



# Exploration and Practice of Curriculum Ideology and Politics Education in Engineering Majors

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**Abstract.** Since the 18th CPC National Congress, the CPC Central Committee has held several national conferences on ideological and political work in colleges and universities, emphasizing the importance of curriculum ideological and political work. However, there are still a lot of problems in the development of curriculum thinking and politics for professional courses, and it is still in the exploration stage. Many professional courses still adopt traditional teaching methods, focusing on the cultivation and teaching of professional knowledge, while ideological and political education needs to be strengthened. In the context of the current course Civics, it is necessary to explore and practice how to carry out Civics education in professional courses and how to plan Civics teaching, so as to ensure that the civics of professional courses is a planned, systematic and scientific teaching activity that can be assessed. The thesis firstly discusses the necessity of carrying out the curriculum thinking politics, then puts forward some difficulties and problems encountered in carrying out the curriculum thinking politics, and finally elaborates the teaching exploration and practice of integrating the curriculum thinking politics elements with the teaching of engineering courses.

**Keywords:** Curriculum ideology and politics · OBE · Engineering courses · Ideological and political cases

## 1 Introduction

In order to solve the problem of “educating people” and “educating talents” in China’s higher education, based on “subject moral education” in the basic education stage, Shanghai colleges and universities explored the implementation of “curriculum thinking and politics” in Colleges and universities in 2014. In June 2017, the Ministry of Education held the “Shanghai Research film meeting on the teaching quality of Ideological and political theory courses in Colleges and universities and the on-site promotion meeting on ‘curriculum ideological and political work’ in Colleges and universities” in Fudan University. In the same year, the implementation outline of the quality improvement project of Ideological and political work in Colleges and universities was printed and issued,

and the “curriculum ideological and political work” was written into the document of the Ministry of education for the first time.

In May 2020, the Ministry of Education issued the “Guideline for the Construction of Curriculum Civics in Higher Education”, which for the first time put forward clear requirements for colleges and universities to promote the construction of curriculum civics. The guiding outline puts forward a clear requirement for the professional course of thinking and politics: “all kinds of courses and ideological and political courses go in the same direction, unify explicit education and implicit education, form a synergistic effect, and build a large pattern of all-round education for all staff” [1]. “It is the basic strategic requirement for the professional course of thinking and politics, and it is the basic guarantee for the construction of a large pattern of all-round education for the whole staff. The basic role of “implicit education” in the professional course of thinking and politics, hoping that it can achieve the effect of silent education.

## **2 The Significance and Function of Curriculum Ideological Politics**

Curriculum Civics is an educational practice that educators take professional courses and general courses other than Civics as the carrier, fully exploit the nurturing elements and resources of various courses, and follow the laws of education and teaching to achieve moral education [2]. From the definition, curriculum ideological and political education is a kind of teaching activity based on other courses besides ideological and political education. It needs to ‘go in the same direction’ with the Civics course, to achieve the purpose of ‘invisible education’, forming a synergistic effect of educating people. But to carry out the course of thought politics and must ‘follow the laws of education and teaching’, not for the sake of thought politics and thought politics, cannot be rigid thought politics, cannot be rigidly applied. It should be a series of purposeful, planned, systematic and measurable teaching practices.

## **3 Problems of Ideological and Political Education in Professional Courses**

### **3.1 Some Teachers Have Insufficient Understanding of the Importance of Ideological and Political Education**

Some professional course teachers still stay in the traditional teaching mode that only paid attention to the teaching of professional knowledge in the past, and did not realize the importance and urgency of curriculum ideological politics. Although these teachers also agree with their responsibility and value embodiment of “teaching and educating people”, they naturally ignore “educating people” and focus on “teaching” in the teaching process. They believe that “educating people” itself is the responsibility of Ideological and political courses and full-time student work teachers, and their goal is to do a good job in teaching. On the surface, such a wrong understanding is to simply separate “Curriculum” from “Ideological and political” and to regard “independent and independent” as a clear division of labor. In fact, from a deep level, it is a kind of utilitarian thought in teaching. The indicators of higher-level assessment and evaluation are scientific research

projects, papers, student achievements and awards in competitions, Teachers focus on these teaching achievements in the teaching process, resulting in a series of phenomena of ‘emphasis on intelligence than morality’. How to take measures to change the current situation of professional teachers’ only teaching but not educating’ is the key to the ideological and political development of professional courses.

### **3.2 Insufficient Integration of Ideological and Political Education and Professional Course Knowledge Education**

As more and more attention is paid to ideological and political education, some professional courses do not consider whether the ideological and political education content matches the knowledge content taught in the classroom. It is purely for ideological and political education. The phenomenon reflected is that the transformation of Ideological and political elements and knowledge elements in the classroom teaching process is rigid and unnatural, and the second is that the selection of Ideological and political cases is inappropriate. This kind of problem leads to the poor effect of Ideological and political education, which not only fails to achieve the effect of Ideological and political education, but also causes students’ disgust and plays the opposite role.

### **3.3 Similar Cases of Ideological and Political Education**

The guiding outline for ideological and political construction of courses in Colleges and universities issued by the Ministry of education specifically points out that “Ideological and political construction of courses is a systematic project. Colleges and universities around the country should attach great importance to it, strengthen top-level design, make comprehensive planning, step by step, point by point, and constantly improve teaching results”.

At present, there is a wrong understanding about the ideological and political education in the curriculum. It is considered that the ideological and political education in the curriculum is to add ideological and political elements to the professional curriculum. Such misconceptions directly lead to the lack of overall planning, top-level design, decentralized and unsystematic implementation of Ideological and political courses, and the lack of communication between courses, resulting in duplication of Ideological and political elements among professional courses, similar cases, and even contradictions and conflicts.

