

Research on Integrating “Internet Plus Curriculum Ideology” into Higher Vocational Mathematics Teaching

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Abstract: At the National College Ideological and Political Education Conference, Comrade Xi clearly stated that the idea of establishing a virtuous person should be put into the education process of various disciplines, to realize the “Three-whole Education”. That is, the whole-person education, the whole process education, and the all-round education. To be specific to higher vocational mathematics teaching, there are many issues. Relating to this, the integration of curriculum ideology and politics can help realize the goal of educating people and improving the comprehensive quality of students. However, in some higher vocational colleges, there are problems such as the mathematics teaching becoming formalistic, and the teachers' attention being low degree. They have greatly limited the mathematics teaching development of vocational colleges. To this end, the “Internet plus” model can be used to make this course content and the mathematics teaching become a integration, to enrich the guidance work for the ideological and political course.

1. Introduction

In 2016, Chinese leader emphasized the need to highlight the role of classroom teaching at the Ideological and Political Work Conference, so that various professional disciplines can follow the main line of ideological and political education, forming a synergistic development effect and promoting education reform. In details, teachers should emphasize quality education, and pay great attention to the sustainable development of students. Incorporating “Internet plus Curriculum Ideology” into the new model of mathematics teaching can encourage students to prepare for the mathematics curriculum by studying the curriculum ideology and thinking in mathematics, clarify the learning objectives, and eventually make students become qualified talents for society and enterprises.

2. The Teaching Status

In the course of continuous reform exploration in mathematics teaching in higher vocational colleges, it is necessary to integrate both Internet technology and ideological education content, aiming to cultivate the scientific and rigorous mathematics learning attitude of students and help students shape the correct outlook on world, life and values. However, in actual teaching, the importance of integrating “Internet plus curriculum ideology and politics” into the vocational

college mathematics teaching mode is insufficient, due to the low importance of teachers themselves. As a result, the combination of the two teaching methods is more obvious, and it is difficult to obtain substantial teaching effect. Therefore, teachers of these colleges are required to analyze the relationship between “Internet plus curriculum ideology” and mathematics curriculum in depth and summarize the problems in teaching.

2.1 Mathematics Teaching Becoming a Mere Formality

At present, there are fewer modes of combining “Internet plus Ideological and Political Courses” with professional courses in most higher vocational colleges. Especially in mathematics education, teachers seldom integrate this kind of education content; most of the time, they only integrate for integration. Formalism is more serious. With quality education reform, teachers of higher vocational colleges just blindly teach mathematics topics, ignoring the mathematics textbooks, such as modeling ideas, professional ethics, and philosophical ideas. By this, mathematics teaching become monotonous, making it difficult for students to generate interest in learning. At the same time, teachers' understanding of “Internet plus curriculum thinking and politics” is not deep enough. Usually in classroom teaching, they take a look at the contents of thinking and politics. They do not deeply explore the contents of thinking and politics in mathematics, which makes the connection between them.^[1]

2.2 The Degree of Emphasis from Teachers is Low

At present, some mathematics teachers keep a low level of understanding the integration mode and “Internet plus curriculum ideology and politics”. Unilaterally, the teaching of this course is the task of ideology teachers and counselors, and has little connection with mathematics teaching. Therefore, the content has been not integrated into the specific teaching or less, which makes the teaching of mathematics courses boring. In addition, some teachers still understand the course in the mathematics classroom, which is a simple level to play a ideology concept or a story of ideology and politics. As for whether the content of ideology and politics is related to the learned content or not, it is not concerned. This is not only of little significance for improving the ideological quality of students, but even affects the normal math teaching effect.

2.3 The Cases Are Fewer

At present, Internet technology has begun to be widely used in almost educational content. Mathematics teaching belongs to it, but “Internet plus curriculum thinking” has not been integrated into the mathematics classroom. For example, when teaching the content of instructors, teachers only teach in the usual “concept-exercise-consolidation” method, and give little introduction by a few of cases, making it difficult for students to understand the problem of calculating the instantaneous speed in variable-speed linear motion. Simultaneously, in the after-school mathematics expansion teaching, the abstract mathematical content is difficult to be transformed into concrete content, making it difficult for students to generate interest in learning.^[2] The insufficient cases are one of the main reasons.

