

Research on the Path of Improving Quality and Efficiency of Curriculum Civics and Politics Integrated into the Teaching of New Engineering Science

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Abstract: Currently, major universities have undergone curriculum reform, with Civics and Politics emerging as a prominent subject in classrooms. Concurrently, there has been an advocacy for new engineering education with the guiding principle of Lidu Shurenren. This approach effectively dismantles the traditional barriers separating Civics from professional education, paving the way for an innovative integration of new engineering teaching and Civics and Politics in the curriculum. This paper is focused on the intersection of curriculum ideology and politics, emphasizing the significance of blending new engineering teaching with Civics and Politics. It delves into the necessity of this integration, examines strategies for enhancing quality and efficiency through these teaching methodologies, proposes the development of a novel curriculum education system, and underscores the role of this framework in nurturing high-quality talents for societal needs.

1. Introduction

At present, in China's education system, the new engineering education plays a vital role in leading the country towards educational excellence. To achieve this ideal effect of "1+1>2," it is crucial for colleges and universities to successfully integrate the new engineering curriculum with civic and political education. By aligning the construction of the ideology and politics curriculum with the development needs of higher education institutions, an effective synergy can be established. This entails delving deep into the fundamentals of civic and political education while optimizing the curriculum design to enhance moral education. Through this approach, colleges and universities can explore new and practical teaching methodologies that hold significant value for students. Ultimately, this integrated approach aims to improve the overall educational landscape and enhance the process of nurturing students within the educational system.

2. The necessity of analysing the integration of curriculum Civic and political education in the construction of new engineering disciplines

Carrying out curriculum Civic and political education is an important choice to achieve the

construction of new engineering disciplines. Regarding the new engineering disciplines, they are usually upgraded and improved from the traditional engineering disciplines through the level, or they are combined together through crossover. Nowadays, whether it is scientific research or technological invention, all reflect the complexity of the characteristics, if only rely on a scientific research, it is difficult to get in line with the development of modern society and innovative results, through the cross-fertilisation of multiple disciplines, can focus on the wisdom of the ideas to deal with complex problems, and the integration of the new engineering disciplines and curriculum civics and political education, which is in line with the fundamental requirements of the teaching and research in colleges and universities, and conducive to the cultivation of more talents with the ability to conduct research. It is conducive to cultivating more talents with research ability. Combined with the mission of Civic and Political Education, the main goal is to establish moral integrity, and in the new engineering education, it is aimed at cultivating technological talents with innovative cognition and ability for the country, therefore, the unification of the two can be seen in the initial heart of education, and establishing moral integrity is the main idea pursued. In the new engineering education, it is necessary to combine Lidu Shuren as a leading idea in the process of advancing, which is an educational approach based on China's current development strategy, talent cultivation requirements, and from the connotation level, it upholds the concept of Lidu Shuren, flexibly responds to social changes and scientifically shapes the future during the construction process, and through inheritance and innovation, continuously cultivates high-quality talents with innovative ability under the coordination and sharing. The concept of "to educate people with moral integrity" is upheld in the process of construction. In this context, the effective promotion of curriculum Civics and Politics can promote the comprehensive development of talents, so that they can gain professional knowledge and skills, and at the same time develop good personality qualities, so that they can better adapt to the needs of the reality of development [1].

The curriculum of ideology and politics plays a crucial role in facilitating moral education by integrating theoretical knowledge and practical application in engineering education. The teaching approach in engineering curriculum encompasses not only technical expertise but also ideological and political education. Through the integration and development of curricular content, the curriculum effectively blends ideals, values, and cultural aspects, showcasing the fusion of scientific inheritance and the pursuit of truth in professional training. Therefore, it is imperative to incorporate ideological and political education into the curriculum, as it provides the necessary foundation for nurturing talent in emerging engineering disciplines, while facilitating the harmonious coexistence of value rationality and instrumental rationality. This symbiosis enhances the promotion of moral education within the educational framework.

3. The main dilemma of the current integration of curriculum Civics and new engineering education

3.1. Teaching goal positioning is not precise enough

In the course of teaching Civics, it is necessary to ensure that the target positioning is accurate, to correctly understand the course of Civics, not to be confused with the theoretical courses of ideology and politics, in the engineering courses. The value of Civics teaching should be embodied, but the reality of the teaching stage is still mainly in the teaching of professional knowledge, ignoring the value of the role of the lead, in the teaching process, most of the ideological and political theory courses in the form of the development.

3.2. Easy to detach from reality when teaching

Many teachers fail to seize the time of ideological and political education, but also fail to consider the ideological dynamics of students, when the course of ideological and political education content, and the students' ideas produce an obvious gap, ideological and political teaching is not vivid enough image, resulting in students cannot be fully engaged, affecting the actual teaching effect [2].

