

Some Thoughts on Ideological and Political Education in Mechanical Specialized Courses

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Abstract: With the continuous deepening of education reform, ideological and political education in the curriculum has become an important component of higher education. As an important discipline in science and engineering, the construction of ideological and political education in mechanical specialized courses has also received widespread attention. At present, there are still some prominent contradictions and problems in the ideological and political construction of mechanical specialized courses in China. This article addresses these contradictory issues and, based on the current situation, proposes specific measures to effectively enhance the ideological and political effects of mechanical specialized courses from multiple dimensions and perspectives, including strengthening ideological and political education awareness, exploring ideological and political elements in courses, clarifying teaching objectives and improving evaluation systems, and strengthening campus cultural construction. The aim is to provide useful references for relevant educators.

Keywords: Mechanical; Specialized Courses; Ideology and Politics Education.

1. The Importance of Studying Ideological and Political Education in Mechanical Specialized Courses

In the higher education system, as an important part of engineering education, mechanical courses bear the heavy responsibility of cultivating high-quality engineering and technical talents for the country. However, with the rapid development of society and the rapid change of science and technology, it is difficult to meet the demand for talents in the industry only with professional skills. Therefore, it is particularly important to integrate ideological and political education into mechanical specialized courses. First, the ideological and political courses of mechanical majors can improve the comprehensive quality of students. The primary significance of mechanical courses is to improve students' comprehensive quality. In the traditional teaching mode, emphasis is often placed on the teaching of professional knowledge, while the cultivation of students' comprehensive quality is ignored. By integrating ideological and political education elements into specialized courses, students can receive ideological and moral edification while learning professional knowledge, and enhance their social responsibility, humanistic quality and professional ethics. Second, the ideological and political education of mechanical specialized courses can promote the integration of specialized courses and ideological and political education.

2. The Main Problems of Ideological and Political Education in Mechanical Specialized Courses

2.1. Lack of Ideological Understanding and Insufficient Emphasis

Firstly, the lack of ideological understanding is the primary issue facing ideological and political education courses in mechanical engineering majors. In traditional concepts, ideological and political education is often seen as the

responsibility of ideological and political course teachers, rather than the main teaching objectives of professional course teachers. This concept has led to a lack of understanding among some professional course teachers about the importance of ideological and political education in the curriculum, and a lack of awareness to actively integrate ideological and political elements. They often separate specialized courses from ideological and political education, believing that the learning of professional knowledge is not directly related to ideological and political education, and even worry that ideological and political education will occupy the teaching time of professional knowledge and affect teaching effectiveness.

2.2. The Exploration of Ideological and Political Elements in the Curriculum is not Deep Enough, and the Integration Method is Single

Mechanical specialized courses have unique disciplinary characteristics and knowledge systems, and objectively, there are relatively few explicit ideological and political elements, which increases the difficulty of implementing ideological and political education in the courses. However, some professional course teachers have subjectively failed to deeply explore the ideological and political elements and spiritual connotations in the curriculum when implementing ideological and political education. They simply "label" the ideological and political content into professional knowledge teaching, resulting in ideological and political education being merely a formality, lacking specificity and effectiveness. In addition, the single integration method is also a major problem in the implementation of ideological and political education in the curriculum. Some teachers only conduct ideological and political education through rote learning or PPT presentations, lacking innovation and interactivity, making it difficult to stimulate students' interest and participation in learning.

2.3. Unclear Teaching Objectives and Incomplete Evaluation System

Teaching objectives are an important guide for the implementation of ideological and political education in the curriculum. However, in mechanical specialized courses, some teachers lack a clear understanding and planning of the teaching objectives of ideological and political education, resulting in a lack of direction and pertinence in the implementation of ideological and political education. Meanwhile, the imperfect evaluation system also hinders the effective implementation of ideological and political education in the curriculum. Currently, the assessment of mechanical specialized courses often focuses on the mastery of professional knowledge and skills, while the evaluation of students' ideological and moral qualities, innovative spirit, and social responsibility is relatively weak. This evaluation system is difficult to comprehensively reflect students' comprehensive qualities and the effectiveness of ideological and political education, and cannot provide strong support for the continuous optimization of curriculum ideological and political education.

