Exploration of Ideological and political education in the course of Civil Engineering

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Abstract. Based on the analysis of some typical courses of civil engineering, this paper condenses the ideological and political elements in these courses, and studies the teaching reform of Ideological and political courses. Through the analysis and research of typical engineering cases and the combination of typical engineering cases and ideological and political education, the introduction of ideological and political education into the professional class can not only improve the efficiency of students' ideological and political education, but also make ideological and political education more practical.

1. Introduction

Different from Humanities and Social Sciences, science and engineering majors pay more attention to the mastery and application of "technology" and "skills" in the process of talent training. However, in the process of talent training, science and engineering majors also need to cultivate students' ideological and moral quality as well as the spirit of love and dedication. In China's higher education, ideological and political education is basically completed in the related classes of ideological and political education. Teachers who are specialized in ideological and political theory teach students the course of ideological and political theory. In this case, the skill education ignores the value guidance of students, and the ideological and political theory course does not go deep into the moral education of students. In fact, ideological and political education and professional curriculum education are mutually integrated and complementary. If the professional teachers play the role of ideological and political education, they can transfer the ideological and political education to the professional knowledge, ideological and political education will be more practical.

The Construction industry is an important industry of national economy, and house is also one of the necessities of people's life. The development of construction industry represents the level of industrialization and urbanization of a country. In China, It is of great significance to infiltrate ideological and political education into the relevant courses of civil engineering. It can not only cultivate professional talents to adapt to social development, but also improve the ideological and moral quality and social responsibility quality of the whole society. As the most important major in civil engineering, civil engineering has a wide range of professional fields and wide employment. Infiltration of ideological and political education in civil engineering related courses can not only cultivate professional talents to adapt to social development, but also improve the ideological and moral quality and social responsibility quality of the whole society.

2. Specific implementation of the course

In the teaching practice of civil engineering, through in-depth excavation and research, the following elements of civil engineering curriculum and ideological and political integration are obtained.

2.1 course of architectural structure

In the course of architectural structure, while teaching structural design, some typical structural design cases are introduced to students. For example, the Hong Kong Zhuhai Macao Bridge has created many unprecedented new records. This case can not only stimulate students' interest in
learning, national pride and self-confidence, but also stimulate students' love and enthusiasm for this major. Teachers can also introduce some failure cases of structural design to students. For example, the failure of the structure of Jingyuan beside Lianhua River in Shanghai has caused incalculable losses to the people, even endangering the life safety of many people. Through these cases, let students know the importance of structural safety and make students establish process responsibility consciousness, feeling the important responsibility of civil engineering professionals.

2.2 course of building engineering materials

In the course of building engineering materials, while learning the use amount of various building materials, we can introduce some cases of poor engineering quality caused by Jerry building. For example, the Shengshui bridge on the Han River in Seoul, South Korea, caused the bridge deck to collapse due to a large number of work and materials stolen during the construction process, resulting in 33 deaths and 17 injuries. This kind of bean curd dregs project, bringing the loss to people's life and property, is also our civil engineering people's shame. From the analysis of accident cases, students can learn lessons, understand the importance of following professional norms, and improve their sense of responsibility and safety.

2.3 course of introduction to civil engineering

In the course of introduction to civil engineering, teachers can share the life stories of Mao Yisheng and Lin Yan, the Chinese structural design masters. From this, we can understand their spirit and wisdom, introducing the representative projects of these masters, and analyze their spirit of creatively solving practical engineering problems. Thus, it can inspire the students' innovative consciousness, learning master's working attitude and fighting spirit of fearing difficulties, facing difficulties, studying hard and pursuing excellence.

2.4 course of earthquake resistance of engineering structures

In the course of earthquake resistance of engineering structures, by watching the videos of major earthquakes in history, students are guided to think about the severity of earthquake disasters, to establish a sense of professional awe from the bottom of their hearts, so as to grasp the essence of craftsman spirit. Keeping improving is the objective standard of craftsman's spirit, and preciseness and meticulousness are the internal requirements of craftsman's spirit. Craftsman spirit contains social responsibility and professional character. The working conditions of civil engineering specialty are relatively hard, which requires the relevant staff to have strong environmental adaptability and patience. These are actually our professional spirit of "love the post and work hard". In this course, we can also specifically analyze the design and construction defects of buildings seriously damaged in the earthquake, learn relevant lessons, guide students to understand the importance of civil engineering in people's daily life, and improve students' sense of responsibility and mission.

2.5 course of major mechanics courses

In the three major mechanics courses, some engineering cases will be introduced into the teaching content in the explanation of various exercises calculation. These engineering cases include: excellent building cases with simple stress and reasonable force transmission, and building structure damage cases caused by unreasonable structural design. Through the positive and negative cases, students can be warned that the building stress is related to the stress, transmission and life of the building, and even affects the use of the building safety. Through the positive and negative cases, students can be warned that the building stress is related to the stress, transmission and life of the building, and even affects the use of the building safety.

2.6 course of engineering construction technology

In the course of engineering construction technology, various accident cases in construction are analyzed. For example, the collapse of formwork support causes casualty accidents, the use of construction elevator causes casualty accidents, and the scaffold construction errors cause casualty
accidents, warning students to abide by safety regulations, eliminate safety hazards, and love work. These make students realize the importance of respecting professional norms, and improve their safety awareness and responsibility awareness.

3. Summary

At present, the ideological and political integration of humanities courses has achieved fruitful results, but the ideological and political integration of science and engineering courses needs further research and deepening. In the course of teaching practice, we should be brave to find the ideological and political mapping point of each professional course. Through the combination of knowledge points and cases, and then sublimation to the height of ideological and political education, the ideological and political education of professional courses will be realized, and the effect of classroom teaching will be improved. Only when students realize the importance of national spirit inheritance and professional ethics, can the function of ideological and political education of professional courses be well reflected.

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References


