

RESEARCH ON THE STRATEGY OF THE EFFECTIVENESS OF MATHEMATICS CLASSROOM TEACHING IN SENIOR HIGH SCHOOL UNDER THE NEW CURRICULUM STANDARD

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ABSTRACT

Mathematics is the science of depicting nature and law. It is the foundation of other subjects, the core of many fields, and an important part of school education. Therefore, it is the main task of mathematics teachers to cultivate students to form basic mathematical literacy and look at the world with a mathematical perspective. There are great differences between senior high school mathematics and junior high school mathematics. The knowledge system is more complex, which tests students' thinking logic more, and puts forward higher requirements for teachers' teaching objectives. This paper is mainly from the perspective of teachers to actively explore strategies and methods to improve the effectiveness of classroom teaching, through observing students to find out the factors that affect the effective classroom, so as to put forward targeted strategies. As a qualified and excellent teacher, we should firmly grasp the basic learning situation of students, integrate effective strategies on this basis, and improve the effectiveness of mathematics classroom teaching.

Keywords: Teaching mode, Effective classroom, Effectiveness.

INTRODUCTION

Influenced by the traditional teaching mode, the teaching mode in China has always been "indoctrination" and "sea of questions". In the process of learning, students are in a passive state, unable to play a subjective initiative. In the long run, students lose interest in mathematics. Many teachers have slowly changed this traditional teaching mode. With the development of science and technology in recent years, more and more teachers tend to use modern education technology as the main way to show the classroom, but many students still haven't got the corresponding development. This phenomenon reminds us to pay attention to the effective classroom, the real effective classroom is not a teacher's one-time teaching How much content, but how much content students learn in a class. As a qualified mathematics teacher, we should increase students' understanding, grasp the learning situation, let students understand mathematics, like mathematics, help students form good learning habits, integrate learning situation into teaching strategies, enhance the effectiveness of mathematics classroom teaching, and cultivate students' thinking ability and core quality.

THE DEFINITION OF THE VALIDITY OF MATHEMATICS CLASSROOM TEACHING IN SENIOR HIGH SCHOOL

The basis of effective teaching is people-oriented, that is to say, student-oriented. It is practical, scientific and regular. The connotation of effective teaching plays a guiding role in the actual teaching. We need to pay attention to the behavior and psychology of students, receive the feedback from students in time, and constantly improve the teaching objectives, teaching ideas, teaching means, teaching process and teaching evaluation The ultimate goal is to maximize the efficiency of students' classroom learning.

At present, the main form of teaching is classroom teaching, and classroom teaching refers to a certain period of time, teachers in the classroom for students to carry out teaching activities. The effectiveness of classroom teaching is to achieve effective teaching in the classroom, so that students can gain the most knowledge in a limited time, and learn to use it, give full play to students' subjective initiative, so that students can constantly broaden their horizons in the process of learning knowledge, improve their abilities in all aspects, and achieve the full development of knowledge and skills, emotional attitude and values. Teachers should not only pay attention to the students' learning situation, we should pay attention to the students' psychological process, improve the students' initiative, appropriate rhythm, and put learning into practice.

Hegel, the great philosopher, once said that "mathematics is the symbol of God describing nature". It can be seen that mathematics is a special subject, which is the basis of many subjects and requires strict demonstration and reasoning. Therefore, in the process of mathematics classroom teaching, teachers should flexibly grasp its particularity, pay more attention to the process while focusing on the results, pay attention to the development of students' thinking and understanding, and form a complete knowledge structure, so that students can learn more effectively. "Mathematics curriculum standard" points out: "effective mathematics learning activities can not only rely on imitation and memory, hands-on practice, independent exploration and cooperative communication are important ways for students to learn mathematics; Teachers should have diverse and selective teaching ideas, and according to different levels and needs, from the inherent characteristics of mathematics curriculum problems, put forward multi-level and multi type open problems, to provide broad space for students in the process of reflection and problem-solving, and promote the improvement of independent reflection ability. " In the actual teaching process, we should pay attention to the cultivation and penetration of mathematical thinking methods, improve the comprehensive ability of students, and teach students how to look at the world with a mathematical perspective^[1].

