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# Research on Ideological and Political Teaching of Computer Information Technology Course in Colleges and Universities

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**Abstract:** Based on the ideological and political construction practice of information technology course, teachers should clarify the ideological and political objectives of the course, dig into the relevant ideological and political elements, and explore how to integrate the ideological and political contents in ways such as strengthening the teacher team and supplementing theoretical learning online in combination with practical operations, so as to improve the overall quality and effect of computer information technology courses in colleges and universities. Cultivate students' innovation ability and social responsibility.

**Keywords:** Computer information technology course; Ideological and political teaching; Theoretical resources

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## 1. Introduction

The Opinion on Accelerating the Construction of the Ideological and Political Work System in Colleges and Universities clearly points out the need to thoroughly implement the socialist ideology with Chinese characteristics in the new era, implement the spirit of the Third Plenary Session of the 20th Central Committee of the Communist Party of China, study and implement important discourses on education, accelerate the construction of the ideological and political work system in colleges and universities, strive to cultivate new people who shoulder the great responsibility of national rejuvenation, and cultivate socialist builders and successors with comprehensive development in morality, intelligence, physical fitness, aesthetics, and labor [1]. The computer information technology courses in universities should be deeply integrated with ideological and political education courses to cultivate high skilled talents. By combining ideological and political elements with technical courses, not only can students improve their professional abilities, but it can also help them establish correct values and a sense of social responsibility, enhance their innovation consciousness and collectivism spirit, and make them ideal and responsible technical backbones in their future careers, contributing to the great rejuvenation of the Chinese nation.

## 2. The significance of ideological and political teaching of computer information technology courses in colleges and universities

### 2.1. Improving teaching quality and effectiveness

Traditional computer information technology courses often focus on the imparting of technical knowledge and skill training, emphasizing the cultivation of students' ability in programming, algorithms, hardware operation and so on. However, with the rapid development and wide application of information technology, simple technical ability has been unable to meet the needs of society for scientific and technological talents. Modern society needs more talents with good moral accomplishment, correct values and social responsibility. The integration of ideological and political elements into the computer information technology course can guide students to establish the correct concept of network ethics and improve their awareness of network security and social responsibility. This integrated teaching approach not only helps to cultivate students' comprehensive qualities but also enables them to better cope with various challenges and temptations in their future careers [2,3].

### 2.2. Cultivating high-quality personnel with both moral and ability

In today's rapidly developing information age, computer information technology has become an indispensable tool in all walks of life [4]. The rapid development of technology has also brought a series of problems and challenges, such as cybercrime, information security risks and so on. Therefore, it is particularly important to train talents who master advanced technology and have high moral character. The deep integration of ideological and political elements with computer information technology courses can cultivate students' patriotic feelings, innovative spirit and social responsibility, make them become outstanding talents with both technical strength and moral responsibility and promote social progress and development. At the same time, this kind of integration can also help students establish correct network ethics and legal awareness, prevent technology abuse, promote science and technology to serve human welfare and provide a guarantee for the harmonious development of science and technology and society.

### 2.3. It will help promote fine traditional Chinese culture and core socialist values

The fine traditional Chinese culture is the spiritual lifeblood and cultural foundation of the Chinese nation, while the core socialist values are the concentrated embodiment of the contemporary Chinese spirit [5]. The integration of ideological and political elements into computer information technology courses will enable students to deeply understand and inherit excellent traditional Chinese culture, cultivate their cultural self-confidence and national pride, actively practice socialist core values, establish a correct worldview, life and moral values, and promote social harmony, stability, prosperity and development. By combining ideological and political elements with computer information technology courses, students can not only master the basic knowledge and skills of modern science and technology but also deepen their cognition of excellent traditional Chinese culture during the learning process. For example, students' interest in and reverence for traditional culture can be stimulated by exploring the combination of ancient Chinese scientific and technological achievements with modern information technology. This curriculum integration helps students become technological innovators with global vision and cultural confidence in the context of the new era [6].

