

Exploration and Integration of Ideological and Political Elements in the Course of Mechanical Fundamentals

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Abstract: In a speech at the 2016 National Conference on Ideological and Political Work in Higher Education Institutions, experts emphasized the need to adhere to the central link of moral education, integrate ideological and political work throughout the entire process of education and teaching, achieve comprehensive and all-round education, and strive to create a new situation for the development of education. This article focuses on cultivating virtue and educating people, and explores the excavation and integration of ideological and political elements in “Mechanical Fundamentals” from the perspective of the requirements of “Three Comprehensive Education”.

Keywords: Mechanical foundation; Ideological and political elements; Excavate; Integrate into

The thinking of students in vocational colleges is still in an unstable and immature stage. Therefore, through school education, it is necessary for teachers to improve their ideological awareness, strengthen their sense of respect for their profession, work attitude, and love for the country. In basic professional courses, teachers need to repeatedly guide and nurture their thinking from multiple perspectives, integrate relevant ideological and political elements into the learning process, and engage in ideological collisions to stimulate students' learning enthusiasm and strive to achieve the educational goal of cultivating morality and talent.

“Mechanical Fundamentals” is a fundamental course for mechanical majors in technical colleges. This course adheres to the basic principle of “cultivating virtue and nurturing talents” in ideological and political education. Through the use of different teaching methods such as case teaching, discussion, and independent inquiry learning, students are taught how commonly used mechanical equipment works, in order to achieve the goal of controlling and mastering them. It cultivates a rigorous and serious learning attitude among students, allowing them to fully experience the spirit of craftsmanship and possess the qualities of active progress and practical innovation.

Based on the introduction content of “Fundamentals of Machinery” and with “Machinery Found a Great Country's Important Tool” as the core of professional ideological and political education, we will closely focus on the teaching objectives of value shaping, ability cultivation and improvement, and knowledge transmission. We will explore and deeply explore the ideological and political elements contained in professional courses, and seamlessly integrate them into professional courses.

I. The excavation of ideological and political elements

1. System spiral excavation

The excavation of ideological and political elements can be systematically spiral extracted and promoted based on the teaching content and chapters. Using the professional talent training program as a carrier, first determine the overall training objectives and mining requirements at the professional level, then decompose the objectives and requirements into course objectives, and finally subdivide them into each chapter. For example, when learning the concept of machinery, first watch a video to learn about ancient Chinese machinery - blast ironmaking. This was the invention of Du Shi in the Eastern Han Dynasty, which saved manpower and improved the quality of ironmaking. Its utilization was more than a thousand years earlier than in Europe. Enhance students' sense of national pride and cultural identity through the glory of ancient machinery. Further understanding of modern Chinese machinery such as C919 and high-speed railways, which are used for national defense and people's safety, to enhance social services and improve people's lives, or to explore the unknown world through modern inventions, enhances national strength, all of which reflect Chinese wisdom and inspire students to build confidence in the development of the Chinese industry.

When discussing parts and components, ideological and political elements spiral upwards. First, let students understand the spirit of nails; Through the microfilm “Luosi” and the introduction of the character Hu Shuangqian, a craftsman from a great country, students can feel the importance of being serious and responsible in their work, striving for excellence, and comprehend the spirit of craftsmanship, as well as the true meaning of being a craftsman from a great country; Finally, through group cooperation, describe the differences between parts and components, cultivate students' spirit of cooperation, and form good professional ethics.

2. Collaborative complementary mining

The teaching and research group can closely cooperate with teachers in the same teaching and research room based on their lesson preparation requirements and standards, gather ideas, conduct collective lesson preparation and thematic discussions, express their opinions on different professional courses, compare them with their own ideological and political excavation methods, learn from each other's strengths and weaknesses, and jointly explore the excavation of ideological and political elements in professional courses and other teaching issues.

At the same time, it is also necessary to utilize online platforms to achieve mutual communication among teachers from different systems. The Ministry of Education has currently opened the National College Ideological and Political Work Network, and the exploration of ideological and political elements can refer to the “College Ideological and Political Contribution System” of the ideological and political

network, making it a platform for teachers to learn and exchange typical experiences.

3. Digging into small things in life

Small things often contain big truths. Starting from small things in life, excavate ideological and political elements that are both close to students and practical life, stimulate students' thinking, and have a greater impact on their thinking. Otherwise, it is easy for teachers to become clumsy and far fetched when integrating teaching, or for students to be confused and confused.

For example, in the introduction teaching, profound thoughts can be revealed to students from some small things in daily life, especially those related to machinery. For example, learning mechanical collaboration: The various components of a machine need to work together in order to achieve maximum efficiency. This is like our class, where everyone has their own roles and responsibilities, and we need to collaborate with each other to achieve common goals. Durability of machines: Many mechanical devices undergo strict quality testing to ensure their stable operation in various environments. This tells us that no matter what difficulties and challenges we face, we should maintain a resilient spirit and not give up easily. The above are just some big truths learned from machinery and small things in life. In fact, knowledge is everywhere in life. As long as we guide and observe with our hearts, and think with our hearts, students can gain valuable ideological inspiration from it.

