

# Teaching and Management of Higher Vocational Mathematics Class Based on Morality Education

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**Keywords:** Li de shu ren, Higher vocational mathematics, Classroom teaching, Innovative spirit.

**Abstract:** Mathematics in higher vocational colleges is famous for its meticulous logical thinking, which plays an important role in improving students' professional skills and values and outlook on life. Higher vocational teaching should not only enhance students' comprehensive ability from the professional point of view, but also constantly tap students' ability from the perspective of Li De and Shu Ren. Based on this, this paper firstly analyses the role of mathematics education in Higher Vocational Colleges in educating people, secondly analyses the problems existing in the current mathematics teaching classroom in Higher Vocational colleges, and finally puts forward innovative ideas of mathematics classroom teaching in Higher Vocational Colleges from the perspective of Li De Shu Ren.

## 1. Research background

### 1.1 Literature review

The innovation of mathematics education in higher vocational colleges plays an important role in promoting students' concept of morality and cultivating people, which has been discussed in detail by many scholars at present. Zhang Yong Jie believes that the parallel development of higher vocational education and vocational education will play an important role in the future vocational education system. In order to adapt to the development of society, higher vocational colleges should innovate in mathematics education. The scholar pointed out some problems existing in current mathematics education and put forward corresponding countermeasures (Zhang, 2016). Research by Li Xi Min and others shows that with the continuous development of modern technology, the combination of network technology and mathematics teaching is an irresistible trend. Modern education technology has become an indispensable part of mathematics operation. Mathematics teaching methods in higher vocational colleges should also be reformed (Li, 2010). Dong Li Jun believes that mathematics has rich humanistic value and important scientific value. Higher vocational colleges generally pay attention to scientific value and train students' thinking in the process of mathematics teaching, but neglect the education of humanistic spirit. (Dong, 2011). Zhou Xiu Jun's research finds that mathematics education can cultivate the innovative ability of Higher Vocational College students. Therefore, schools should focus on exploring students' learning methods, in order to break through the traditional teaching mode, and then optimize the teaching content (Zhou, 2007). Wang Xian Feng believes that higher vocational colleges have made great progress in education, but also made great contributions to the cultivation of talents in society, to meet the needs of all sectors of society for talents. Through the characteristics of mathematical modeling color, the author discusses how to use mathematical thinking flexibly to analyze and solve problems (Wang, 2015). Geng Xiao Zhe and others believe that qualified teachers in higher vocational colleges should not only possess professional knowledge and love teaching work, but also know how to master classroom teaching skills and stimulate students' interest in learning, which requires teachers to play a leading role, improve the quality of education and promote students' all-round development (Geng, 2012).

### 1.2 Research purposes

Education itself is teaching and educating people. Textbooks teach cultural knowledge, and

educating people is to enable students to form a correct outlook on life, values and world outlook, and cultivate students to develop good moral qualities. Nowadays, the impact of modern education on traditional education has been constant, which will certainly affect the previous teaching mode. Teachers are the theme of cultivating people by virtue in Higher Vocational colleges. They are obliged to integrate the educational concept of cultivating people by virtue into teaching. Mathematics teaching is a basic cultural course in Higher Vocational colleges. Mathematics has its own unique characteristics. Compared with Lide Shuren, other disciplines are recessive and potential. Based on this, higher vocational colleges should give full play to their leading position, while giving full play to the function of mathematics teaching and educating people, which also requires schools and mathematics teachers to work together.

## **2. The role of higher vocational mathematics education in educating people**

### **2.1 Encouraging students to foster the spirit of respecting knowledge and advocating science**

In the process of mathematics teaching in Higher Vocational colleges, some scientists and knowledge can be combined to explain, for example, the story of Newton's invention of calculus is the most classical, interesting, and has practical educational significance. He sorted out the common principles from different angles and forms, and summarized them into rigorous mathematical theory, which made calculus an independent and brand-new subject. These predecessors are brave in exploring on the road of scientific research. Many famous scientists have experienced numerous difficulties before they have achieved certain results. They can encourage students to keep moving forward on the way of learning, stand the test, stand the loneliness, and really settle down their hearts. The success of some scientists is also based on the accumulated experience of predecessors. Therefore, when teaching students, mathematics teachers in Higher Vocational Colleges tell them that the final conclusion of these theorems is the contribution of scientists, and they should pay high tribute to them.

### **2.2 Guiding students to think about the problems they encounter in life and improving their self-cultivation**

Mathematics teachers can bring some vivid stories into the classroom when they teach. They can not only activate the atmosphere, but also analyze the knowledge difficulties, so that students can learn to think independently. In mathematics, there is no need for teachers to tell students the standard answers. The most important thing is to guide students to think independently and let students form their own opinions about other foods around them, so as to further explore the principles of natural science and finally have their own understanding of things. The Chinese nation has a long history and culture. There are many outstanding achievements in traditional culture. These achievements are also very important for students' education. From this point of view, we can see some problems in life from the point of view of mathematics learning through the analysis of mathematical knowledge. We can feel the rationality in life from the point of view of natural science, and stimulate students to improve themselves and form correct values.