2.4. Lack of Innovation in Teaching Methods and Tools

The innovation of teaching methods and means is the key to improving the ideological and political effectiveness of the curriculum. However, in mechanical specialized courses, some teachers still use traditional teaching methods and tools, such as lecture style teaching, blackboard demonstrations, etc., lacking innovation and a sense of the times. These methods are difficult to adapt to the learning needs and characteristics of modern college students, and also difficult to stimulate students' interest and enthusiasm for learning. In addition, the application of modern educational technology is not sufficient, such as multimedia teaching, online courses, virtual simulation experiments, etc. These technological means play an important role in improving teaching effectiveness and enriching teaching resources, but have not been fully utilized in the implementation of ideological and political education in the curriculum.

2.5. Lack of Teacher-Student Interaction and Emotional Resonance

Teacher student interaction is an important part of implementing ideological and political education in the curriculum. However, in mechanical specialized courses, some teachers often focus on imparting knowledge and training skills, while neglecting emotional communication and ideological collision with students. This 'cramming' teaching method is difficult to resonate and reflect on among students, nor can it achieve the deepening of ideological and political education. At the same time, students' participation and initiative in the classroom are also insufficient. They often only passively receive knowledge and lack opportunities and motivation for active thinking and questioning. This situation not only affects the effectiveness of ideological and political education, but also restricts the improvement of students' comprehensive quality.

3. Several Suggestions for Improving the Ideological and Political Effects of Mechanical Specialized Courses

3.1. Strengthening The Awareness of Ideological and Political Education and Building a Pattern of Educating All Staff

Firstly, we need to enhance the ideological and political literacy of teachers. Teachers are the main body of implementing ideological and political education in the curriculum, and their ideological and political literacy directly affects the effectiveness of ideological and political education in the curriculum. Therefore, it is necessary to strengthen the ideological and political education and training of mechanical professional course teachers, and enhance their political theory level, moral sentiment, and humanistic literacy. By organizing thematic learning, seminars, and experience exchanges, teachers are guided to deeply understand the connotation and value of ideological and political education, and consciously integrate ideological and political education into the entire process of professional curriculum teaching. Secondly, establish a collaborative education mechanism. Curriculum ideological and political education is not an isolated educational activity, but a collaborative education mechanism that requires the cooperation and participation of various departments and disciplines in colleges and universities. It clarifies the responsibilities and tasks of each department in curriculum ideological and political education, forms a working force, and ensures the orderly and effective implementation of curriculum ideological and political education work.

3.2. Deeply Explore the Ideological and Political Elements of the Curriculum, Innovate Teaching Content and Methods

One is to explore the ideological and political resources of specialized courses. Mechanical specialized courses contain rich ideological and political resources, such as craftsmanship spirit, innovation consciousness, social responsibility, etc. Teachers should delve into these resources, combine course content with students' actual situations, and design targeted ideological and political teaching cases and topics. Through case analysis, group discussions, role-playing, and other forms, guide students to think deeply and internalize these ideological and political elements. The second is to innovate teaching methods and means. Traditional teaching methods are difficult to meet the needs of ideological and political education in the curriculum. Teachers should actively explore new teaching methods and tools, such as blended learning, flipped classroom, project-based learning, etc. By introducing modern educational technologies such as virtual reality, augmented reality, and big data analysis, teaching methods and resources can be enriched to enhance students' interest and participation in learning. At the same time, emphasis should be placed on emotional education and value guidance, enhancing students' ideological and political literacy through emotional resonance and value recognition.

3.3. Clarify Teaching Objectives and Improve Evaluation System

One is to establish scientifically reasonable ideological and political teaching objectives. The teaching objectives of

ideological and political courses should be clear, specific, and highly operable. When formulating ideological and political education objectives, the characteristics of mechanical majors and the actual needs of students should be fully considered, and ideological and political education should be closely integrated with professional knowledge and skill development. By setting clear knowledge goals, ability goals, and quality goals, guide students to develop comprehensively. Secondly, we need to improve the evaluation system for ideological and political education in the curriculum. Establishing a scientifically reasonable curriculum ideological and political evaluation system is an important guarantee for improving the effectiveness of ideological and political education. We should change the previous single evaluation method and adopt diversified and comprehensive evaluation methods. In addition to traditional evaluation methods such as exams and assignments, various evaluation methods such as student self-evaluation, peer evaluation, teacher evaluation, and social evaluation can also be introduced. By collecting and analyzing various evaluation information, we can comprehensively understand students' ideological and political literacy and growth situation, and provide strong support for subsequent ideological and political education.

