

# Discussion on Mathematics Classroom Teaching in Primary School Based on Core Literacy

Yujie Geng\*

Yangzhuang Center Primary School, Laiwu District, Jinan, Shandong 271123

\*Correspondence to: Yujie Geng, December 1969, male, Han nationality, native of Laiwu, Shandong province. Currently, a teacher at Yangzhuang Central Primary School, Laiwu District, Jinan City. Research interests: mathematics education in compulsory education.

**Abstract:** with the deepening of the new curriculum reform standards, primary mathematics teaching objectives, teaching content and teaching methods have made the corresponding optimization and adjustment, more attention is paid to the all-round development of students and the improvement of comprehensive quality. The concept of core literacy is the latest requirement for the cultivation of students' quality in the course reform, and it can be said that core literacy is the vertical extension of the concept of quality education, we should permeate the core literacy into the primary school mathematics classroom teaching, innovate the primary school mathematics teaching method, according to the student's actual demand and the physical and mental development characteristic to formulate the teaching plan, optimizes the teaching content, it lays an important foundation for the improvement of the core qualities such as the ability of self-regulated learning, the ability of problem inquiry and the ability of logical thinking.

**Key Words:** Core literacy; Primary mathematics; Classroom teaching

## 1. Introduction

At present, the cultivation of the core literacy of primary and secondary school students has become an important direction of teaching reform, the so-called core literacy mainly refers to the process of teaching practice, in addition to pay attention to the accumulation of subject knowledge, in addition, students should be able to apply what they have learned, and to combine learning with thinking, so as to form a teaching model of learning-accumulation-thinking, to enable students to have independent learning, lifelong learning and the ability to adapt to society in the future<sup>[1]</sup>. It is a great breakthrough in the reform of mathematics curriculum to combine the idea of core literacy education with math-



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ematics classroom teaching in primary schools, improve the efficiency of classroom organization, cultivate students' mathematical logic thinking and interest in learning mathematics, and lay a solid foundation for students' higher level learning in the future. Combined with specific teaching cases, this paper mainly discusses the effective strategies of mathematics classroom teaching in primary schools under the concept of core literacy.

## **2. The Importance of Core Literacy-based Mathematics Classroom Teaching Reform in Primary Schools**

### **2.1 Enhance the Overall Quality of Primary School Students**

The reform of mathematics classroom teaching in primary schools based on the core literacy is to train the students' mathematical thinking ability and core literacy, so that the students can not only understand and master the mathematics knowledge better, and can use mathematical knowledge to solve real problems in life, at the same time with the corresponding awareness of the problem, so as to develop diligent thinking, good analysis of good study habits, to achieve the improvement of the overall quality of primary school students [2]. Mathematics as an applied subject, mathematics teaching thinking should be more flexible, in the core of the concept of literacy, teachers change teaching ideas, focus on training students' ability to learn independently, how to guide the pupils to analyze and solve the problems correctly, form the corresponding mathematical scientific thinking, and improve the students' mathematics comprehensive application ability.

### **2.2 Conducive to Improving the Quality of Mathematics Classroom Teaching**

Based on the core quality of primary mathematics classroom teaching reform, but also to fundamentally improve the quality of mathematics classroom teaching. The key and difficult point of mathematics teach-

ing in primary school lies in how to make students understand and master abstract mathematics knowledge better, and at this age of students active, curious about new things, difficult to concentrate in the classroom, which increases the difficulty of primary mathematics teaching, reducing the effectiveness of classroom teaching [3]. From the thinking angle of cultivating students' mathematics core quality, the classroom teaching is organized by means of question guidance, classroom teaching situation creation and classroom interactive games, etc.. It can realize the mathematics knowledge transformation, which is more convenient for the primary school student's understanding and the memory, simultaneously also can stimulate the primary school student's study interest and the classroom participation enthusiasm, has promoted the mathematics classroom teaching efficiency, it also ensures the quality of mathematics teaching in primary schools.

