

Research on the Influence of Mathematics Culture on Basic Mathematics Education

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Abstract: Mathematics has experienced a long development gradually become a subject, and has a cultural nature. Mathematics culture is not only a cultural phenomenon, but also a microcosm of human beings into the integration of social production, social background. The emergence of mathematics culture plays an important and far-reaching role in basic mathematics education. Based on the research on the influence of mathematics culture on mathematics basic education, this paper discusses the connotation of mathematics culture and analyzes the application of mathematics culture in mathematics basic education, in order to provide experience for reference for mathematics basic education.

1. Introduction

Mathematics basic education is rich in content, is an important part of mathematical knowledge principle teaching, rich in humanistic color, sensory color. Mathematics culture has a profound influence on mathematics education, which not only enriches the content of mathematics basic education and changes the malpractice of traditional mathematics teaching mode, but also takes the cultivation of students' mathematical idea and mathematical thinking as the goal, and attaches importance to the infiltration of humanistic content in mathematics basic education. Mathematics culture is of great significance to improve students' cognition and help students overcome difficulties.

2. Connotation of Mathematics Culture

Mathematical culture is a cultural phenomenon, the narrow definition includes spirit, thought, language and viewpoint, method, after several historical periods to form a unique mathematical culture, and continue to develop. In a broad sense, mathematical culture includes mathematicians, mathematical history, mathematical aesthetics, mathematical education, refers to the part of mathematics and society, in the long-term development of the formation of the human component. The development of mathematics is a cultural phenomenon, and the early mathematicians were the founders of mathematics culture. The development of mathematics from the history of the development of mathematics, the specific mathematical theory, mathematical concepts and mathematical methods of the study set off a rich culture inside information, become the material of mathematical presentation [1].

3. Influence of Mathematics Culture on Basic Education

3.1 Stimulate Interest in Learning

Mathematics culture plays an important role in improving the quality of education and arousing students' interest. Mathematics culture plays an important role in promoting educational progress because of its connotation. As a worldwide subject education, mathematics basic education has been regarded as monotonous, boring and boring label, and students have been deterred from receiving basic education. Mathematics culture has a great influence on basic education. Infiltrating cultural education into basic education can cultivate students' interest in learning and understand the course of mathematics development. During this time, teachers focus on the cultivation of interest,

dig up the connotation of culture and education, pay attention to the key points of education, excavate the value of basic mathematics education, and make It can meet the objective needs of quality education.

3.2 Enrich the Content of Education

The content of mathematics culture to basic education not only stays on basic knowledge education, but also involves many other contents. The contents of education include the history education of mathematics development, the education of mathematics theory, the education of mathematicians' deeds, the education of mathematics language, the education of mathematics viewpoint and so on. The content of the above education is to enrich and perfect the basic education, and give more cultural and spiritual connotations to the basic education of mathematics. After a long period of development, mathematics culture has rich inside information, rich material in mathematics culture, adaptable to the integration of basic mathematics education, and has a rich role in mathematics education [2].

3.3 The Concept of Quality Education

China's education development has gone through several stages, from traditional examination-oriented education to quality-oriented education, China's education still has a long way to go. The influence of mathematics culture on mathematics basic education is that it provides convenient conditions for quality education and core literacy education. Mathematics basic education needs not only the value of educational tools, but also the important key to cultivate and cultivate students' cultural value and aesthetic value. Therefore, mathematical culture has a positive role in promoting the basic education of mathematics and is an important carrier to constantly improve and enrich the content of education.

4. Application of Mathematics Culture in Basic Education

4.1 Change in Traditional Educational Concepts

If we want to give full play to the positive role of mathematics culture in basic education, we must abandon the malpractice of traditional education mode, constantly update, change the educational concept, give full play to the edifying effect of basic education on students' spirit and thought, and promote the all-round development of students. Therefore, in the process of basic education, teachers must make clear the importance and necessity of integrating mathematics culture into basic education, infiltrate educational thought, and integrate it with teaching design and teaching behavior. For example, scores, decimal basic education has a lot of abstract knowledge, students are not easy to understand. Drawing lessons from the concept of mathematics culture, the teaching content, knowledge content and imitation can be displayed intuitively and imitating, so that it can satisfy the requirements. Autonomous learning, cooperative learning goals, teachers can build a new learning model, permeate the content of mathematics culture. Mathematics culture emphasizes the infiltration of humanistic spirit and cooperation and sharing. For example, teachers change the traditional educational concept, infiltrate culture into basic education, permeate the concept of mathematics development, tell the emergence of mathematics to a certain problem, with the understanding and transformation of the world, improve students' understanding of mathematical content and mathematical thought. In addition, teachers should make it clear that the key point of mathematics basic education is to shape students' character, improve students' sense of experience and direction in learning mathematics knowledge, and take mathematics understanding as the internal power of learning mathematics knowledge content. Therefore, teachers should adopt the traditional education concept, imperceptibly infiltrate mathematics knowledge into curriculum learning, so that students can be influenced by it, and then achieve the goal of cultivating students' creativity, imagination, and logical thinking ability [3].

