

# Research and Practice on Ideological and Political Construction of Computer Foundation

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**Abstract:** Computer foundation in universities are general courses for non-computer majors. Carrying out ideological and political construction in general courses is an important way for universities to fulfill the fundamental task of cultivating morality and cultivating talents. This paper explores and reflects on the theoretical research and teaching practice of curriculum ideological and political education from four aspects: enhancing teachers' educational and teaching concepts, emphasizing the development of curriculum ideological and political content, innovating curriculum ideological and political teaching methods, and improving the evaluation system of curriculum ideological and political teaching effectiveness. The aim is to provide reference for the promotion and popularization of curriculum ideological and political education in general courses.

**Keywords:** Computer Foundation, Curriculum Ideological and Political Education, Teaching Method, Teaching Evaluation.

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## 1. Introduction

Course ideological and political education has become an important part of curriculum construction and an important measure to deepen the reform of higher education teaching. [1] However, in the teaching practice of computer general education courses, some teachers still have little knowledge of the relevant theories of ideological and political education in the curriculum, and are at a loss when implementing ideological and political education in general education courses. [2] Therefore, further in-depth exploration and research are needed on the theory and practice of ideological and political education in courses, in order to comprehensively improve the teaching effectiveness of ideological and political education in courses. College Computer Fundamentals is a general foundational course for non-computer major college students, characterized by a large quantity, wide scope, emphasis on practice, and emphasis on application. The teaching objective of the course is to cultivate the information literacy and computational thinking of college students, enhance their computer application abilities, and lay a solid foundation for the subsequent study of professional courses. How to integrate ideological and political education into university computer basic classroom teaching is an urgent problem that needs to be solved at present. The teaching and research group of university computer basic courses has seriously discussed how to incorporate ideological and political education into the teaching reform of university computer basic courses, and fully integrate it into the entire process of course teaching. Based on recent teaching practices, the course team has explored the integration of ideological and political education in university computer basic course teaching from four aspects: enhancing teachers' educational and teaching concepts, emphasizing the development of ideological and political education content, innovating ideological and political education methods, and improving the evaluation system of ideological and political education effectiveness, achieving good teaching results.

## 2. Enhance Teachers' Educational and Teaching Concepts

Curriculum ideological and political education is proposed on the basis of respecting the laws of education and teaching, deeply grasping the essence and mission of education, and it is consistent with the laws and concepts of higher education teaching. [3] The implementation of ideological and political education in the curriculum needs to be guided by certain educational and teaching concepts, and its teaching practice is inevitably influenced by the ideological concepts held by teachers. [4] However, in the implementation process of ideological and political education in the curriculum, some teachers still have a unclear understanding of ideological and political education in the curriculum, and they have only a partial understanding of why ideological and political education should be integrated into the curriculum. There are two common misconceptions in practice: firstly, the belief that ideological and political education in the curriculum is just a work task, without a deep understanding of its important value as an educational concept; Secondly, although recognizing that ideological and political education in the curriculum is an educational philosophy, there is a lack of in-depth consideration of the internal connection between ideological and political education in the curriculum and professional courses. Therefore, the teaching team of this course has taken the following measures to enhance the educational and teaching philosophy of teachers.

One is to fully utilize the time of departmental political learning and teaching research activities, carry out diverse and rich teacher training activities, eliminate ideological misunderstandings, and enhance teachers' educational and teaching concepts. Due to years of teaching experience and habits, computer teachers focus on cultivating students' practical skills and computer application abilities. However, they often overlook the shaping of students' scientific thinking, humanistic literacy, and values. This requires teachers to continuously learn, broaden their horizons, deeply understand the relationship between ideological and political education and university computer basic courses, and improve their own ideological and political literacy and

teaching ability.

The second is to have team teachers regularly participate in various ideological and political education training to cultivate their awareness of ideological and political education and teaching abilities. These trainings include lectures on course ideological and political construction held during the school's teaching quality activity month, training on ideological and political teaching abilities for university teachers organized by the National Network Training Center for University Teachers, summer training on professional development for higher education teachers, and centralized learning and education on teacher ethics in national universities. Through theoretical guidance, operational demonstration, and continuous reflection, ideological and political education content is integrated into the classroom teaching of teachers from the perspectives of moral quality, patriotism, and the great rejuvenation of the Chinese nation, making teachers become leaders and guides of students' professional abilities and values.

Thirdly, utilizing virtual teaching and research rooms to aggregate high-quality course resources and create a teaching community. Virtual teaching and research rooms are a product of the rapid development of modern information technology. This new type of teaching organization breaks through the limitations of traditional physical teaching and research rooms in terms of time and space. It can conduct teaching and research activities anytime, anywhere, and comprehensively explore various educational and teaching issues. For this reason, the course teaching team has joined the virtual teaching and research room of university computer fundamentals organized by the Shanghai Municipal Education Commission. The virtual teaching and research room regularly carries out activities such as lectures on course ideological and political construction and excellent case sharing, seminars on the analysis and proposition of information technology proficiency exams in Shanghai universities, and exchanges on computer basic education teaching reform. The course teaching team's teachers actively participate in various online and offline training and exchange meetings, continuously improving their ideological and political theory level and teaching ability.

