

The Design of Middle School Mathematics Homework in the Context of Double Reduction Policy

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Abstract: Mathematics is the foundation and core of human civilization, and in modern society, it has become an important tool indispensable to people's life, communication and thinking development process. Since the implementation of the junior high school curriculum reform, teachers have gradually realized that mathematics homework design is an essential and effective method, but it has also become a major problem for teachers in the context of the new curriculum reform, as the state pays more attention to students' quality education, which has led to a change in teaching methods, and the traditional test-based education model has been broken. At present, teachers should pay attention to the design of junior high school mathematics homework, in line with the premise of the "double reduction" policy, to improve students' learning efficiency as much as possible, to give full play to the role of homework, in order to effectively reduce the burden of homework for students in compulsory education, and to build a good educational ecology.

Keywords: Double Reduction Policy; Middle School Mathematics; Mathematics Homework Design

1. Introduction

With the rapid development of social economy, the state pays more and more attention to education and invests more and more, and the development of education is also more and more rapid. Teachers are responsible for teaching and educating people, so they should pay more attention to the overall development of students. Teachers should not only pay attention to the mastery of students' mathematical knowledge, but also pay attention to their thinking ability and innovative spirit, instead of just pursuing the transmission of mathematical knowledge. Therefore, in the education and teaching reform, we should advocate and advocate students' independent learning, cooperative inquiry to improve secondary school students' understanding and application of course content, emphasize that homework design should be flexible and varied, teach according to the material, so that students' mathematical thinking skills can be developed, pay attention to the evaluation results and provide timely feedback to teachers.

2. The Meaning of the "Double Reduction" Policy

2.1 The Practical Significance of Implementing the "Double Reduction" Policy

The implementation of the "double reduction" policy, from the macroscopic point of view, has put forward higher requirements for students' mathematics homework ability and comprehensive literacy, which helps to improve students' mathematics homework ability; from the microscopic point of view, it has a positive effect on cultivating and enhancing secondary school students' interest in learning, and it is also conducive to teachers paying more attention to the principle of "teaching to the students" in teaching. It is also beneficial for teachers to pay more attention to the principle of "teaching to the students" and to make the classroom full of interesting and practical operations. First of all, the curriculum reform in junior high school, the new curriculum reform emphasizes the importance of quality education, comprehensive promotion of quality teaching^[1]. The second is to change the traditional way of learning, that is, from the focus on knowledge points to focus on improving the speed and quality of problem solving and the concept of progress, so that students in the learning

process to form good mathematical homework habits. Finally, reduce the academic burden so that students can find confidence in the learning process and can actively participate in mathematical activities, so that they can experience the joy of success [2].

2.2 The Advantages and Disadvantages of the "Double Reduction" Policy

The implementation of the "double reduction" policy has great benefits for students to learn mathematics, but there are also some disadvantages. The first is that the assessment of the work is not comprehensive. Second, there is not enough support for students in learning mathematics, which affects their interest in learning. Therefore, we should comprehensively consider various unfavorable conditions to formulate feasible and effective, scientifically reasonable and in line with the development characteristics and needs of junior high school students.

The advantages of the "double reduction" policy are mainly in three aspects: First, it has the support of parents, most of whom are positive about the implementation of the "double reduction" policy and think that the "double reduction" policy is a boon to students [3]. The policy is a blessing for students, who can use their mathematical knowledge to solve real-life difficulties. Second, the "double reduction" policy can effectively alleviate parents' educational anxiety, because students' self-knowledge is low, their motivation is not strong, and teachers do not find students' problems in mathematics in time, so the "double reduction" policy can effectively alleviate the educational anxiety between parents and teachers. The implementation of the "double reduction" policy can effectively alleviate the educational anxiety between parents and teachers. Third, it can effectively reduce the family's expenditure on education, reduce the burden of students, promote the reasonable distribution of educational and curricular resources among different regions of China.

3. Problems in the Design of Junior High School Mathematics Homework

3.1 Uneven Design

Some mathematics teachers do not consider students' learning needs when designing homework, they do not pay attention to practical teaching; some teachers do not understand the new curriculum concept deeply enough, and the homework design is out of touch with real life. These factors will cause students to be unable to complete the academic assessment and psychological pressure in the context of the "double reduction" policy in junior high school, which will not only reduce students' interest in learning, but also affect the design of mathematics homework.

3.2 Learning Facilitation is not Strong

In secondary school mathematics, there are many knowledge points that students need to learn, think and solve problems by themselves. Teachers implement the strategy by simply imparting it to them, which makes the learning process boring and tiresome, thus making students much less interested. For example, some topics mention that there are many conditions that can be related to life, but they do not want to do it and just rely on rigid formulae to solve the problem, which is against the original purpose of education [4].

4. The Optimal Design of Mathematics Homework for Junior High School Students

4.1 The Content of Mathematics Homework Should be Comprehensive and Appropriate

Students should take full consideration of the content of mathematics homework for different age groups and grade characteristics, life environment, etc. It is necessary to design mathematics homework for junior high school students of

different ages in terms of their psychology, thoughts and emotions. Middle school is one of the most important periods for learning mathematical knowledge, which is easier for them to understand and accept at this time, so it is possible to design mathematical homework that fits their age group and is relevant and workable in their life environment. However, in the actual design of mathematics homework, teachers tend to focus only on students' knowledge of the functions they have learned and their ideas and techniques for solving problems. This approach not only does not help students understand the content of the topic but also reduces teaching efficiency and affects students' learning mood. Therefore, we need to study the design of secondary school mathematics homework, and then analyze its problems and propose corresponding countermeasures [5].

4.2 Mathematics Homework Should be Relevant

Although it is said that the design of mathematics homework is based on students' existing knowledge and experience, it should not be blindly copied from the textbook and syllabus, but should be appropriately innovated on the basis of the original mathematics according to the cognitive rules and psychological characteristics of students, so as to make the teaching effect better. In the actual implementation process, different learning needs can be selected according to different types of courses. The "double reduction" is not only to reduce the amount of homework, but also to reduce the quantity but not the quality. Therefore, before assigning homework, teachers must divide the important and difficult points of teaching content, and then design homework in a targeted way, so that students can complete homework efficiently.

4.3 Mathematics Homework Should be Interesting

Some students' math homework is rather boring and uninteresting, and some of them are even uninterested in the topic. Our secondary school is the period of adolescence, in which they should feel the joy and sense of achievement of learning. Therefore, in order to make these students have a good emotional experience, it is necessary to design mathematical homework that is interesting and can cause others to think about the problem and explore the knowledge points, and also to stimulate junior high school students to participate in classroom teaching activities with active initiative, independent inquiry ability and interest [6].

5. Conclusion

To sum up, in the traditional design of secondary school mathematics homework, teachers usually focus on the mastery of basic knowledge and skills, but ignore the cultivation of students' creative ability. However, with the development of the times, social needs and educational reform, the implementation of the "double reduction" policy has increased the difficulty of teaching in junior high school, and in order to optimize and improve the curriculum, the design of homework has put forward higher requirements. The main way for students to consolidate their mathematical knowledge is through the use of the "double reduction" policy. The main way for students to consolidate their mathematical knowledge is homework. Teachers should pay attention to optimizing homework design, ensuring the gold content of homework under the premise of the "double reduction" policy, reducing students' pressure while improving teaching quality, and truly achieving the purpose of reducing the burden and increasing the efficiency.

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