

The Thinking of Moral Education Infiltration in Mathematics Teaching from Moral Education and Cultivating People

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Abstract—Mathematics teaching is a very important part of school education, and people pay more and more attention to its moral value. This paper explains the necessity and feasibility of infiltrating moral education in mathematics teaching, and elaborates the strategy of infiltrating moral education in combination with the content of middle school mathematics, so as to provide practical experience for the effective infiltration of moral education in mathematics teaching.

Keywords—Moral education and cultivating people; Mathematics teaching; Moral permeation

I. INTRODUCTION

Moral education and cultivating people includes “moral education” and “cultivating people”. Moral education is the way and cultivating people is the purpose. They are the two pillars of education. Insisting on “moral education” is to “cultivating people”, which means to train socialist builders and successors who are well developed morally, intellectually, physically, physically and physically. General secretary Jinping Xi’s educational thought of “moral education and cultivating people” is in line with Marx’s theory of all-round human development. General secretary Jinping Xi attaches great importance to the priority and fundamental position of moral education in education, emphasizing the cultivation of people as the basis and moral education as the priority [1].

II. NECESSITY

The party’s 18th report clearly put forward the “moral education and cultivating people as the fundamental task of education”, further emphasize from the party’s 19th report “in five years, the education system around moral education and cultivating people fundamental task, strengthen the ideal faith education, adhere to the socialist core values into the whole process of national education, help students the first grain of button button.[2]” It has become the core of socialist education with Chinese characteristics, which reflects the progress and innovation of China’s education.

Einstein once said, “It is not enough to educate people with professional knowledge. With a professional education, he can be a useful machine, but he cannot be a harmonious person.” This shows that the ultimate goal of education is to cultivate a

harmonious and well-rounded person, not to cultivate tools, to make people better people rather than machines. We both teach mathematics and educate people with it.

The development of mathematics has a long history in China, containing a wealth of ideological methods and other contents, and a large number of materials with educational significance can be used for moral penetration. In addition, the mathematics discipline opens the class hour number is more, the teacher and the student contact time is also longer. Therefore, it is very necessary to infiltrate moral education into mathematics teaching, both in terms of mathematics itself and the proportion of mathematics teaching in school education.

Mathematics discipline is the basic discipline that trains the student to use mathematics knowledge skillfully, forms mathematics thinking, improves the student mathematics ability and mathematics quality. In mathematics teaching, the implementation of moral education and cultivating people is by no means to paste the word “moral” on the mathematical knowledge points, but in the whole process of mathematics teaching, to fully tap the inherent moral resources of mathematical knowledge, and reflect the understanding and requirements of mathematics to a complete person. The infiltration of moral education in mathematics mainly focuses on the unity of patriotism, rationality, mathematical aesthetics and moral quality, so that students can observe the real world with mathematical vision, think about the real world with mathematical thinking, and express the real world with mathematical language.

III. FEASIBILITY

A. Reasonable

Mathematics is a rigorous subject, requiring that the description of mathematical conclusions must be accurate, the reasoning of conclusions must be based on step by step, in line with the requirements of logical theory everywhere. The preciseness of mathematics makes the teaching content of mathematics very persuasive and rational. In the process of moral education, if students can grasp this advantage well, they will be more convincing, so as to successfully complete the established goal of moral education.

For example, in the teaching of the standard equation of ellipse, students can understand that ellipse trajectories are not the same when a and b are different. Therefore, in life, to choose the right parameters, in order to draw their own life trajectory. Such a transfer, the students understand at a glance, also had the effect of moral infiltration.

B. Practical

Mathematics comes from life and serves life. Mathematics teaching should combine mathematics and life more organically. By reducing the boring knowledge from students' life practice in mathematics teaching materials to some real mathematical problems in students' real life, we can realize the transformation of mathematics knowledge into life. In a vivid reality of practical problems, students can not only experience the usefulness of mathematical knowledge, but also make it easier for students to accept moral education.

