Application Analysis of Pbl Teaching Method in Mathematics Teaching of Higher Vocational Colleges

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Abstract: As a new type of teaching method, the PBL teaching method is mainly problem-oriented. If it is effectively used in mathematics teaching, it will create a good thinking environment for students, promote students' active thinking, and enable students to continuously improve their thinking skills during the learning process.Based on this situation, this article mainly analyzes the necessity of PBL teaching method in mathematics teaching in higher vocational colleges, and focuses on the detailed research on the application of PBL teaching method in mathematics teaching in higher vocational colleges.

1. Introduction

Mathematics is an important subject in higher vocational colleges. This subject has strong logic and thinking, which indirectly increases the difficulty of students' learning. In the actual teaching process, since the mathematics teachers still mainly use traditional teaching methods, it is difficult to stimulate students' enthusiasm for mathematics learning, resulting in insufficient overall teaching effect. The application of the PBL teaching method in higher vocational mathematics teaching can create thinking situation for students and actively guide students to participate in thinking. In this process, not only helps students acquire mathematical knowledge, but also helps improve students' mathematical literacy.

2. The Necessity of Pbl Teaching Method in Mathematics Teaching of Higher Vocational Colleges

2.1 Meet the Requirements of Higher Vocational Mathematics Teaching Reform

With the continuous development of higher vocational education, in order to accelerate the development of mathematical education, higher vocational colleges have cultivated a large number of all-round applied talents. Mathematics, as an abstract chemistry subject, is also a basic course in higher vocational colleges. It is of great significance to strengthen the reform of mathematics teaching in higher vocational colleges. By strengthening the reform of mathematics teaching, it will help strengthen students' mathematical ability, improve students' mathematical learning ability, cultivate students' ability to combine theory and practice, and promote students to better use mathematical knowledge to solve problems in life. According to the survey of relevant data, the vocational students' mathematical foundation is generally weak, their basic skills are not solid, and they lack the confidence to learn good mathematics. The reason for the current problem is that higher vocational students have not mastered scientific learning methods, and their learning attitude is not correct. In addition, the influence of traditional teaching modes makes it difficult for students to obtain opportunities for practice. This backward teaching mode can no longer meet the needs of mathematics teaching in higher vocational colleges, and is not conducive to the cultivation of talents. The application of PBL teaching method in mathematics teaching in higher vocational colleges, focusing on giving play to students 'abilities and emphasizing students' mathematical literacy.Which effectively remedying the defects and deficiencies of traditional mathematics teaching, overcoming its shortcomings.It plays an important role in enhancing students

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'self-confidence, promoting students' active learning and motivating students.

2.2 Meet the Requirements of Talent Training Goals in Higher Vocational Colleges

As we all know, although domestic higher vocational education has achieved significant development results, its development history is relatively short and does not have a certain development foundation as developed countries do. Due to the nature of higher vocational education, skilled talents are the main talent training goals of higher vocational colleges, focusing on training students 'comprehensive ability and improving students' mathematical literacy. As a new teaching method, PBL has the advantages that traditional teaching methods do not have. The effective application of PBL in higher vocational mathematics teaching can better solve the above problems.The PBL teaching method adheres to the concept of student-oriented education and teaching, and always adheres to the goal of cultivating students' professional ability.Analyzing from the perspective of vocational mathematics curriculum arrangement, it effectively meets the needs of students' professional positions, which has a positive role in promoting the development of vocational mathematics education.

3. Application of Pbl Teaching Method in Mathematics Teaching of Higher Vocational Colleges

3.1 Create Situations and Raise Questions

In the course of higher vocational mathematics teaching, if mathematics teachers want to make the most of the advantages of PBL teaching, they need to combine the actual situation of mathematical teaching, create situations, raise questions, create a good learning atmosphere for students, and enhance students' interest in mathematics learning,guide students to think actively. In the process of problem introduction, mathematics teachers need to find the entry point, usually based on the student's recent development area as a benchmark point, to help students review the relevant knowledge points of previous learning, increase students' understanding of knowledge points, so that students can quickly grasp these knowledge. For example, when a mathematics teacher explains the content of “application of differential of linear functions”, it mainly involves the definition of the original function and the definition of indefinite integral. Mathematics teachers can combine the content of linear functions learned in the past according to the current teaching content, and on the basis of students' full understanding, enable students to establish and grasp the nature and formula of indefinite integrals.Through analysis and comparison of this, it can promote students to master the knowledge they have learned in the past.

3.2 Teaching Activities to Solve Problems

In the practical application process of PBL teaching method, it pays attention to give play to students' autonomy. Therefore, in the process of higher vocational mathematics teaching, mathematics teachers should dig up the content of mathematical teaching materials, construct teaching activities for students, meet the needs of students 'mathematical learning, create a good learning atmosphere for students, and cultivate students' ability to analyze problems in specific environments.In addition, in order to ensure the effect of PBL, math teachers can guide students to actively explore the problem, so that students can analyze the problem during exploration. At the same time, teachers should give play to their own guiding role and cultivate students' ability to solve problems. Taking “extreme value of function” as an example, teachers can set teaching tasks for students. According to the previous knowledge, students can actively explore the corresponding problems in teaching activities, so that students' overall learning ability can be improved, and then students' learning ability can be cultivated.

3.3 Summarize and Review, Evaluate Each Other

Based on the teaching of PBL, mathematics teachers should be good at summarizing and reviewing the problems explored. In the specific teaching process, in order to optimize the teaching effect, mathematics teachers should pay attention to the use of auxiliary courseware to carry out

teaching activities, such as mind maps, geometric sketchpads, etc., to help students fully understand the issues explored and deepen students' knowledge and consolidate their knowledge, so that the profoundness of students' thinking has been comprehensively improved. On the basis of ensuring the current work, mathematics teachers also need to focus on making objective evaluations of students, and also pay attention to innovating specific evaluation models. Students can be encouraged to evaluate each other, increase their knowledge, and open up their horizons. The evaluation between students can help students express themselves and strengthen communication between students. Especially in the implementation of PBL teaching mode, in order to maximize the role of PBL teaching methods, mathematics teachers should combine the actual situation of current teaching and students' cognitive laws to design courses in a targeted manner to promote the improvement of the quality of mathematical teaching .

4. Conclusion

In a word, in the mathematics teaching of higher vocational colleges, mathematics teachers should pay enough attention to the PBL teaching method, give full play to the advantages of the PBL teaching method, and combine the PBL teaching method with student learning.In the specific implementation process, mathematics teachers should not only follow the emotional needs of students, but also meet the cognitive rules of students. Based on the actual situation of students, we can design courses suitable for students to study, stimulate students' interest in learning, and encourage students to actively participate in specific learning activities. In addition, mathematics teachers also need to properly guide students, create teaching situations for students, and enable students to learn in specific situations, in order to enhance students' learning ability, and then improve the level of mathematics teaching in vocational colleges.

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