3.3 Insufficient coordination during teaching

Insufficient teaching of the course's ideological and political content can result from teachers not effectively coordinating the balance between delivering engineering knowledge and conducting ideological and political education. This stems from a failure to allocate teaching time appropriately. Sometimes, this occurs because teachers spend excessive time on ideological and political education, leaving insufficient time to cover the necessary engineering content. Alternatively, inadequate ideological and political education may occur when the balance is skewed towards technical knowledge at the expense of ideological and political concepts.

3.4 Teaching form is relatively single

Currently, from the point of view of the teaching mode, it reflects a single, mechanical effect. During the teaching period, the teacher is responsible for explaining, and the students are responsible for listening to the knowledge, so that the transfer of knowledge belongs to the one-way form, failing to play the effect of interactive communication, which will affect the students' interest in learning and lead to the overall teaching work is not efficient enough.

4. Based on the analysis of improving quality and efficiency to promote the integration of curriculum Civics and new engineering teaching paths

4.1 Establish a global mindset and determine clear objectives of course ideology and politics

In each course, it is necessary to clearly determine the tasks to be faced in developing comprehensive literacy, understand the value and role that subsequent courses should embody, so as to clarify the feasible objectives of course civics. Firstly, looking at the new engineering majors, some of the ideological and political objectives exist, especially in the quality cultivation work, such as pioneering and innovation, professionalism and so on. However, for different new engineering majors, there are different objectives of the course, and in the face of different majors, it is necessary to find the matching objectives of the course through a reasonable positioning. Teachers should give a clear positioning of the course majors and understand the objectives of the ideology and politics in order to get the ideology and politics of the course objectives, and to promote the relevant knowledge of the teaching and learning to meet the target requirements. Secondly, teachers should pay attention to their own courses, and understand that the cultivation of the quality of course politics needs to be cross-fertilised in course teaching to achieve comprehensive exercise, and in the cultivation of the same quality, they should create a progressive form of the system, and with the help of the cultivation system, they should find the appropriate course positioning and tasks, to ensure that the relevant professional course politics can really achieve the effect of educating people [3].

Thirdly, in the realistic teaching link of the course, systematic thinking is used to find out the elements of ideology and politics contained therein, and the technical characteristics are explored in

the course, so as to obtain feasible ideological and political objectives. In the course, the deep analysis of which involves the Civic-Political elements, if for a certain quality, when the introductory training, to determine the corresponding Civic-Political objectives for it, it can be a reminder of the quality of consciousness, but also from the ideological and cognitive recognition of the identification; when it belongs to the foundational training, it can be associated with the way of thinking, explore the formation and internalisation; when it belongs to the advanced training, it is necessary to determine the development of the qualities of the externalisation of the actions identified in the objective. When the training is advanced, it is necessary to identify in the objectives the actions that will lead to the externalisation of the quality. In addition, around the technical characteristics embodied in the course, you can find a specific training direction for the course ideology, for example, when learning the relevant content of the industrial control equipment, to determine the ideological objectives of the course, you can use the PLC as a system engineering, in the practice of training, so that students continue to develop the spirit of excellence, in which the PLC system engineering training, is the technical characteristics of the course, based on which, to make the implementation of the course ideological teaching clearer. The implementation of course political teaching is clearer.

4.2 Promote the content of the course's ideological education to keep pace with the times and fit the actual teaching

During the teaching period, teachers should study the teaching materials and syllabus diligently to ensure that the Civic and Political Education curriculum aligns with real-world circumstances and remains current. By effectively incorporating societal hot topics and relevant real-life examples, educators can bridge the gap between professional knowledge and practical life situations. For instance, within the field of civil engineering, projects like the construction of Thunder Mountain and Vulcan Mountain exemplify the strengths of the socialist system and highlight the effectiveness of the national governance structure. Addressing students' real-life queries on "how to perceive" and "how to handle" various challenges is pivotal for fostering proper ideological and political education, facilitating the refinement of students' spiritual qualities. Enhancing students' spiritual attributes, in conjunction with ideological and political education, is instrumental in elevating their overall quality. Studying the exemplary actions of role models allows students to appreciate the ethos of dedicated workers, comprehend the intricacies of engineering endeavors, and nurture attributes like meticulousness and pragmatism. This, in turn, instills a sense of responsibility and dedication that is essential in engineering practice. Employing technology and current affairs as educational tools, educators can imbue students with a profound understanding of subject matter while also fostering positive values. By guiding students towards an interest in ideological and political discourse, instructors create an environment conducive to weaving together academic and political aspects with emerging engineering disciplines, thus paving the way for a comprehensive educational experience.

