

The Application of Higher Mathematics Teaching Methods under the Innovation and Entrepreneurship Education

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Abstract. With the development of the national economy and the concept of "mass entrepreneurship and innovation", China pays more attention to the education of innovation and entrepreneurship, and innovation education plays an important role in the adjustment of the education system. College leaders need to recognize their important role in education and teaching, transform traditional educational concepts, promote the innovation of higher education in teaching methods, keep pace with the development of the times, conduct in-depth analysis of learning conditions, and achieve continuous innovation in higher mathematics teaching methods and achieve sustainable development of higher mathematics teaching. This paper analyzes the problems existing in higher mathematics teaching, and puts forward the higher mathematics teaching methods under the background of innovation and entrepreneurship education, which lays a foundation for improving the efficiency of higher mathematics teaching.

Introduction

Innovative entrepreneurship education is aimed at cultivating talents with basic entrepreneurial qualities and pioneering personality, and fosters students' entrepreneurial awareness, entrepreneurial spirit, and innovative entrepreneurship. It is also a step-by-step process of innovative thinking and entrepreneurship. The education of ability training is essentially a practical education. The Higher Mathematics course is a professional foundation course designed to develop students' ability to discover, think, and solve problems, which is consistent with the goal of innovative entrepreneurship education. In the process of higher mathematics teaching, how to let students understand the sense of innovation and improve students' ability to innovate is a problem worth studying. Based on the current teaching situation of higher mathematics, this thesis analyzes some problems existing in teaching, and puts forward corresponding countermeasures for these problems, which can better provide some new teaching methods for some colleges and universities.

Related Concepts

Innovation and entrepreneurship education.

Innovative entrepreneurship education refers to the training of some people with basic entrepreneurial qualities and groundbreaking thinking, not only based on the students' own entrepreneurial consciousness, spirit and ability. It is open to the whole society, and it is specifically targeted at those target groups who are ready to start a business or who have already started a business or have succeeded in starting a business, and then classify them at different stages and levels. From the perspective of innovative thinking and capacity building, innovation and entrepreneurship education is definitely a very practical education. However, the education of innovation and entrepreneurship must enter the classroom, it can better enable students to understand the working environment through teaching, to help students improve their ability to start a business. Therefore, when designing a course, the school must create opportunities for students to collaborate and communicate with the organization, leadership, and team, as well as some entrepreneurial courses. In addition, it is necessary to closely integrate some entrepreneurship

education on professional courses and basic courses to let students better understand the real working environment.

Higher mathematics.

The focus of higher mathematics is to cultivate students' abstract thinking ability, logical reasoning ability and spatial imagination ability, so that students can have very skilled computing skills, and also enable students to comprehensively apply the knowledge they have learned. Students can have the ability to propose, analyze, and solve problems. Therefore, for higher mathematics teaching in colleges and universities, it is necessary to closely integrate with innovation and entrepreneurship education, which will directly affect the overall employment level of students and the improvement of the overall quality of citizens.

The Important Role and Significance of the Integration of Higher Mathematics Teaching and Innovation and Entrepreneurship Education

The reason why China vigorously advocates innovation and entrepreneurship is because it is of great practical significance to carry out the integration of higher mathematics teaching and innovation and entrepreneurship education. Specifically, it is manifested in the following aspects:

By integrating higher mathematics teaching methods with innovative entrepreneurship education, students' ability to innovate can be improved.

Innovation is a source of national progress and an inexhaustible driving force. Therefore, it is very important to cultivate students' innovative ability. Especially in the new situation of innovation and entrepreneurship development, only by changing the teaching methods of higher mathematics and cultivating students' innovative ability can they adapt to the important historical trend of innovation and entrepreneurship development in China. Therefore, through the effective integration of innovative entrepreneurship and higher mathematics teaching methods, students can cultivate their innovative ability, divergent students' thinking, cultivate students' logical ability and analytical ability, and finally lay a solid foundation for cultivating students' true innovation and entrepreneurial ability.

It can make our talents more practical and achieve employment smoothly.

With the increasingly fierce market economy in China, people must improve their practical ability and entrepreneurial ability in order to gain a foothold in the fierce job search. Therefore, by integrating the teaching methods of higher mathematics with the innovation and entrepreneurship education, not only can students improve their practical ability, but more importantly, they can cultivate students' comprehensive ability, so that students can smoothly adapt to social competition and fully compete in the increasingly fierce competition. Give play to your own subjective initiative, use your own mathematical knowledge, and successfully achieve employment.

Cultivate the overall quality of students.

Under the traditional teaching methods, many "high-scoring and low-ability" talents are cultivated, so that although students have high scores, they have a good grasp of subject knowledge, but they lack comprehensive quality, especially the lack of adaptation to society and social development ability. For example, most of the textbooks in China are based on concepts and theories, and they are not applied to the actual social life. Some teachers are difficult to get rid of the old and old-fashioned teaching mode, and they mainly focus on "teaching" and neglect the students' "learning". Due to the constraints of China's economic conditions, the teaching methods cannot keep up with the pace of the times. Higher education aims to cultivate comprehensive quality talents with all-round development of morality, intelligence, body, beauty and labor. However, the problems faced in education have seriously hindered the development of education. To solve this problem, it is necessary to integrate higher mathematics education with the current concept of innovation and entrepreneurship education as soon as possible, to stimulate students' subjective initiative and creativity, and to play their main role in learning.

