## **Research on Teaching Method of Real Variable Function and Practice**

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**Abstract:** Real variable function course is the most important basic course for mathematics majors, which lays a good foundation for learning more mathematics knowledge in the future. Because of the abstract and logical nature of the real variable function course, students often find it difficult to understand the contents of the knowledge they have learned, which reduces their interest in learning. In order to solve this problem practically, this paper will discuss the research and practice of the practical function course teaching method, analyze in detail the problems that students may encounter when learning the real variable function, and propose relevant solutions according to specific reasons.

#### 1. Introduction

The real variable function is a discipline with abstractness, strong logic, and strict thinking. Students can gradually develop students' thinking logic ability when they study the real function curriculum because of the differences in the way they deal with problems. In order to improve the effect of classroom learning, teachers should adopt such methods as giving the first lesson of real variable function, enriching the interest of classroom teaching and setting up suitable topics for students to effectively improve the efficiency of classroom learning and improve the quality of classroom teaching [1].

## 2. Improve students' interest in learning by giving the first lesson of real variable function

Many students have a fear of learning the real variable function course. Generally speaking, students are confused about the real variable function. Some students even wonder: How can learning the real variable function help their life and future work? In the teaching of real variable function, due to the limitation of class hours, mathematics teachers often neglect the importance of the first class for students to learn real variable function in the first real variable function course. There is not enough attention to the development and structure of the whole course of real variable function, and there is no detailed explanation of the relevant links and courses of real variable function. It is just a simple introduction in the classroom or directly explain the content of the real function textbook in the classroom. This phenomenon causes students to have no clear understanding of the course of learning the actual function. There are fears of difficulty in learning the course of real variable function, which affects the learning effect of students to varying degrees, and reduces the interest of students to learn the real variable function. Therefore, the first section of real variable function teaching is very important. The mathematics teacher should teach the first lesson of the practical function classroom teaching as an introductory course, and encourage students to have a preliminary understanding of the overall curriculum content of the real variable function. In addition, based on the previous learning experience and the mathematics knowledge of learning, we can further understand and understand the knowledge and content of the basic course of mathematical analysis by learning the course of the real variable function.

The mathematics teacher uses the mathematics knowledge mastered by the students to systematically analyze the basic courses of mathematics analysis and the real function curriculum, and compare the links to help students deepen their impressions, improve students' learning confidence, and improve students' interest in learning real variable functions. In the classroom, teachers should explain the importance of learning the practical function curriculum to students. It

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is very necessary to provide this course from the perspective of real function knowledge. It is very important to help students to carry out further studies or future work. The course of learning the real variable function is a good foundation for future theoretical research and technical work. To learn the course of real variable function well, from the student's point of view, through learning the course of real variable function well, we can further improve the effect of students' geometry, algebra, mathematical analysis and other related mathematical knowledge. By learning the course of real variable function well, it can help students understand the mathematics knowledge they have learned in the past more comprehensively and thoroughly, and help to cultivate students' ability to think, analyze and effectively solve the problems they encounter in learning mathematics. By learning the course of real variable function well, students' ability of analyzing problems and logical thinking can be gradually trained. In the first class of real variable function, math teachers can summarize the importance of learning real variable function well in a simple sentence, "Learning real variable function well can make people smarter" and effectively improve students' interest in learning real variable function [2].

Mathematics teachers can help students close the distance between real variable function and real variable function by taking the first real variable function course well. To a certain extent, it dispels the fear of students in the process of learning the knowledge and content of the real variable function, so that students fully feel the theoretical value of the real variable function and the practicality and importance of the real variable function curriculum. At the same time, cultivate students' interest in learning, stimulate students' enthusiasm for learning, and effectively improve the overall teaching effect of the real variable function course [3].

# 3. Enriching the Interest of Classroom Teaching and Stimulating Students' Interest in Learning

Through the first lesson of the teacher's practical change function course, students have a certain understanding of the overall structure of the real function curriculum. However, in the process of actual learning, when learning the specific content of the real variable function, the knowledge content of the real variable function will be relatively abstract, and the boring phenomenon will gradually appear in the process of learning, resulting in the students' learning efficiency is not high. In order to effectively improve the classroom teaching effect, mathematics teachers should enrich the classroom teaching content, incorporate some small stories in the classroom, and fully mobilize the students' enthusiasm for learning the real variable function through comparatively explicit language. In the process of teaching, mathematics teachers focus on the classroom attention through active classroom atmosphere, and significantly improve classroom teaching efficiency. For example, when mathematics teachers explain the knowledge of set theory to students, they tell them some stories about German mathematician Cantor in class. When they set up set theory in detail, mathematics circles do not agree with his continuum hypothesis theory. So Cantor suffered a great blow, resulting in his mental problems, and finally died of a long-term mental illness. However, the set theory created by Cantor was finally accepted by the mathematicians and affirmed the value of the set theory. By explaining some real stories by math teachers, students can better understand the history of mathematical development related to the content of real variable function knowledge, help students improve their learning desire, and gradually cultivate students' interest in learning real variable function [4].

