

# Teaching practice of civil engineering in higher education from the perspective of ideological and political education

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**Abstract:** In today's higher education, the ideological and political education has become the key path to cultivate students' comprehensive quality, and the teaching practice of civil engineering major is particularly important under this background. From the perspective of ideological and political education, this paper deeply discusses the teaching strategies of civil engineering majors in colleges and universities. It will focus on how to penetrate ideological and political elements while imparting professional knowledge, and cultivate students' social responsibility, ethical concepts and innovative spirit. Through the strategic analysis of course design, practice planning and faculty construction, it aims to provide a feasible ideological and political path for the teaching of civil engineering major, so that students can become technical professionals and have more social responsibility and humanistic care.

**Key words:** ideological and political courses; colleges and universities; civil engineering; professional teaching

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## 1 Introduction

In the current college education, the ideological and political course has become the core concept of cultivating students' all-round development. The teaching practice of civil engineering major in this background is particularly important. In today's comprehensive promotion of quality education, the teaching of civil engineering majors in colleges and universities needs to be more comprehensive and modernized.

## 2 The necessity of integrating ideological and political elements into the teaching practice of civil engineering major in higher education

The integrating ideological and political elements into the teaching practice of civil engineering major in colleges and universities is not only the requirements of the times, but also the key to cultivating engineers with comprehensive quality. As a subject with strong application, the teaching of civil engineering should go beyond a single technical level, and should deeply reflect the penetration of ideological and political elements. This not only helps students to develop in their professional fields, but also makes them become comprehensive talents with a sense of social responsibility and innovative spirit.

The integration of ideological and political elements helps to broaden students' knowledge horizon. Students majoring in civil engineering usually come into contact with a lot of professional knowledge and skills, but if they lack ideological elements, these knowledge may only stay at the technical operation level. Through the integration of ideological

elements into teaching practice, students can be guided to understand the social background and ethical value, which makes their disciplinary understanding more comprehensive and profound.

The integration of ideological and political elements helps to cultivate students' sense of social responsibility. Civil engineering major involves urban construction and infrastructure construction, which are directly related to the sustainable development of a society. By being guided to pay attention to social problems and think about the impact of engineering on society, students can have a more sense of social responsibility in practical work. This is not only beneficial to the individual's career development, but also conducive to the sustainable development of the industry.

The integration of ideological and political elements can stimulate students' innovative spirit. In the field of civil engineering, continuous technological innovation is the key to driving the progress of the industry. By integrating ideological and political elements into teaching, students can be concerned about social issues and have enthusiasm for innovation. Cultivating students to think independently and innovate when solving practical problems plays a positive role in cultivating leading talents in civil engineering.

### **3 Teaching practice of college civil engineering major from the perspective of ideological and political education**

#### **3.1 Establishing the new goal of integrating ideological and political education into the construction of practical teaching base**

The establishment of new goals requires innovation in the curriculum design. The traditional civil engineering courses often focus on the cultivation of technical and practical skills while ignoring the infiltration of ideological and political education. In order to achieve the new goals, we need to re-examine the curriculum setting and organically integrate the ideological and political elements into the professional curriculum. For example, engineering ethics, social responsibility and other contents are introduced into the structural design course, so that students can think about the impact of engineering on the society and the environment while learning technology, and cultivate their sense of social responsibility. The planning of practice should pay more attention to the goal of ideological and political education. Practice is an indispensable part of civil engineering major, and integrating ideological and political education into practice can make students experience the problems of social responsibility and ethics in practice. For example, in off-campus internships, students are guided to pay attention to the impact of engineering projects on the local community, and develop their sensitivity and responsibility to social issues.

The achievement of new goals requires a combination of professional and ideological qualities of teachers and teachers' precept in the classroom is directly related to the formation of students' values and ideas, so the civil engineering professional teachers need to have higher professional quality, and pay attention to the cultivation of ideological education. With the professional background and ideological literacy, teachers can better guide students in class, enabling them to develop good ideological and moral character while studying professionally. Finally, the construction of practical teaching base is a key link in realizing the new goal, which requires universities to strengthen the cooperation with actual engineering projects and enterprises, and establish a practice base in line with the ideological and political requirements. In the construction of the base, attention should be paid to the selection of those projects that have social influence and can reflect the ethics and social responsibility. Through the deep cooperation with these practice bases, students can better integrate into social practice and fully realize the social responsibility of civil engineering [1].