### **2.3 Beneficial to Realize the Innovation of Mathematics Teaching Mode**

The reform of mathematics classroom teaching in primary schools based on core literacy is also beneficial to the innovation of mathematics teaching model in primary schools. Under the guidance of the concept of core literacy, primary school mathematics summed up and reflected on the problems and deficiencies in the previous classroom teaching. In order to better train students' comprehensive application ability and practical ability, it breaks through the shackles of the traditional mathematics teaching mode, makes the original boring mathematics classroom become vivid and interesting, and constructs a kind of benign interactive relationship between teachers and students, this is also conducive to the healthy development of mathematics teaching.

## **3. Problems in Primary School Mathematics Classroom Teaching**

### **3.1 Students Lack Independently Think and Explore Ability**

At present, in the process of primary school mathematics classroom teaching, there is a widespread lack of independent thinking and problem-solving ability of students. Under the influence of the traditional exam-oriented education idea, our primary school mathematics class has long been focused on the students' basic knowledge and ability to do the exercise and training, the aim of teaching is to let students learn how to do the problem, and use a lot of exercises to let students master a skill and method<sup>[4]</sup>. In fact, mathematics is a subject with a high degree of flexibility and speculation, for a mathematical problem can be interpreted from multiple angles, and there are different ways to solve the problem. Under the guidance of the traditional educational idea, the students lack the ability of thinking and inquiry from the primary school stage, and the students are all the same, which is not conducive to effectively developing the students' intelligence level, and it is not conducive to the long-term development of mathematics.

### 3.2 Unitary Teaching Form

At present, in the process of mathematics classroom teaching in primary schools, there are still problems of too single classroom teaching form. Many mathematics teachers still adopt the spoon-feeding teaching method, do not really respect the student's main body status, and do not realize the teacher's own guidance and service role, simply to inculcate knowledge to students, lack of guidance to students' thinking and ability. It is precisely because of the lack of such two-way interaction and communication, it is also difficult for teachers to really grasp the students' learning situation, as well as students' hierarchical and individualized needs<sup>[5]</sup>, in the formulation of teaching plans and the preparation of teaching plans, the lack of effective targeting, the actual needs of students did not take mathematics classroom teaching content and methods of adjustment, gradually widening the gap between students, it has not laid a good foundation for pupils to learn mathematics in the future.

### 3.3 Rigid Teaching Content

At present, there are many limitations in the teaching contents of mathematics in primary schools, that is to say, mathematics teachers only impart the knowledge in textbooks to students, neglecting to extend the depth and breadth of related mathematics knowledge. Mathematics is an applied discipline, mathematics is closely related to our lives, if the mathematics teaching limited to textbook knowledge, then lost the practical value of mathematics<sup>[6]</sup>. We take the Qingdao edition of mathematics textbooks as an example. For example, in the course of learning "The knowledge of Gram, kilogram and ton", if the teacher only explains these units of measurement to the students, it is very abstract, and through the actual examples in the joint life, let the students recall how the stall owner weighed the vegetables when they went to the market with their mother, starting from the perspective of living practice, that will help students better understand and understand abstract mathematical concepts.

### 3.4 Lack of Teaching Evaluation

At present, the lack of teaching evaluation in primary school mathematics teaching also affects the improvement of students' core literacy. As an important part of teaching practice, teaching evaluation is often neglected by teachers. The process of teaching evaluation is actually a process of summarizing and reflecting on teaching achievements, at the same time, it is also an important way to understand students' learning situation, but teaching evaluation in primary school mathematics teaching is often based on students' homework and the completion of related classroom tasks as the standard, do not pay attention to the teaching process and students' classroom performance of comprehensive evaluation, especially on students' cognitive ability, thinking ability and emotional experience, etc., therefore, there is no real feedback on the effect of the cultivation of core literacy in primary mathematics classroom teaching.