Some knowledge content of real variable function is often abstract. It is difficult for students to understand when they study. Many students are confused when they learn the knowledge content of cardinality. Because of the large number of natural numbers, students feel as much as real numbers when they study. In fact, the number of natural numbers varies greatly. In order to improve students' understanding ability, mathematics teachers should explain in a more vivid language to help students deepen their impressions. Through the teacher's interesting image, the classroom atmosphere can be effectively enhanced to enhance the classroom teaching effect [5].

### 4. Setting up a suitable topic for students

In order to improve the classroom effect of students learning the real function, teachers should innovate in the concept of education. When teaching students the content of knowledge, they should also focus on cultivating students' abilities, developing students' intelligence and improving students' comprehensive quality. Through the mathematics teacher in the first class, I will systematically explain the overall structure of the real variable function, and compare the relationship between the mathematical analysis and the real function, to help students have a general understanding of the real function curriculum. By integrating some more visualized language and stories related to real-time functions into the classroom, the mathematics teacher helps students improve the enthusiasm of learning real-time functions and significantly improve the classroom learning effect. However, it is not enough to rely solely on the above two points in the actual classroom teaching. We should also pay attention to the students' mentality in teaching. Some students will think that real variable function is a course, lacking certain initiative in learning, passive to learn the relevant knowledge content of real variable function. Mathematics teachers still use traditional inculcation teaching method when explaining the content of real variable function course. Teachers play a leading role in the teaching class, which results in students passively learning the content of real variable function knowledge, and students lack the initiative to learn real variable function in the learning process. Therefore, in order to change this situation and make students actively participate in the study of real variable function, students should be fully aware of the importance of real variable function in teaching. Teachers can set up some papers suitable for students according to the curriculum content of real variable function and the actual situation of students, which can concentrate students' attention. Students change from passive learning to active learning to learn the knowledge of real variables, and gradually cultivate students' interest in learning [6].

By arranging some thesis topics, students can be trained to think and analyze problems from multiple perspectives, and to summarize the contents of their knowledge. Mathematics teachers should set up topics according to the curriculum content of real variable function, and let students talk about their learning experience and summarize their knowledge in class. Students can give more room for thinking and summarize the problems they encounter in the process of learning. Teachers can gradually develop students' logical thinking by adopting this kind of teacher. The learning effect of a student's study of a course is not only determined by the score of the face. The most important thing is the degree of understanding of the course. By studying this course, you can enrich your knowledge and improve your synthesis. ability. When teaching real variable functions, mathematics teachers should pay attention to cultivating students' learning habits and gradually improve students' learning effects by developing good study habits [7].

## 5. Research Objectives of Real Variable Function Course

The main purpose of applying various teaching methods to classroom teaching is to improve students' ability to understand the knowledge content of learning, to enhance students' interest in learning and to improve the effect of classroom learning. Teachers should carry out irregular tests on the learning effect of real variable function teaching classes to understand students' mastery of real variable function, which knowledge points students still have doubts, difficulties encountered in the process of learning real variable function, etc [8]. Effectively analyze the results of the test, and reflect on the actual situation of the students, and adjust their teaching accordingly. The research goal of the real variable function curriculum is to update the previous teaching methods. According to the mathematical analysis theory that the students have mastered, the students are correctly guided to learn the real variable knowledge content in a relaxed and pleasant way. Inspire students to broaden their thinking and develop students' logical thinking ability [9]. When learning the course of real variable function, mathematics teachers should reasonably link the theory of mathematical analysis with the course of real variable function, which can enable students to gradually enhance their confidence in the process of learning and effectively improve the learning

efficiency of students [10].

### 6. Conclusion

In summary, the real variable function is a relatively important basic subject. Students learn the practical function of the real variable function, which is conducive to laying a good foundation for the future learning related mathematics knowledge. I have a deeper understanding of the mathematical analysis I have studied before, so it is very important to learn the practical function. However, in the actual teaching, because the knowledge of the real variable function is relatively abstract and difficult to understand, the knowledge content that the students learn cannot be fully grasped. Therefore, the teaching mode of real variable function should be changed. In teaching, students should be the dominant position, and some interesting teaching contents should be formulated according to the actual situation of students, so as to effectively enhance students' interest in learning. So that students can master the knowledge they have learned skillfully and effectively improve the classroom teaching quality of the course of real variable function.

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