

Under the Background of New Engineering, the Teaching and Ideological and Political Courses of the University Machinery Major Study Together

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Abstract:

Under the background of new engineering, college students majoring in machinery need to have high ideological and political literacy. In classroom teaching in colleges and universities should play the role of course education position, the moral elements into mechanical professional course teaching, explore the way of ideological and political education innovation, not only can make mechanical teaching has higher effectiveness, can also to college students' values, world outlook, the outlook on life form the correct guide, and cultivate consistent with the new engineering requirements of mechanical professionals. Based on this, this paper will study the ideological and political construction of mechanical professional courses in universities under the background of new engineering.

Keywords:

Course Ideological and Political, New Engineering, Mechanical Major

1. Introduction

After entering the 21st century, artificial intelligence, intelligent manufacturing and other technologies have affected traditional industries and industries to a large extent, and traditional mechanical engineering teaching has been unable to cultivate talents to meet the needs of today's society. In this case, to develop the higher engineering education suitable to The Times and train the socialist successors and builders, we must pay full attention to the development of new engineering and implement the ideological and political construction of mechanical courses based on the new engineering background.

2. The Important Role of Ideological and Political Construction of Mechanical Major Courses Under the Background of New Engineering

2.1. Develop higher engineering education in the new era

The core of new engineering is engineering, and its development direction is new. Therefore, compared with traditional engineering, new engineering has brand-new ways, ideas and requirements, so as to optimize traditional engineering education and stimulate the vitality of engineering education. In this process, the relevant personnel should use the new thinking to carry out the engineering education mechanism and system innovation, and cultivate the high-quality compound talents [1] with international competitiveness, strong engineering practice ability and strong innovation ability. In recent years, although many educators attach great importance to the reform of traditional mechanical professional teaching, and make their teaching methods and curriculum become more scientific and reasonable, there are still contradictions in the curriculum practice. In addition, the influence of insufficient personalized teaching forms, single teaching resources and other factors has formed a serious obstacle to the teaching development of mechanical major. Therefore, only by realizing the development and innovation of mechanical professional courses, based on the needs of social and economic development, and organically combining ideological and political courses and mechanical professional courses, can the relevant personnel effectively promote the development of higher engineering education.

2.2. Improve the comprehensive quality of students

In the new engineering education, moral education is an important connotation, which not only requires relevant personnel to cultivate talents with international development vision and effectively solve the challenges related to the transformation and upgrading of emerging industries, but also should love the Party and the country, firm ideal and faith, and shoulder the task of realizing the great rejuvenation of the Chinese nation [2]. Therefore, integrating ideological and political courses into the training of new engineering talents can develop ideological and political education and professional ability training at the same time, and promote the mutual penetration and integration of the two. Only in this way can the two play a synergistic effect and improve the comprehensive quality of students.

3. Difficulties in Ideological and Political Construction of Mechanical Major Courses Under the Background of New Engineering

3.1. Ideological and political awareness of the course is low

There are essential differences between curriculum ideological and additive teaching. At present, some teachers pay too much attention to teaching, or pay too much attention to ideological and political education. Some teachers pursue curriculum ideological and political education, and believe that ideological and political elements in the teaching process, in many cases. The reason why the above problems exist are mainly because the relevant teachers in colleges and universities do not correctly understand the ideological politics of the course, and do not accurately grasp the connotation of the ideological politics of the course. If teachers cannot

timely realize their own problems and complete the concept change in time, it is difficult to play the ideological and political role of mechanical professional courses, leading to the “two skins” of professional courses and ideological and political situation of professional courses.

3.2. The teaching means is single, and the content is insufficient

At present, the teachers of mechanical major courses rely too much on electronic courseware, textbooks, blackboard writing, etc., and still take it as an important way to explain theoretical knowledge. In terms of course knowledge, traditional machinery manufacturing and structure, etc., traditional machinery, Internet of Things, artificial intelligence and less, etc. Due to the outdated content, the learning enthusiasm of college students cannot be fully mobilized. In addition, when the teaching resources are too single, there is a great chance that the ideological and political content of the course will be abstract, which is divorced from the actual life of college students, and eventually the ideological and political course of the new engineering major cannot be implemented. Especially in the post-epidemic era, if teachers still use these traditional teaching modes and do not deeply analyze the ideological and political courses and new engineering teaching resources, it will seriously hinder the innovation and development of mechanical professional courses.

3.3. Absence of ideological and political evaluation system for mechanical professional courses

The latent characteristics of ideological and political teaching are very obvious. It can appear in various forms and forms in the whole process of professional course teaching, and pay attention to the subtle integration of ideological and political elements in the teaching of professional knowledge. Moreover, due to the complex nature of ideological and political education, it is difficult to accurately define the actual impact of a certain teacher, a certain aspect and a certain course on students' ideological and political literacy. Therefore, in the evaluation of ideological and political teaching, it is not only impossible to determine the process teaching index such as teaching form, but also impossible to use students' political literacy as the result index. Under the background of new engineering, the evaluation system of ideological and political teaching of mechanical courses should conform to the characteristics of mechanical courses and be exquisite and invisible. Because of its very strict requirements, the ideological and political evaluation system of mechanical professional courses is absent for a long time, which cannot effectively guide the ideological and political construction of the curriculum, and reduces the initiative of teachers to reform the ideological and political teaching of the curriculum.