4. Different comparison excavation

The selection of ideological and political materials also requires attention to diversity and multi perspective presentation. Society is diverse, and viewpoints are also diverse. By selecting materials from different positions, perspectives, and perspectives, students can broaden their thinking horizons, cultivate dialectical thinking and diverse thinking abilities. For example, when selecting materials, cases and examples from different political and social systems can be included to help students understand the development and issues in different social backgrounds.

For example, when introducing machinery in the introduction, the classroom will introduce high-end bearings, bolts, etc. that China can only rely on imports at present, to remind students to be aware of the gap, and at the same time, to see the hope of the nation and have confidence in the Chinese nation. The 14th Five Year Plan clearly points out that it is necessary for China to accelerate the development of basic components and accelerate the pace of domestic products replacing imported products. Mechanical components are the key to China's aerospace, weapons and equipment, heavy machinery, etc., stimulating students' professional interests and encouraging them to keep up with the pulse of the times, take on responsibilities, and strive hard.

II. The integration of ideological and political elements

Professor Liang Changhong, a nationally renowned teaching teacher, once said, "Nowadays, young teachers talk more about the process and results in their lectures, but less about their thoughts and history. Can teachers, based on the courses they teach, tell students how they read? How did you enter this field? What difficulties did you encounter before? What methods did you use to solve them? In fact, what students lack the most is guidance."

Therefore, the purpose of exploring ideological and political elements in curriculum is to effectively integrate into teaching activities, and ideological and political education in curriculum is not simply to directly incorporate the content of ideological and political education into professional courses, but to cleverly integrate the concepts, values, and spiritual essence of ideological and political education into professional courses, so that students can unconsciously accept the influence of ideological and political education while learning professional knowledge. Teachers should be conscientious individuals, always adhere to the guidance of education, constantly sort out and innovate teaching content, activate ideological and political elements in the curriculum, and integrate the concept of education into teaching content. To silently integrate ideological and political elements into classroom teaching, the following methods can be adopted.

One is to explore the entry points between ideological and political elements and professional knowledge, clarify their connections, and establish a generative internal fit through systematic teaching design, seamless integration and organic integration, in order to achieve a subtle and silent effect. An excellent course design for ideological and political education must be natural and immersive. In the process of imparting and cultivating professional knowledge and abilities, one can not only taste the taste of "ingredients", but also avoid the sense of disharmony caused by "seasoning".

For example, when using the introduction section to explain the composition of a machine, if one component fails, the entire machine will not be able to complete its function. Remind students to handle the relationship between individuals and the collective correctly, have a holistic perspective, do not care about individual gains and losses, and obey the collective.

Secondly, the integration of ideological and political elements should take the real-life problems that students are concerned about as the starting point, take the classroom as the starting point, guide according to the situation, and encourage students to engage in extended learning or research individually or in groups.

Students are the main body of ideological and political education, and their interests, hobbies, and life experiences are important criteria for selecting materials. By selecting materials closely related to student life, students can increase their participation and initiative. The problem is the voice of the times, and only by grasping the problem can we capture the hearts of the people. By combining professional courses and guiding students to think and explore hot issues in life, we can achieve the synergy between ideological and political education and professional education, achieving twice the result with half the effort.

The third is to use modern information technology methods, such as multimedia and online platforms, to enrich the teaching of

ideological and political courses from a sensory perspective, improve students' intuitive feelings, and stimulate learning interest and participation. For example, by organizing online discussions and watching relevant videos, students can be guided to learn and think independently, in order to better understand and accept the content of ideological and political education.

The integration of students into self-directed learning is an important extension.

For example, in the course of "Mechanical Fundamentals", when guiding students to learn independently after class, students are required to investigate cases of model workers in Zhenjiang City in the past five years and conduct interviews with people around them to deepen their understanding of the craftsmen around them. This is beneficial for students to deeply understand that entering a company after graduating from a technical college is not just a rumor of low technical content, but also a rumor of "screwing screws". Since the founding of the People's Republic of China for over 70 years, especially since the country's reform and opening up for over 40 years, with the development of the country's economy and the upgrading and transformation of industrial structure, vocational and technical education has received more and more attention and support. The demand for technical and skilled talents is also increasing, thereby enhancing students' employment confidence, deepening patriotism and pride.

Good ideological and political education focuses on "turning spring breeze into rain, moistening things silently". Integrating the excavated elements of ideological and political education into curriculum teaching is not a simple physical process, but a challenging and artistic "chemical reaction". It is a complex and meticulous educational work that requires the joint efforts of teachers, schools, and society. Only in this way can we truly achieve the educational goal of full process education and all-round education.

III. Conclusion

This article explores the methods of exploring ideological and political elements in the introduction course of "Mechanical Fundamentals", focusing on "knowledge education, practical education, and environmental education". It adopts the methods of "systematic spiral excavation, cooperation and complementarity excavation, small life matters excavation, and different comparison excavation". Seamlessly integrating ideological and political elements into teaching is a systematic project that requires joint efforts from teachers, schools, and society. Only in this way can we truly achieve the educational goal of full process education and all-round education. As a professional course teacher, it is also necessary to continuously learn and explore to make the course of Mechanical Fundamentals more profound and warm.

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