Effective Integration Strategies of Information Technology and Primary School Mathematics Teaching

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Abstract:

With the development of modern science and technology, information technology has been widely used in primary education. From the initial use of slide projectors to display pictures, to the application of computers in the classroom, and then to the gradual deepening of the application of information technology in education, the development of education is constantly innovating the application forms of technology in the field of education. Nowadays, information-based teaching can be seen in the applications of micro-classes, flipped classes and live classes, which are more vivid, popular and interesting. It has brought more prominent educational technology reform to primary education. Multimedia technology and Internet technology are included in information technology, and the integration of information technology and mathematical knowledge is to provide students with a better learning environment. The integration of information technology and primary school mathematics knowledge needs to start from a realistic point of view, in-depth analysis of integration difficulties, cultivate students'interest in learning and learning awareness, and create basic conditions for the stable development of teaching.

Keywords:

Information technology; Primary school mathematics; Integration strategy

Introduction:

Mathematics has a certain abstract, in primary school mathematics teaching, because students' thinking is in the initial stage of growth, we need to do a good job in the integration of mathematical knowledge points, reasonable integration of information technology, so that the abstract teaching content is concrete. For mathematics teaching, information technology is an important link. In mathematics classroom teaching, it is necessary to integrate information technology reasonably and take information technology as the main method to promote teaching work. Introducing information technology into teaching can not only improve classroom efficiency, but also make the boring classroom lively and interesting. Compared with traditional teaching methods, learning is no longer a burden for students, but more like an alternative way of entertainment. The combination of information technology and modern education can be said to be a landmark measure in the history of education, which is of great significance.

1. The Significance of Information Technology in Primary School Mathematics Teaching

(1) Make the teaching content rich and colorful

In the past teaching methods, when teaching students to learn mathematics, it is difficult to extend the knowledge according to the content of the textbook. And the textbook knowledge is relatively monotonous, can not adjust the classroom atmosphere for students to concentrate, then some students will be too bored and unable to concentrate, as the saying goes, interest is the best teacher, but this situation will only make students lose interest in learning, of course, students'grades can not be improved, and the combination of information technology and classroom. It makes the teaching process colorful and avoids the occurrence of the above situation. In traditional teaching, in order to improve students' logical thinking and calculation ability, most students are asked to do more problems. Repeated math problems will make students gradually lose interest in learning, leading to students' weariness of learning. But now in the classroom, the process of solving problems can be made lively and interesting through multimedia technology, such as taking the form of animation to bring questions to students, students can answer correctly or incorrectly with corresponding animation encouragement, the addition of animation will make classroom teaching lively and interesting, students will not feel boring, but the effect of simple animation is not simple. The development of information technology brings not only animation, but also image, text, video and other media materials. When these

elements are combined with classroom teaching, they will produce a wonderful "chemical reaction", and the monotonous course will become lively and interesting after "reaction".

(2) Improving teaching efficiency

In traditional teaching methods, teachers will pass on knowledge to students through oral and blackboard writing, but this single teaching method has great limitations, sometimes when teaching some relatively complex concepts, limited by teaching props, teachers often adopt more abstract descriptions, which are not so clear and concrete. It is often difficult for some students to understand the content of the teacher's lecture, and it is easy for them to have self-doubt, which will discourage their enthusiasm for learning. Now, teachers can demonstrate those complex knowledge by animated video. The advantage of video is that it can transmit information through visual and auditory means, vividly and concretely deduce those abstract concepts, reduce the difficulty of teachers'teaching, and make students more receptive to new knowledge. The addition of video also makes the teaching method break away from simplification. Occasional video teaching also plays an important role in regulating the classroom atmosphere. The multimedia technology that has been popularized has reduced the workload of teachers in class, teachers often need to write repeatedly on the blackboard in each class, now they only need to make slides when preparing lessons, and the reusability of slides makes the time for teachers to write on the blackboard obviously reduced, teachers only need to click the mouse lightly to present the teaching knowledge. This greatly improves the teaching efficiency of teachers. At the same time, teachers will no longer be affected by chalk dust when writing on the blackboard, and lung diseases caused by inhaling chalk dust among teachers will gradually disappear. Information technology not only improves the efficiency of teaching, but also protects the health of teachers.

(3) stimulate students' interest and realize autonomous learning.