4.3. Explore the teaching mode of cross-fertilisation of multiple disciplines to improve the coordination of teaching

From the point of view of new engineering, it brings quality services to the new development pattern, and needs to overcome technical difficulties and improve the quality of development. In such a situation, single-quality talents cannot meet the current development requirements, and in this regard, it is necessary to effectively combine the ideology and politics of the curriculum with the service objectives of the new engineering, to show the synergy of educating people and break through the limitations of the disciplines, and to promote the cross-cutting of various disciplines

during the teaching period, so as to cultivate talents with a high level of technology, and at the same time, to improve the coordination of teaching. High-level technical talents, and at the same time to ensure that the talents have professional qualities, to cultivate new engineering talents, so that they can become the leading figures in the field of engineering. At present, for new engineering students, if they only understand from their own professional and disciplinary aspects, it will lead to a more limited vision, which is not conducive to the dispersion of ideas, so it is necessary to achieve the effect of cross-fertilisation in disciplines, and constantly broaden students' horizons, so that they can improve their cognition. Teachers should learn to find integration opportunities to enhance the coordination of teaching, through the introduction of the Marxist position of viewpoints, methods of transformation, for students to bring the motivation to forge ahead; based on the concept of people-oriented, honesty and integrity, for students to show a good code of ethics, naturally integrated into the student's behaviour; for the different types of laws and regulations, by virtue of the case of the way, the natural introduction of the classroom, so that the student more comprehensive learning of legal knowledge.

4.4 Starting from different dimensions, effectively exploring resources related to the ideology and politics of the curriculum

First, in the new engineering curriculum, patriotism education can be initiated based on the Civics component. The new engineering courses introduce various technologies aligned with the country's development strategy, thereby providing an opportunity to explore the resources of curriculum civics from a patriotic perspective. For instance, when delving into industrial control network studies, teachers can incorporate the concept of interoperability, which aligns with the current development ideology. By integrating discussions on the new development stage into the curriculum content, a new political narrative can be constructed. With the rapid advancements in engineering technology and the utilization of real-time information dissemination in related fields, educators can leverage students' curiosity to identify compelling topics within the Civics framework. This approach not only enhances student engagement but also fosters national pride and enthusiasm for science and technology. Secondly, life value education plays a crucial role within the new engineering curriculum, encompassing both personal and social values, which are inherently interconnected. The curriculum's alignment with contemporary demands and its focus on advanced technology contribute to social progress. Through the integration of value-based discussions into curriculum content, students can explore the values inherent in human development, fostering a sense of shared destiny within the community. For example, when examining industrial control network concepts, educators can illustrate the value of the industrial Internet, emphasizing its role in creating a globally connected community. By showcasing scenarios that highlight the connectivity facilitated by technology, students are inspired to appreciate the transformative power of the Internet and to aspire to contribute to their country through science and technology, thereby advancing the vision of a shared community destiny.

In the projects related to new engineering, it is obvious to see that many disciplines cross and integrate with each other, and in the new engineering talents, it is necessary to promote cross-border integration and play a coordinating role. When launching the course practice, you can design some worthwhile topics for practice, reflecting the cross-disciplinary collaboration, for example, through a certain production process, the students will experience the meaning of coordinated development through the practical activities, so as to experience the intelligent manufacturing and design intuitively. Realise personal values while contributing to society. Thirdly, it can be combined with the education of ideals and beliefs. Establishing clear ideals and beliefs is the only way to have a goal to strive for and a higher level of spirituality. Among college students, guiding them to develop

ideal beliefs can better cultivate their sense of responsibility and provide services to achieve the construction of the motherland.

5. Conclusion

To effectively enhance the implementation of course ideology and politics within the context of emerging engineering disciplines, several strategic measures need to be undertaken. Firstly, cultivating a global mindset within the educational framework is crucial for fostering a broad understanding of diverse ideological perspectives. Subsequently, clearly defining the objectives of course ideology and politics is essential to provide a structured foundation for educational practices. Moreover, updating the course content regularly to align with contemporary challenges ensures its relevance and applicability in educational settings. Exploring interdisciplinary teaching approaches that integrate various fields can enhance the comprehensive understanding of course ideology and politics among students. Furthermore, enhancing coordination among instructors and resources is imperative to ensure a cohesive and efficient teaching environment. Lastly, engaging in a systematic exploration of resources from diverse sources can enrich the educational experience and improve the overall effectiveness of teaching course ideology and politics.

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