

The Exploration of the Curriculum Ideology and Politics is effectively integrated into the International Engineering Talent Training

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Abstract: It is urgent to pay attention to the lack of college students' values caused by the internationalization of colleges and universities. Sino-foreign cooperation in running schools must ensure that it adheres to the socialist educational philosophy and is committed to achieving the fundamental task of cultivating people with virtue. Sino-foreign cooperation in running schools must ensure that it adheres to the socialist educational philosophy and is committed to achieving the fundamental task of cultivating people with virtue. This requires us to establish the concept of full, whole-process and all-round education, and requires all staff to assume the responsibility of education, to ensure that all courses can play the function of education and give full play to the educational effect of "curriculum ideological and political". This paper analyzes the problems in the process of cultivating international engineering talents, and explores the guidance of The curriculum ideology and politics in improving the innovative education concept, assisting the innovative teaching methods, and creating the mode of industry-university-research learning. Combined with the practice of mechanical design and automation cooperative education major of Shandong University, the combination of The curriculum ideology and politics and international engineering talent training is given.

Key words: curriculum ideology and politics; international talent training; teaching reform

Introduction

In the "Outline of the National Medium and Long-Term Education Reform and Development Plan (2010-2020)", the Ministry of Education clearly proposed the goal of cultivating international talents, that is, "to cultivate many international talents who have an international perspective, understand international rules, and are able to participate in international affairs and international competition". This shows that internationalization has become a trend in the development of Chinese universities. The "Plan for Accelerating Education Modernization (2018-2022)" also proposes to accelerate the cultivation of high-level international talents, improve policies for international students to return to China for entrepreneurship and employment, improve the quality of Sino-foreign cooperation in running schools, and improve the access and exit mechanisms for Sino-foreign cooperation in running schools. Once again, it emphasizes the promotion of student internationalization and Sino-foreign cooperation in running schools.

The majors in cooperative school running should ensure the socialist direction of school running and the fundamental task of moral education, and cultivate talents in a comprehensive, full staff and the whole process. The teaching staff should assume the responsibility of training students, all courses should reflect the function of cultivating people, and give full play to the training effect of "curriculum ideological and political affairs". Therefore, in addition to innovation in teaching and scientific research, international education also needs to explore the ideological and political work of the curriculum.

The emergence of the Internet and the information society, as well as the changes in knowledge formation and information dissemination, have promoted the development of "new engineering" and excellent engineering talent cultivation and education innovation. The future society's demand and challenges for talents have also put forward new requirements for the cultivation of engineering professionals. Therefore, it is an important strategic task in education development to accelerate the promotion of the "double first-class" project and cultivate first-class and excellent engineering talents that meet the needs of the new era. Under the background of "double first-class", how to use existing international school-running conditions to develop a new mechanism for cultivating engineering talents that emphasizes both The curriculum ideology and politics and internationalization, so as to improve the quality of educating people in more international schools, cultivate compound engineering talents with international vision, competitiveness, and innovation ability is of great significance.

1. Some difficulties when we cultivating international engineering talents in colleges and universities

The state has issued the "Innovation and Creativity Reform" and the "2011 Plan" to strengthen the construction of higher engineering education in China. However, some problems in engineering talent cultivation cannot be ignored.

1. Education concept. The level of communication and cooperation between domestic colleges and universities and internationally renowned universities, research institutions, and multinational companies is inadequate, and the educational philosophy and teaching methods need to be further improved.

2. Training objectives. There are some problems in traditional engineering education in China, including deviation from training objectives and limitations on material resources, which lead to students receiving higher engineering education lacking the ability to solve practical engineering problems and the potential to participate in leadership, decision-making, coordination, control, and management in modern engineering. Therefore, we need to carry out reform and innovation, promote the docking of engineering education with actual engineering needs, and improve students' practical ability and engineering management ability.

3. Talent structure. There is a lack of talents in the field of higher engineering education, especially international-level and outstanding talents, as well as a lack of high-end engineering talents. In addition, there is a lack of transformation and upgrading ability for basic engineering talents. Colleges and universities mainly focus on traditional engineering education, leading to an excess of traditional engineering talents in colleges and universities, but a severe shortage of new engineering talents. This results in engineering enterprises facing talent shortages and difficulties for many graduates to find jobs.

4. Knowledge system. After China proposed the concept of inclusiveness and openness, various new disciplines, marginal disciplines, cold disciplines, and interdisciplinary disciplines have emerged continuously. The cycle of students obtaining knowledge through multiple choices has been shortened. The content of higher engineering education courses has become outdated and cannot adapt to the rapid development of modern society. The curriculum design of higher engineering education disciplines is too rigid at the institutional level and cannot adapt to changing market demands. The disciplines of higher engineering education continue to develop deeply within the existing knowledge framework and.

In summary, the above problems restrict the cultivation and development of international engineering talents in China's higher education. It is urgent for China's current higher education to solve the above problems in cultivating international engineering talents.

2.how the curriculum ideology and politics improving the cultivation quality of international engineering talents

1)Guidance for innovative educational concepts

When traditional engineering majors promote the construction of "new engineering", they need to adhere to the "whole person education" concept, as the concept is the primary requirement of teaching, and it is an unprecedented innovation movement. Special attention should be paid to the collaboration and mutual promotion betweenThe curriculum ideology and politics in the design of international curriculum content and other aspects. By introducing and promoting student-centered teaching methods, OBE teaching principles, project-based learning, and experiential learning, we can promote students' personality, creativity, innovation ability, and self-learning ability, thus achieving the goal of cultivating students' lifelong learning ability. To ensure that students can achieve the expected goals of the training program, it is necessary to optimize the curriculum system and teaching methods to make them more suitable for student development.