THE CURRENT SITUATION OF HIGH SCHOOL MATHEMATICS CLASSROOM TEACHING

With the implementation of the new curriculum reform, new requirements have been put forward for the effectiveness of classroom teaching, but the traditional teaching mode, teaching methods and teaching methods still have a great impact, so there are still many problems in the current high school mathematics classroom teaching. Through my research, I found that they are mainly reflected in the following aspects:

Students do not adapt to the change of teaching mode. Nowadays, with the development of science and technology, the teaching mode is becoming more and more modern. More and more teachers prefer to use multimedia to replace most of blackboard writing in the classroom. It is undeniable that multimedia technology has brought efficiency and convenience to mathematics, which can make students understand knowledge faster and develop cognition of spatial graphics effectively. Meanwhile, it is necessary for teachers to use multimedia to replace most of blackboard writing, In the limited time, teachers can teach more knowledge; however, with my in-depth understanding, I found that while using multimedia efficiently, most students seem to lose a very important skill - "taking notes", and this situation does not only appear in one school. In order to save time to improve the efficiency of the classroom, teachers require students to only listen in class Explanation, but we need to know that mathematics is a subject with strong flexibility. It has a lot of detailed knowledge. Taking notes is to let students

strengthen their understanding and memory of knowledge. On the one hand, it can let students improve their concentration, while people's memory ability is limited. Most students have poor self-discipline and will not prepare notes alone after class. This kind of need The way of asking students to listen to explanations in class is obviously suitable for a small number of students. Most of the students with poor self-discipline don't have notes in class. They don't organize notes when they go home. They don't know how to review when they want to review. There are many details, let alone, the speed of forgetting knowledge is also rising while the ability of understanding is improving^[2].

The effect of classroom interaction between teachers and students is not obvious. After investigation, it is found that the effect of classroom interaction between teachers and students in senior one to senior three is gradually improved. Many teachers will find that students are often dull and lack of interaction in the classroom. Teachers often repeat knowledge simply. Students are the audience rather than participants in the classroom. This situation is especially common among freshmen in senior one. For interactive teaching, learning The role of students is too passive, there are few or almost no students to ask questions in class, teachers rarely ask students to master the situation actively, so classroom teaching can not be carried out step by step according to students' response or understanding. We can often hear the teacher ask "do you understand?" at this time, the students will answer "understand", which will lead to some questions being put aside, so if they accumulate, the students will treat their mathematics learning negatively and increase their frustration. This kind of representational interaction has almost become the normal classroom, many teachers lack of substantive interaction, but this not only can't bring up the enthusiasm of students' learning, but also make students have conflict psychology, making the classroom more boring.

The relationship between teachers and students is not harmonious. The relationship between teachers and students is a problem that cannot be ignored in the learning process. As the educator Zankov said, "as far as the effect of education is concerned, it is very important to see how the relationship between teachers and students is". Most of the teachers are still the main body in the classroom, most of them pay more attention to the content of lesson preparation, especially in some open classes, they seldom start from the needs of students, which obviously does not meet the requirements of the new curriculum reform. Some teachers do not treat every student fairly and justly in the process of getting along with students. In the process of interaction between teachers and students, they tend to ask questions of students with good performance, while ignoring students with poor performance will make students have a rebellious psychology towards teachers, and teaching is not geared to all students.

AN ANALYSIS OF THE REASONS AFFECTING THE EFFECTIVENESS OF MATHEMATICS CLASSROOM TEACHING IN SENIOR HIGH SCHOOL

"New teaching mode" followed blindly in teaching process. Nowadays, it has become an inevitable trend to transform the traditional teaching mode into the modern teaching mode. However, the establishment of the new teaching mode must be based on the learning situation. Only by organically combining the new teaching mode with the students' actual learning situation can we build an efficient learning mode. However, many teachers have not found a real suitable one for students in the process of teaching implementation Teaching mode, they often only pay attention to the application of teaching mode, and do not pay attention to whether this new mode can bring real efficiency to students. On the surface, classroom efficiency does improve, but this efficiency only exists in the classroom, and the real efficient classroom will continue this kind of "efficiency", and will affect students' learning habits imperceptibly.

The teacher did not grasp the learning situation when preparing lessons. Due to the requirements of nine-year compulsory education, the mathematics teaching materials in junior high school have changed greatly, the difficulty and depth of mathematics have declined, and many knowledge points have been cancelled from junior high school teaching materials, while the mathematics content system in senior high school is huge, so teachers need to let students master a large number of knowledge points in a short period of time, so the basic requirements for students are very high, and even there are many contents that students do not have in junior high school. What we have learned has brought a certain degree of pressure to the students who just went to high school. For the students in the transition stage, their autonomy is still very poor. However, most of the teachers just give too high position to the students' autonomy, coupled with the influence of the environment and other factors, which will lead to the students not being active in the classroom and the interaction effect is not obvious, thus reducing the efficiency of the classroom^[3].

Lack of effective communication between teachers and students. High school students need to learn a lot of content, the teaching task of teachers is heavy, many teachers in order to improve students' mathematics performance, a large number of self-study time, a lot of exercises, repeated practice, and do not pay attention to timely correction, just do a lot of exercises, because of various subjective and objective problems, teachers have no time to worry about the communication problems with students, ignoring the students' heart Manage needs. In the process of teaching, teachers have to face all the students, more or less, there will be the phenomenon of one thing or the other. However, in the face of such problems, most teachers will choose to pass by one thing instead of solving them in time, which aggravates the students' Weariness of learning. On the other hand, with the development of science and technology, the channels for students to obtain information are constantly expanding, which virtually reduces the opportunities to communicate with teachers, and the relationship between teachers and students is becoming more and more strange.