In the classroom, teachers can connect the boring knowledge with beautiful music, beautiful pictures, interesting games and vivid videos through new teaching methods, so as to create interesting classroom life for students. Different from the serious classroom atmosphere in the past, in this relaxed and pleasant classroom atmosphere, learning is no longer boring for students, on the contrary, students will enjoy the process of class. The combination of information technology and teaching also strengthens the connection between teachers and students, and broadens the way of interaction between teachers and students. For example, when answering questions by roll call, the roll call device on the computer can be used for random roll call. The probability of each person being called is the same, which is fair and just. Students will experience an alternative sense of excitement in the process of roll call. This practice not only strengthens the interaction between teachers and students, but also plays a role in adjusting the classroom atmosphere, which is not available in traditional teaching methods. Through the information technology, we can create the corresponding teaching situation, the introduction of multimedia makes the teaching with the help of light, shadow, sound and color, the illusory knowledge is vividly presented in front of students, colorful teaching content is more likely to stimulate students'thirst for knowledge, so that students can learn spontaneously.

2. The Integration Strategy of Information Technology in Primary Mathematics Teaching

(1) Use information technology to create visual situations and explain abstract knowledge of textbooks in an intuitive way

Although the knowledge points in primary school mathematics textbooks are relatively basic, there are some abstract and difficult theoretical knowledge, which is not only the focus of teachers' teaching, but also the difficulty of students' learning, so how to explain this kind of theoretical knowledge in an easy-to-understand way has become a key research issue for the majority of mathematics teachers. In this regard, primary school mathematics teachers can use information technology to create visual situations for students, so that students can consciously participate in learning situations, and simplify the difficulty of learning abstract knowledge in books through intuitive visualization. In this situation, students' self-confidence in mathematics learning will be enhanced, so that students can realize the significance and benefits of learning mathematical knowledge, so that students can learn more mathematical knowledge, thus gradually helping students form mathematical literacy. For example, in primary school mathematics class, when teachers teach students the content of "cuboid and cube", the teaching goal is to let students understand the characteristics of cuboids and cubes, learn the surface area formula and volume formula of cuboids and cubes, and then fully understand their plane development. In order to achieve the teaching goal, teachers can use information technology to randomly present a cuboid and a cube in classroom teaching, and then ask students to drag the geometry in information technology, so as to achieve a comprehensive observation of the two geometries. Through the application of information technology to present cuboids and cubes intuitively, students can understand the characteristics of the two geometric bodies in an intuitive way, and when explaining the corresponding plane development drawing, teachers can continue to use information technology to demonstrate the development process of the two geometric bodies, so that students can intuitively grasp the abstract theoretical knowledge.

(2) Use multimedia teaching equipment to improve the effectiveness of mathematics classroom teaching

Nowadays, almost all school classes are equipped with multimedia teaching equipment, so teachers can use multimedia teaching equipment to innovate teaching forms during classroom teaching, in order to strengthen the effectiveness of classroom teaching. At the same time, under the new situation of the widespread application of information technology in the social field, China's education has been further improved, the traditional teaching methods have been unable to meet the current development needs of students, and it is difficult to promote students to devote all their energy to learning. Therefore, as a teacher, we must have innovative consciousness, timely update and optimize teaching methods, guide pupils to form a good learning attitude, and strengthen students'desire to explore mathematical knowledge. Only in this way can we expand students' mathematical thinking and gradually improve students' mathematical literacy. For example, in elementary school math class, when teachers teach students the content of "possibility", they can set learning questions in the introduction of new lessons: "Students, please guess what is the probability of positive and negative sides appearing in the coin-tossing experiment? Please practice and further verify your guess. In order to arouse students' desire to learn mathematics. After the question is put forward, it can cause intense discussion among students. Some students say that the probability of positive and negative sides is 50%, and some students say that they only have four positive sides in ten coin tossing experiments, so the probability of positive and negative sides can not be 50%. Because of this teaching problem, students come to a variety of guesses, which can not be unified in a short time. According to students' current guess and observation, teachers can lead students to observe together. At this time, teachers can use probability software to analyze the positive and negative sides of coin tossing, so that students can understand that there is no problem in their practice process, but the number of coin tossing is less, so they can not measure a more accurate value. If the number of experiments is increased, they can further refine the value and get a more accurate answer. Through the application of multimedia teaching equipment and teaching software, students have a stronger interest in mathematical knowledge in a short time. In this process, teachers can not only let students feel mathematical knowledge, but also promote students to further analyze the relevant teaching content through personal practice. While feeling the charm of mathematics, they can lay a good foundation for the improvement of students'mathematical literacy.

