

On the Cultivation of Students' Application Consciousness in Higher Vocational Mathematics

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Abstract: Under the background of educational reform in the new era, cultivating students' core literacy has gradually become the main goal of teaching. In higher vocational mathematics teaching, it is in line with the current teaching development trend to strengthen the cultivation of students' mathematical application consciousness and ability, and it is of great significance to promote higher vocational students' thinking ability and innovation. However, there are still many problems in the actual teaching process due to the limitations of teaching methods and ideas in some higher vocational schools. Higher vocational mathematics teachers should further innovate teaching ideas and teaching methods, enrich higher vocational mathematics teaching classes, actively carry out various mathematical activities, and promote the cultivation of students' mathematical application consciousness. This paper analyzes the current situation of mathematics teaching in higher vocational colleges, and puts forward feasible measures, hoping to improve students' mathematics application consciousness and comprehensive application ability.

1. Introduction

The teaching purpose of higher vocational mathematics teachers is to guide students to learn professional knowledge and skills, enhance students' understanding and learning of relevant professional knowledge, so that students can use the professional knowledge they have learned to work after graduation. Therefore, it is very important to cultivate vocational students' consciousness and ability to use professional knowledge and skills to solve problems in real life. Cultivating students' application consciousness in higher vocational mathematics teaching is of great significance for improving the traditional teaching mode and improving students' enthusiasm in learning mathematics. It can be seen that higher vocational teachers must actively adopt various ways to cultivate students' consciousness of mathematics application.

2. Current Situation of Mathematics Teaching in Higher Vocational Colleges

Mathematics application consciousness refers to a kind of consciousness that students connect with mathematics thinking in their actual work and life and solve problems through professional knowledge. From the perspective of practical operation, it means that students can consider problems from mathematical thinking and use mathematical knowledge to give specific solutions to problems.

2.1 Boring Teaching Class

The survey shows that in the current mathematics class in higher vocational schools, teachers' teaching activities to students still stay in an old model of explaining mathematical concepts and principles, analyzing some mathematical examples, and then allowing students to learn. There is little application of new teaching methods. Under this traditional teaching mode, the whole classroom lacks vitality and interest in learning, and students' enthusiasm in learning mathematics can't be fully mobilized. Even in many mathematics classes, teachers teach in front of the classroom, and students sit on their seats playing with mobile phones or doing other things. The traditional mathematics teaching mode will lead to students' learning weariness, conflict with

learning mathematics knowledge, and lead to the decline of the teaching quality of the whole higher vocational mathematics classroom. Therefore, higher vocational mathematics teachers should improve teaching methods, make full use of various methods to enrich the classroom, let every student participate in mathematics teaching, enhance students' interest in classroom learning, and improve students' enthusiasm in learning mathematics knowledge.

2.2 Students Do Not Pay Enough Attention to the Study of Mathematical Knowledge

At present, many higher vocational students have a stereotype about mathematics learning. They think that learning mathematics knowledge is only to cope with examinations, and mathematics is not applied in real life and has little impact on their future work development. Therefore, they are not willing to spend too much energy and time on mathematics courses. In addition, most higher vocational students have a weak mathematical foundation, and it is difficult to build confidence in mathematics learning. Even some higher vocational students have had resistance to learning mathematics in junior and senior high school, so it is difficult to take the initiative to learn and exercise mathematics knowledge to solve problems.

2.3 Students Do Not Take the Initiative

At present, in many higher vocational mathematics classes, the interaction between teachers and students is less, and the simple theoretical teaching mode of teachers' explanation and students' learning and absorption is adopted. In this case, there are few opportunities for students to think independently and solve problems independently, and students' learning initiative can't be brought into full play, which leads to the lack of full play and effective exercise of students' mathematical knowledge in practical application. If this situation is allowed to develop, it will kill the students' enthusiasm for learning mathematics knowledge and reduce the teaching quality of mathematics teachers.

2.4 Derailment between Mathematics Teaching Content and Professional Knowledge

Mathematics teachers who teach in higher vocational schools all have profound professional theoretical knowledge and practical skills. However, because the teaching methods of mathematics teachers have always retained the traditional teaching mode and have not been combined with the characteristics of higher vocational education, the actual teaching content will be irrelevant to students' professional knowledge, which makes some students feel that mathematics knowledge has nothing to do with their majors, do not pay attention to mathematics courses, and think mathematics is only an elective course for their majors. Under the influence of this consciousness, it is difficult for students to take the initiative to learn mathematics knowledge, and it is difficult for mathematics teachers to improve their teaching quality. At the same time, many higher vocational mathematics teachers do not allocate theory and practice properly in the teaching process, resulting in students' lack of mathematics application experience.

