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Research on the Application of Network Resources in College Mathematics Classrooms

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Abstract: The idea of "integrating education into entertainment" has been proposed for a long time, but its application effect is not satisfactory. The emergence of information technology provides new ideas for the implementation of "integrating education into entertainment". By utilizing commonly used digital devices and network resources, "integrating education into entertainment" can be achieved. Propose strategies to improve teaching quality by utilizing online course resources, that is, breaking through teaching priorities and difficulties, enhancing teachers' modern information technology knowledge and skills, enriching teaching methods, strengthening course teaching design, and achieving significant teaching reform results, improving students' learning efficiency, and enhancing teachers' teaching level and professional abilities.

Keywords: Network Resources, College Mathematics Classrooms

1. INTRODUCTION

With the continuous development of information technology, various digital devices have emerged one after another, such as communication devices, image processing devices, audio playback devices, video playback devices, projection devices, etc. Although there are various types of learning devices, their application effect in teaching is not very good. At present, most schools have built multimedia classrooms and campus networks, but the usage rate of these digital devices by teachers is not high, and the usage effect is average. They are basically in the stage of using campus networks to collect basic teaching courseware and using multimedia classrooms to play courseware.

The "cramming" teaching model is difficult to improve. The so-called "duck feeding" teaching refers to the teacher explaining the key points of knowledge to students in the classroom, and then allowing them to learn and accept and review after class. In the college mathematics class, for many reasons, teachers always focus on the students in a very short time and consume a lot of physical strength and energy in the class. It is relatively easy for students with strong receptivity. "Further Mathematics" is abstract. The advantage of online teaching resources is to make full use of images, words and sounds to lead students into a vivid and colorful educational environment, stimulate students' senses in multiple ways, simplify complexity, and deepen their understanding of mathematical concepts and theorems through visual images, making students more proficient in learning.

For example, the calculation of multiple integrals, especially the calculation of triple integrals in Chapter 10 of "further mathematics" is the difficulty of this chapter. Teachers can use online teaching resources to vividly demonstrate the projection method and section method of triple integrals to students in the form of animation, to strengthen the understanding of the difficulty of "how to convert triple integrals into triple integrals". Interest is the best teacher. If students are not interested in mathematics teaching, even if they master many learning methods and techniques, it is difficult to induce innovative thinking. The application of online resources in the classroom can use sounds, animations, videos, etc. to help teachers frequently transform innovative teaching methods, stimulate students' interests, satisfy their freshness, and desire for expression, and thus tap into students' new potential, allowing them to actively participate in the learning process.

Analyze the relevant lyrics in the song "Greater China", and then abstract the "two dragons at home" in the lyrics into the concept to be learned based on the meaning of the set, that is, the set, and abstract the "Yangtze River" and "Yellow River" as two elements of this set. Explaining the meaning of sets in such an easy-to-understand way can enhance students' interest in learning and deepen their understanding of the basic concept of sets. Modern educational technology can concretize abstract knowledge in mathematics, facilitating students' understanding. There is a lot of knowledge in the knowledge of further mathematics, which needs the help of modern educational technology to help students understand. For example, teachers can use multimedia to transform relevant knowledge into images or videos, making the knowledge no longer dull and more vivid and interesting. The human brain has a better understanding of images and videos.

2. THE PROPOSED METHODOLOGY

2.1 Definition of Network Resources in the New Era

The advantages of large amount of technical information, vivid image, and strong expressive power can improve teaching efficiency. The application of network resources in mathematics classrooms should attach importance to inducing students' innovative thinking, encouraging them to make reasonable judgments, boldly guess, and question, and cultivating students' ability to flexibly use and actively create by stimulating their thinking. In mathematics classrooms, due to the gradual deepening of teaching content, students' attention is often easily disturbed and influenced.

To enable students to fully grasp the key points of mathematics textbooks, teachers can use various information in online resources to stimulate students' senses, express some abstract concepts in intuitive and visual ways, develop students' thinking, expand their spatial imagination, turn difficulties into ease, grasp teaching priorities, and break through teaching difficulties. The dull classroom atmosphere not only makes students feel oppressed, but teachers' teaching energy will also be easily exhausted. With an active classroom atmosphere, students can not only open their minds, but also actively interact with teachers and actively cooperate with

teachers' teaching work, thus promoting the teaching quality of further mathematics. A good learning atmosphere has a two-way impact on both teachers and students.

