

The Application of Curriculum Ideological and Political Education in Universities Engineering Mechanics Teaching

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Abstract: In the field of engineering education in modern colleges and universities, engineering mechanics is a basic subject. If students do not master the course content of engineering mechanics, it will inevitably increase the difficulty of subsequent learning. Therefore, modern colleges and universities can adapt to the quality-oriented education proposed by the education department, actively apply curriculum ideological and political education in engineering mechanics courses, and guide students to master the knowledge of engineering mechanics deeply through ideological and political factors. Based on the course teaching of engineering mechanics in colleges and universities, this paper analyzes the concept and function of curriculum ideological and political education, and probes into the concrete application of curriculum ideological and political education in the course teaching of engineering mechanics in colleges and universities.

Keywords: Curriculum Ideological And Political Education; University Engineering Mechanics; The Teaching Application

1. Introduction

The core purpose of higher education is to cultivate talents who are beneficial to national development and social progress. Therefore, colleges and universities should deepen their understanding of the current situation of education and grasp the basic connotation of education accurately. Engineering mechanics is a basic course in the field of engineering, which has the basic characteristics of strong basic theory and numerous formulas. The course content of engineering mechanics not only involves engineering machinery, civil engineering, materials, energy, transportation, aviation, shipbuilding, water conservancy, chemical engineering and other fields, but also includes the application content combined with all kinds of fluid mechanics and engineering related geological fluid mechanics. Due to the abstract content and boring learning process, the course has been unable to achieve the expected results. Under the background of the new era, colleges and universities should actively integrate ideological and political teaching in engineering mechanics courses to lay a good ideological and moral foundation for students.

2. The concept and function of curriculum ideology and politics

2.1. The concept of curriculum ideology and politics

Curriculum ideological and political education mainly refers to the construction of student-centered, whole-process, all-round curriculum management ideological and political education teaching mode. Its teaching practice forms are various ideological and political theory courses, and has been widely used in colleges and universities in China. As the main part of the theory of ideological and political education in colleges and universities, it contains the basic political theory knowledge used in the theory of ideological and political education in colleges and universities, such as values, mental outlook, ideological concepts, political theory, personal pursuit and so on. By learning the ideological and political content of the course, students can imperceptibly grasp the true meaning of ideological and political education, and they can still uphold the most correct ideological and political habits in their daily study, life and even future work, and fundamentally avoid their bad habits and behaviors in the future development.

2.2. The role of curriculum ideology and politics

At present, ideological and political theory education and teaching quality, subject, object, content and methods have undergone new changes. Through a single educational curriculum, it is not only difficult to adapt to the historical and realistic requirements of school ideological and political education, but also difficult to complete the teaching practice of promoting moral education. In some special administrative morality education disciplines, moral education of ideological and political construction and moral education of ideological and political theory course teaching can not be harmonious and unified, and after education into the curriculum in engineering mechanics education, can be in the course of education to carry out ideological education, from the fundamental to realize the administrative subject in classroom of moral education and its teaching practice value coordinate and contact each other, Promote the coordination and linkage of administrative body construction inside and outside the classroom, so that the students can develop each other in the process of constantly strengthening their own knowledge of relevant disciplines, consciously and constantly strengthen their professional ideological and moral comprehensive quality and political accomplishment, and improve their ideological quality and political consciousness.

3. The application of ideological and political education in engineering mechanics teaching in colleges and universities

The application of curriculum ideological and political education in the teaching of engineering mechanics in colleges and universities mainly focuses on setting up the goal of curriculum ideological and political education, accurately entering into curriculum ideological and political education and doing a good job in the reflection of curriculum ideological and political education.

3.1. Setting up ideological and political education goal in engineering mechanics

Through carrying out ideological and political education in engineering mechanics course teaching, colleges and universities can give the most correct ideological and political guidance to college students, and cultivate the correct outlook on life, world outlook and values. To sum up, the following objectives can be achieved: First, students should be guided to take people as the center, and take human value, feeling and dignity as the measure of value, so as to constantly improve their own humanistic quality. Second, it can strengthen college students' understanding of the objective material world and promote the formation of their materialistic world outlook, thus stimulating students' sense of responsibility necessary for becoming professional engineers.

