



# Exploration on Ideological and Political Teaching of “Civil Engineering Construction Technology” Course

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**Abstract.** This paper aims at private colleges and universities through the construction of civil engineering construction technology curriculum ideological and political construction, in order to build the whole process of education pattern, which will go with the course and ideological and political theory in the same direction, synergistic effect, the “moral cultivation” as the fundamental task of education and the concept of education and teaching. Through the method of combination of explicit and implicit and the idea of scientific innovation, we can achieve the ideological and political essence of cultivating people by combining the idea of cooperative education. This paper will take the civil engineering construction technology course as an example, use the mixed teaching mode to dig and refine the ideological and political elements in the course, and carry out the course ideological and political teaching design, to provide beneficial reference for the civil engineering construction technology course in private colleges and universities.

**Keywords:** Curriculum ideology and politics · Civil engineering construction technology · Teaching practice

## 1 Introduction

During their study period, college students are at the key stage of their growth and development. They are able to accept new things and master knowledge quickly. Therefore, they are vulnerable to the influence of some external adverse factors and wrong orientation, which leads to the deviation of some students’ values, forming the “derailed” phenomenon [1–2]. In order to avoid this kind of situation, timely ideological and political education of college students can cultivate students’ correct value system, and they can see through the essence of things with dialectical materialism. It also enables students to develop good personal qualities and professional feelings imperceptibly, so that students can produce immunity to rotten and wrong ideas, and further improve the ideological quality of students. If college students do not have a solid ideological and political foundation, it is difficult for them to see the essence through the phenomenon in the complexity of social development, and they are prone to extreme emotions. As a

result, their moral level is not high, and they cannot have the ideological and political quality required by the socialist cause.

## **2 Ideological and Political Elements of Civil Engineering Construction Technology Course**

Feeling of patriotism National pride Professionalism Ideals and beliefs craftsmanship spirit Social responsibility and other values [3].

## **3 Curriculum Ideological and Political Teaching Design**

The course of Civil Engineering Construction Technology is a compulsory course for the engineering cost major of our school. It is offered in the third semester, with a total of 56 periods. The main research object is the technical principles and methods of each link in the construction stage of construction engineering, as well as the working principles, parameters and applicable scope of various construction machinery and equipment. The course covers a wide range of areas, is comprehensive and has high practical requirements. Through the teaching of this course, students are required to master the construction process and auxiliary construction technology, management measures, and have the ability of construction technology and structural measures related to construction engineering. At the same time, students are required to have good professional ethics, scientific rigor, pragmatic professional ability, and be able to use the knowledge learned to make scientific and technical decisions, and have the necessary basic knowledge and ability to engage in construction projects. Therefore, for this course, it is to cultivate the construction personnel who really contribute to socialism, and the construction course to solve the professional course of engineering construction technology. Therefore, carrying out ideological and political construction in the construction course, on the one hand, responds to the call of building a powerful country in education; on the other hand, it also provides effective support for the comprehensive education of civil engineering major, and finally provides correct political guidance for students' work and development [4].

### **3.1 Course Teaching Objectives**

#### **Objective of Knowledge**

Be familiar with the research objects, tasks and learning methods of this course, and understand the relevant knowledge of civil engineering construction development and engineering construction standards.

#### **Capability Objectives**

Through the explanation of the content and the introduction of cases, let the students understand the design and construction process of modern housing construction engineering and the important and difficult points, and the construction process involved in the construction of the division of the project construction process.

#### **Quality Objectives**

Through the introduction of the course content, students will be stimulated to explore

engineering construction technology and engineering construction related standards. By playing and explaining the video of the design and construction of Shanghai Tower, students are allowed to perceive the research objects, tasks and learning methods of civil engineering construction technology by themselves, so that students have the ability to combine theory with practice, and cultivate the habit and ability of independent learning.

### **Ideological and Political Objectives of the Course**

Promote students' understanding of the major, and stimulate students' patriotic enthusiasm and national pride. Through the development process of civil engineering industry and the latest technological development and engineering examples of the teaching, let students better understand the connotation of their major, and stimulate students patriotic passion and national pride, to help students establish the idea and faith to contribute to the development of society and the country.

Cultivate students' engineering thinking consciousness. The period of civil engineering construction is taught, so that students can understand and master the principles of engineering design and construction, so as to cultivate students' engineering thinking, and then through the analysis of some key cases, promote the inspiration of students' engineering wisdom [5], and improve students' awareness of engineering innovation.

Cultivate students' labor concept of unity of knowledge and practice. People and things must be single-minded, consistent, and the same inside to achieve the unity of knowledge and practice. As the new force of society, young people should learn to "combine knowledge and practice" based on their positions, and constantly improve their energy, real skills and hard responsibility.