3. Significance of Cultivating Students' Application in Higher Vocational Mathematics Teaching

3.1 Meet the Needs of Social Development

In the era of rapid development of information, mathematics classroom teaching is no longer just to explain theoretical knowledge to students and cope with examinations. The key is to cultivate students' ability to combine theory with practice, teach students to apply mathematical knowledge to real life, and use mathematical thinking to solve problems encountered in real life. Our country pays more and more attention to the training of practical talents, and constantly emphasizes the application of professional knowledge to real life. Therefore, it is very necessary to train students to connect mathematical theoretical knowledge with real life in higher vocational mathematics teaching.

3.2 Meet the Training Objectives in the Field of Education

Higher vocational mathematics teaching is not only to train mathematicians and graduate students, but also to train practical talents who can apply mathematics knowledge to practical problems. The teaching focus of higher vocational schools is to cultivate students' professional knowledge and skills, and to cultivate students' practical ability. Therefore, cultivating students' application in higher vocational mathematics teaching is in line with the talent training goal in the field of education in China.

4. Measures of Cultivating Students' Application Consciousness in Higher Vocational Mathematics Teaching

4.1 Take Students as the Center and Establishing Teaching Objectives

Students are the main body of teaching. Therefore, in the process of mathematics teaching, we should set reasonable teaching objectives, select teaching methods suitable for each major student, and formulate scientific teaching plans from the actual professional situation and interest of students. Only in this way can students' interest in learning mathematics and application ability be truly improved. Therefore, to cultivate students' application ability in higher vocational mathematics teaching, mathematics teachers need to communicate and ask about students' professional situation and whether they are interested in mathematics before teaching, investigate their understanding of the mathematics knowledge to be learned, and formulate teaching objectives in combination with students' actual learning ability, so as to teach students in accordance with their aptitude. In class, mathematics teachers should first let students understand and pay attention to learning mathematics knowledge not only for exams, but also make students aware of the role and significance of learning mathematics knowledge in real life, and guide students to be interested in learning mathematics knowledge. Then, according to the specific teaching objectives, the corresponding teaching plan is formulated to ensure the normal operation of the whole teaching activities. Finally, according to the specific teaching content, teachers can plan and organize students to participate in teaching practice activities, so that students can correct their attitude towards mathematics learning in practice, and exercise their ability to apply mathematics knowledge in real life. After class, mathematics teachers also need to summarize teaching experience and adjust their teaching progress according to the learning status of students to ensure that each student can master the ability of mathematics application in teaching.

4.2 Improve the Importance of Higher Vocational Students to the Application of Mathematics

In the process of higher vocational mathematics teaching, teachers need to help and guide different types of students' learning conditions if they want to cultivate students' mathematical application ability and mathematical thinking without delaying the course progress. Mathematics teachers can hold some lectures on mathematical application, combine the application of mathematical knowledge with practical cases, and make students further aware of the importance of improving their mathematical application ability and thinking. At the same time, teachers should not only improve the importance of students' application of mathematics, but also deeply study how to cultivate students' consciousness and ability of applying mathematics, and carry out teaching and training activities. Only teachers and students attach importance to the cultivation of mathematics application ability, higher vocational mathematics teaching activities can be carried out smoothly.

4.3 Integrate Theory with Practice and Strengthen Mathematical Practice

First of all, properly adding mathematics practice courses can not only enrich the teaching classroom, but also make students have a more intuitive feeling of mathematics knowledge. For example, mathematics teachers can take the table design of the furniture factory as the teaching content, let students use various mathematical software, use mathematical knowledge to design suitable table shapes, and express their own design principles, so that students can not only more intuitively experience the application value of mathematical knowledge in real life, but also

effectively exercise their mathematical application thinking and ability. In addition, it is necessary to strengthen the learning of mathematical modeling knowledge. In higher vocational mathematics class, mathematics teachers help students understand and analyze problems more comprehensively by establishing models. They can also formulate different types of modeling tasks according to students' different majors, so as to improve higher vocational students' mathematical application consciousness and ability.

4.4 Cultivate Students' Consciousness of Mathematics Application

Mathematics teachers can use the problem-based teaching method in class, put forward some mathematics problems closely related to real life, let students discuss in groups, and then evaluate and guide students' achievements. This not only deepens students' understanding of the knowledge learned, mobilizes students' enthusiasm in learning mathematics, but also strengthens students' consciousness of the application of mathematics to practice. Mathematics teachers can also arrange practical assignments to enable students to use mathematical knowledge to solve problems in their actual work and life, enhance students' understanding of the applicability of mathematical knowledge, and thus cultivate students' consciousness of mathematical application. In addition, in the classroom teaching, higher vocational mathematics teachers can also appropriately use multimedia teaching to make some complex and difficult mathematical knowledge vivid, enhance their enthusiasm for learning, and more effectively cultivate higher vocational students' interest in learning mathematical knowledge.

5. Conclusion

To sum up, higher vocational mathematics teachers play a guiding role in mathematics teaching activities. They must put improving student' mathematics application consciousness and ability in the first place in teaching, organize mathematics teaching practice activities on this basis, and constantly strengthen the cultivation of students' mathematics application consciousness and ability.

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