

Research on Teaching Reform of Construction Equipment Engineering Course Based on “Ideological and Political Theories Teaching in All Course”

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Abstract: “Ideological and Political Theories Teaching in All Course” means integrating ideological and political education elements into the teaching process to ensure that the transmission of knowledge is consistent with the guidance of values. With the deepening of higher education reform in China, “Ideological and Political Theories Teaching in All Course” has become a key way to improve the quality of education in higher education institutions. Under the current educational background, integrating the thought of “Ideological and Political Theories Teaching in All Course” into the course of construction equipment engineering can not only enhance students’ professional skills and knowledge, but also help them establish correct values, ethics and social responsibility. This paper aims at how to implement the strategy of “Ideological and Political Theories Teaching in All Course” efficiently in the course of construction equipment engineering, hoping to provide useful suggestions and references for the educational reform in this field.

Keywords: Ideological and Political Theories Teaching in All Course; Construction equipment engineering; Course teaching; Reform strategy

Introduction

Construction equipment engineering is an important part of the architectural discipline, which covers many professional directions such as building water supply and drainage, HVAC and electrical. With the continuous progress of society and the acceleration of the pace of urbanization, the demand for professionals in the field of construction equipment engineering is also gradually rising. However, the traditional teaching mode emphasizes the teaching of professional knowledge and ignores the cultivation of students' comprehensive quality and values, which is difficult to meet the needs of high-quality compound talents in the new era. In the report of the 19th National Congress of the Party, it is clearly proposed that ideological and political work should run through the whole process of education and teaching, and realize the education of all members, the whole process and all-round. The Ministry of Education also released a document titled "On the Implementation of Strengthening the Construction of Ideological and Political Theories Teaching in All Course in Colleges and Universities", which requires all higher education institutions to promote the construction of Ideological and Political Theories Teaching in All Course in an all-round way, so as to realize the synergistic development and synergistic effect of various types of courses and ideological and political theory courses.

1. Course overview of Construction Equipment Engineering

The Construction Equipment Engineering course is highly technical, specialized and integrated, covering several key areas such as building water supply and drainage, fire protection, heating, ventilation and air conditioning, and electrical engineering. It is not only the core content of the three majors of water supply and drainage, HVAC and electrical, but also presents a rich knowledge system to students in a compact arrangement of 48 class hours in the form of 3 modules. In terms of teaching methods, 40 class hours of classroom teaching and 8 class hours of practice are used to ensure that students take both theory and practice into account.

The purpose of this course is to guide students to have a deeper understanding of construction equipment engineering drawing knowledge and construction technology, and on this basis to develop students' skills in dealing with the complex relationship between construction equipment and building bodies and structures. We hope that students can seek innovation and change on the basis of maintaining stability, and gradually adapt to the engineering thinking mode. The teaching process emphasizes the extraction of ideological and political elements from the knowledge source, technology development, industrial application and market dynamics, and explores the philosophical thinking and moral connotation of the teaching content, thus enhancing the engineering and technical ability of students, and strengthening the cultivation of their professional moral quality. We hope that while mastering solid engineering knowledge, students can also establish correct engineering values and profound feelings for the family, treat every project with a rigorous, serious and compliant attitude, fully tap their own potential,

and continuously improve their management and innovation capabilities.

The course officially starts in the fifth semester, with students learning engineering drawing, building materials, housing architecture and building construction as the pre-course, which lays a solid foundation for students to follow the engineering metrology, engineering valuation courses and graduation design.

2. “Ideological and Political Theories Teaching in All Course” overview

"Ideological and Political Theories Teaching in All Course" is an innovative educational concept that organically integrates ideological and political education into professional curriculum teaching, aiming at cultivating high-quality talents with all-round development of morality, intelligence, physical fitness, and labor through the dual roles of professional knowledge imparts and value guidance. Ideological and Political Theories Teaching in All Course is not only the teaching mission of ideological and political theory courses in colleges and universities, but also the common responsibility of all courses. As far as higher education is concerned, Ideological and Political Theories Teaching in All Course pay attention to various courses and ideological and political education to work together and produce synergies, so that students can learn professional knowledge and establish correct world outlook, outlook on life and values. Based on Marxist educational theory and modern pedagogy and psychology, it emphasizes the integration of socialist core values through specific teaching contents and teaching methods, and the integration of Chinese excellent traditional culture and spirit of The Times into daily teaching, so as to achieve a subtle and silent education effect. The implementation of Ideological and Political Theories Teaching in All Course requires teachers to have a high degree of ideological and political accomplishment and teaching ability, and also must have a sound curriculum design and teaching evaluation system to ensure that ideological and political elements can be organically integrated and the actual effect can be effectively evaluated. Under the background of globalization and informatization, Ideological and Political Theories Teaching in All Course have brought a new approach to the reform of higher education in China, which is conducive to enhancing students' sense of social responsibility and national identity, and training qualified builders and reliable successors for the cause of socialism with Chinese characteristics in the new era.