## **3. Problems existing in current mathematics teaching classes in higher vocational colleges**

Mathematics teachers in Higher Vocational Colleges basically adopt the traditional teaching mode, using blackboard and chalk to give lectures. Because the time of each class is limited, teachers waste 1/3 of their time on writing blackboard. Teachers are the instructors and facilitators of students' learning, but there are still some problems in the traditional teaching mode. This traditional teaching method leaves less time for students to think independently, so it also leads to students' low learning efficiency and even the psychological weariness of learning, as shown in Figure 1. After class, the teacher will leave some homework questions, but some students copy others' homework in order to complete their homework, and even there will be a class of students whose homework is the same. Mathematics examination in some higher vocational colleges is only a mere formality. Before the examination, teachers will reveal the questions of the examination

papers to the students, and even some teachers will tell the questions of the direct examination once in class. This will not only damage the image of the school, but also the education of the students. It is easy for students to make wrong judgments in other areas, and even lead to students forming wrong values.

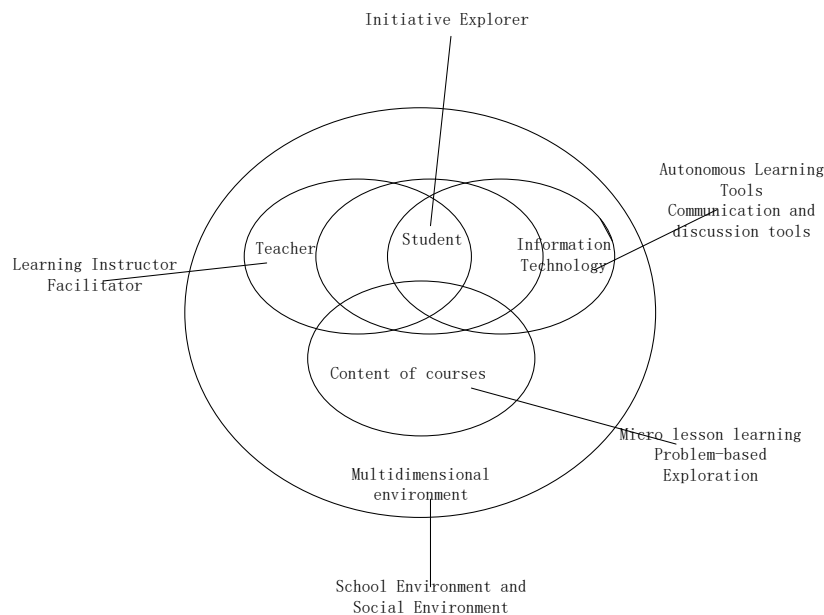


Figure 1. Mathematics Teaching Mode in Higher Vocational Colleges

Mathematics experiment is not included in mathematics teaching in Higher Vocational colleges. Students can improve their thinking and develop their spirit by participating in mathematical competitions and mathematical modeling training. Most of the organizations in some colleges and universities are mainly teachers, supplemented by students. In most cases, students are nominal and do not participate in them. Only a few and their excellent students can participate. However, the participation of teachers is only for the purpose of obtaining bonuses and certificates, or for the purpose of selecting professional titles. Based on these problems, students not only fail to improve their study, but also affect their psychological quality. Schools fail to teach and educate students, but also cause negative education to some students.

#### 4. Innovative thoughts of mathematics classroom teaching in higher vocational colleges based on lide shuren

##### 4.1 Higher vocational mathematics teaching can improve students' personality quality

Psychological quality is a necessary condition for success in life and winning learning. Contemporary people are getting bored and the pace of life is accelerating. Work pressure is also increasing. College students are facing severe forms of employment. Therefore, college students' mental health is particularly important. First of all, the proof of every conclusion or theorem in mathematics requires strict reasoning, repeated proof, scientific spirit and attitude, and can not be half false. Secondly, mathematics is Abstract, so solving mathematical problems is often accompanied by difficulties. When students do mathematical exercises or answer questions, they can let students experience failures and setbacks, which can temper students' will and cultivate their indomitable spirit. At the same time, mathematics can teach students to be honest and honest, right and wrong are distinct, there will be no ambiguous answers, right is right, wrong is wrong. It plays a very important role in cultivating the integrity and good quality of Higher Vocational students. Mathematics is also a course full of wisdom. It needs skills to solve the problems in mathematics. We can generalize more propositions through a type of problem, and we can get many solutions to a problem and skillful solutions to difficult problems, so as to cultivate students' spirit of exploration and innovation.

## **4.2 Cultivating students' high-quality ability with the characteristics of mathematical science**

With the characteristics of mathematics, students can be educated in virtue and morality, such as the harmony of mathematics as a whole, the symmetry of mathematical graphics can give people a more beautiful feeling, the accuracy of mathematics in language, the rigor of logical reasoning and so on. In mathematics, a small theorem shows its harmony, ranging from one method of solving problems to the whole knowledge system of mathematics. The conceptual rules in mathematics have high accuracy and rigor. At the same time, mathematical formulas and graphics are symmetrical. In fact, these not only bring students a sense of beauty, but also shock their hearts and let students pursue truth in the process of learning. Therefore, we can make use of these characteristics of mathematics to educate students in morality and morality, so as to enhance the aesthetic ability of Higher Vocational students.

## **4.3 Combining mathematical knowledge with real life to form students' service consciousness**

In the teaching process of Higher Vocational mathematics, we should consider not only the future employment of students, but also the students' specialty. Mathematics is in a relatively high position compared with other subjects. Therefore, we should link the professional knowledge of mathematics with the characteristics of the industry, and enhance the awareness of mathematics to serve students' employment. For example, when teaching for economic students, mathematics teachers in higher vocational colleges should combine mathematics knowledge with economic courses, and even with mathematical problems in life. To strengthen the application of mathematics in daily life, for example, when explaining the probability problem, we can explain some practical problems such as the probability of winning a lottery ticket in our life. When giving lectures to students majoring in engineering, we should combine the life problems involved in engineering with teaching.

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