

# Primary School Mathematics Teaching and Improvement Strategies Based on Double Reduction Policy

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**Abstract:** Compared with other disciplines, mathematics is more fundamental, practical, logical and applicable, while primary school students have relatively little learning experience, and their reaction to mathematics is also negative, so they often have no way to start.[1] Teachers should realize the seriousness of this problem. On the one hand, they should have a deep understanding of the core content of the "double reduction" policy and better understand the changes in primary school mathematics education under the new situation. On the other hand, we should start from the perspective of students; carry out teaching work around students, so that primary school mathematics teaching can be further developed.

**Keywords:** "Double Reduction" Policy, Primary School Mathematics, Current Teaching Situation, Strategy

## 1. The Policy of "Double-Reduction" and the Policy of "Double-Reduction" in Mathematics

Teaching in primary schools are the educational policies which exist in our country according to the nine-year compulsory education stage, and are put forward by various deficiencies, mainly to reduce the workload of students and the burden of off-campus training as the core, so that students can complete the main tasks in school, off-campus according to their own interests and self-exploration, bold innovation. Among them, the supervision and management of the training institutions outside the school is the most critical [2]. Our country has put forward a lot of policies to strengthen the macro-overall planning and comprehensive management of the training institutions outside the school, which is really for the students, lay a solid foundation for growth and development as well as the reform of the education system. In the "Double reduction" policy, under the general environment of primary mathematics teaching reform has been repeatedly mentioned, this policy of primary mathematics teachers are very strict requirements. Mathematics teachers should pay attention to the link, pay attention to the analysis and research of the key and difficult points of mathematics teaching in primary schools, Understand Students' learning, foundation, guide students to spread freely, and guarantee students to leave a deep impression through independent learning, to realize the steady improvement of individual mathematics core literacy. Mathematics teachers need to do a good job of preparing courseware, pay attention to the effective analysis of different factors, adhere to the people-oriented, step-by-step education and teaching philosophy, pay attention to the development trend of the times, effective research. In the course of guiding and encouraging the students, we should adjust the teaching ideas, reform the teaching mode, promote the rational allocation of various high-quality educational resources, and ensure that the teaching of mathematics and learning in primary schools can achieve further breakthrough and improvement.

## 2. The Present Situation of Mathematics Teaching in Primary Schools under the Background of "Double Reduction"

### 2.1. The Teaching Content is Boring

The "Double reduction" policy requires primary mathematics teachers to actively build interesting classrooms, so as to ensure that students can participate in the whole process, easy to complete different learning tasks, step by step, the development of personal interests, to achieve the overall growth of

moral, intellectual, physical and aesthetic labor. However, some small, mathematics teachers have less education experience, teaching knowledge as the focus of classroom teaching, combined with practice and consolidation of knowledge-related requirements of the teaching work to carry out teaching, work, teachers can only teach the content of textbooks and teaching materials, few teachers through the effective introduction of extra-curricular topics to stimulate students' interest, and continue to enrich the subject content and form of teaching. For example, when exploring triangles, understanding and area calculation with students, teachers do not arrange them rationally according to students' learning interests, and other educational and teaching tasks do not focus on students' interests, the explanation and the analysis, finally causes the classroom teaching content to be boring. Students produce, a lot of negative response to the emotions, can only be mechanical review and consolidation, individual academic performance stagnation, see table 1. In addition, some teachers pay too much attention to teaching, control the rhythm, in order to successfully complete the teaching task in the limited time, constantly increase the speed of teaching, not according to the students physical and mental growth of the law for targeted adjustment. This leads to students can only dabble, cannot really achieve an example. Scholars argue that this mechanical and blunt teaching model violates the original intention of the "Double reduction" policy and is not conducive to the innovation of mathematics teaching in primary schools, with some educational resources being wasted, students also gradually lost their initiative and self-confidence in learning mathematics independently.