3.4. Strengthen Practical Teaching and Enhance Education on Social Responsibility

One is to deepen school enterprise cooperation and expand practical bases. Practical teaching is an important component of mechanical engineering education and also an important carrier of ideological and political education in the curriculum. We should strengthen cooperation and communication with enterprises and establish a number of high-quality off campus practice bases. By organizing students to participate in production practices, technology research and development activities of enterprises, students can experience corporate culture, learn craftsmanship spirit, and enhance their sense of social responsibility through practice. The second is to carry out social practice activities and strengthen education on social responsibility. Organizing students to participate in social practice activities is an effective way to enhance the ideological and political effectiveness of the curriculum. A series of targeted social practice activities can be designed based on the characteristics of mechanical majors and social hot issues. Such as environmental protection projects, poverty alleviation and assistance, volunteer services, etc. Through practical activities, students can gain a deeper understanding of society, pay attention to people's livelihoods, and enhance their sense of social responsibility and mission.

3.5. Strengthen Campus Culture Construction and Create a Good Educational Environment

One is to promote the spirit of campus culture. Campus culture is an important supplement and extension of ideological and political education in the curriculum. We should vigorously promote the spirit of campus culture, such as school motto, school spirit, and academic atmosphere. By organizing a variety of campus cultural activities such as academic lectures, cultural festivals, art exhibitions, etc., we aim to create a positive cultural atmosphere and educational environment. Simultaneously emphasizing the cultivation of

students' teamwork spirit and sense of collective honor, enhancing their sense of belonging and responsibility. The second is to create a good network education environment. With the popularization and development of the Internet, the network has become an important platform for students to obtain information and exchange ideas. We should make full use of the network platform to carry out ideological and political education, such as establishing ideological and political websites, WeChat official account, etc. Guide students to establish correct values and outlook on life through publishing positive articles, videos, and images; At the same time, strengthen network supervision and public opinion guidance to ensure the healthy and orderly development of the network environment.

3.6. Pay Attention to Individual Differences and Implement Personalized Teaching

One is to understand the needs and characteristics of students. Each student is a unique individual with different interests, learning styles, and growth backgrounds. In the process of implementing ideological and political education in the curriculum, it is necessary to fully understand the needs and characteristics of students and pay attention to their ideological dynamics and psychological changes. Collect students' opinions and suggestions through questionnaire surveys, individual conversations, and other methods to provide reference for subsequent ideological and political education work. The second is to implement individualized teaching strategies. Implement personalized teaching strategies based on students' different needs and characteristics. For students who are intellectually active and have a wide range of interests, they can be guided to participate in more social practice and volunteer service activities; For students with introverted personalities and learning difficulties, more care and assistance can be provided; For students with innovative spirit and practical ability, they can be encouraged to participate in scientific research projects and innovative activities. By implementing personalized teaching strategies, we aim to stimulate students' potential and creativity, and enhance their overall quality and competitiveness.

4. Conclusion

Mechanical specialized courses not only bear the responsibility of imparting professional knowledge and skills, but also the important mission of cultivating students' ideological and moral qualities and social responsibility. The implementation of ideological and political education in mechanical specialized courses is a systematic project that requires the joint efforts of schools, teachers, students, and all sectors of society. By strengthening the awareness of ideological and political education, deeply exploring the ideological and political elements of the curriculum, clarifying teaching objectives and improving the evaluation system, strengthening campus cultural construction and other measures, the effectiveness of ideological and political education in mechanical specialized courses can be effectively improved. This will play a certain promoting role in the in-depth development and research of ideological and political education in mechanical specialized courses, promote the integration of teaching and education, and contribute to the comprehensive development of students and the cultivation of high-quality new talents.

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