The Application of Effective Use of Multimedia in High School Mathematics Teaching

Liu Qiang

Siping No.1 Senior Middle School, Siping, 136000, China

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Abstract: With the development of information technology, information technology has been widely used in various fields and industries. It is a common phenomenon that there are many concepts, formulas, theorems and figures in high school mathematics class, the content is abstract and boring, the students are difficult to understand and master, and the classroom atmosphere is not active. Many high school classrooms are equipped with advanced multimedia technology equipment. With the popularization of new curriculum reform in senior high schools, how to effectively use multimedia technology to promote mathematics classroom teaching in senior high schools has become a hot topic of discussion in various senior high schools. Effective use of multimedia technology is of great significance in improving the efficiency of high school mathematics classroom.

1. Introduction

At present, information technology has been widely used in various fields and industries，which also brought about great changes in classroom teaching. While optimizing the teaching process, it improved the teaching effect, promoted the development of quality education and provided new ideas, methods and approaches for training more innovative talents. At present, many high schools have introduced modern information technology with multimedia as the main body into their teaching classes. This should be a good thing, but there are many phenomena such as “textbook moving" teaching and teachers becoming “operators of machines" in the daily classroom teaching. Teachers do not pay attention to students' attention and psychological process, classroom teaching links are too fast, which increases students' learning burden and psychological pressure and deprives students of their main position to a certain extent. Therefore, exploring how to effectively use multimedia technology to promote high school mathematics classes has become an urgent problem to be solved in current high school mathematics education.

2. Under the background of new curriculum reform, the characteristics of high school mathematics

Senior high school mathematics is a basic subject, which plays an important role in students' understanding of the relationship between mathematics and nature, mathematics and human society, the scientific value and cultural value of mathematics, improving students' ability to analyze and solve problems, forming rational thinking, and developing and innovating consciousness.

3. The Role of Multimedia Teaching

Situation import, stimulate interest. Interest is the best teacher, and situation is the motivation and source to stimulate students' interest. Using multimedia technology to introduce new lessons can stimulate students' curiosity and thirst for knowledge in all directions and from various angles through situational pictures so that they can have motivation to learn. There are many methods of situation introduction, such as situation introduction and question introduction. Picture introduction, music introduction, performance introduction, etc.

Make things easier and break through difficulties. Multimedia technology has excellent ability to

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comprehensively process and control symbols, languages, words, sounds, images and so on. By using this unique function, it can change abstract into concrete, static into dynamic, dull into vivid, thus making it difficult to make it easy. The obstacle for students in learning language and characters is the difficulty in teaching. And using the function of multimedia technology can help students solve the difficulties in abstract thinking, logical thinking and language understanding.

Clever questioning and pioneering thinking. The application of multimedia technology can stimulate students' curiosity and thirst for knowledge, inspire students' thinking, trigger students' thinking inspiration, and create conditions for students to study actively and initiatively. For example, when teaching the concept of function, you can design a problem situation and first ask students what kinds of expressions of function are in life? Create suspense, and create an atmosphere of questioning. After the students answer, call out the image, graph and analytic expressions of the function from the computer. Let the students concentrate on watching again, then the questions in the students' hearts will be suddenly enlightened, their mood will be high, and their thinking will be open.

It can be said to be an extension and divergent thinking. In mathematics teaching, teachers should not only give students knowledge, but also try their best to guide students to transfer learning methods and cultivate their innovative ability through students' divergent thinking. The use of multimedia technology can enable students to increase the amount of information, realize communication inside and outside the class, improve classroom teaching efficiency in an all-round way and improve the overall quality of students. It not only transfers the learning method, but also cultivates the students' innovative thinking.

4. Misunderstanding in Multimedia Teaching

The use of multimedia deviates from the principle of effective classroom teaching and usurps the main role. The basic purpose of using multimedia teaching means in mathematics classroom teaching is to improve teaching efficiency. Teachers must use the media according to the teaching objectives, teaching contents, characteristics of teaching objects and different functions of various media, choose to use them when they use them, and pay attention to practical results.In mathematics classroom teaching, some teachers have unilaterally attached importance to multi - media, which is good for multi - media, and has even reached the point where all " systems" have been abolished and become exclusive media. Other teachers use multimedia as a performance tool to show their computer level, making the classroom dazzling and especially " good - looking".The students were dazzled by the class and became dizzy after class， the students were dazzled by the class and became dizzy after class，and finally put the cart before the horse.There are also some teachers who, in pursuit of form, regard multimedia as a high-level blackboard for demonstrating teaching contents, decorations for mathematics classes and shortcuts for classroom performance, making the media a modern tool for " exercises-stuffed teaching method" invisibly, not only failing to achieve the effect of optimizing classroom teaching, but also causing students' fatigue and failing to meet the requirements of the new curriculum reform.