2)Assist in exploring innovative teaching methods

With the advancement of the information age and network technology, a large number of shared educational resources have rapidly emerged on the Internet, providing guidance for the innovation of teaching methods in engineering education. Emphasis should be placed on combiningThe curriculum ideology and politics with advanced teaching methods, using multiple teaching models such as comprehensive case teaching, practical teaching, knowledge teaching, online+offline coupling, virtual-reality integration and other teaching methods to create borderless classrooms, and actively explore ways to enhance students' learning initiative and cultivate their self-learning ability.

3)Cover three-dimensional exploration teaching methods

The construction of new engineering is a teaching orientation that combines engineering and multidisciplinary cross-integration, covering engineering, mathematics, natural sciences and other disciplines' curriculum content. Multidisciplinary all-round teaching is crucial for cultivating excellent engineering talents. Various interactive methods such as exchange learning, short-term exchange, and semester exchange can enhance and promote students' international quality.

4)Creation of industry-university-research learning models

To cultivate innovative engineering and technical talents, close cooperation with industries and enterprises should be fostered during the training process, referring to their talent cultivation suggestions, and discussing international talent cultivation goals with them. At the same time, schools and enterprises should jointly participate in the construction of higher engineering education curriculum, and jointly build training bases to enable students to participate in engineering practice authentically to achieve a win-win model of "student-school-enterprise" cooperation. Enable students to understand the development of modern enterprises, deepen the cultivation of their ideal beliefs, sense of responsibility, and mission.

3.Important achievements of ideological and political construction in cultivating international engineering talents

The Ministry of Education officially approved the establishment of Shandong University's Mechanical Design, Manufacturing and Automation (China-Australia cooperation) major in cooperation with the Royal Melbourne Polytechnic of Australia in 2013. This major requires four years of study, and students have the opportunity to choose the 2+2 model, which means they study in China for two years and then continue their studies in Australia for another two years. After completing all the credits, students can obtain both the graduation certificate and the bachelor's degree certificate issued by Shandong University and the Royal Melbourne Polytechnic. Students also have another choice, the 4+0 model, which requires them to study in China for four years and finally obtain the graduation certificate and degree certificate issued by Shandong University. The major has been enrolling students since 2013, and after 10 years of construction, it has formed distinctive characteristics in running a school and has been highly recognized by both Chinese and Australian schools, students, parents, and employers. At the same time, the school has also cultivated an international teaching team and successfully trained many high-level professionals.

Through the implementation of the course group plan, the college guides and cultivates new teachers to join the teaching team in terms

of teacher training. In addition, relevant teachers will regularly hold teaching and research activities on the curriculum ideology and politics, including mid-term teaching inspections that last three weeks every semester, supervision, listening to classes and on-site comments, paper spot checks, departmental symposium, summary exchange meetings, etc. Each academic year also includes activities such as course group seminars, new teacher training, and observation teaching. These measures have played a positive role in promoting teachers' awareness and ability of the curriculum ideology and politics, thereby improving the effectiveness of the courses. Since 2013, two teachers have been awarded as outstanding graduate advisors in Shandong Province, and another three teachers have been recognized as excellent cases of the curriculum ideology and politics at the school level subdivision knowledge.

Significant achievements have been made in student training. Three students have been nominated as China's self-improvement stars for college students, one student has been recognized as a pioneer in practicing socialist core values by the Central Committee of the Communist Youth League, one student has won the title of outstanding student cadres at the provincial level, one student has won the China Telecom Scholarship, and another four students have been recognized as outstanding students at the provincial level. Additionally, 14 students have been recognized as outstanding graduates in Shandong Province. One student has been recognized as an advanced individual in social practice in Shandong Province, and four students have received the Principal's Scholarship from Shandong University. In practical competitions such as the Challenge Cup and the Internet+, students have performed actively and achieved excellent results, with multiple students winning honors and awards at the provincial level or above.

Some graduates choose to further their studies and pursue master's or doctoral degrees at top universities in China or internationally. The employment rate for this major is nearly 20 percentage points higher than that of ordinary majors. In 2021, 97.5% of students obtained employment, with 28.5% choosing to study at top universities overseas and another 33.7% choosing to study at well-known domestic institutions such as Tsinghua University and the University of Chinese Academy of Sciences. Nearly one-third of students signed contracts with companies such as Beijing Aerospace Petrochemical Technology Equipment Engineering Co., Ltd. The quality of talent cultivation has been widely recognized by society.

4. Conclusions

Cultivating talents is a continuous process, so ideological and political education cannot be achieved overnight; it requires time and patience. Under the trend of internationalization, countries around the world are committed to cultivating talents with their own national and ethnic values. China's higher education must undertake important tasks such as cultivating national talents and outstanding talents needed by the socialist cause.

We must not only strive to improve students' self-learning ability and interest in science, but also cultivate their innovative thinking as much as possible, train their comprehensive quality and practical ability, broaden their international vision, enhance their international competitiveness, and make them become international innovative engineering talents. More importantly, our students should love the socialist cause and have a passion for serving the people and a spirit of devotion. The key to achieving all this lies in the joint efforts of each educator.

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