3. Path of Ideological and Political Theories teaching in All Course reform of construction equipment engineering

3.1 Teaching content reform

With the reform of teaching content as the core of Ideological and Political Theories teaching in All Course implementation, the ideological and political education elements are integrated into the construction equipment engineering curriculum, and the teaching of professional knowledge and the cultivation of values are organically combined. Specifically, the curriculum must clearly define the goal of ideological and political education, and organically integrate the core socialist values, the concept of ecological civilization, and the sense of social responsibility into each teaching module. In the teaching of the basic principles and technical application of construction equipment engineering, the professional ethics and social responsibility that engineers should have in the new era can be demonstrated in combination with actual engineering cases. For example, when explaining green building and energy-saving technology, national energy-saving and emission reduction policies and environmental protection regulations can be introduced to discuss the importance of energy-saving technology to sustainable development goals. In addition, taking major engineering projects as an example, the paper analyzes the humanistic care and safety management of engineering design, and cultivates students' comprehensive quality and teamwork spirit. In the course work and project design, students are encouraged to take into account social benefits and environmental impact, and improve social responsibility and innovation ability. By diversifying teaching content and methods, naturally integrating ideological and political elements into the process of professional knowledge teaching, it can not only promote the improvement of students' professional quality, but also effectively achieve the goal of ideological and political education, and realize the dual effect of knowledge imparting and value leading.

3.2 Teaching method innovation

The innovation of teaching method is an important means for the effective development of Ideological and Political Theories teaching in All Course of construction equipment engineering, and the complementary teaching of ideological and political education and professional knowledge can be realized by diversified teaching methods. Project-driven teaching method is one of the effective methods. Teachers can design comprehensive projects so that students can master professional skills and understand the ethics and social responsibility contained in engineering practice. For example, through the system engineering design of energy-saving buildings, students can feel the significance of green buildings and the guidance of relevant national policies for them. Case teaching method is also an important means of innovation. Teachers can select typical engineering cases, analyze the technical problems and solutions therein, and discuss the social, economic and environmental issues faced in the process of project implementation, which not only enables students to master professional knowledge, but also improves their sensitivity to social practical problems and judgment ability. Interactive teaching is the interaction and discussion between teachers and

students, and between students and students, so as to trigger students' positive thinking and active participation, and promote students' in-depth understanding of knowledge and formation of values. For example, classroom debates and role-playing activities can make students feel the complex and multi-dimensional process of engineering decision-making, and at the same time simulate the real scene.

3.3 Optimization of teaching evaluation system

Optimizing the teaching evaluation system is an important part of ensuring the efficient implementation of Ideological and Political Theories teaching in All Course. It comprehensively measures students' knowledge mastery and value cultivation with scientific and reasonable evaluation standards. The evaluation system should be changed from single knowledge assessment to multi-dimensional and multi-level comprehensive evaluation, involving many aspects such as peacetime scores, final exams, project design and practical ability. Students' daily performance can be assessed through various ways such as classroom interactions, completed assignments, and group discussions, especially focusing on students' learning attitude and thinking ability. The final examination has not only focused on the examination of theoretical knowledge, but also evaluated students' cognition and application ability of professional knowledge, as well as their thinking depth and innovative consciousness in solving practical problems by means of case analysis and open questions. In the evaluation system, the design and practice of the project occupy a key position, and through observing the performance of students in the project, they can assess their teamwork, leadership and social responsibility. For example, in the design of energy-saving building system project, environmental impact assessment and social benefit analysis can be set up to evaluate the comprehensive quality and social responsibility of students. At the same time, it introduces the comprehensive evaluation methods such as teacher evaluation, student mutual evaluation and self-evaluation, which comprehensively and objectively reflect the learning effect of students and the actual effect of ideological and political education.

4. Conclusion

In short, the effective development of Ideological and Political Theories teaching in All Course can not only promote the improvement of the teaching quality of construction equipment engineering courses, but also train students to be both virtuous and talented, high-quality talents, and help the development of socialism with Chinese characteristics in a new era. In the future, the teaching reform should continue to deepen the research and practice of Ideological and Political Theories teaching in All Course, and continuously improve the teaching content, teaching methods and evaluation system, so as to ensure that ideological and political education is organically integrated into the professional curriculum and achieve actual results, so as to provide a strong support for the reform of China's higher education.

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