The reason for this is that the curriculum ideological politics is simply regarded as the task of the curriculum itself and the personal responsibility of the teachers who undertake the curriculum teaching task. The development of curriculum ideological politics is not viewed from the perspective of professional development and training objectives.

## **4 Ways to Solve Problems**

Based on the above problems, we can learn from the results-oriented education concept and take measures from the three aspects of specialty, curriculum and teachers to solve

the difficulties encountered in the process of Ideological and political development of curriculum.

OBE (output based education) is an educational concept with “output” as the core idea. It was put forward by Spady and others in 1981, and soon received people’s attention and recognition. It has become the mainstream idea of education reform in the United States, Britain, Canada and other countries. Its principle is “student oriented, achievement oriented and continuous improvement”.

The core idea of result oriented education is “reverse design and forward implementation”. In the process of curriculum teaching, it is necessary to clarify the contribution of each course and each lesson to the realization of the expected learning output. Therefore, to carry out ideological and Political Education under the concept of OBE, it is first necessary to define what learning achievements students can obtain after receiving ideological and political education, how these achievements are reflected, how students realize them, and how teachers help students realize them.

#### **4.1 It is Necessary to Complete the Top-Level Design of Ideological and Political Education from the Perspective of Professional Training Program**

As a professional course, we carry out ideological and political construction of courses. At present, the practice of most majors in our university is to pilot some courses and gradually follow up the rest. A large number of course Ideological and political demonstration courses have been built and completed. On the one hand, these demonstration courses show the ways and methods of Ideological and political teaching to the majority of teachers and play a demonstration role. On the other hand, they also constantly summarize experience to achieve the effect of gradual improvement and optimization. However, at present, the implementation process of curriculum ideological politics is still lack of systematic and overall top-level design, which leads to the lack of overall deployment of curriculum ideological politics in the teaching process of various professional courses. Ideological and political elements are arranged disorderly among courses. Some requirements are excessively repeated, while some requirements may be omitted.

Therefore, there is an urgent need to carry out unified deployment, planning, requirements and assessment of curriculum ideology and politics from the perspective of professional training programs. Before completing the top-level design of Ideological and political education, it is necessary to clarify a scope. First of all, this paper does not discuss the ideological and political content design planning of school-level public basic courses, but only from the perspective of professional courses. The second is the need to clarify the ideological and political teaching content and objectives.

#### **4.2 Strengthening Curriculum Construction Includes Not Only the Construction of Knowledge System, But also the Construction of Ideological and Political Content**

In view of the curriculum construction, we need not only to improve the construction of knowledge and ability teaching system, but also to realize the construction of ideological and political teaching content. Ideological and political teaching should not only be the embellishment of professional knowledge teaching, but also be an indispensable part of

the complete teaching plan. Therefore, it is necessary to complete the teaching design of the ideological and political unit in the syllabus, teaching calendar, teaching design and other teaching materials.

In view of the well-established ideological and political teaching objectives, course teachers first need to design which knowledge was teaching objectives these ideological and political objectives can be combined with. In the teaching process, we need a natural and smooth transition from knowledge teaching to ideological and political teaching, so the teaching design of this step is the prerequisite for the success of Ideological and political teaching. The combination of the two must be organic, smooth and natural, otherwise it is easy to copy mechanically and cannot play its due role in teaching.

Secondly, the teaching process of Ideological and political elements must be completed based on cases. Based on cases, the ideological and political elements should be gradually guided to complete the ideological and political teaching objectives. In the process of Ideological and political teaching, we should not preach according to the book. Starting from the case, first grasp the students' interests, and then activate the classroom atmosphere and gradually lead to the teaching theme through questions, discussions, and other interactive modes. In this process, we must pay attention to that the ideological and political education in the curriculum is "invisible education", which cannot be too direct, otherwise, it will not only fail to achieve the ideological and political teaching objectives, but also easily have a negative effect.

Finally, ideological and political teaching cases must be carefully selected, and must be organically combined with the combined knowledge teaching content. Cases should be displayed in various forms, such as text, video, news, animation, etc. The selected cases should be as rich in content and diverse in forms as possible, with appropriate examples and teaching in fun. In addition, the courses need to communicate with each other on the use of cases to avoid repetition and conflict.

### **4.3 Strengthen the Guidance, Training, and Motivation of Teachers**

The main implementer of the course teaching is the teacher. Therefore, the teachers' understanding of the course Ideological Politics, teaching design and teaching implementation are the reliable guarantee for the realization of the ideological politics teaching objectives.

It is undeniable that at present, some professional course teachers still have resistance to carrying out curriculum ideological and political education, thinking that "it takes up class hours", "it is not my job" and so on. As a teaching manager, he should not be assigned rigidly, nor should they be forced to carry out ideological and political education in professional courses. First, teachers need to strengthen guidance and training. Gradually let professional teachers realize the necessity and importance of curriculum ideological and political education, let professional teachers change passivity into initiative, and improve teachers' enthusiasm in carrying out ideological and political education.

## 5 Conclusion

In the ideological and political teaching system of curriculum, the curriculum is only the smallest teaching unit to realize the teaching process. Therefore, to achieve all the ideological and political goals, we can not only count on the success of one or several courses. Curriculum ideological politics should be an organized, planned, systematic and effective teaching activity, which requires the coordination of schools, majors and courses. Based on the idea of achievement-oriented education, this paper explores an implementation route of curriculum ideological politics, which lays a solid foundation for the extensive development of curriculum ideological politics in various courses of Engineering Majors in the future.

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