Cultivate students' craftsman spirit of professional responsibility and dedication. Through the analysis of rights, obligations and responsibilities in engineering construction and management, this paper aims to strengthen students' awareness of engineering construction responsibility and professional ethics, so that students can establish a sense of social responsibility and a sense of awe for the profession from the bottom of their hearts [6]. At the same time, through engineering cases, students can be inspired to pursue excellence in the spirit of creation, the spirit of excellence in quality, the spirit of customer first service.

## **4 Ideological and Political Teaching Practice**

The ideological and political construction of civil engineering construction technology curriculum carries out the concept of "educating the whole staff and the whole process" [7], follows the law of education and teaching and the law of students' growth. The emphasis of different stages of curriculum teaching is different, and the education runs through the whole process of "before class, during class and after class" with classroom teaching. The ideological and political teaching methods of this course mainly adopt typical case method, story telling method, career experience method, documentary and film materials, etc.

### **4.1 Before Class**

With the help of network resources and learning teaching platform, we will publish teaching tasks such as discussion topics, video viewing, and standard consulting, so as

to inspire and guide the upcoming classroom teaching content and cultivate students' ability of independent exploration and independent thinking.

#### 4.2 In Class

In the course teaching process, project teaching and other ways are adopted to collect and refine the typical ideological and political materials. Through the pre-designed ideological and political implementation ways, the ideological and political objectives of the course are closely followed and imperceptitiously integrated into the classroom teaching. In the teaching practice, the instructor pays attention to the cultivation of students' professional quality in the practical operation through the whole process of guidance. At the same time, the teacher distributes and completes the task according to the group to cultivate students' solidarity and cooperation ability (Table 1).

**Table 1.** Ideological and political teaching objectives and integration points

The serial number	Teaching Content	Ideological and political mapping and integration point	Ideological and political goals
1	The development of civil engineering construction technology	from Chinese ancient construction techniques to modern construction civilization. (The Great Wall, Zhaozhou Bridge, Yingxian Wooden Tower, Bird's Nest, Shanghai Tower, etc.)	Cultivate students' patriotism and national pride.
2	Folk recipe	Analyze the distribution of soil in the country, guide students to admire the vast territory and the rapid development of productivity.	Cultivate students' patriotic feelings and broaden their horizons.
3	Foundation treatment and foundation engineering	Hong Kong-Zhuhai-Macao Bridge, Shanghai Tower super project foundation construction case, then highlight the spirit of frontier cattle.	Cultivate students' consciousness of engineering innovation and spirit of overcoming difficulties.
4	Masonry work	Citing the examples of "The Great Wall, Xi'an City Wall, Zhaozhou Bridge and other ancient buildings" and "Young craftsman Liang Zhibin: Built a Wall by moving bricks to become a world champion", the construction process and technological requirements of masonry engineering are highlighted.	Cultivate students' professional quality of being rigorous and serious, seeking truth from facts, unity and cooperation, bearing hardships and standing hard work, the pursuit of excellence and the spirit of creation, the spirit of quality and the spirit of customer first service [8].

(continued)

**Table 1.** (continued)

The serial number	Teaching Content	Ideological and political mapping and integration point	Ideological and political goals
5	Reinforced concrete engineering	Through the Shanghai Tower as the carrier, the scientific principle analysis, highlighting the modern reinforced concrete buildings with environmental protection and intelligent characteristics.	Cultivate students' consciousness of engineering innovation and sustainable development [10].
6	Structural installation works	Taking Hong Kong-Zhuhai-Macao Bridge as the carrier, the technical characteristics and requirements of structural installation are highlighted.	Cultivate students to pursue excellence, keep improving the spirit of labor and craftsman spirit.

### 4.3 After Class

With the help of online teaching platform, publish homework and expand network learning resources to have students consolidate and expand knowledge, which helps them to answer questions, obtain psychological guidance, transfer social positive energy, and be a good teacher and friend of students.

## 5 Conclusion

According to the experiment and practice of ideological and political teaching in the course, and the characteristics of the school in the course evaluation, the course evaluation method suitable for the school has been formed. Students' feelings at home, personal cultivation, professional quality and other aspects have been greatly improved. This is reflected in the following aspects:

- (1) Through course learning, students' enthusiasm to participate in discipline competitions is improved, and their sense of honor is significantly improved;
- (2) In teaching practice courses, production practice and graduation practice, students have shown the quality of pursuing excellence without fear of hardship and fatigue;
- (3) students' sense of social responsibility has been significantly improved, especially during the epidemic prevention and control period, and they can also volunteer to make their own contribution to the local epidemic prevention and control.

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