The Practice of Integrating Curriculum Ideology and Politics into University Physics Course Teaching Organically

Yi Wang*, Donghua Fan, Fu Dai
School of Applied Physics and Materials, Wuyi University, Jiangmen 529020, Guangdong, China
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Abstract: In the process of cultivating high-quality applied talents in contemporary colleges and universities, any teacher should integrate curriculum ideology and politics into daily curriculum teaching. This is a task that every teacher must undertake. It is an inevitable requirement for the cultivation of high-quality talents with Chinese characteristics and socialism. It is an inevitable requirement for the cultivation of high-quality talents that meet the (outcome-based education) OBE concept and the needs of the country. Through years of organic integration of the ideological and political content of the curriculum into the teaching practice of college physics, the author has realized that this can not only achieve better teaching results, but also comprehensively improve the teachers' own education and teaching level. The author would like to take this opportunity to share some personal experiences with colleagues.

Keywords: curriculum ideology and politics, organic integration, OBE concept, talent training mode

1. Introduction

Curriculum ideology and politics is a comprehensive education and teaching concept and specific implementation methods. It uses a curriculum education and teaching form of constructing a full-staff, full-process, full-course education, that is, "three-full education" pattern, which forms a co-curricular and synergistic education with various courses and the ideological and political theory courses offered by various schools. model. It regards "cultivating morality and cultivating people, teaching and educating people" as the fundamental task of higher education. [1] "Curriculum ideology and politics" is different from "ideological and political curriculum". It asks every teacher to integrate the elements and contents of "curriculum ideology and politics" into the curriculum teaching under the guidance of the entire talent cultivation plan and teaching system. This kind of integration does not have any compulsiveness, but it is an indispensable element and content in the high-quality talent training program that China's higher education country urgently needs [2]. However, for most young teachers, there is still a big difference among the understanding of what is "curriculum ideology and politics", how to carry out curriculum ideology and politics teaching, and how to integrate "curriculum ideology and politics" elements into the process of curriculum teaching. At the same time, there are deficiencies in experience in the acquisition and understanding of the "element and content" of curriculum ideology and politics, and the effectiveness of the organic combination with the teaching content of the curriculum. It is very meaningful for everyone to jointly improve the teaching level of curriculum ideology and politics through mutual exchanges and mutual learning.

2. How to integrate "curriculum ideology and politics" into the course teaching process

2.1 Understand the importance and significance of "curriculum ideology and politics" elements in curriculum teaching

"Curriculum ideology and politics" is a teaching content that has a positive impact on the students' outlook on life, science, values, and world, that is, the "Four Outlook" included in the teaching of the curriculum. The outlook on science must be added here, because it has the scientific cognition attributes of higher education and talent training. The teaching content of "curriculum ideology and politics" is not isolated from the normal course teaching but "mechanically applied" content. It is an important part of the teaching system and curriculum teaching content of the entire college student talent training program, and it can be organically integrated into the whole process of curriculum teaching. It requires teachers to promote it to a higher teaching height [3,4]. The characteristics of "curriculum ideology and politics" are: the content is fresh, forward-looking, scientific, and instructive. It has an important leading role in the formation of the Four Outlooks of college students, and it is even for college students to leave the school to engage in scientific research and technological development. Engaging in the work of government departments has important guiding significance.
2.2 Deeply understand the connotation of "curriculum ideology and politics" and improve the quality of selection of teaching content of "curriculum ideology and politics"

Only when teachers have a deep understanding of the connotation of "curriculum ideology and politics" can they integrate the curriculum ideology and politics content accurately, scientifically, and deeply in the course of teaching. For example, when talking about mechanical vibration and fluctuation, the technical innovations contained in China's high-speed rail's core technologies with independent intellectual property rights — "high-speed rail shock absorbers", "seamless steel rails", etc., are in place to truly stimulate The learning interest of the majority of students. The explanation of the modern application of the basic knowledge learned will be more thorough and clear. Students will have a correct understanding of the great achievements of our country's independent and technological innovation. It can be seen that the teacher's knowledge, grasp and selection of the ideological and political content of the course require the teacher to have a deep understanding of the selected content, and be able to integrate these "live" curriculum ideological and political content into the teaching of the course content. For teachers, this is also a double improvement of awareness and knowledge. If the examples selected by the teacher are not accurate or even correct, it will have a negative effect of "misleading students". Therefore, the teacher must carefully prepare the relevant teaching content to ensure the quality of teaching [4].

2.3 How to organically integrate the content of "curriculum ideology and politics" and the content of curriculum education

This problem should be a practical problem that many teachers are confused or have differences in understanding. Judging from the practical experience of education and teaching in different types of colleges and universities for many years, several combinations should be realized. (1) The latest advances in world science and technology, especially the latest advances in Chinese engineering and technology, can be combined with the knowledge of university basic physics. For example, China's large-scale scientific project-the combination of the world's largest diameter radio telescope and the resolution knowledge and concepts in the diffraction of light; the road and bridge engineering and the high-speed railway bridges and bridge railways in China's western high-speed railway bridges and bridge railways. Combine and so on. (2) The "Four Outlooks" in the content of these "Curriculum Ideological and Political" should be combined with the development goals and objectives of the taught knowledge used in engineering technology. For example, the combination of China's lunar exploration project and Mars exploration and how to use the relevant kinematics, dynamics and other knowledge we have learned to achieve this grand goal, and so on. (3) As a teacher, you should pay attention to the scientific and technological progress related to the course teaching content in time, not only to be "learned", but also to be able to attract students, arouse students' resonance and attention, and achieve the goal of "curriculum ideological and political" deeply rooted in the hearts of the people. Teachers should guide students to take the initiative to relate to current affairs, to care about the latest application of the professional knowledge they have learned, and to relate to the latest developments in science and technology.

2.4 How to test the effectiveness of teachers' teaching and students' learning

The author believes that the test of the teaching effect of the curriculum ideological and political curriculum can be judged from the following aspects. (1) Some questionnaires can be designed to conduct questionnaire surveys, so that the first-hand and most authentic students' evaluation of the effect of integrating curriculum ideology and politics into classroom teaching can be obtained. The design of the questionnaire requires careful preparation. (2) The ideological and political teaching content of the course is fully prepared, including videos, pictures, clear physics principles, the effects of the application of physics principles, and innovative curriculum concepts that attract students. At the same time, it should be very popular with students, can effectively attract students' attention, and melt into their study and thinking. (3) The ideological and political content of the curriculum must first enter the talent training program, enter the curriculum outline, enter the teaching plan, enter the teacher's brain. (4) Students can have the correct "Four Outlooks" through learning, and be able to link the curriculum ideology and politics with the content of the curriculum.

3. A practical case of the integration of curriculum ideology and politics with college physics teaching content

Due to space limitations, this article gives the ideological and political outline of the 24-hour course content of the second semester of college physics, which is for reference only.
4. Experience

The organic integration of the ideological and political elements of the curriculum in the normal subject teaching process is not only the need for the country's high-quality talent training, but also the need for moral cultivation, teaching and educating people. To do a good job in curriculum ideological and political teaching, teachers must have a higher level...
of understanding and the ability to control curriculum ideological and political teaching, and organically integrate it with normal curriculum teaching. This is the responsibility and obligation of every teacher. Only in this way can we truly realize the national strategic goal of establishing morality and cultivating people.

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