*Table 1: Problems in primary school mathematics learning.*

Serial No	Problems
1	Computing power
2	Concept understanding
3	Operating ability
4	Ability to solve practical problems

### **2.2. Single Teaching Method Mechanical**

Teaching in the liberal education context, mathematics teaching in primary schools has become more and more stringent. The enhancement of Teachers' professional skills should not be overlooked [3]. Some teachers themselves, professional literacy is not ideal, the speed of promotion is slow, unable to meet the liberal education and "Double reduction" policy implementation requirements. This has led to the teaching methods adopted by teachers are relatively simple and mechanical, traditional teaching mode occupies a higher proportion, and rarely, teachers flexible use of diverse teaching strategies and interesting teaching methods, the whole mathematics classroom is not attractive to the students, and the students also have a lot of wrong knowledge. Other math teachers don't realize the importance of creating a fun classroom, and they don't mix with their students in the classroom, and they focus too much on the dignity of the teacher and the authority of the individual. Few teachers can understand the students' knowledge and skills according to the current situation of education and teaching. The classroom teaching method is simple and inefficient. This is against the requirements of quality education reform, leading to classroom teaching progress, slow, students can only rely on the teacher, waiting for the teacher to give the final answer.

### **2.3. Less Interaction between Teachers and Students**

The policy of "Double reduction" pays great attention to relieving students' burden, requiring teachers to understand students' basic learning and to lighten students' burden of learning and study in the process of interaction and exchange with students, to ensure that students are aware of the fun of learning mathematics, and then to achieve a steady increase in personal learning ability and level. However, some teachers, when carrying out their teaching activities, do not actively strengthen the interaction with students according to the law of Students' physical and mental growth, and pay too much attention to the authority status of individuals, did not guide students with an equal attitude, respect students, understand students and give students targeted help [4]. This has not only led to the waste of some educational resources, but also seriously affected the effective implementation of the whole classroom teaching activities, not conducive to students' learning ability and level of steady improvement. It is difficult to keep up with the pace of the development of the times. Through rational allocation and optimal utilization of various educational resources, the reform and innovation of classroom teaching in primary schools can be realized.

#### ***2.4. The Way of Teaching is Backward and the Way of Solving Problems is Inflexible***

At present, the reform of education and teaching is carried out in every period from primary school to primary school in our country. Many primary schools, first of all, responded and achieved good results. However, due to various reasons, primary schools are still not implemented, teachers still teach the main, and after-school homework is still the majority, relevant information shows that the proportion of homework in primary school students is large. In primary school, most of the math lessons, the teacher is very serious, but the students rarely speak, with a lot of arithmetic to consolidate results, this is a very effective way of teaching, but if it is too monotonous, can let the student's mathematics thought receive the certain interference, therefore must make the corresponding adjustment.

#### ***2.5. The Life-Based Teaching of Mathematics***

Education is a new teaching method under the background of the new round of curriculum reform, which conforms to the current trend of education and development, as well as the students' understanding, however, in the process of using life-based teaching, many teachers do not have a thorough understanding of life-based teaching, which leads them into a dead end in practice, can make the implementation of life teaching effect is not good; simply from the online materials for teaching, teaching and life will be out of touch, so that it cannot give full play to its advantages [5]. At the same time, some teachers do not realize the importance of "Life-oriented" teaching, in carrying out "Life-oriented" education, still using the "Traditional" method, this has caused the "Life-oriented" teaching cannot be truly implemented. In teaching practice, teachers over-emphasize the transfer of knowledge, resulting in a waste of resources and time [6].

#### ***2.6. Primary School Students Have Poor Autonomy in Teaching***

It is difficult for students to master all the knowledge and they have to rely on students to review after class. Therefore, students should take the initiative to study, it is very important to improve students' mathematical ability. However, some primary school students did not consciously review their textbooks after class, see table 2. In addition, some students will encounter many problems in mathematics teaching because of their learning ability and dependence on teachers.

*Table 2: Student learning initiative questionnaire.*

Classification	Proportion
Ask students	41%
Sometimes ask students	52%
Never ask students	7%

#### ***2.7. Under the Background of the New Curriculum Reform and "Double Reduction"***

Teachers can provide students with appropriate teaching means according to the requirements of teaching materials to improve their learning level and ability. However, in the daily teaching, teachers have not carried out any innovation, still using "Indoctrination" and "Spoon-feeding" teaching methods, resulting in the form of the classroom is too single, teaching atmosphere is too rigid, students cannot fully mobilize the enthusiasm of learning, leading to students in the classroom always in a negative state, cannot improve the quality of mathematics learning and efficiency [7].