#### **3.2 Improving the level of ideological and political education of practice instructors**

First of all, it is necessary to pay attention to the construction of the teaching staff, cultivate, exercise and guide the ideological quality of teachers, especially focusing on improving their own political and theoretical level, strengthening the

theoretical learning of the Marxist theoretical system. Through the organization of professional training, academic exchanges, the practice teachers will have a deeper understanding of the theoretical system of ideological education. And the practice teachers should be encouraged to deeply think about the role of the civil engineering profession in the development of the society, so as to better guide students to combine technical operation with social responsibility.

Second, to strengthen teachers' ideological practice experience and improve their theoretical level, it is necessary to combine the actual practice, such as participating in social service projects to guide teachers to have a deeper understanding of social practical problems, which helps them to better guide students to apply their theoretical knowledge to practice in actual teaching and to cultivate students' sense of social responsibility and moral values.

Again, a sound evaluation mechanism that incorporates ideological education into the performance appraisal system of teachers has been established to evaluate the practical level of teachers' ideological education through the establishment of ideological education-related evaluation indicators, such as the quantity and quality of students' participation in social practice and the cultivation of students' sense of social responsibility, etc. The evaluation mechanism will motivate teachers to pay more attention to ideological education and promote them to guide their students' practice in a more targeted manner.

In addition, it is necessary to strengthen communication and cooperation among practice teachers, form learning teams, and encourage them to share their ideological education experiences and insights through regular research activities and seminars. In this process, practice teachers can inspire each other, exchange teaching methods, and jointly improve the level of ideological education. The formation of a team helps to create a collective atmosphere for ideological and political education, and promotes the development of ideological and political work in the entire profession to a higher level.

Finally, guide practice instructors to pay attention to the cultivation of students' ideological and political literacy. Different students may have different thinking and attitudes when facing the actual projects. Practice instructors should pay attention to exploring the individual characteristics of each student, and guide them to establish a correct outlook on life and values. Through personalized guidance, students can fully realize the importance of social ethics, responsibility and other aspects in practice.

### 3.3 Building a cloud resource database of ideological and political education materials in the practical teaching base

From the perspective of ideological and political education, the cloud resource library of ideological and political education materials in the practical teaching base of civil engineering major is to better integrate ideological and political elements into the practical teaching, and promote students to cultivate social responsibility, ethical concepts and other qualities in professional practice. This measure can not only improve students' ideological and political quality, but also contribute to the depth development of practical teaching.

First of all, the construction of cloud resource database requires the full use of advanced information technology means. The modern database and network technology are adopted to build a cloud resource database with centralized management and convenient access for students, which means that the ideological and political materials involved in practical teaching are digitally sorted out and stored and managed through the cloud platform. Such practices not only improve the availability of resources, but also facilitates their use by practice teachers and students.

Second, the construction of the cloud resource database needs to attach importance to the diversity of ideological education content. Civil engineering professional practice covers many areas, including project management, design practice, social responsibility, etc. Therefore, when building the cloud library database, it should give full consideration to the field of ideological education content, such as related theoretical knowledge, case analysis, ethical problems, etc., which not only provides the practical teaching with more comprehensive material, but also enables students to better understand the connotation of ideological education in practice.

Again, the construction of the cloud resource database needs to introduce interactive elements. Through discussions on cloud library, online communication platforms, and other functions, students are encouraged to actively participate in ideological education learning. At the same time, practice teachers can also interact in real-time on the cloud platform, answer students' questions, share practical experience, and create an interactive learning atmosphere [2].

#### **4 Conclusion**

To sum up, when discussing the teaching practice of civil engineering in higher education, we should consider how to give richer teaching from the perspective of ideological and political education. By paying attention to social responsibility, ethical concept and innovative spirit, we are committed to cultivating civil engineering professionals with comprehensive quality. Strategically, we emphasize the key of curriculum design innovation, practice planning, and the urgency of faculty construction. It is a combination of ideas and practices, laying a solid foundation for shaping the outstanding talents in the future engineering field.

#### **Conflicts of interest**

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

#### **References**

- [1] Yan M, Tian Y, Zhang MY. 2023. Exploration of the principle of concrete structure design in civil engineering in private universities. *University*, 17:86-89.
- [2] Li ZL. 2021. Practice and exploration of ideological and political teaching of civil engineering courses in university laboratory. *Technology Vision*, 11:26-27.