For example, in the teaching of probability, let the students calculate the probability of winning the lottery, strengthen the students' grasp of the basic knowledge of probability, and cultivate the students' down-to-earth habit of doing things in accordance with objective laws and the rational spirit of science.

C. Perennial

Moral education cannot be completed overnight, is a long-term process. Moral cultivation is not only a matter for ideological and political teachers, class teachers and schools. As the most basic and main activity of schools, subject teaching bears the responsibility of permeating moral education to students. Mathematics courses account for a large proportion of basic education courses, so each grade needs to offer mathematics courses, and the number of class hours of the courses is large. Therefore, the infiltration of moral education in mathematics discipline is a long-term task, which is a great help to the implementation of the fundamental task of moral education.

IV. THE STRATEGY OF INFILTRATING MORAL EDUCATION IN MATHEMATICS TEACHING

A. Schools

First of all, to construct and perfect the system of teachers' further study, the educators should be educated first. General secretary Jinping Xi stressed at the symposium of ideological and political theory teachers that "the teenage stage is the jointing booting stage of life, which needs careful guidance and cultivation". For educators, in addition to giving the educated careful guidance and cultivation, we also need to carefully polish ourselves. The school should construct and improve the system of teachers' further study, and regularly organize activities such as concentrated study, listening to lectures and going out to study. Teachers should keep learning ideological and political theory knowledge, the main connotation and practical requirements of Jinping Xi's educational thought of "cultivating virtue", how to better permeate moral education in subject teaching, the characteristics and scope of moral education of various subjects, and the teaching methods that

can be used to carry out moral education more effectively. The educators should be educated first, and the ideological cultivation of teachers should be combined with their personal accomplishment, so as to improve their ideological and political attainments and professional attainments.

Secondly, the seminar is held to explore new ways to infiltrate moral education. Teachers of all subjects should actively carry out the discussion and exchange meeting on the infiltration of moral education in the teaching of subjects, discuss the new problems and new situations in the teaching process, and reflect and summarize. Of course, we should not be limited to the communication between teachers in our own schools. We should go out and carry out communication between schools and regions. Collect everyone's strong points, explore the new method of moral education infiltration, and truly achieve teaching and educating people.

In a word, the improvement of teachers' awareness and ability is the key to fulfill the fundamental task of cultivating people with morality.

B. Teachers

1) Lead by example and set an example for students

It is an important factor that determines the success or failure of a teacher's teaching. Just as the famous ancient Chinese educator Confucius said: "the body is upright, but not ordered; its body is not straight, although the order does not follow." Similarly, the German philosopher jaspers once said, "true education is to use a tree to shake another tree, a cloud to push another cloud, and a soul to awaken another soul." From ancient times to modern times, from middle to outside, the success of education is inseparable from teachers' behavior and example.

Middle school students in this period have a strong plasticity, imitation and the ability to accept new things. It can be said that middle school is a critical period for the formation of students' three views, ideals, beliefs and moral codes of conduct. Teachers should start from their own code of conduct, strict with themselves everywhere, consistent with words and deeds, as a good example of students.

Teachers' "being a teacher" is not only reflected in their own external performance but also in their own inner world. As stressed by general secretary Jinping Xi, when our party is committed to the great cause of the Chinese nation in the long run, we must cultivate generation after generation of useful talents who will support the leadership of the communist party of China and the socialist system of China, and who will devote their lives to the cause of socialism with Chinese characteristics [3]. Teachers are disseminators of communism. Our correct political direction and firm political belief are the core of teaching, the main content of teachers' political literacy and the most direct factor affecting young students. We should use the words and deeds of "moistening things silently" to guide teenagers to live a good life of "jointing booting period".