Under the model of "cultivating applied talents", students' theoretical teaching hours are reduced accordingly. To avoid the drawbacks of having more content and fewer class hours, higher requirements are put forward for university mathematics teaching. Updating teaching requirements means transforming traditional single knowledge requirements into comprehensive requirements in terms of knowledge, ability, and quality, enhancing students' interest in learning and their ability to solve practical problems. In the teaching design of "further mathematics", it can be divided into three stages: preparation before class, learning in class, and feedback after class. In the pre class preparation stage, students first familiarize themselves with how to use online resource sharing course online platforms. There are currently many such platforms, such as the "China University MOOC" national high-quality course learning platform. Students only need to download and register the "China University MOOC" app before class. Teachers collect student registration information, assign learning tasks based on actual situations, and students watch course videos as required, complete the online course content, and take corresponding exams.

The purpose of this stage is to help students clarify their learning objectives, grasp the key points and difficulties. During the in class learning stage, teachers should shift from traditional classroom injection teaching to heuristic teaching, fully leveraging students' innovative awareness and creative thinking. In the feedback stage after class, teachers and students can exchange learning experiences and answer questions online through the learning communication class platform, continuously improving students' learning enthusiasm and initiative, and achieving good teaching results. Through students' independent thinking and discussion, as well as group collaboration and hands-on exploration, gradually connect the area knowledge related to various shapes in students' minds.

2.2 The Application of Network Resources in College Mathematics Teaching in the New Era

The traditional teaching method is a combination of chalk and a blackboard. Although it has a process of formula reasoning and is easy to understand, it is a waste of time. Multimedia teaching can not only make the teaching content vivid and vivid, but also better compare and analyze the content related to charts, shorten teaching time, effectively avoid the defects of less class hours and more content, and make full use of multimedia.

Students explore and report on these issues, and then teachers cleverly guide and guide them to form correct thinking abilities and cultivate their innovative thinking. Teachers should collect relevant resources based on the teaching content and objectives, and then fully integrate the collected teaching resources into the lesson plan during lesson preparation. Teachers should use network and electronic technologies to comprehensively collect knowledge and can also use library resources to access relevant materials. Information collection aims to enable teachers to prepare the knowledge involved as comprehensively as possible, which can give students more choices in the classroom learning process. Students need to preview, refer to the knowledge in the book, and then use network or computer technology to find more comprehensive knowledge. Only through preview can students have a more comprehensive understanding of their self-learning mathematics situation.

Both teachers and students can engage in effective learning before the start of the classroom, so that both parties can perform better in the classroom. After nearly two years of teaching reform and practice, the "further mathematics" course in our college has gradually changed from traditional classroom teaching to the teaching mode of combining multimedia and network resources. The combination of classroom teaching and online assisted learning has fully mobilized students' learning enthusiasm, made the classroom atmosphere more active, and significantly improved the learning efficiency. Compared with 2017, the average score of 2018 students in the final examination of "Further Mathematics" has increased by 11.8 points, the passing rate has increased by 15%, and the proportion of students with high scores above 80 points has also increased significantly. Innovation is the vitality of a nation, and "innovation" provides students with a vast world, transforming their brains from a "warehouse" to a "processing field", and "innovation" provides good conditions for their healthy growth.

The application of online resources in mathematics classrooms has indeed brought significant changes. It has optimized the classroom teaching environment, deepened the density of classroom teaching, and brought the mathematics classroom into an atmosphere full of vitality, passion, and freedom. Established in 1696, it made significant contributions to the study of limits and derivatives in mathematics. "L'Hôpital's rule" includes the formula of "zero to zero", "infinite to infinite" and "other infinitives", all of which can be traced back to their origins. Teachers can divide students into several groups and have them discuss relevant knowledge points between groups. The results are secondary, but what is important is the knowledge learned and innovative thinking explored during the process of exploring formulas.

Taking small groups as a unit, allowing students to explore knowledge has improved their participation, not only in learning knowledge, but also in cultivating their ability to "learn". Most of the members of the research group are young and middle-aged teachers with strong learning abilities. To do a good job in the research work, the research group consists of.

3. CONCLUSION

This article analyzes the shortcomings in current mathematics classroom teaching in universities, lists the important significance of the application of modern educational technology in university mathematics classrooms, and points out the relevant strategies for the participation of modern educational technology in university mathematics classroom teaching. Modern educational technology is the application of modern technological products in teaching, based on traditional mathematics teaching in universities. Modern educational technology has a significant impact on the development of mathematics in universities, which is conducive to improving students' learning initiative and teaching quality. The complete integration of modern educational technology into university mathematics classrooms is a lengthy process that requires the active cooperation of universities, teachers, and students. The production of electronic teaching plan is the main content of classroom teaching reform of "further mathematics" course. The members of the research team improved the outdated way of thinking in the process of producing electronic teaching

plan from scratch, from existing to refined, and improved the teaching level and professional ability.

4. REFERENCES

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