the flipping classroom of higher mathematics based on Mu course.

1. Introduction

In the contemporary mode of education, teachers' teaching methods are also constantly improving and improving. In order to make classroom teaching no longer single solidified, the use of modern Internet technology combined with classroom teaching is the most common way so far. Advanced mathematics knowledge for many students are more profound and difficult to understand, so many students have given up the subject of mathematics, in order to regain students' confidence in learning mathematics, teachers need to combine the current popular Internet technology with classroom content. Information technology has become a necessary tool for people to live and work in today's society[1]In today's educational reform, we should also keep up with the times and apply the convenient and fast Internet technology, which not only makes the teaching methods new, but also reduces the time for teachers to give lectures, so that students can learn a lot through the Internet.

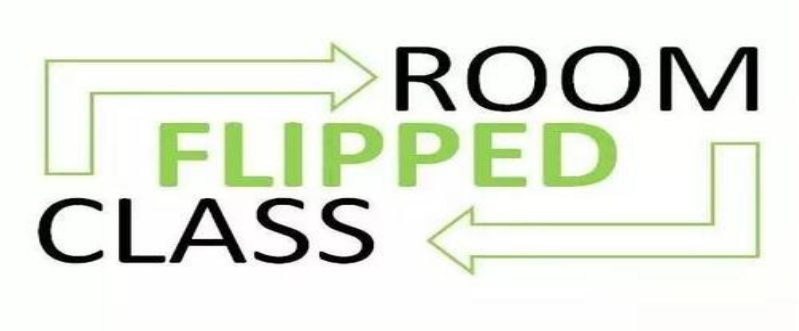

Figure 1 Internet education

2. The Meaning of "Flipping Class" in Higher Mathematics Based on Mu-class

2.1. Improved Student Initiative

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With the continuous progress and development of science and technology, the traditional mathematics teaching mode in the past can not meet the requirements of the development society for teaching quality, but also can not train the talents who meet the requirements of today's society. In the teaching process, put into the use of the Internet, Internet teaching is mainly through the combination of pictures, text, video, sound construction[2]. It can break the limitation of time and space, show the content of knowledge incisively and vividly, can make students feel novel and interesting, so as to improve students' active initiative in learning and improve their learning efficiency.

2.2. Helping to Reduce the Burden on Teachers

The Internet is mainly supported by the network, it is convenient and fast in searching materials, and the speed of information transmission is also fast. In this point, it can provide teachers with good lesson preparation content, through the use of the Internet can analyze and summarize the students' learning situation, and then make corresponding teaching plans according to the students' learning situation, so as to reduce the pressure of teachers to prepare lessons and save a lot of lesson preparation time. Teachers can spend more time helping students learn.

Figure 2 Fill-up board

3. The Practice of "Flipping Class" in Higher Mathematics Based on Moo

3.1. Design of Rich Teaching Activities to Enhance Students' Interest in Learning

Teachers can download pre-recorded teaching videos to the Internet, students can preview the course through the teaching platform, and then provide feedback to teachers on the problems they face in their own learning process. Teachers allow students to discuss learning problems in groups in groups, and take classroom teaching as the driving force to effectively improve students' ability to communicate and express their thinking[3]. To organize and plan different teaching activities so as to enhance students' interest and enthusiasm in learning.

3.2. Change Teachers' Teaching Concepts and Increase Teaching Videos

Changing teachers' concept is a very important link in educational reform. Teachers' teaching methods should be innovated constantly. In the normal teaching process, we should pay attention to the cultivation of students' subjective initiative, set a good example and model for students, and use people-oriented thought to cultivate students' learning concept. Teachers should make it clear that students' learning ability should be mainly improved in higher mathematics teaching. In normal teaching to increase the shooting of teaching video, in the grade can also be selected "the best math learning video" and other activities, so that all teachers and students can participate in the wave of video teaching.

