

A Case Study of Integrating Curriculum Ideology and Politics into Digital Electronic Technology¹

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Abstract: This paper discusses the significance of the “Digital Electronics Technology” course teaching reform from a political perspective, that is, by combining learning and practice to cultivate students’ comprehensive qualities and innovative abilities. Then it discusses the “Digital Electronics Technology” course teaching reform process, including improvements in course design, teaching implementation, and learning assessment. Finally, it concludes the effects of the reform, such as increasing students’ learning interest and innovation ability and enhancing students’ comprehensive qualities.

Keywords: Digital Electronics Technology; Curriculum Politics

1. Introduction

In the new era, incorporating ideological and political education into the curriculum is an effective reform method. Teachers should optimize their educational philosophy and enhance their feelings^[1]. They incorporate relevant elements into the teaching process, fostering students to become talents with ideas, innovation, and correct values. "Digital Electronics Technology" is a practical and applicable foundation course with solid professional coverage, many people, and rich ideological and political elements. It takes social demand as its teaching goal and cultivates applied talents. By teaching analysis and design of electronic devices, digital circuits, and systems, the course guides students to abstract practical problems and design corresponding logic circuits^[2]. Students can also familiarize themselves with standard digital circuit chips through the Multisim simulation platform and independently complete circuits with a certain complexity of design and debugging^[3]. In addition, students also need to write experiment reports that meet the requirements of engineering practice to cultivate the ability to summarize, express engineering, and communicate^[4]. This course is closely linked to many subsequent professional courses and plays an essential role in the teaching system. Therefore, teachers will integrate the concept of combining learning and using with the "Digital Electronics Technology" course to achieve good results in ideological and political education in the curriculum.

2. The significance of incorporating political ideology into the curriculum.

The significance of incorporating political ideology into the teaching reform of the “Digital Electronics Technology” course is not only the cultivation of students’ skills and knowledge but also the cultivation of their sense of social responsibility and civic quality. Students can apply their knowledge and skills to real life through learning and application and discover their social responsibilities and roles. In the “Digital Electronics Technology” course, students can learn the skills and knowledge needed in modern society and improve their innovation and teamwork through practice. Introducing political ideology is not only for cultivating students’ skills and knowledge but also for cultivating their sense of social responsibility and civic quality to produce more talents with social responsibility and innovation for society.

3. The process of incorporating ideological and political education into the curriculum

The core concept of the "Digital Electronic Technology" course teaching reform is based on combining learning with the

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application. This means that the course's teaching content and methods should be able to meet the actual needs of students and allow them to apply what they learn in class. In the implementation process, we have adopted various means to improve the practicality of the course. For example, we have introduced experimental segments of practical operation, allowing students to experience the application of electronic technology directly. At the same time, we have also invited entrepreneurs and experts to share their experiences of using electronic technology in their work. Through these reform measures, we have found that students' interest and investment in the course content have improved significantly. They can better understand the practical application of electronic technology and apply what they learn in class. Such a course of teaching reform improves students' learning interests and abilities and lays a solid foundation for their future work and learning.

3.1 Organization of Teaching Content

The organization of teaching content for 'Digital Electronics Technology' must first be based on combining study and application. This means that when students learn this course, they not only need to master knowledge and skills related to digital electronics technology but also learn how to apply this knowledge and skills in practical situations. In the course, students will learn about the basic principles of digital electronics technology, combinational logic circuits, sequential logic circuits, and their real-world applications. Additionally, through experiments and practical activities, students can master how to design digital circuits using this knowledge and skills. The course will also focus on explaining the importance of digital electronics technology in social development and economic growth and how to conduct electronic product research and manufacturing within the framework of social responsibility and ethical standards. This will help students better understand the social significance of this course and make responsible decisions in their future careers.

3.2 Teaching Strategies

The teaching strategy in class focuses on combining learning content with real life, enabling students to experience the importance of knowledge in practical applications. Specifically, the class will use problem-solving methods to mobilize students' learning motivation, guiding students to think and solve real-life problems. This enhances students' interest in knowledge and improves their ability to apply knowledge in practical situations. The class will also use hands-on activities such as experiments and simulations, allowing students to directly experience the practical applications of digital electronics and enhance their understanding and recognition of knowledge. Overall, the teaching strategy in the classroom aims to enhance students' interest and ability in knowledge through a combination of learning and application and to improve students' ability in practical application.

The teaching strategy in class should focus on combining learning with the application. This means that the class should emphasize the teaching of knowledge points and cultivate students' practical application abilities. In order to achieve this goal, the class should adopt a combination of explanation and demonstration. This way, students can hear the knowledge points explained by the teacher and see the teacher's practical operation. This can better help students understand knowledge points. At the same time, the class should also generalize the specific problem. This means that the class should turn abstract knowledge points into specific problems that students can understand and operate. This can help students understand knowledge points better and be able to apply them more effectively.

3.3 Practical Teaching Strategies

The teaching strategy emphasizes the combination of learning and practice. In class, students learn theoretical knowledge and deepen their understanding and mastery of knowledge through practical operations. Emphasis is placed on cultivating students' innovation and practical abilities. Students can improve their innovation and practical abilities through participation in various experiments and projects. Emphasis is placed on cultivating students' sense of social responsibility. Students can understand social issues by participating in social practice activities and learning to solve social problems through their skills and knowledge.

3.4 Assessment Strategies

The assessment strategy emphasizes the concept of integrating learning with practical application. This means that the curriculum aims to equip students with technical knowledge and skills and to understand how to apply these in society and the workplace. The assessment strategy will employ various methods to evaluate students' learning outcomes to achieve this goal. For example, students may be required to complete practical projects and experiments to demonstrate their ability to apply what they have learned in real-world scenarios. Students may also be required to complete written assignments and exams to evaluate their understanding of knowledge and concepts. Most importantly, the assessment strategy will focus on examining

how students apply what they have learned in society and the workplace and will require students to actively participate in social practice and volunteer service inside and outside the classroom. This can help students develop a sense of social responsibility and civic qualities during the learning process.

4. The effects of incorporating ideological and political education into the curriculum

The reform of course teaching can enhance the comprehensive development of students. By combining theory and practice, students can learn technical knowledge and cultivate innovative thinking and practical ability. Secondly, it can improve the comprehensive quality of students. By combining course teaching with social practice, students can better master and apply the knowledge to society. Finally, teaching reform can help students better adapt to the future development of society. With the continuous progress of technology, students can better adapt to the future development of society and become builders of the future society through course learning.

5. Conclusion

From the perspective of ideological and political education, incorporating the concept of combining learning and application into the teaching of “Digital Electronics Technology” can change the teaching method, stimulate students’ learning interest and initiative, cultivate students’ innovation ability, enhance the relationship between teachers and students, improve classroom effectiveness, and achieve the goal of learning and applying. In addition, this approach can effectively integrate knowledge education and ideological and political education, achieve good educational results, and meet the needs of comprehensive and quality education. In order to further improve the teaching effectiveness, the course group will continue to optimize the teaching content, tap into ideological and political elements, and explore new teaching methods and models.

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