

# Reflections on the Development of Students' Subjectivity in Mathematics Teaching in Primary Schools

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**Abstract:** With the continuous progress of the new curriculum reform, the current primary school educational institutions and related teachers have gradually increased their attention to the dominant status of students. In the process of mathematics teaching in primary school, how to guide and guide students to think independently? It has become the focus of the majority of mathematics teachers. For this, primary school mathematics teachers should abandon the previous concept of mathematics education, effectively improve the education model, and guide students to continue to study deeply. Fully cultivating and developing students' autonomy and subjectivity in primary school mathematics teaching is not only conducive to fully stimulate students' sense of independent thinking, but also help students broaden their horizons and improve their thirst for knowledge. at the same time, it urges them to maintain a strong interest in mathematics learning all the time. This paper makes a comprehensive analysis and discussion on the students' subjective thinking in the process of mathematics teaching in primary school, and puts forward the corresponding research conclusions, in order to provide corresponding reference for the research of relevant scholars.

**Keywords:** Mathematics teaching in primary school; Subjectivity; Students; Interest

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In the previous primary school mathematics education, due to the continuous influence of backward educational ideas, primary school mathematics teachers thought that they were the leaders of mathematics education classroom, so they always maintained the authoritative position of knowledge. mistakenly think that students are only the object of knowledge indoctrination, so they do not strengthen the communication with students. This wrong cognition will not only affect the teaching quality and efficiency of mathematics classroom in primary school, but also affect the overall teaching level of the school. In this regard, teachers should pay more attention to the leading position of students in mathematics teaching, abandon the previous "spoon-feeding" teaching mode, and constantly improve students' enthusiasm for participation and learning autonomy in mathematics class. to achieve the overall improvement of students' learning quality and efficiency.

## 1. Using Mathematics Teaching Design to Stimulate Students' Subject Consciousness From The Perspective of Independent Development

The exploration of students' subjectivity in primary school mathematics teaching should be based on good developmental thinking. Subjective teaching methods can not only effectively improve students' learning autonomy, but also transform the more general and abstract mathematical knowledge in textbooks into mathematics knowledge points with strong pertinence and prominent key contents. In this regard, primary school mathematics teachers can not only help students sort out relevant mathematical knowledge points and preview pre-class content through the rational application of Internet and multimedia, so as to improve students' understanding of mathematical abstract knowledge. online teaching resources can also be used to help students consolidate and review after class, and there are many problems in the learning process of this textbook knowledge. Students can answer effectively through online platform and PPT courseware, which can not only deepen their understanding of mathematical knowledge points, but also effectively exercise their own autonomous thinking in answering questions.

Although modern information means are increasing, even if some students watch the content of teaching resources repeatedly, they can not improve their correct understanding and understanding of complex knowledge points. In this regard, first of all, primary

school mathematics teachers should fully affirm the students' independent thinking and the effect of after-class learning, and give sufficient affirmation to the students who answer questions correctly; for those students with certain limitations in their after-class learning methods, teachers should give them full encouragement and guidance to help them solve many problems in the process of mathematics learning<sup>[1]</sup>.

For example, when explaining the relevant knowledge points of "interesting graphics", because they are in a secondary position in the teaching work, primary school mathematics teachers should set the goal of mathematics classroom teaching as; effectively stimulate and guide students to study independently, and then form good independent learning habits.

In order to improve students' correct understanding and mastery of graphics-related knowledge points, teachers can first ask the question: "what are the common graphics in our lives?"

What are the unusual graphics? " And then guide the students to analyze and discuss the mathematical problems in a group way, so that they can think constantly in the actual discussion process, so as to complete the independent study of the contents of mathematics textbooks.

In the process of students' thinking, teachers should listen carefully to students' problem-solving ideas, actively guide them from the side, and avoid telling students the answers directly. This teaching method not only helps to improve students' intuitive understanding and understanding of complex mathematical knowledge points, but also helps to give full play to students' autonomous learning thinking and intellectual creation in time, deepen students' understanding and mastery of abstract mathematical knowledge points, and help them to realize their independent initiative effectively.

At the same time, it can not only effectively stimulate students' interest in mathematics learning, but also constantly strengthen the relationship between effective students and primary school mathematics knowledge, so as to realize the organic combination of students' mathematics knowledge reception and mathematics classroom content.

## **2. Using Cooperative Learning Mode to Carry Out Teaching Work From The Perspective of Independent Development**

The age class of primary school students is low, the basic mathematical knowledge is relatively weak, and there are some limitations in the perspective of thinking, so most of them lack unity thinking and cooperation consciousness. In this regard, primary school mathematics teachers should take certain measures to effectively optimize and improve this phenomenon, and organically combine independent development with cooperative learning mode, so as to effectively cultivate students' mathematical literacy and learning consciousness. In the early stage of teaching, teachers can organize students to take a test in advance to investigate the basic mathematics learning of students in the class, as well as the learning differences between students<sup>[2]</sup>. As there are many deficiencies in the comprehensive cultural literacy and basic knowledge level of each student, the role played in group cooperation is not the same. After the end of the test, teachers and other members of the group can know the actual learning situation of the students in time.

According to the learning situation of students at different levels, teachers should formulate homework contents at different levels so as to effectively distinguish students from group cooperation. For example, students with better comprehensive learning ability can cooperate with students with poor comprehensive learning ability, and then guide them to form complementary effects in mastering mathematical knowledge. At the same time, when primary school mathematics teachers guide students to carry out autonomous learning under the cooperative learning mode, they can take the contents of mathematics textbooks as the classroom learning theme, encourage students to choose their own learning partners in the group, and realize group autonomous learning.