4.2 Innovative Cultural Teaching Methods

There is no denying that mathematics culture has a positive role in promoting mathematics basic

education, and teachers are the important carrier to play cultural value and permeate culture education, and also the core key to promote mathematics culture education. Therefore, teachers must master advanced teaching methods, innovate educational models, carry out basic education activities in depth, and dig out the value of mathematics culture through advanced teaching methods as far as possible. For example, when the teacher is teaching multiplication, the teacher asks the student: "Why is 2×2 equal to 4?" "Why is 11 equal to 2?" And so on has the mathematics thought as well as the philosophy thought question. This problem has been extensively explored in the field of mathematics, the mathematician have found the answer by argumentation. A seemingly simple problem contains infinite possibilities in mathematics, and students can deeply feel the infinite mysteries of mathematics. In the process of infiltrating mathematics culture teaching, teachers can apply a variety of methods, including problem situation teaching method, atmosphere situation teaching method, cooperative inquiry teaching method, multimedia teaching method and so on. Many advanced teaching methods are adaptable in basic education and can achieve the goal of mathematics culture infiltration education. The contents of different basic education courses are different, and the educational methods applied are also different. The cooperative inquiry teaching method is suitable for the complexity and openness of the teaching method. The content teaching is strong, and the problem situation teaching method is suitable for thought and viewpoint teaching. Therefore, teachers should master different educational methods, innovate educational models, attach importance to the infiltration of curriculum learning into students' cultural literacy, and give full play to the role of mathematics culture in improving students' learning ability and exploring ability [4].

4.3 Focus on Cultural Values

There is an inseparable relationship between mathematical culture and mathematics, which promote and complement each other. Excavating the value of mathematics culture is not only the key point of improving mathematics education, but also the key to improve the quality of mathematics education. Therefore, in the specific teaching, teachers need to have a planned, organized, purposeful and low penetration cultural content, and bring culture into the specific curriculum teaching. For example, when a teacher teaches a course involving a 99 multiplication table. The teacher asked the students, do you know who invented the multiplication table? Teachers talk about the background and process of multiplication table, which makes students have a deep understanding of multiplication table and permeates the humanistic value behind curriculum education. Mathematics culture education should not only explore the essence of mathematics science, but also advocate the spirit of mathematics and humanism. Integration of knowledge education, quality education, humanities education and quality training. For example, teachers regularly broadcast documentary films about the life course of mathematicians, including the spirit of mathematicians studying mathematics, meticulously and conscientiously conveying mathematical knowledge to the world and, as far as possible, conveying mathematical feelings to students in education. The integration of mathematics education and culture education will help students to look at problems and understand problems from dialectical thinking

4.4 Emphasis on Ideological Education in Mathematics

Mathematics thought education is an important part of mathematics culture education. The infiltration of mathematics thought into mathematics basic education is an important key to promote students' quality education and improve students' mathematics application ability. In the specific teaching activities, in addition to the necessary formal teaching training, we should infiltrate the ideological content education as much as possible, feel the ideological teaching methods and the core of ideological teaching, so that it can play an indispensable role in the whole ideological teaching system. For example, in the process of basic education of mathematical graphics, teachers can build model templates so that students can learn to build their own models, understand the principles of the model and analyze the causes of the model. Set module In order to establish students' positive learning attitude and learning goals, combined with mathematical thought to permeate logical rationality. Mathematics ideological education is also an important part of basic

education. Teachers use diversified teaching methods to promote students' divergent thinking, exercise students' thinking mode, and promote students' comprehensive quality. Therefore, teachers should attach great importance to the promotion of mathematical ideological education to students, infiltrate the content of cultural education as far as possible in the process of ideological education, promote the perfection of students' thinking, and excavate the role of mathematical ideology and culture in basic education as much as possible.

5. Conclusion

Mathematical culture is an important part of human culture. It permeates all aspects of human life and is an important part of promoting social progress and social development. Mathematical cultural literacy has gradually become a necessary accomplishment for citizens. The influence of mathematical culture on basic education lies in its rich role in the content of basic education and the promotion of educational goals. Understanding pluralistic mathematics culture is not only the premise of cultivating mathematics interest, but also the new requirement of quality education for mathematics education.

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