2) Using the history of mathematics, patriotism education

The Chinese nation is one of the greatest nations in the world. Along with the splendid culture of five thousand years, our country's mathematics development level also once led the

world, has made the remarkable achievement. The history of mathematics is a golden treasure-house, from which, no matter how The Times change, a great deal of material of educational significance can be found [4]. Middle school mathematics textbooks contain a rich history of mathematics. In teaching, we should aim at the appropriate teaching content, in combination with the relevant history of mathematics, so that students can understand the outstanding contributions made by Chinese mathematicians to promote the development of mathematics. Thus, it can stimulate students' national pride, enhance national self-esteem and educate students on patriotism.

For example, in the process of "know negative" teaching, using multimedia display, to introduce students to knowledge found in the negative aspects of the history in our country, let students understand ancient Chinese mathematicians contribution to the development of the world mathematics, deeply feel that deep mathematical culture of our country, inspire the student I am a Chinese pride and sense of responsibility, help to cultivate students to study hard, positive enterprising spirit.

3) Carry out the teaching reasonably, carry on the dialectical materialism education

As pointed out in the mathematics teaching syllabus of the full-time junior high school of nine-year compulsory education (the revised version), "The teaching content should be expounded from the viewpoint of dialectical materialism, so that students can understand from it that mathematics comes from practice and is applied to practice, as well as the dialectical relationship reflected in mathematics, so as to be educated from the preliminary viewpoint of dialectical materialism.[5]" Therefore, to carry on the dialectical materialism education to the student, is an important task of our middle school mathematics teachers.

In the Pythagorean theorem in the teaching process, for example, by making the students experience from isosceles right triangle such special right triangle to common right triangle exploration process, summarizes the Pythagorean theorem, by the students to use the Pythagorean theorem to solve specific problems, to cultivate students' ability of reasoning and deductive reasoning, infiltration from special to general and special dialectical materialist point of view.

In the middle school mathematics teaching carries on the dialectical materialism viewpoint education, is helpful for the student to strengthen to the mathematics knowledge understanding, enhances the student to analyze the question, the solution question ability, is helpful for the student to form the scientific world outlook foundation.

4) Show the characteristics of the discipline and cultivate the rational spirit

Through the process of using mathematical knowledge to solve problems, it helps students gradually accumulate the ability to solve practical problems with mathematical knowledge, and trains students' application ability and innovation consciousness. It fully displays the characteristics of mathematics, reveals the process of the generation,

development and application of mathematics knowledge, and trains students' rational spirit.

For example, in the teaching of probability, let students appreciate classical and geometric probability results great value to practical problems. To realize the guiding role of objective laws in human practice, to cultivate students' ability to analyze and solve problems, to feel the rigor and scientific nature of mathematics, to develop students' awareness of mathematics application, to cultivate students' innovative spirit, and to inspire students' enthusiasm and confidence in understanding and transforming the world.

5) Show the beauty of mathematics and improve the aesthetic ability

As the crystallization of human thinking, mathematics contains infinite beauty. As a basic subject of natural science, mathematics imperceptibly imparts unique aesthetic education to students in its own unique way. This requires us teachers to understand the beauty of mathematics, be good at mining the beauty of mathematics, in the teaching process naturally to show the beauty of mathematics.

For example, in the teaching process of trigonometric function, let the students feel the concise beauty of the induction formula and the relation of the same Angle trigonometric function, and feel the symmetry beauty of the trigonometric function image and transformation.

Through the study of mathematical knowledge and the cultivation of mathematical ability, students can be guided to understand the positive and negative, up and down, conciseness, symmetry and other aesthetic elements in mathematics, and learn to comprehend, express and create the unique mathematical beauty of mathematics, so that mathematics becomes an educational resource for students to pursue truth, kindness and beauty and create a better life.

V. CONCLUSION

Every teacher should consciously infiltrate moral education into the subject teaching, and fulfill the fundamental task of cultivating people with morality. Moral education is an important task of discipline teaching, but not the main task, teachers should pay attention to the methods and strategies in the infiltration of moral education in mathematics teaching, do not put the cart before the horse, to improve the consciousness of infiltration, grasp the feasibility of infiltration, pay attention to the repetition of infiltration.

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