### **3. Emphasize the Development of Ideological and Political Content**

The basic computer courses in universities have the characteristics of applicability and practicality. To implement "ideological and political education in courses", it is necessary to deeply explore the ideological and political elements contained in the teaching content of basic computer courses in universities, adopt appropriate teaching methods, and naturally integrate the content of ideological and political education into course teaching. How to connect ideological and political education teaching points with course teaching content and silently influence students in the classroom requires teachers to deeply explore and fully condense, in order to ultimately achieve the teaching objectives of ideological and political education in the course. [5] According to the current general requirements for ideological and political content in the curriculum, the teaching team of the curriculum follows the practices of sister universities and integrates patriotism, innovation, craftsmanship, science, and the rule of law into the classroom teaching process.

After years of practical exploration, the course teaching

team has selected 15 typical teaching cases, combined with teaching knowledge points, to deeply explore the specific ideological and political elements under each ideological and political education goal, and preliminarily designed the content of university computer basic ideological and political education. When explaining multimedia technology, play video clips of "Amazing My Country" to let students understand the remarkable achievements of socialist construction in China, enhance their cultural confidence, institutional confidence, and national pride; When explaining Excel spreadsheets, students are asked to create a world GDP ranking table, leading them to use their personal efforts to draw a great blueprint for national development, inspiring their sense of national pride and patriotism; When explaining the editing of WORD documents, create a long document layout of Zhong-Nanshan's deeds, allowing students to feel the patriotism of patriotism, sacrifice and dedication, and selflessness; When explaining information coding, demonstrate the method and input effect of Chinese character coding, allowing students to learn the scientific and innovative spirit of Chinese scientific researchers who boldly innovate and overcome difficulties; When explaining the Photoshop software, use the image of a model worker alumni named Bao-Qifan as the material to create promotional posters, inspiring students to love labor, be brave in exploration, and constantly innovate; When explaining the operating system, tell the story of Huawei's difficult entrepreneurship and development, allowing students to learn the innovative spirit of Chinese enterprises in independent innovation and overcoming difficulties, as well as the craftsmanship spirit of Chinese technology personnel who strive for excellence; When explaining new computer technologies, by playing news videos and pictures to introduce Qingdao Port, students are inspired to learn the scientific spirit of Chinese science and technology workers breaking monopolies and independent innovation, and this spirit is integrated into their learning and future career; When explaining computer viruses, through the introduction of the outbreak of the CIH computer virus, explain the terrible consequences and reasons caused by virus transmission, provide students with education on compliance with laws and professional ethics, integrate legal concepts into students' awareness, and enhance self-discipline in online use.

### **4. Innovative Teaching Methods for Ideological and Political Education**

Course ideological and political education cannot be a combination of professional knowledge education and ideological and political education. Instead, it naturally integrates the content of ideological and political education into the teaching of professional knowledge, silently influencing students and allowing them to experience and comprehend through self-reflection. [6] Therefore, the course teaching team actively explores and meticulously designs teaching methods and approaches, actively interacts with students in classroom teaching, guides students to constantly think, enables students to construct knowledge through active learning, realizes self-awareness of ideological and political content, and continuously improves the teaching effectiveness of course ideological and political education.

One is to use multiple teaching methods and firmly implement the concept of "learning by doing". The traditional teaching method is a one-way indoctrination, with teachers

leading the entire process of classroom teaching, which is not conducive to unleashing the subjective initiative of students in learning. In the teaching process of computer fundamentals in universities, teachers adhere to the teaching philosophy of "task driven" and "learning by doing", explore multiple teaching methods, and enhance students' classroom participation through active interaction between teachers and students, fully mobilizing their learning and enthusiasm and initiative. In the teaching practice of basic computer courses in universities, we attempt to transition from "teacher lectures" to "student lectures", transferring the leadership of classroom teaching to students, with teachers playing the role of organizers and guides. The basic computer courses in universities offer innovative assignments related to ideological and political elements, such as using pictures of model workers and alumni Bao-Qifan as materials to create promotional posters; Create a presentation using moving Chinese characters as materials; Using Chinese craftsmen as prototypes for document editing. In the process of completing major assignments, it can stimulate students to think deeply and communicate in both course content and ideological and political content. In this process, cultivate students' innovation ability and stimulate their patriotism. After completing various tasks, students should be divided into groups to present and report in class, in order to achieve self-awareness and self-education of the ideological and political content in the course.