## 4. Primary school mathematics classroom

## teaching strategy research based on the core literacy

### 4.1 Good at Problem Leading

Under the guidance of the concept of core literacy, mathematics classroom teaching in primary schools should be reformed in order to improve classroom efficiency and cultivate students' core literacy. First of all, teachers must be good at problem guidance, so that students through the analysis of problems, to improve the ability of autonomous learning and problem-solving ability<sup>[7]</sup>. For example, in the course of this lesson, "Comparing the size of fractions from the same denominator," we can give students a few scores and let them try to compare the sizes on their own initiative first. They can use the form of group discussions, each group gives an answer, and talk about how you compare them, how you compare them, and how you think about it? Then give the students the corresponding time to analyze and explore, then the teacher listen to the answers given by each group, and then guide the students to use the transformation of thinking will be converted into fractions. Because we have learned before multiplication and division, let students divide the denominator by the numerator to carry out the size comparison, this can also achieve before and after knowledge of the connection and integration. Through such a comparison method to get a correct answer, let students through the answer to reverse comparison denominator of the same fraction size rule, let the student be able to discover naturally in the same denominator of the score the molecular bigger the score is bigger. Through the teaching process of question introduction, argumentation and analysis, thinking transformation and backward inference, the pupils can have the corresponding ability of thinking and analysis, to master some methods of mathematical problem analysis, can put forward their own assumptions and sum up the law, deepen the impression of knowledge and understanding of the starting point to explore the problem, can effectively im-

prove the core literacy of students.

### 4.2 Innovating Classroom Teaching Methods

Based on the core literacy of primary school mathematics classroom teaching should also achieve teaching methods and methods of innovation. Teachers should change the previous spoon-feeding teaching, fully respect the main body status of students, and build a two-way interactive mathematics classroom<sup>[8]</sup>. For example, in the teaching process of the lesson "Parallel and intersecting", teachers can make use of the teaching method of combining numbers and figures, teachers lead students to "Draw a picture" "Find a look" such as the classroom interactive games, so that primary students can more intuitive understanding of what is the intersection line, what is parallel line. At the same time, in order to deepen students' accurate understanding of this concept, teachers can also make full use of multimedia to show students some common parallel lines and intersecting lines in the form of slides, for example, our straight and wide roads are parallel, while our extensive railway network has many intersecting lines. In addition, students can also make full use of the teaching topic of this unit, which is an activity like "I learn design from my dad", so that they can make full use of their time after class, try to design an object or build a house with parallel lines and intersecting lines. We combine the idea of number and shape with the content of mathematics teaching to make mathematics teaching more concrete. In this way, we not only innovate the form of mathematics teaching, but also stimulate students' creative thinking. In addition, in the process of mathematics classroom teaching in primary schools, teachers should carry out hierarchical teaching according to the different situations of students and follow the principle of differential teaching, strive to make every student can progress and improve.

### 4.3 Pay Attention to the Development of Teaching Evaluation

To organize mathematics classroom teaching in pri-

mary school based on core literacy, we must pay more attention to the development of teaching evaluation. In the process of classroom teaching, we should carefully record and summarize the students' classroom performance and learning feedback in this class, and construct diversified teaching evaluation standards, in particular, students in the classroom thinking ability, analytical ability and cognitive ability and other core literacy content to be an objective evaluation. For example, in the course of studying this part of "Four mixed operations of fractions", students may not be skilled enough in the mixed operations of fractions and lack the flexible use of simple operations, in the process of teaching feedback and evaluation, the teacher should let the students explain the process of calculation rather than the accurate results. For the parts that go wrong, the teacher should let the students analyze the reasons for the problems themselves, the teacher through to the classroom question arrangement carries on the pointed explanation to the student, can let the student consolidate the knowledge truly, enhances student's comprehensive utilization ability, taking the process of solving problems by teachers and students as the main basis of teaching evaluation, so as to show more real teaching effects, and thus constantly improve the professional ability and teaching level of teachers, it lays an important foundation for promoting the cultivation of students' core quality in mathematics.

## 5. Conclusion

In the mathematics classroom of primary school, we should permeate the concept of core quality, take the problem guidance and inquiry as the core, connect with the reality of life, innovate the classroom teaching methods, and attach importance to the development of teaching evaluation links, can effectively promote the development of students' mathematics comprehensive ability.

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