

Research on Mathematics Classroom Teaching Based on the Model of Hierarchical Teaching Management

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Keywords: Hierarchical teaching management, Mathematics classroom teaching, Improvement

Abstract: With the implementation of nine-year compulsory education, and our school is located at the border of urban and rural areas, there are many children in rural areas and the quality of students varies. The problems of mathematics learning in our school have come to the fore. Some do not learn at all, and some cannot learn. Coupled with the traditional thinking that mathematics is a “big problem” in students’ minds, students’ learning initiative and self-consciousness are generally higher. Poor, it was difficult to improve at one time. On the other hand, limited by students’ large classes, number of class hours and 45 minutes of class time, classroom teaching can provide students of different levels with limited participation opportunities. Therefore, as a mathematics teacher in actual work, they will constantly try to use better methods. To change the problem of student differences in class teaching mode. By analyzing the status quo of mathematics teaching in the middle school, studying the reform practice of mathematics teaching at home and abroad, it is decided to conduct experimental research of layered teaching in mathematics classroom teaching of our school. Hierarchical teaching conforms to the dialectical theory of materialism, the theory of pedagogy, the learning psychology of students, and the principles of teaching students in accordance with their aptitude in the teaching theory. It has a broad theoretical foundation.

1. Introduction

Many years of teaching career have given me the deepest experience that students enter high school, especially when they are studying mathematics in the first grade, their basic thinking methods have large defects, which directly affect students' learning results. The main manifestations are: First of all, mental dispersion is a situation that is more likely to occur in the process of students listening to lectures. Distraction between classes is closely related to interruption of lectures. Once this happens, students cannot keep up with the teacher’s thinking during subsequent lectures, which affects students’ learning outcomes. In particular, the unfixed length of the dispersion time directly causes the learned knowledge to become fragmentary fragments, which seriously affects the quality of listening to the class. Secondly, there are emotional problems in class. Some students look very normal outside of school. Once they step into the classroom environment, they immediately experience hypoxia, confusion, confusion, and do not know what problems they have and how to solve them. This is the so-called phobia, it’s just him. The object of fear is the classroom. Entering

the classroom in such a state, the mind cannot be concentrated, and there is no learning efficiency at all. If such a problem arises, for the student's own physical and mental health, it is necessary to overcome internal obstacles or seek the help of medical workers.

2. Research on the Concept and Basic Connotation of Hierarchical Teaching

In recent years, hierarchical teaching has become a new teaching model, and the education circle attaches unprecedented importance to it. Today, hierarchical teaching has been defined as: "In the same class, students are divided into several levels according to their learning and acceptance ability, and the teaching goals and teaching methods suitable for this level are formulated." It not only includes "teaching in accordance with their aptitude", but also The meaning of "multiple intelligence" is also included. The first is the division of levels, and the second is the use of targeted teaching models and assessment methods for each level to encourage students at each level to fully explore their personal potential and obtain the best development. On the other hand, hierarchical teaching means that in the process of teaching, teachers are stratified according to regulations and guidelines for many students in the same class with different cognitions, different levels, and different accepting abilities. Generally speaking, The lower levels are divided into three levels, namely excellent, medium, and low. When promoting teaching at these three levels, they must be treated differently and in a targeted manner. When setting learning goals, there must be a distinction between difficulty and ease. In this way, the improvement of the overall class level can be promoted through personal improvement.

Teaching includes teaching and learning, and the target is teachers and students, but there are big differences between students, which are manifested in different cognitions, different learning levels, and different ability to accept knowledge, so as an educator , Don't be partial to either side, and face up to the differences between students, because this difference is also a manifestation of their personalities. For the majority of educators, in the process of teaching, they hope to promote national quality education, but they cannot ignore the real problem of entering a higher education. This sharp contradiction has existed since the restoration of the college entrance examination system. In order to effectively solve this problem, educators must have a more detailed understanding of students' mathematics knowledge. Hierarchical teaching can effectively solve this contradiction, and it enables students of different levels to achieve common progress.

3. The Necessity and Feasibility of Stratified Teaching and the Strategies of Stratified Teaching

Hierarchical teaching is a teaching model that faces the whole and teaches students in accordance with their aptitude. It emphasizes that "teachers should be adapted to students' learning. Overall class optimization". The core of hierarchical teaching is to face all students, face up to the individual differences of students, formulate teaching goals differently, design teaching content, control teaching progress, change teaching methods, and determine evaluation methods, so as to make every student as best as possible. The best development in the learning environment. The implementation of hierarchical teaching fully considers students' intellectual and non-intellectual factors, stimulates students' interest in learning, arouses students' inherent needs, mobilizes learning enthusiasm, creates a relaxed and happy learning atmosphere for students, and reduces students' interest at the same time. The extra-curricular burden has improved the efficiency of learning. Some unexpected "high opinions" put forward by students should be promptly adopted and fully affirmed, and students are encouraged to freely engage in reverse thinking, seeking different thinking, divergent thinking, boldly doubting, boldly imagining, boldly innovating, and being able to take certain actions. Questioning common views or conclusions, draw your own

conclusions.