The second is to carry out blended online and offline teaching. The development of blended online and offline teaching has become a trend, and teaching methods can be roughly divided into three aspects: pre class, in class, and post class. Pre class learning mainly involves students independently watching teaching videos on relevant knowledge points and completing corresponding practical exercises. If they cannot understand or do something, they should record it in a timely manner. In class, the teacher explains the key and difficult points, answers students' questions, and guides them in completing corresponding learning tasks. After class, students review and consolidate what they have learned, and use the platform to complete and submit homework. The university computer foundation course undertaken by the author has been established as an online open course. Through the Chao-xing teaching platform, teaching videos, as well as a large amount of materials, cases, and learning tasks (including watching teaching videos, making presentations, designing and making promotional posters, etc.) are uploaded to the Chao-xing teaching platform. Students can study anytime and anywhere in their spare time, and teachers can monitor learning progress at any time. Students who are slow in progress can be reminded and urged to complete them on time. At the same time, the theme discussion module of the Chao-xing teaching platform can be fully utilized to initiate online discussions on ideological and political cases, achieving an online ideological and political education process of "discussing ideological and political cases, sharing ideological and political cases, and exchanging experiences and insights".

## 5. Improve the Evaluation System for the Effectiveness of Ideological and Political Education

The evaluation of the effectiveness of ideological and political education in courses is an important link in the

construction of ideological and political education in courses. [7] When evaluating the effectiveness of ideological and political education in courses, both the teaching effectiveness of teachers and the learning effectiveness of students should be evaluated simultaneously. Therefore, when constructing an evaluation system for the effectiveness of ideological and political education in the curriculum, both teaching and learning should be emphasized, and both teachers and students should be taken into account. [8] On the one hand, it is necessary to guide peer teachers and teaching supervisors to correctly evaluate the teaching level and effectiveness of teachers; On the other hand, it is important to accurately evaluate the learning outcomes of students. The teaching team of university computer basic courses refers to existing research results, based on the concept of student-centered and continuous improvement as the goal, combined with a multi subject perspective, to construct an evaluation system for the effectiveness of ideological and political education in courses.

For students, the first level indicator system includes learning behavior, professional ability, value shaping, and emotional identification. In terms of learning behavior, after the ideological and political education in the curriculum, the teaching effect is evaluated by assessing the initiative, enthusiasm, and creativity of students in learning; In terms of professional abilities, the effectiveness of ideological and political education in the curriculum is mainly evaluated through student academic performance, competition awards, and research achievements; In terms of value shaping, the effectiveness of ideological and political education in the curriculum is mainly evaluated through the changes in students' outlook on life, worldview, and values after participating in the teaching; In terms of emotional identification, the effectiveness of ideological and political education in the curriculum is mainly evaluated through aspects such as patriotism, cultural confidence, and institutional confidence. For the teaching of teachers, in addition to evaluating the teaching attitude, teaching methods, teaching abilities, etc. in classroom teaching, an evaluation of ideological and political integration and employment literacy is introduced. In terms of the effectiveness of ideological and political integration, it is mainly evaluated by peer teachers and teaching supervisors, including the degree of compatibility between ideological and political elements and teaching content, the depth of ideological and political resources, and the ability of teachers to teach and educate. In terms of the effectiveness of employment literacy, evaluations are mainly conducted from the perspectives of society and employers, including whether the moral qualities of employed students are upright, whether they possess professional qualities and abilities to engage in work.

## 6. Conclusion

The construction of ideological and political education in the curriculum is a systematic project that requires teachers to fully tap into the ideological and political education resources in the curriculum, construct a comprehensive education system, and continuously improve the teaching quality and effectiveness of ideological and political education in the curriculum, while following the laws of higher education. As a general education course for non-computer major students, the basic computer courses in universities will inevitably have a subtle influence on students under the guidance of the value of "ideological and political education in the curriculum", making efforts to cultivate new era college students with

cultural confidence and patriotism, who have comprehensive development in morality, intelligence, physical fitness, aesthetics, and labor. This article proposes a preliminary idea for the construction of ideological and political education in courses from four aspects: enhancing teacher education and teaching concepts, emphasizing the development of ideological and political content in courses, innovating teaching methods, and improving evaluation systems. By enriching the case library of ideological and political education in courses, suggestions are made on how to integrate ideological and political elements into classroom teaching, providing reference for ideological and political education in university computer basic courses. Of course, the exploration of ideological and political education in the curriculum is not something that can be achieved overnight. Some of the ideas and practices proposed in this article still have many shortcomings and need to be continuously explored and improved in teaching practice. With the changes of the times, society will endow college students with new missions and tasks, and demand new abilities and qualities from them. The condensation of ideological and political elements and the design of content in computer basic courses for college students will inevitably keep pace with the development of the times and continuously innovate.

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