3. The Teaching Strategies

In the current process of continuous development and change of information technology, higher vocational colleges have combined the “Internet plus ideological and political education” with mathematics teaching. Through the integration, students are allowed to master the development

principles of things, and the generation and evolution of computing theorems. Students can flexibly use mathematical knowledge to solve problems that arise in real life. In this regard, teachers in higher vocational colleges can integrate the content of “Internet plus curriculum ideology and politics” according to the specific content of mathematics courses, create a good ideological and political teaching atmosphere, enhance the classroom teaching effect, and open up a new reform path for quality education.

3.1 To Carry out Teaching Activities in Combination with Content

In order to better promote the reform of mathematics teaching, teachers need to combine the teaching content and divide the high mathematics course into multiple knowledge modules, so that students can know about the development principles deeply, then master the skills, and abstract logical reasoning and operation. For example, mathematics can be regarded as covering three parts: extreme knowledge module, probability module and integral module. In the integral module, students can be taught the dialectical unified thought in philosophy, and use the theorem to deal with problems in practical work, life and other fields. At the same time, teachers can also create Internet plus ideological and political and mathematics teaching planning tables, clarify the path and method of integration of them, and carry out mathematics teaching activities better.

Knowledge Unit	Case Base	Content of “Internet plus curriculum ideology and politics”	To Cultivate Students' Ability
Function (exponential function, segmented function, derivative function)	The origin of natural constant e, the PI story, tiered pricing	To guide students to love learning and life; to clear students' purpose; to promote students' living habit of saving water and electricity	To develop students' observation ability, exploration ability, positive and optimistic life attitude and sense of responsibility
Extreme knowledge	Extreme stories in Chinese history	To inspire students' patriotism and sense of responsibility	
Probability knowledge	The tremolo and Monte Carlo methods	To guide students to learn to observe life, diligently think, and be good at discovering mathematical laws	
Integrating knowledge	To calculate different mold volumes	To learn to use the Internet to build mathematical modeling and make 3D mold materials	

3.2 To Create an Excellent Teaching Atmosphere

During the mathematics teaching, to create a teaching atmosphere for higher vocational students is vital. Firstly, a pre-class reading module should be established. Teachers can recommend students to use their free time to read classic bibliography about mathematics, such as *Nine Chapters of Arithmetic*, *Principles of Mathematics*, or distribute inspirational stories about mathematicians in class groups, to improve the national cultural identity and interest in learning mathematics courses for of students. Secondly, teachers can set aside 3 to 5 minutes in class, and ask students to share their experiences of reading books outside of class, which can be made into small videos and PPT courseware to enrich mathematics classroom. In addition, teachers also need to use Internet technology to build mathematical modeling, like binary magic, and three-dimensional models, to create a strong math classroom atmosphere for students.^[3]

3.3 To Notice the Guidance Significance

With the continuous deepening of the curriculum teaching reform in higher vocational colleges, teachers need to break through the traditional theoretical teaching form and construct a diversified teaching form before class, in class and after class in the integration of mathematics course and “Internet plus course thinking”. For example, teachers can introduce examples before the class to introduce teaching content. For example, in the derivative concept teaching process, teachers can appropriately introduce examples of traffic accidents caused by speeding in people’s lives, and give the detailed explanation in class through multimedia screening related short films. In the classroom, teachers can intersperse in the classroom with ancient Chinese mathematics stories, using historical characters familiar to students as an entry point to help students understand the concept of extremes, in order to guide students to realize the extreme thinking.^[4]

4. Conclusion

Ideological and political education play an important role. Higher vocational colleges education will be affected by its level. So, it is not only the task of teachers and counselors, but also the responsibility of everyone. This kind of integration will not only help enhance students' study interest, but also facilitate the mathematics teaching reform, in the teaching of mathematics courses in higher vocational colleges under the new situation. Therefore, teachers need to change the teaching concept and combine mathematics with “Internet plus curriculum thinking and politics” to achieve the goal of quality education.

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