Problems in Current Higher Mathematics Teaching Methods

Lack of training in vocational ability of students in higher education institutions.

With the rapid development of the social economy, China's higher education schools have achieved remarkable development. In this context, it also leads to the need for talents in higher education institutions. At the same time, in order to meet the needs of the society for professional skills, and to help China's higher education institutions to meet the actual needs of China. In the process of teaching higher mathematics in higher education institutions, we must pay full attention to strengthening the cultivation of vocational ability and entrepreneurial ability of students in higher education institutions. At the same time, with the further development of China's social economy, in the follow-up process of higher mathematics teaching, the actual teaching situation is fully considered and the students' comprehensive quality ability is cultivated. Students who have high requirements for professional skills and innovation and entrepreneurship should fully ensure that their professionalism and entrepreneurial ability are fully exercised in the process of teaching, so that students have enough ability to get their favorite positions in the process of applying for a job. However, as of now, China's vocational training only pays attention to the cultivation of students' theoretical knowledge, ignoring the cultivation of students' professional ability, which leads to the lack of students' professional ability. In view of such a situation, it is of great practical significance to carry out higher mathematics teaching based on the cultivation of professional ability.

Insufficient training of students' comprehensive quality ability in higher education institutions.

Through the summary of the law of social development, it can be seen that with the further improvement of China's social and economic level, the quality of students trained in higher education institutions will be higher, and the professionalism of students in higher education institutions can be guaranteed. However, through the survey of relevant literature and the survey results of the questionnaire, the comprehensive quality ability of students in higher education institutions in China has not been effectively improved. Specifically, the root cause of this problem is that higher mathematics teachers neglect the cultivation of students' comprehensive mathematics ability, which leads to students not having sufficient professional ability.

Teaching equipment utilization is not high.

At present, most of the higher mathematics courses use the courseware to teach, so that the content taught is visualized and embodied. However, the production of courseware requires better conception and computer operation foundation, so that most of the contents actually copy the teaching materials. In addition, there are more teaching contents and less class hours. When using the courseware, the teachers are eager to give lectures. The courseware is flipped faster. If the students have not read clearly or understand clearly, they have jumped to the next knowledge point. This is undoubtedly worse for students' learning.

Exploring the Strategy of Higher Mathematics Teaching Methods Under the Background of Innovation and Entrepreneurship Education.

Create a teaching atmosphere and carry out heuristic teaching.

Higher mathematics courses are established in China's higher education. Students are just graduated from high school passive education, and their ability to learn independently is poor, and they have not formed the subjective initiative of learning. Therefore, teachers should first focus on creating a good teaching atmosphere when conducting advanced mathematics education. The construction of a good teaching atmosphere should be based on the students' interest in learning. Higher mathematics is of certain interest. Teachers can enlarge the interest of the teaching content itself, so that students can learn interest in the student content and improve students' learning effectiveness. When constructing a teaching atmosphere, teachers can combine with heuristic teaching methods to fully mobilize the enthusiasm of students to learn, give students the imagination of teaching content, and improve students' logical thinking ability. By creating a relaxed and harmonious teaching atmosphere, teachers can make full use of innovative thinking in the heuristic teaching, stimulate

students' interest in learning, and build students' confidence in learning advanced mathematics.

Conduct classroom instruction and use problem-based teaching.

When teaching high mathematics, teachers should pay attention to classroom guidance and adopt problem-based teaching methods to concentrate students' attention and stimulate students' interest in learning. When teaching, the teacher can ask questions about the content of the teaching, guide the students to analyze the content of the problem, study the ideas of solving the problem, and provide methods to solve the problem through continuous analysis and discussion, so as to cultivate students' ability to solve problems. The biggest advantage of problem-based teaching is that it can fully attract students' attention and stimulate students' interest in learning. In the classroom through the presupposition of the problem, so that students' thinking in the classroom teaching can fully improve the learning efficiency of students. Therefore, the teacher conducts active classroom guidance during the lectures, sets the default questions, and exercises the students' ability to independently discover problems, analyze problems, solve problems, and improve students' practical application ability.

Be good at empathy, using analogy.

When teaching, teachers must be good at translating students. By carefully analyzing the way students think, they can clarify the students' learning misunderstandings, thus improving teaching efficiency. Shakespeare said that "a thousand people have a thousand Hamlet in their hearts." This sentence also has profound meaning in teacher teaching. Teachers also use the time of a class to teach students, but each student has different degrees of mastery of knowledge, understanding of key difficulties, and the degree of application in real life. Therefore, teachers should understand the knowledge needs of students through empathy in teaching. Teachers can use the analogy method to enable students to distinguish and connect when they learn knowledge, and cultivate students' ability to analyze knowledge. For example, the definition of triple integral, the definition of nature and the definition of double integral, and the analogy of nature. Students can find the similarities and differences between the two through comparison. In analogy learning, students can effectively deepen the mastery of knowledge through thinking. Therefore, teachers should be good at empathy and use analogy teaching so that students can fully understand and master the relevant knowledge of advanced mathematics.

Summary

Higher mathematics is a difficult subject, and teachers need to continuously innovate through teaching methods so that students can quickly and effectively grasp the teaching content. Through the use of different teaching methods, teachers create the subjective status of students' learning, mobilize the enthusiasm of students' learning, stimulate students' interest in learning, and the teaching knowledge will be used flexibly in the future development and become a comprehensive talent for the society to achieve long-term development of students.

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