RELEVANT STRATEGIES TO IMPROVE THE EFFECTIVENESS OF MATHEMATICS CLASSROOM TEACHING IN SENIOR HIGH SCHOOL

Reasonable transformation of teaching mode. In the process of practical teaching, teachers should change the teaching mode on the basis of mastering students' learning situation. For example, in the face of students' lack of notes, some students may not have mature learning methods, or they may not have formed good review habits in junior high school, and some students only do the assignments assigned by teachers, which they think are not emphasized. It is not important. In the face of this situation, teachers should know the situation in time and remind students appropriately. Students are immature people in some way. Teachers should think more from the perspective of students. Mathematics is a subject with strong logic. The real effective teaching is not how much this lesson tells, but how much most students learn. Therefore, teachers should combine blackboard writing with modern education technology to give students time to think and remember, so as to improve teaching efficiency^[4].

Adopt the method of layered teaching. Layered teaching method is a teaching strategy for the objective differences between students, and it is an effective way to implement individualized teaching. The teacher is the guide, the student is the main body of learning, is a person with independent significance, each student has different characteristics, and layered teaching is to carry out targeted teaching for different students. In the process of layered teaching, the teacher should fully consider the differences between students, combine the knowledge structure of different students, and promote different types of students to be able to The original foundation

has been effectively improved, and the individual differences of students have been fully respected, so that all students can develop together.

Teachers should grasp the learning situation and let students participate in the class. In the process of teaching, teachers should grasp the mathematics teaching materials and curriculum standards of junior and senior high schools, and expand and establish connections on the basis of students' original knowledge when introducing new class hours. For example, when we talk about trigonometric functions, we can first take students to review the simple trigonometric functions in junior high school, and then expand them. There is a big gap in the content of mathematics in junior and senior high schools, but there is a sequential relationship between them. In this case, teachers should review or supplement the knowledge points appropriately to promote students' follow-up learning. At the same time, teachers should also really mobilize the enthusiasm of students in the classroom interaction, and carry out high-quality classroom questions. At the same time, the questions designed should be purposeful. Through students' answers, they should have a certain judgment on students' learning situation, encourage students more, activate students' thinking, exercise students' expression ability, and let students participate in the classroom.

Establish a good communication platform to enhance students' self-confidence. High school mathematics knowledge system is huge, many teachers' teaching tasks are heavy, lack of understanding of the basic situation of students, leading to many teachers in teaching design often only according to the past teaching experience to design, lack of a certain pertinence. Therefore, teachers should build a good communication platform, timely grasp the feedback of students, and find a breakthrough to solve the problem. We can also use the network platform to let students leave their own problems anonymously, establish a communication mode, communicate with students more, treat students equally, find out the flash point of students, do some psychological counseling work, guide students' emotions and thoughts, stimulate students' enthusiasm for learning, teach students according to their aptitude, and enhance students' confidence^[5].

CONCLUSION

From the above research, we can draw the following conclusions: we should carry out effective and rich teaching, make students take the initiative in learning, so as to improve teaching efficiency and quality. We should be good at finding and summarizing in teaching, try to use the combination of multiple modes, and ensure the quality at the same time of high efficiency. Teachers should pay attention to the students' learning situation, improve the teaching mode reasonably, pay attention to the supplement of some knowledge points, fully mobilize the students' subjective initiative, cultivate the students' independent learning consciousness, at the same time, they should also be diligent in exploration, continuous innovation, be the guide of students, cultivate the overall situation of students, and cultivate innovative talents for the country.

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REFERENCES

[1] Wang hairy. Research on the effectiveness of mathematics classroom teaching in Senior High School under the new curriculum standard [D]. Yan'an University, 2016

- [2] Li chundan. Strategies to improve the effectiveness of mathematics classroom teaching in senior high school [D]. Shaanxi Normal University, 2016
- [3] Yang Zhongqiang. The effectiveness of high school mathematics classroom teaching under the new curriculum standard [J]. Scientific consultation (education and scientific research), 2020 (02): 173
- [4] Yang Xinghua. On the effectiveness strategy of mathematics classroom teaching in senior high school [J]. Science and technology information, 2019,17 (35): 112 + 115
- [5] Leng Haiyun. Research and Practice on the effectiveness of high school mathematics classroom teaching under the new curriculum standard [J]. Mathematics learning and research, 2019 (16): 25