For example, if the learning topic of this math class is "numbers in Life", the teacher should inform the students of the learning tasks in the math class before the class discussion, and then encourage and guide the students to choose groups. After understanding the learning task, group members should give full play to their basic mathematics learning ability and innovative thinking ability, and actively implement their own subjective learning.

In the stage of independent and cooperative classroom preparation, students should preview and think independently about the learning content of this class, mark and sort out the knowledge points that they do not understand in time, and then integrate the questions in the group discussion. answer each other's questions, so as to improve the thinking activity and innovative thinking ability of the group members. In the process of answering questions each other, it is not only helpful to strengthen students' understanding and mastery of mathematical knowledge points, but also help students to improve their understanding of abstract knowledge points, check and fill gaps, and then constantly improve students' level of answering questions.

### **3. Using Good Problem Situations to Stimulate Students' Sense of Subjective Participation in Mathematics Classroom**

In order to effectively stimulate students' sense of subjective participation in mathematics classroom, primary school mathematics teachers can analyze and construct good problem situations, which is not only conducive to continuously improve students' classroom participation, but also help students review and consolidate their knowledge points. strive for the realization of teaching goals. The use of problem situation construction to organize and carry out mathematics teaching can effectively stimulate students' independent initiative and innovative thinking ability. Therefore, in practical teaching, teachers should, on the basis of students' actual learning situation and the development of their mental health, accurately grasp the similarities and differences between new knowledge points and previous knowledge points, and combine life practice to build challenging and meaningful problem situations, so as to effectively stimulate students' curiosity and desire for knowledge, at the same time stimulate Xu's internal driving force, and improve their sense of subjective participation in classroom learning. And encourage them to rely on themselves to continuously cultivate self-confidence in learning.

For example, when explaining the section "knowing watches and clocks", teachers can use multimedia equipment to show students the design of clocks and introduce them: "does everyone know what this picture looks like?" There are three subjects in this beautiful picture, one is called the hour hand, the other is called the minute hand. Can you guess what the name of the other subject is? " In this case, when the students' interest in learning is fully stimulated, they will answer in unison that it is "the subject of the second hand". Only then can the teacher show the clock-related courseware for the students. Then, teachers can introduce the mysteries of hour hand, minute hand and second hand to students, and constantly improve students' classroom attention and desire to participate<sup>[3]</sup>.

Finally, teachers can use video materials to show the clock face for students, encourage students to constantly analyze and explore it, and comprehensively explore its mysteries in front of other students. In a good teaching atmosphere, it is not only helpful to help students get rid of the "predicament" of mathematics learning, but also to improve students' interest in exploring new knowledge, so as to provide help for the follow-up teaching work. Through the effective construction of the problem situation, students can actively explore and think about the problems hidden in the situation, and the cognitive conflicts in the group discussion can effectively stimulate students' internal learning motivation and strengthen their sense of subject participation. at the same time, promote them to participate in the problem-solving process independently. Through the continuous exploration of mathematical problems, we can effectively improve students' desire for knowledge and classroom participation, and then play the role of classroom subjectivity.

### **4. Making Use of Cognitive Conflict to Improve Students' Classroom Participation**

Students' interest in mathematics learning and desire to explore problems are important factors that can not be ignored in the process of mathematics teaching in primary schools. However, if students' cognitive conflict has become an important channel to stimulate students' internal learning motivation, then students' enthusiasm to participate in the classroom is an important basis and prerequisite to ensure the development of students' thinking ability. In this regard, primary school mathematics teachers should constantly pay more attention to the setting of cognitive conflict, constantly set cognitive conflict problems in the actual teaching classroom, and constantly stimulate students' desire to explore problems and the enthusiasm of classroom participation.

For example, when teachers guide students to preview the chapter "Cognitive Graphics", they should assign corresponding homework for students: make a geometric figure by themselves, and then show the common graphics in daily life to the students in classroom teaching. at the same time, in the form of small groups to guide students through cooperation to construct geometric figures, and explore the following questions: how many methods do geometric figures have? Will the volume and area of the geometry change under different placement methods? What are the main reasons that affect the area and volume of geometry? What is the relationship between these factors?<sup>[4]</sup>.

Through the continuous design and exploration of these problems, students may have different degrees of cognitive conflicts, and are always in the process of discovering, putting forward, analyzing and solving problems. Through the continuous exploration of mathematical problems, students' desire for knowledge and classroom participation continue to improve, and then can play its subjective role.

### **5. Pay More Attention to The Cultivation of Students' Innovative Ability**

The cultivation of students' innovative ability has become an important teaching goal put forward under the background of the

new curriculum reform, which requires that primary school mathematics teachers should constantly encourage and guide students to fully think and analyze mathematical knowledge in the process of practical work. and help students to think and solve problems from a multi-layered point of view.

At the same time, in the process of explaining mathematical examples, teachers should choose topics with strong openness, constantly pay more attention to the cultivation of students' innovative ability, and analyze the examples from many angles. in order to cultivate students' innovative thinking ability and mathematical literacy<sup>[5]</sup>.

## Conclusion

To sum up, improving the importance of students' subjective development of teaching methods is not only conducive to the setting and solving of mathematics curriculum content according to students' own interests, hobbies and learning habits. it is also conducive to targeted mathematics practice for students. Students' autonomous learning motivation not only helps to improve students' bad habits in mathematics learning, but also helps to improve students' understanding and mastery of mathematics knowledge.

At the same time, through the continuous analysis, observation and practice of mathematical problems, we can not only effectively stimulate students' interest in mathematics learning, but also effectively strengthen the relationship between students and mathematics content. finally, it can realize the organic combination of students' mathematics knowledge reception and mathematics classroom content, so as to ensure the continuous improvement of the level and quality of school mathematics teaching ability.

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