#### ***2.8. Teachers Should Change Their Teaching Liberal***

Education in a timely manner and pay attention to the development of students' thinking and abilities. However, in the teaching of mathematics in primary schools, teachers do not pay attention to the cultivation of students' comprehensive quality, but spend most of their time on teaching knowledge, so many problems of students have not been solved, it leads to the lower and lower learning efficiency of the students.

### 3. In Order To Keep Pace with the Times and Promote the Full Implementation of the "Double Reduction" Policy

Mathematics teachers in primary schools need to reform teaching strategies, teaching ideas, teaching methods, based on the optimization, truly linked, pay attention to the effective integration of in-class and out-of-class. To understand the students' learning basis and individual development requirements, to explore and innovate with students, to ensure the primary mathematics teaching reform to achieve new results.

#### 3.1. Enrich the Content of Teaching Mathematics

Teachers in primary schools need to do a good job of pre-class preparation, aware of the content of teaching, the important impact on students, while enriching the content of teaching at the same time to truly build quality classroom. Primary school mathematics teachers need to take the interesting classroom as the goal, choose the teaching content that the students are more interested in, do a good job of pre-class preparation, find the cut-in point and breakthrough of the interesting teaching. Among them, the reform and innovation of the pre-class introduction work is very important. Teachers can take the form of magic tricks to attract students' attention, so that students have a good initial impression, and then under the guidance of the teachers to take the initiative to complete the task of learning. This gradual and people-oriented education model can better highlight the main value of students and promote students' mathematics learning and social practice. For example, in order to guide students in their parallelogram, primary school math teachers need to show the transformation and transformation of parallelogram and rectangles by playing multimedia videos to stimulate students' various senses, to arouse students' interest in learning, so that students can complete the task of learning independently and consciously, this has an important impact on reducing burden and increasing efficiency.

#### 3.2. Innovation in Teaching and Learning Methods

Puts teachers to the test, while teachers need to strengthen cooperation with their peers in the process of learning from experience and lessons learned, with emphasis on creative teaching methods; the rational use and effective development of law. Among them, group cooperative teaching has achieved obvious results, and it has an important influence on students' knowledge learning, skill improvement and cooperative consciousness cultivation [8]. Mathematics teachers need to integrate more game elements and pay attention to learning, students learning nature, through the form of playing games to help students to absorb knowledge, to ensure that different teaching methods can achieve effective innovation. Many students learn, high motivation, to learn the mathematics can have a refreshing feeling. Teachers need to take advantage of this effective opportunity to appropriately raise the level of difficulty in teaching, so that students can touch it with a jump. This will reflect the students' subjective value and realize a variety of, the optimal allocation and use of creative teaching resources has an important impact, and teachers can also develop game-based teaching activities to enable students to play their own strengths and advantages in the process of autonomous participation, truly master their own mathematics learning strategy, initiative for the realization of the group task to make continuous efforts, perseverance, see table 3. A lot of learning, students can participate in the whole process; personal core literacy has been improved.

Table 3: Innovative curriculum methods.

Serial Number	Methods
1	Innovative Educational Concept
2	Optimize The Subject Teaching Structure
3	Improve Teachers' Basic Teaching Skills
4	Explore The Teaching Mode And Learning Style

#### 3.3. To Strengthen Teacher-Student Interaction and Contact

Teachers need to grasp the essence of mathematics teaching in primary schools, pay attention to the exchanges between and among students, understand students' real thoughts, explore with students together, and promote different kinds of teaching, the effective expansion and extension of activities. Through effective interaction and communication between teachers and students, now teaching mutually beneficial, so that students can take the initiative to keep up with their own pace and rhythm,

freedom, divergence, bold imagination, this has a very, very critical effect on the improvement of students' learning ability and level. Students can also be aware of the teacher's care and recognition of their own, take the initiative to complete the task of learning, actively seek the help of teachers, say a person's unique views and ideas, open their hearts. The overall teaching progress is faster, the real gains of students are more and more rich, can really achieve an example of three. Teachers can put more teaching energy and time on the key knowledge to improve the overall performance of students in mathematics, to ensure primary mathematics teaching, reform work to achieve a new breakthrough, see table 4.