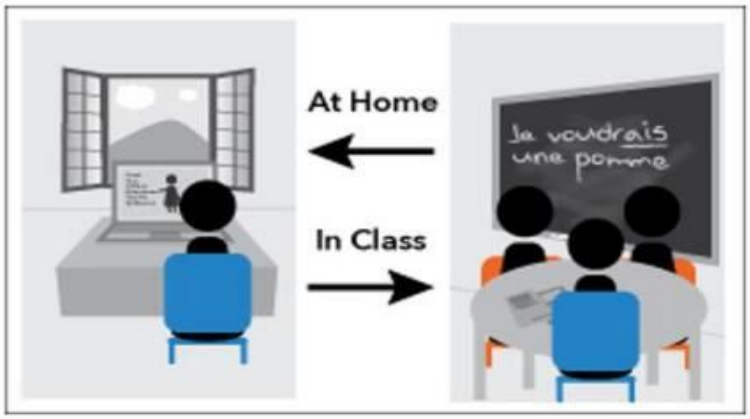

Figure 3 Comparison of online and offline education models

3.3. Building an Information Network Platform to Improve the Scientific Evaluation System

Higher mathematics teaching should also build a corresponding network platform teaching, on the basis of the use of flipping classes, first of all, to make use of the characteristics of students like close contact with the Internet, today's students are more electronic products, Through the information network platform can effectively improve students' interest and initiative in learning, effectively enhance the network information mathematics learning platform, help students learn different new knowledge, help them correct mathematical thinking, exercise mathematical reading and computing ability, so that students can learn mathematics knowledge from various mathematics software.[4]In this process, we should break through the evaluation index, make the corresponding evaluation of the students' learning structure from the perspective of quantitative evaluation and qualitative evaluation, and introduce the dynamic evaluation system of the students' learning process. Finally, it can effectively improve the efficiency of mathematics learning.

3.4. Classroom Transformation of Teaching Methods

Traditional teaching methods make it easy for many students to put too much pressure on themselves in the normal course of mathematics learning, so that some students who are full of enthusiasm and expectation for mathematics are also swallowed up in the whirlpool of "high score" and "problem sea ". In the long run, their enthusiasm will also be exhausted, in the course of learning lost the original enthusiasm, completely lost direction. Although this way of learning can achieve some results in the short term, because the majority of the students in the university case are normal is relatively depressed, there is no clear plan for their future, at present just simply want to mix to graduate. However, because the development of the Internet has made people's mentality have quietly changed, making students learn more diversified, in the past traditional mathematics teaching can be found that boring teaching methods are completely unsuitable for students to carry out thinking activities, but also not conducive to students' understanding and memory of teaching content, so teachers are required to use Internet technology to develop students' thinking patterns so that students can solve their own problems in the classroom[5]Through Internet technology, teachers convert abstract mathematical theory knowledge into real sounds and images, so that students can understand classroom teaching contents through concrete sounds and pictures to deepen their memory and improve their ability to overcome difficulties independently. So as to expand students' thinking ability in many ways, students can solve problems in many different ways.

3.5. New-Style Classroom Instruction

In the higher mathematics classroom teaching, the use of Internet technology to carry out a scientific design of the teaching content, for example, when the students themselves review, they can play soothing and relaxing light music, so as to relax the students' brain nerves, but also can use the Internet to lead students to deepen the memory of knowledge points, create a teaching situation for students, so as to improve their practical enthusiasm[6]. Internet technology can also guide students to participate more in extracurricular Internet creation. For example, teachers can assign

students to choose appropriate pictures and videos for the content of teaching materials, find corresponding pictures for the content of mathematics teaching, write introduction materials, etc. Finally, it can be displayed through the Internet in class. The content written through their own efforts can make students feel proud and thus enhance their interest in learning mathematics.

3.6. Teachers Should Recognize Their Position Correctly

In the traditional values of our country, teachers generally dominate the classroom, teachers are the protagonists and students become the supporting actors in the passive mode. In the course of teaching, students follow the teacher's instruction and command all the time. This teaching mode can not effectively activate students' wisdom, let them find problems and solve problems themselves. In teaching, students are often afraid to put forward their own real ideas because of fear of teacher criticism, that is, students are often afraid to ask questions in class. But now with the development and popularization of the Internet, it is also put into use in curriculum teaching, which urges students to communicate with teachers without "face-to-face ", which in some ways enhances students' self-confidence, because this way can reduce their tension and oppression in the face of teachers. At the same time, teachers can help each student solve the learning problems without "one-to-one ", and communicate with students through the form of Internet teaching. Teachers should also continue to learn and practice, to strive to strengthen their communication skills with students, teachers and students communication is a very important "bridge" between learning and teaching, often only through the correct communication can achieve the correct meaning that each other wants to express. Teachers must constantly adjust their professional orientation according to the trend and changes of the times. At present, with the development of the Internet and the popularization of resources, the dominant position of teachers in our country can and has been adjusted and changed accordingly, which is no longer the traditional teaching mode of the past, so that teachers can better guide students to learn and communicate.

4. Conclusions

Internet technology has been widely used in various subjects teaching, among which the teaching results are self-evident, this technology has become a necessary tool for educational reform and innovation. In order to do a good job of educational reform and innovation, we also need the joint efforts and progress of educators. In order to provide a strong guarantee for Internet teaching, we should allocate teaching resources scientifically, improve teachers' teaching level and ability, and strengthen investment in human and financial resources.Through these ways, students can feel the fun of learning, enhance their confidence in learning, so that students have a strong interest in the subject of mathematics. Internet technology is used to improve mathematics classroom teaching methods, mainly to improve the quality of mathematics classroom teaching.

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