## 3. The university computer information technology course ideological and political teaching research strategy

### 3.1. Strengthen the cultivation of teachers' ideological and political ability

College leaders know that IT is of great significance to integrate ideological and political education into the information technology curriculum to cultivate students' professional skills and shape their correct worldview, life and moral values [7]. At the beginning of each semester, the school will invite famous teachers in the field of ideological and political education at home and abroad, either professors with profound academic attainments or educational experts with rich practical experience, to communicate with teachers face-to-face through the form of special lectures, and deeply discuss how to skillfully integrate ideological and political education elements into every detail of information technology courses. With their profound theoretical foundation and rich practical experience, these famous teachers provide teachers with valuable ideas and strategies and guide them to naturally intersperse patriotic education, social responsibility awareness, ethics and other ideological and political points in the specific teaching content such as algorithm design, programming practice, and network security, so that students can be influenced and inspired in a subtle way. Colleges and universities encourage teachers to keep up with the development of the Party and the country and grasp the pulse of the era. Actively pay attention to the news at home and abroad, understand the international situation, broaden their horizons, and extract ideological and political education that can stimulate students' patriotic feelings and enhance national pride. For example, when teaching the course "Artificial Intelligence and Big Data," teachers can combine the rapid development of China in the field of artificial intelligence, tell how Huawei, Baidu and other enterprises show Chinese wisdom on the international stage, and stimulate students' patriotic feelings and enthusiasm for scientific and technological innovation. In the "Network Security" course, the teachers can analyze domestic and foreign network security incidents, guide students to realize the importance of safeguarding national security and keeping state secrets, and cultivate their sense of responsibility and mission. If we want to integrate the curriculum ideological and political education into the teaching of information technology curriculum, we need to form a new teaching mode, which can not only cultivate students' professional skills but also temper their ideological character [8,9].

### 3.2. Online resources supplement theoretical learning content

Traditional information technology courses are faced with the problem of tight class hours of theoretical knowledge, resulting in many important contents being compressed or omitted, and it is difficult for students to fully master relevant knowledge [10,11]. In order to alleviate this situation, information literacy courses based on online high-quality resource platforms can be introduced during the military training of new students.

(1) In order to arouse freshmen's interest in college computer information technology, the platform will transmit knowledge about the origin, development, change and future trend of computer and network technology, so that freshmen can access these resources anytime and anywhere, and use the fragments of military training practice to conduct independent learning, relieve the physical and mental pressure of military training and enrich their study life.

(2) After students have reached a certain stage of learning, they will transmit videos of vacuum tube computers, modern quantum computers, early wired network technology, and today's 5G Internet of Things on the network platform, so that freshmen can see the context and trend of information technology development, and combine the current social hot spots and industry needs. Let students think about the application and prospects of information technology in various fields.

(3) New students need to complete the learning tasks of online courses on time and consolidate and verify them through online tests and homework submissions. These academic results will be included as part of the freshmen's entrance education results, as an important basis for their comprehensive quality evaluation during college. In this way, freshmen can pay more attention to this learning opportunity, improve their information literacy and comprehensive ability through practical actions, have a deeper understanding of computer and network technology, feel the charm and power of information technology, stimulate their learning interest and motivation, and lay a solid foundation for their university study and employment.

## 4. Group cooperative teaching method

Integrating information technology with ideological and political education in university classrooms to cultivate high-quality talents with solid professional skills and good ideological qualities. For example, before starting to explain computer information technology, teachers can post a creative task on the learning platform: requiring students to independently explore document layout knowledge and apply this knowledge to create an upcoming promotional electronic newsletter. Students logged into the teaching platform one after another and found that the teacher had divided different students into groups and what the tasks for each group were. Then, students quickly found their groups based on the list. Taking the theme of "transcending oneself and running towards the future" as an example, the team leader asked the team members to find relevant information through the Internet and upload it to the platform for resource sharing, so that all students can see it. Then, the preliminary manuscript was drawn, and the drawings were synchronized to the platform. Students will provide feedback online and make revisions accordingly. Through online communication and group collaboration, students can develop their abilities in information screening and organization, appreciate the importance of teamwork, and cultivate their awareness of digital learning and innovation. In class, each group sends representatives to the stage to explain their reasons for choosing the topic and present a hand-drawn draft. Teachers need to give high praise to students' creativity, guide them to summarize the composition elements and production steps of tabloids, help students understand the layout structure and methods, and combine theory with practical operation. Students further refine their work based on the steps discussed earlier. In the process of improvement, when they encounter many problems, they will summarize them and provide them to the teacher. The teacher will use micro lesson videos and on-site demonstrations to provide technical support for students' common problems, helping them overcome difficulties. Teachers organize each group to vote on the work they think they are most satisfied with and select the best work. The teacher provides a detailed evaluation and offers suggestions for improvement. Through such activities, teachers enable students to master the basic skills of document typesetting, while also learning to combine professional knowledge with ideological and political education, seeking opportunities for self-improvement in challenges, and integrating personal growth into collective development [13].