Table 4: Interactive mode.

Serial Number	Methods
1	Create A Harmonious Classroom Atmosphere
2	Create Mathematical Situation
3	Carry Out Colorful Mathematical Activities

### 3.4. Stimulate Students' Interest in Learning through Learning Strategies

A strong interest can enable students to take the initiative to deal with various difficulties encountered in mathematics learning, people's knowledge to achieve a simple transfer and bold exploration. Teachers can take the form of story-telling, story-telling and game-playing teaching, and choose teaching ideas and teaching and learning elements that students enjoy, to carry out teaching activities, and pay attention to students' interest mobilization and enthusiasm arousing, to understand the specific requirements of mathematics teaching in primary schools after the new curriculum reform , see table 5[9]. Analyzing the connotation and value of the policy of "Double reduction", under the guidance of this policy, we should actively adjust the train of thought of education, reform the teaching mode, and ensure that various educational resources can play a certain role and value, for students of mathematics learning, social practice to lay a solid foundation. 4. Conclusion the policy of "Double reduction" requires mathematics teachers in primary schools to reform the teaching model, pay attention to the real situation of students in the process of autonomous learning, and give students direction, guidance and skills advice. Gradually enrich the content of teaching, reform teaching strategies, actively strengthen teacher-student interaction, actively stimulate students' interest in learning, to ensure that students are relaxed.

Table 5: Design strategy.

Design Strategy	Design Objectives
Pre work	Introducing new knowledge into
Detective homework	check learning
Interesting homework	stimulates learning interest
Practical homework	observe problems from a mathematical perspective

### 3.5. Strengthening Teacher-Student Relationship and Communication in the Teaching Process

Teachers should actively explore the nature of mathematics, pay attention to communication with students, understand their thinking and work with them to better accomplish their tasks. The interaction between teachers and students increases the atmosphere in the classroom, allowing students to follow the teacher's explanation, constantly expanding their imagination and enhancing their imagination. For example, in the third grade, the chapter "Four times and divide," Teachers should first ask students: "Students, in order to beautify our campus, we would like to invite you to do our gardener." After the completion of the teaching program, the teacher should give the students appropriate encouragement and affirmation, so that they feel the teacher's care for them, and in this way to stimulate their expression. Only in this way can we improve the overall effect of teaching, so that students in the classroom have a harvest, and then achieve the aim of inferences. Teachers can also have more time to answer these questions, improve their ability to promote the development of primary school mathematics. Therefore, in the new curriculum reform, teachers must constantly innovate teaching methods, constantly optimize teaching ideas to promote the expansion of students' thinking and ability, thus promoting their own development. In the background of "Double subtraction", the teacher creates a relaxed classroom atmosphere, while reducing the pressure of learning, it can also promote students' interest in learning, thus improving their English learning ability.

### 3.6. Using Games to Enhance Students' Interest

In mathematics learning is the biggest motivation for students to learn mathematics. However, primary school students' understanding of mathematics knowledge is not deep enough, and they lack interest and interest in mathematics, therefore affected their study enthusiasm. Therefore, teachers in the face of this problem, the game can be interesting elements into the math class, so that they have a strong interest in math class. Game teaching is a game-based teaching method, teachers can put the knowledge and knowledge in the classroom into the game, make it in the game, acquire knowledge, and make it interested in the game [10]. In learning the course parallelogram and trapezoid, teachers can use information technology to play games, and as a theme, the use of four quadrilateral or trapezoid puzzle, so that students understand their similarities and differences. Teachers can also bring parallel and vertical concepts into the game, so that they quickly grasp the knowledge of the game.

## 4. Conclusion

In summary, mathematics in primary school is a very important course. Therefore, teachers should pay more attention to mathematics in primary schools, improve classroom teaching, relieve students' pressure, promote students' physical and mental development, and promote the implementation of "Double reduction" policy. At the same time, teachers should strengthen the design of classroom teaching, reduce students' learning burden, improve the effect of after-school exercises, and promote students' all-round development.

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