The basis of hierarchical teaching division is students' cognitive ability, learning ability and acceptance ability. This puts forward a higher-level requirement for educators, that is, not only to complete the tasks of the "standard", but also to have a comprehensive understanding of each student, including their learning ability, acceptance ability, knowledge level, class completion, For the sense of responsibility and love between the class and classmates, through these explorations of their psychology, the entire class becomes a large group of solidarity and mutual assistance. At the same time, you can use methods such as heart-to-heart talks, class meetings, and partying for understanding. Other methods include individual conversations, obtaining resources from other substitute teachers, etc., soliciting students' opinions through exchanges, and then dividing them accordingly.

The stratification of classroom teaching is the key to changing the traditional education model. In the specific teaching process, not only the individual differences between students must be emphasized, but also the overall quality of students must not be ignored. The stratification standards must be strictly implemented, and each The teaching objectives of the levels are in place, even if it is the time for the three levels of common tutoring, the existence of the levels cannot be ignored. In the process of teaching, the use of intermediate students' imperfect cognition of knowledge points is used to develop questions through the way of asking questions, allowing students to study and research independently. At this time, the importance of hierarchical teaching is highlighted. In the classroom, you can use group discussion questions to study cooperatively, which can promote the development of students at all levels. According to the difficulty of the problem, a time period can be reserved for each class, which can be three to five minutes, preferably not more than ten minutes, because class time is limited. During this time period, students can speak freely about this question. If it is a problem with multiple solutions, they can choose the lowest C level to answer first, and use the methods they can solve to leave the most difficult part to the A level. Students, this method can take care of the emotions of students at each level, so that they can appreciate the joy of success, while enhancing their self-confidence, and happily mastering knowledge. When students are discussing in groups, teachers should observe carefully and make prompts and prompts in a timely manner, so as to help students find simpler solutions.

Layered practice can not only help students to grasp the knowledge points more firmly, but also help teachers to achieve teaching goals perfectly, and improve teaching results and learning effects. However, due to the differences between student levels, the differences cannot be ignored when it comes to practice. Layered practice is actually a process of consolidating knowledge and applying knowledge proficiently, and it is also a very important means to assist students in learning. Therefore, layered practice has become an important way for teachers to discover and solve problems. At this stage, there are no more than three types of exercises that match the hierarchical teaching: solid foundation exercises, comprehensive knowledge assessment exercises, and expansion exercises. In the process of practicing, you must never forget the existence of levels, and the problem needs to be difficult and easy to design. For example, in the "equation solving applied problems", you can choose two multiple-choice questions at will so that students at each level can answer the correct answer. After completion, you can make deeper changes to the two questions, A and B. Students at all levels, through independent study and research, teachers use tutoring to guide students and help students complete problems on their own. If the students at level C can successfully answer the question, and after the question is over, they can get more enlightenment from the answers of the students at the A and B levels to help expand students' divergent thinking.

It is not difficult to find from the above papers that because of the different levels, teachers' attitudes towards students during the assessment process cannot be exactly the same. For those students who are relatively backward in their studies and have relatively low self-esteem, encourage

and support them, discover their shining points, affirm their little progress in the learning process, establish self-confidence, overcome low self-esteem, and stimulate their enthusiasm for learning. The evaluation method for middle-level students should be affirmation and praise throughout. For those A-level students with good grades, strong learning ability, and strong self-confidence, they need to be targeted when evaluating, and can adopt a competitive model, and the requirements for them should be stricter to help them guard against arrogance and rashness. , Establish the spirit of daring to fight. From the specific teaching practice, it is not difficult to see that the hierarchical teaching model not only conforms to the reform of the education system, but also meets the requirements of quality education in our country. The hierarchical teaching model not only effectively reduces the burden of students' schoolwork, but also enables students to obtain better learning results. It is not only a burden reduction, but also an improvement. It not only develops students' personality, but also improves the teaching level of teachers.

4. Conclusion

By effectively organizing the teaching of students at all levels, and flexibly arranging different levels of strategies, teachers have greatly exercised their organizational control and adaptability capabilities. The thoughts elicited by the stratified teaching itself and the challenges raised by the students in the stratified teaching are all conducive to the overall improvement of teachers' abilities. Hierarchical teaching will bring more workload to teachers than traditional teaching. Teachers should be able to improve their own quality as a starting point, and actively explore hierarchical teaching methods to improve work efficiency. Based on the research results of others, this research examines the historical context and current situation of the development of subject hierarchical teaching, combs the theoretical basis of subject hierarchical teaching, analyzes the value of subject hierarchical teaching, and explores the value of subject hierarchical teaching Influencing factors and implementation strategies. Its innovation lies in: First, in the two classification forms of hierarchical teaching, a third classification form-internal and external hierarchical teaching is proposed; second, the theory of subject hierarchical teaching is carried out from the perspective of sociology Third, in the discussion of the implementation strategy factors, the stratification standard is proposed to be more operational than in the past; fourth, in the evaluation stratification, it is emphasized that students and teachers achieve self-evaluation through reflection The purpose of improving the main body and active factors of students and teachers in the evaluation. However, due to my limited theoretical level and ability, coupled with the limited data collected, this research is only at a superficial level, and the theoretical analysis is also superficial, and some opinions will inevitably appear to be biased. However, this research still has certain reference value in enriching the theoretical system of subject hierarchical teaching and applying it in practice. In the future work and research, I will continue this research, and strive to make the subject hierarchical teaching more scientific, theoretical and practical as soon as possible.

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