(3) Using information technology to cultivate students'awareness of autonomous learning

With the deepening of the current teaching reform, students' cooperative learning is very important, but in the traditional teaching process, the teaching method of cramming pays more attention to students' mastery and acceptance of the corresponding knowledge, and long-term teacher-led teaching will gradually make students lose interest in learning. Can not effectively cultivate students' awareness of autonomous learning to enable students to participate in the corresponding teaching work, which is very unfavorable for the cultivation of students' mathematical ability and thinking, and through the application of information technology will make the corresponding mathematical problem solving process more interesting, and students for the corresponding mathematical problem solving thinking analysis is very thorough. Through the use of information technology to effectively integrate the network teaching resources, and constantly optimize the corresponding teaching program. For example, the current application of information technology in primary school mathematics teaching is also reflected in the production of micro-lesson videos. The effective use of micro-lesson videos gets rid of the limitations of time and space, and any student can better watch the teacher's repeated explanations of different knowledge points through micro-lessons. Therefore, many underachievers can effectively use the corresponding micro-lesson videos to deepen their understanding of the relevant knowledge of primary school mathematics, even if their foundation is poor, so as to gradually enhance their awareness of active learning to better participate in primary school mathematics teaching and improve the final quality of teaching.

(4) Using information technology to build a platform for practice exchange

In the process of primary school mathematics teaching, teachers should take full account of the situation of primary school students to adopt appropriate teaching methods. A very important feature of primary school students is that the learning efficiency of collective learning is relatively higher than that of individual learning. Therefore, we can build a corresponding information exchange platform to enable students to effectively communicate the corresponding learning skills and methods, so as to better build their own knowledge network system and realize the continuous accumulation of knowledge. For example, in the process of primary school mathematics teaching, teachers will build a corresponding information exchange platform to better guide students to share their own learning experience in the corresponding communication platform, so as to provide effective learning reference for relevant students, so that they can learn from others' strong points to make up for their own weaknesses, so as to better improve the final learning efficiency and quality. Moreover, in the current platform application process, it is not only limited to the communication between students, but also students can use the corresponding platform to ask questions

to teachers, so as to get the corresponding answers to better cultivate their thinking ability. In addition, they can also learn the corresponding problem-solving skills of famous teachers in the corresponding platform, so as to explore the mysteries of different types of problems. For example, in the learning process of circle area calculation knowledge points, traditional teaching methods are difficult to intuitively help students understand the corresponding knowledge core, so as to guide students to master the corresponding calculation rules and skills. In the corresponding teaching practice platform, many famous teachers will use multimedia to make students effectively decompose and combine the area of the circle, guide students to better think and explore the corresponding rules in the process of continuous demonstration exercises, and present them in a more simple and accurate way, so that students can deepen their understanding of the corresponding knowledge content in practice.

(5) Use information technology to design various exercises and give full play to the value of classroom exercises.

As far as primary school mathematics curriculum is concerned, classroom exercises are an indispensable part of it, which can not only improve students'ability to use mathematics knowledge flexibly, but also open students' thinking of mathematics learning. However, in the previous classroom exercises, there was inefficiency, which brought great pressure to students. In order to improve this teaching situation, teachers should use information technology to solve the problem and give full play to the teaching value of this link. When carrying out classroom exercises, teachers can design various exercises through information technology, so that students can practice step by step, consolidate students'impression of mathematical knowledge through exercises, and play a significant role in improving students' mathematical literacy. For example, in primary school mathematics class, after teaching students the content of "simple equation", teachers can first use information technology to arrange some calculation problems for students to solve the equation, so as to deepen students'understanding of theoretical knowledge. After the students complete the calculation of the above basic problems, the teacher uses information technology to give some comprehensive application problems. The purpose of assigning such exercises is to exercise the students'practical application ability of the theoretical knowledge they have learned. Before students try to solve word problems, teachers can choose more typical examples to demonstrate the solving process, thus reducing students'learning pressure. Finally, teachers use information technology to give some after-school thinking questions, so that students can use their spare time to think about solutions.

3. Conclusion

With the rapid development of information technology, it has laid a solid foundation for the development of various industries. Information technology has changed the way people live and work, and information technology is a guide to education. In primary school mathematics teaching, we should strengthen the integration of information technology, so that the integration of mathematics and information technology can lay a solid foundation for the smooth progress of teaching. The combination of multimedia technology and Internet technology is to provide a better learning environment for students. In order to combine information technology with primary school mathematics, we must proceed from reality and analyze the difficulties in depth so as to improve students'interest in learning and their awareness of learning, thus laying a solid foundation for the steady progress of education.

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