4. Ideological and Political Construction Strategy of Mechanical Major Courses Under the Background of New Engineering Engineering

4.1 Improve the cognition of mechanical professional teachers

Most mechanical courses belong to applied courses, most teachers require students to have strong practical ability, that the goal of education is to improve students' skill level, relatively ideological and political courses belong to accessories, no need to pay too much attention, the most critical problem is to master skills, which is often said to emphasize skills rather than quality. Teachers are the main body of the

implementation of curriculum ideological and political. Only on the basis of teachers' correct understanding of curriculum ideological and political, can curriculum ideological and political be implemented in a real sense. In view of this situation, colleges and universities can help teachers to have a more comprehensive and in-depth understanding of the ideological and political courses by means of "research and innovation" and document training, so that they can have higher ideological and political teaching ability, and promote the coordinated development of value guidance and knowledge teaching. At the same time, colleges and universities should vigorously build the ideological and political team of mechanical professional courses, and must equip professional ideological and political course teachers and teachers to jointly analyze and discuss the issue of professional courses and CPPCC [3]. In addition, colleges and universities should also establish incentive and guidance mechanisms, add the contribution degree of the course ideological and political team in the annual assessment, and apply it to job promotion, training and other work, so as to promote the formation of healthy value orientation and direction guidance, so as to continuously improve the ideological and political level of the whole team course.

4.2. Innovate teaching means and enrich the teaching content

Nowadays, classroom teaching is still a very necessary and key way in the process of mechanical professional course teacher education. After entering the Internet era, people's ideas, living habits, thinking mode and production and life style have changed to a certain extent. Especially during the epidemic period, the needs of ideological and political education in new engineering courses can no longer be met through classroom teaching. Therefore, teachers should, on the basis of fully considering the development of Internet technology, improve the existing curriculum teaching methods, collect and sort out the high-quality teaching resources existing in the Internet, and then play the role of strengthening the ideological and political education of new engineering courses. Multimedia teaching methods such as open classes, micro-courses and MOOCs are used to help mechanical professional teaching to break the restrictions of books and classroom teaching, so that students can learn anytime and anywhere, and use rich network resources to supplement knowledge points. With the help of Internet teaching, students can expand the target of professional courses, deepen their understanding of professional knowledge and ideological and political content of courses, so as to improve the quality of education. At the same time, for the ideological and political education with irregular knowledge system, the use of micro-courses and other teaching methods has outstanding advantages, which can enable students to cultivate their feelings of home and country and their own quality in the study of professional courses.

In addition to innovating teaching forms, teachers should pay full attention to the mining of curriculum ideological and political teaching resources. Due to the limitation of its own development characteristics, the current mechanical professional courses have a relatively single course content and knowledge system. Under the background of new engineering, it is necessary to reasonably add the course content about big data and artificial intelligence, which requires teachers to deeply explore the ideological and political elements in professional courses to ensure that they conform to the characteristics of The Times, and then improve the quality of education. In this process, teachers also need to organically integrate the discipline system construction and mechanical courses, guide students' ideological value in teaching through the theoretical knowledge of mechanical courses, integrate the ideological and political

resources into the whole process of professional process, and finally achieve collaborative education.

In general, under the background of new engineering, teachers should implement the reform of the teaching forms of mechanical professional courses, so as to realize the expansion from classroom teaching to the classroom. In addition, it is necessary to excavate the ideological and political resources of courses with new engineering characteristics, and improve the integration degree of the teaching content and ideological and political elements of new engineering courses, so as to give full play to the role of ideological and political courses in cultivating new engineering talents.

4.3. Build a multiple evaluation system

First of all, to realize the diversification of evaluation subjects. Ideological and political rating of mechanical major courses is a systematic engineering, which needs to make full use of the role of multiple subjects. On the premise of using the evaluation system of conventional mechanical professional courses, professional ideological and political teachers are hired in the ideological and political teaching guidance group of the course, so that the main body of the ideological and political evaluation system of new engineering mechanical courses includes ideological and political teachers, educational administration departments and students, so as to carry out the ideological and political course evaluation comprehensively and scientifically. At the same time, the social evaluation should also be reasonably introduced to form a long-term and effective evaluation and feedback mechanism.

Secondly, the evaluation content is diversified. Under the background of new engineering, teachers should determine different evaluation content [4] when evaluating the ideological and political situation of mechanical major courses. Combined with the evaluation theory of “structure-process-structure”, based on the implementation logic of ideological and political courses, four categories of social evaluation, teaching process, teaching results and teaching design are determined. The social evaluation includes values and career view; the teaching process includes teaching situation and teaching methods; the teaching results include the results of ideological and political education and professional learning effect; and the teaching design includes teaching content and purpose.

Finally, the evaluation methods are diversified. In evaluating the ideological and political situation of mechanical professional courses, teachers should comprehensively use quantitative questionnaire evaluation, professional ideological and political assessment evaluation, subjective descriptive feedback evaluation and other evaluation methods.

5. Conclusions

Under the background of new engineering, the ideological and political construction of mechanical major courses is a very important work. In the actual work, according to the problems existing in the ideological and political construction of mechanical courses at the present stage, relevant personnel should adopt such strategies as improving the cognition of mechanical teachers, innovating teaching means, enriching teaching content and building a diversified evaluation system.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

Author Contributions

Conceptualization; Methodology; Writing – original draft preparation; Formal analysis: Ka Gao; Investigation: Qiang Li; Resources: Wenbo Zhu; Data Curation: Yujia Hu; Resources: Huijie Yu, Dejian Sun, Yang Gao.

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