3.2. Engineering mechanics is accurately integrated into the ideological and political education of the curriculum

3.2.1. Through the teaching mode to enter the curriculum ideological and political

Group cooperation and inquiry teaching mode can be fully used in the course of engineering mechanics teaching. Such as gantry crane weighing device as the core engineering mechanics teaching, the teacher according to the factors such as students interest, group, each group of students to know about the basic content of gantry crane weighing device, the teachers can explain the key content of the real-time knowledge, thus can reduce the difficulty of learning of engineering mechanics course. When students have a good understanding of professional knowledge, they can organize groups to discuss with each other, and carry out curriculum ideological and political engineering mechanics education through exploring teaching mode. The specific topics of group discussion can be provided by the teachers themselves. The Chinese government has been able to complete the construction of a large hospital in more than ten days, including the application of gantry lifting device, so why do we need to use gantry lifting equipment to install columns in the construction process, and can not directly plan and organize them in horizontal layout? After the question is raised, the teacher can organize the students to communicate freely according to the teaching group, and randomly check whether the students in the group speak or discuss, and finally let the representatives sent by the students in each teaching group take turns to speak, so as to understand the group students' grasp of the classroom teaching content. This will provide more opportunities for group students actively participate in the study, not only exercise independent learning, independent thinking and take the initiative to analyze and solve practical problems of thinking ability, but also can improve the interpersonal communication, communication ability and team cooperation ability, and make students understand "China speed", patriotic reasons.

3.2.2. Through the teaching method into the curriculum ideological and political

By adhering to the people-oriented concept and using heuristic and case teaching methods, students are trained to develop logical thinking and independent thinking ability, apply mechanics theory to solve problems related to mechanical engineering science and technology, and improve students' practical comprehensive application ability and basic professional ethics. For example, when engineering mechanics talks about stress measurement and calculation, teachers can select several typical motor models and organize students to explore the internal structure of the motor. Then the main shaft are based on the basis of the principle of static balance of motor drive mechanics mechanics analysis and transmission intensity measurement calculation, and then by students using transmission motor mechanics related basic knowledge of mechanical dynamics theory to calculate test the motor internal shaft strength combined stress intensity measurement are the calculation results can completely meet the requirements. If the measurement and calculation structure cannot meet the relevant requirements, teachers can guide students to think deeply, when the measurement and calculation is faced with this problem, what measures can be taken to effectively improve the overall strength of the motor drive shaft part. At the same time, the teacher can also ask students on the basis of improving strength, uphold the concept of green, environmental protection, economy, and guide students to understand the importance of the green environmental protection in the field of engineering mechanics, prompting them after the work, to the green environmental protection, as the key to engineering mechanics education more relevant requirements of the development of modern society.

3.3. Reflection on ideological and political education of engineering mechanics course

After determining the goal of curriculum ideological and political education and realizing the accurate entry into curriculum ideological and political education, we can carry out in-depth reflection on curriculum ideological and political education, starting from two perspectives of assessment and evaluation. The assessment mainly refers to the assessment of engineering mechanics teaching quality, judging whether the teaching content meets the educational requirements, whether the teaching objectives are clear, whether the teaching methods are reasonable, and comprehensively assessing the implementation of curriculum ideology and politics in engineering mechanics education from the perspectives of teaching experience and teacher team. Evaluation mainly refers to an evaluation model that breaks the traditional teaching mode of independent evaluation by teachers, and realizes the organic combination of school teachers' independent evaluation, students' independent evaluation, group teachers' mutual evaluation and other comprehensive evaluation methods. According to the characteristics of students, based on the requirements of core posts and combined with typical tasks, the integration and innovation mode of pre-class warm-up, in-class infiltration and after-class reflection is adopted to fully implement cooperation with Germany and integrate socialist core values into the course of Engineering Mechanics.

4. Conclusions

To sum up, contemporary college students not only need to master basic engineering knowledge and cutting-edge scientific and technological knowledge, but also need to have high political quality, strong sense of responsibility and pragmatic work style when learning engineering mechanics. In the context of the new era, university teachers need to blend in course of ideological and political course, as a teacher in student organization learning professional knowledge at the same time, should be combined with the characteristics of engineering mechanics course, achieve an organic unity of knowledge and value guidance, firmly establish a course of thought political lesson education teaching concept, through the education teaching process, To realize the three-dimensional educational goal of curriculum ideological and political education.

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