Exploring the Ideas and Paths of Cyber Security Technology Course to Incorporate the Elements of Civics and Politics

Xuhua Zhang

Shaanxi Energy Institute, Shaanxi Xianyang 712000

Abstract: Cyber Security Technology is the core course of computer network technology, which puts forward higher requirements for teachers of professional courses. Faced with the challenge of course ideology and politics, this paper takes Cyber Security Technology as an example to explore the combination of "establishing morality and cultivating talents". It analyses the teaching content and characteristics of the course by refining and exploring the elements of ideology and politics, integrating them into the path, and reforming the teaching mode and method, and puts forward the path of integration in combination with the concept and method of course ideology and politics, so as to provide references for the design of ideology and politics teaching for other courses of computer majors.

Keywords: cyber security, course ideology, path, method

Introduction

Cyber security is a core element of national security, reflecting the comprehensive strength of the country. The Party Central Committee attaches great importance to cyber security and has put forward a series of major strategic ideas.The 2019 National Conference on Ideological and Political Work in Colleges and Universities emphasized the establishment of morality and respect for human beings as the core link and throughout the entire education and teaching process. The construction of curriculum ideology and politics is a response to the call of General Secretary Xi Jinping to ensure that all kinds of courses and ideology and politics courses are in the same direction and build synergy. Therefore, the study of the integration path of the civic and political elements of the *Cyber Security Technology* course combines cyber security and civic and politics, with the goal of establishing morality and cultivating talents, organically integrating knowledge, ability and literacy, enhancing students' enthusiasm for learning and cultivating high-quality talents.

1. The current situation of the research on Cyber Security Technology course ideology and politics

Exploration of the Civic Politics of Professional Courses in Colleges and Universities focuses on the planning of teaching, means and assessment of results. Research is still needed to find out how to incorporate the Civic-Political Programme into professional courses and how to give full play to the role of teachers in professional courses. Chen Chao and others analyzed the necessity and feasibility of "China University Catechism" to carry out course ideology and politics[1]; Zhang Lina and others analyzed the feasibility from the perspective of characteristics[2]; Zhu Min and others carried out a series of course ideology and politics education and teaching reform practices with "China University

Catechism" as a carrier and achieved certain results[3]; He Guiyun and others have carried out a study on the reform of talent cultivation mode based on the concept of curriculum Civics using the "Chinese University Mucous Classes" as the carrier[4-6]. At present, most of the research focuses on the macro level, lack of specific practice thinking, operability is not strong, and the construction of Cyber Security Technology professional course curriculum civic system needs to be further explored.

2. Teaching content and characteristics of Cyber Security Technology

Cyber Security Technology is a core course for cyber security majors, covering computer viruses, intrusion detection, Web servers, security policies and identity fraud. Starting from the students' perspective, this course integrates with the Civic Education, reshapes the knowledge system, and builds a rigorous, hierarchical and interconnected knowledge chain of Civic Education. Combined with the network practice platform, it focuses on moral education and cultivates cyber security technical talents with both moral and aptitude. Clarify the legal and moral red line, avoid the abuse of technology, emphasize the mainstream value leadership, and enhance students' sense of mission and honour in the community of cyber destiny, cyberspace governance, and cyber power.

3. The basic idea and path of integrating Cyber Security Technology into the elements of ideology and politics

The curriculum of Cyber Security Technology has distinctive characteristics, integrates profound theoretical knowledge and practical application, and meets a wide range of social needs. It is of great significance to analyse the characteristics of the courses and explore the elements of the ideology and politics to build the ideology and politics system.

In the process of constructing the *Cyber Security Technology* course, three levels of ideological and political objectives are proposed: to promote the spirit of patriotism, to strengthen the legal and moral education and to cultivate the ability of materialistic and dialectical thinking and analysis. The content of the course is divided into three levels: the importance of cyber security, causes and security.

At the level of the importance of cyber security, students are introduced to the seriousness of cyber security through case studies, so that they can realize the seriousness of cyber security, develop their sense of responsibility and mission, and guide them to set up correct values. At the level of causes of cyber security, students are guided to deeply analyze the root causes of cyber security problems and understand the social, cultural and moral issues behind the phenomena of network attacks and hacking. By discussing the causes of cyber security problems in small groups, students realize that cyber security is not only a technical problem, but also closely related to human beings, and are guided in how to conduct themselves and cultivate good moral qualities and professional ethics. At the level of safety and security, students can master the basic theory and practical skills of network safety and security.

Through the project-driven and task-led teaching mode, students are trained to prevent cyber-attacks and protect cyber-assets, as well as to shape their rigorous scientific attitude and innovative thinking. At the same time, students are guided to establish a scientific outlook so that they can become well-rounded cyber security talents. In the process of content design and planning, Civic and political education is taken as the main line, a new syllabus is formulated, and the construction of the curriculum system is optimized, so as to realize the organic fusion of Civic and political education and the education of knowledge system.

4. Evaluation of the implementation effect of Cyber Security Technology course on ideology and politics

In the promotion of the Civics of Information Security Technology programme, the first task is to achieve the in-depth integration of the professional curriculum with the elements of Civics, and the second is to design the implementation steps and ensure the effectiveness. By constructing a problem-oriented evaluation mechanism and a teaching feedback and

rectification system, the objectives of the Civics programme for different knowledge units are classified and assessed to comprehensively evaluate the performance of students in terms of knowledge, ability and quality. Adhering to the principles of student-oriented, guidance and service, we will collect students' objective understanding of the use of professional knowledge and form a feedback mechanism. This will promote teachers to reflect on the strengths and weaknesses of Civics teaching, clarify the connotation and extension of curriculum integration, and optimize teaching strategies.

5. Conclusion

The issue of cyber security has attracted much attention, and the importance of Civic and political education in it is becoming more and more prominent. This paper explores the integration of Civic and Political elements into the professional curriculum of cyber security technology, aiming to cultivate cyber security talents with both humanistic qualities. By following the principles of practicability, consistency and synergy and adopting a problem-oriented evaluation method, the teaching content and methods are continuously optimized. At the same time, an efficient teaching feedback mechanism is established to adjust teaching strategies in a timely manner. This teaching mode not only improves the quality of Civic and Political education, but also cultivates a group of talents with red speciality quality, making positive contributions to the modernization of China.

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

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