The use of multimedia ignores students' subject status and has poor interactivity. Multimedia classroom teaching cannot let students only passively accept the information and instructions provided by teachers and computers. Teaching and courseware making should follow and adhere to the principle of "assistance" and highlight students' thematic status. However, in some of the current multimedia-assisted mathematics teaching courseware, the teacher's job is only to click the mouse on the computer, tap the keyboard, and even the blackboard writing has been completely replaced by the computer, and the teacher has become a projectionist. When demonstrating courseware, students' actual situation is not paid attention to, students are not given free and independent thinking time, and the cultivation of students' thinking ability is ignored. In classroom teaching, the computer plays instead of the teacher's explanation and inspiration, and the computer's "human - computer interaction" replaces the "interpersonal dialogue" to communicate the emotion between teachers and students. The original "human irrigation" has changed into "machine irrigation", and

the multimedia-assisted teaching divorced from reality has no vitality.

Multimedia teaching is out of touch with traditional teaching methods and lacks organic combination. Multimedia does have powerful functions, so it is common to replace blackboard and chalk with multimedia in public classes. Some subjects even only use multimedia from beginning to end. Multimedia has become the sole media. In fact, multimedia has its advantages, but it is only a means to assist teaching. The sole function of traditional conventional media cannot be ignored and cannot be replaced by multimedia technology.

5. Suggestions for Multimedia Teaching

Ensure adequate thinking time. Multimedia teaching has the advantages of large capacity, high speed, easy operation and high classroom teaching efficiency. However, if the picture is switched too fast and the students' thinking level and speed are not fully considered, it will greatly affect the teaching effect if it flashes like a TV or movie picture and does not allow students to look and think. In multimedia teaching, students should be given enough time for thinking activities to ensure that they understand and master relevant knowledge.

Ensure adequate thinking space. Multimedia courseware teaching should pay attention to cultivating students' ability to think independently and innovate. If all the abstract thinking and the understanding of the written language are displayed in the multimedia image in the courseware, it is actually killing the students' logical thinking ability and innovation ability. Courseware is only an aid and supplement to the bilateral activities between teachers and students, and teachers should give full consideration to the cultivation of students' intelligence and ability, especially the cultivation of innovative ability, stimulate students' learning initiative and creativity, and can't do everything to the end, otherwise it will harm the growth of the next generation of teenagers.

Leave "feeling" under the computer. The "feeling" here is "teacher - student feeling". In multimedia-assisted teaching, due to the extensive use of previously entered content, it is easy to lead to too fast classroom rhythm and emotional loss between teachers and students, which weakens the process of students actively building their own knowledge. Teaching always pays attention to "teaching by words and deeds". Advanced teaching methods should not completely replace traditional teaching. Traditional methods such as blackboard writing, language drawing, gestures, model display, physical demonstration and emotional communication between teachers and students are still very effective.

Leave "blackboard writing" under the computer. Attempting to replace all the functions of the blackboard with a screen without blackboard writing and calculation will backfire. Blackboard is one of the most widely used auxiliary tools at present. It is most suitable for temporary blackboard writing and mathematical operations or similar exercises， and blackboard is an indispensable place for teachers and students to exchange knowledge, experience and experience in classroom teaching.

Give back the real feeling in class. In order to make the content of multimedia teaching as realistic as possible, teachers should not exaggerate or shrink it too much. The communication between the students and the machine itself lacks a sense of reality. If the picture is too exaggerated and virtual, it will undoubtedly be a "worse situation" and over time, the students will lose confidence in science and lose their scientific ability. Multimedia is based on "assistance" rather than substitution. Teachers should not only continue to carry forward the strengths of traditional teaching, but also make use of the advantages of multimedia courseware to turn boring into lively and interesting so that courseware can become a supporting role in teaching. Show its charm and function.

In a word, in order to use multimedia information technology to assist mathematics teaching, it is most important to avoid abusing multimedia technology and all teaching contents to be displayed by computers in the teaching process, resulting in too fast a conversion of teaching links, too little interaction between teachers and students, not conducive to some students with low learning ability to follow up, not conducive to training students' computing ability, and not conducive to students' induction and summarization. Only when teachers realize the respective advantages and

disadvantages of multimedia teaching and traditional teaching and combine them can they play an auxiliary role in multimedia teaching and achieve the best teaching effect.

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