## 5. Teaching methods of situational introduction

In the ideological and political teaching practice of the computer information technology course in colleges and universities, the teaching method of context-leading has injected new vitality and depth into the traditional teaching classroom [14]. Taking the chapter "Information Security and Privacy Protection" as an example,

teachers can use the way of situation introduction to bring students into a tense network security incident scene. In the beginning, the teacher first played a short film simulating a large-scale network data breach, in which the personal information of countless users was illegally obtained, resulting in serious consequences such as property damage and reputation damage. As the scene progresses, the students are fascinated, their faces written with shock and concern. At the end of the video, the teacher asked the question: "Students, have you ever thought about the challenges that our information security and privacy protection are facing while enjoying the convenience brought by the Internet?" The question was raised, and it caused ripples in the minds of the students. They started a heated discussion, some expressed their concerns about network security, and some shared their network security problems in daily life. Teachers, while the iron is hot, further guide students to think: "As future information technology talents, how should we deal with these challenges?" How to protect users' information security and privacy rights while developing technology?" Next, according to this question, the teacher divided the students into groups, each group played a different role, and simulated a cyber security incident response process. In the simulation process, students should not only use the computer information technology knowledge they have learned to analyze vulnerabilities and formulate defense strategies but also think about how to protect the privacy of users while avoiding infringing on the legitimate rights and interests of others from the perspective of ethics. In the process of role-playing, students deepen their understanding of the importance of information security and privacy protection and learn to make correct ethical judgments and decisions in a complex and changing network environment. In addition, the teachers also guided the students to conduct in-depth analysis and discussion based on the current hot events in the field of network security at home and abroad. Let the students see the seriousness of network security issues, and feel the responsibility and mission of information technology talents in safeguarding national security, social stability and public interests. In the whole teaching process, the way of situation introduction is like an invisible thread, which closely pulls students between the exploration of technology and the reflection of morality, so that they not only master the professional knowledge of computer information technology but also plant seeds of concern for society and courage to take responsibility in their hearts [15].

## 6. Conclusion

With the continuous deepening of the research on ideological and political teaching of computer information technology courses in colleges and universities, teachers not only explore the organic integration of curriculum and ideological and political elements, but also witness the double growth of students in technology learning and ideological refining in practice. This study enriches the connotation of its curriculum and provides a strong support for cultivating talents with solid technical foundation and high moral character in the new era.

## Disclosure statement

The authors declare no conflict of interest.

## References

[1] Han S, 2023, Implementation Strategies of Ideological and Political Teaching of Information Technology Course in Higher Vocational Colleges. Journal of Ezhou University, 30(3): 95–96.

[2] Zeng W, He J, Kuang Q, 2023, Exploration of Ideological and Political Education in Professional Curriculum of Information Technology-Enabled Vocational Education. Journal of Computer Application Abstracts, 39(24): 21–23.

[3] Zhang H, 2021, Ideological and Political Teaching Reform of "Information Security Technology" Course in Applied Undergraduate Colleges. Network Security Technology and Application, 2021(10): 107–109.

[4] Liu W, 2024, Research on the Construction of Ideological and Political Teaching System in Applied Undergraduate Colleges Under the Background of Information Technology. China Transition from Military to Civilian, 2024(14): 159–160.

[5] Ma Q, 2019, Implementation and Realization of Ideological and Political Teaching Strategies for Computer Information Technology Basic Courses. Knowledge Economy, 661(33): 159–161.

[6] Wu J, 2023, Exploration and Research of Ideological and Political Curriculum Reform in Colleges and Universities Based on Information Technology. Office Business, 2023(21): 96–98.

[7] Zhang Y, 2024, Analysis of Teaching Path of Big Data Technology Major in Higher Vocational Colleges Based on "Curriculum Thinking and Politics". Journal of Science, 2024(1): 98–101.

[8] Wan H, Shi S, He K, et al., 2023, Research on Teaching Reform Practice of Information Security Technology Curriculum From Ideological and Political Perspective. Computer Knowledge and Technology, 19(32): 95–97.

[9] Li J, Zhang H, Gao J, et al., 2022, The Ideological and Political Research and Implementation of "Computer Network Technology" Course in Higher Vocational Education. Electronic Components and Information Technology, 6(4): 241–245.

[10] Dong T, 2023, Application of Information Technology in Ideological and Political Teaching of College Curriculum. Journal of Liaodong University (Social Sciences Edition), 25(5): 126–131.

[11] Wang C, Wang J, Wang L, et al., 2023, Research Hotspot and Trend Analysis of Ideology and Politics in College Information Technology Courses. Computer Knowledge and Technology, 19(21): 138–142.

[12] Yang Q, 2023, Application of Information Technology in Curriculum Ideological and Political Teaching Reform. National Standard Chinese Language Teaching and Research, 2023(6): 111–113.

[13] Han S, 2023, Implementation Strategies of Ideological and Political Teaching of Information Technology Course in Higher Vocational Colleges. Journal of Ezhou University, 30(3): 95–96.

[14] Li Q, Wu C, 2023, Research on Teaching Reform of Information Technology in Higher Vocational Colleges From the Perspective of Curriculum Ideology and Politics. Computer Knowledge and Technology, 19(11): 133–136.

[15] You H, 2023, Research on Ideological and Political Teaching of Computer Information Technology Course in University. Computer Knowledge and Technology: Academic Edition, 19(10): 169–171.