

Research on the path of political thought education in the second and third classes of computer majors from the perspective of "professional political thought education"

Miaomiao Zhang, Shulan Yu

School of Computer Science and Technology, School of Software, Zhejiang University of Technology,
Hangzhou, 310012, China

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Abstract: According to the characteristics of computer specialty, taking the teaching reform of Python programming course as an example, and according to the social needs and students' future development needs, this paper discusses the teaching reform scheme of "curriculum political thought + practical innovation" from the aspects of curriculum teaching objectives, teaching content, teaching mode and curriculum evaluation. Through the verification of teaching practice, it shows that the new teaching reform scheme has effectively stimulated students' learning enthusiasm, the "1 + 1 > 2" synergy between professional education and political thought education has been realized, and the training quality of professional talents has been improved. Deeply understand the contemporary connotation of curriculum ideology and politics, explain the indispensable core elements of political thought courses for computer majors, and effectively improve the quality of teaching according to the political thought goals of the curriculum, promote the three-round education, and realize the cultivation of morality. Combining with the characteristics of computer majors, this paper digs out the political thought elements of five major courses, and puts forward the measures of adopting mixed teaching mode to carry out political thought education. Finally, taking the basic course of programming as an example, it discusses the effective implementation path of political thought education in practical courses.

1. Introduction

This fundamental attribute of a socialist university with Chinese characteristics requires college teachers to consciously integrate the concept and content of education with curriculum teaching, design curriculum teaching, and adopt appropriate methods to teach good courses that will help students achieve their knowledge, ability, quality, ideology and morality in an all-round way [1]. At the same time, how to cultivate high-quality and excellent engineering innovative talents with both political integrity and ability has also become an important topic in the construction of new engineering [2]. In June 2020, the Ministry of Education issued the "Guidelines for the Political Thought Construction of Curriculum in Colleges and Universities", emphasizing the need to implement the fundamental task of building morality and cultivating people, and comprehensively promote the political thought construction of the curriculum [3]. Carrying out humanized political thought education around students' ideological reality can really guide college students to think about reality to the theoretical level, make Marxist scientific theory and ideology really internalize into students' consensus, constantly improve students' ideological level, political consciousness, moral quality and cultural accomplishment, and achieve the unity of cognition and behavior [4].

The political thought theory course will be further improved and strengthened to enhance its adaptability in the process of students' growth and development [5]. This important discussion shows that professional courses should give full play to their role in political thought education, refine the cultural elements and value elements contained in professional courses, and transform these elements into a form of transmission that can reflect the core socialist values. At the same time, strengthen the guidance of the value level [6]. Top-level design and construction of teaching system at school level, key problems and solutions of political thought construction of courses,

coordinated reform route of political thought courses, ways to improve teachers' political thought ability of courses, construction of "internet plus's political thought mode", implementation of political thought education of basic courses in universities, exploration and practice of political thought education of professional courses, etc. It not only promotes the role of political thought courses as the main channel, but also gives play to the educational functions of specialized courses, general education courses, practical activities, and activities of the Communist Youth League. It expands the space of education and teaching, builds an integrated "professional political thought" educational system, and explores practice [7].

2. Thoughts on Political Thought Reform of Computer Courses

2.1. Determine the professional talent training goal based on "curriculum political thought + practical innovation"

Curriculum ideology and politics itself is not an independent curriculum, it must be integrated with specific subject teaching content and links in order to reflect its life education and value guiding significance [8]. In recent years, the development of cloud computing, big data and artificial intelligence has injected new impetus into traditional computer majors, and put forward new requirements for the cultivation of professionals. In essence, the political thought education of computer majors is a way of thinking, a tendency of consciousness and a teaching idea, which is to integrate the core elements that are most suitable for the major, most in need of cultivation and most in shaping moral character into the professional teaching [9]. The political thought course wants to be organically and coordinately integrated with professional courses, and the design of the overall goal is an important link to try first.

Combined with the characteristics of computer specialty, we design six kinds of Political thought objectives: the concept of family and country in the new era, the core socialist values, the concept of scientific development, the concept of fine traditional culture, the concept of modern rule of law and the concept of professional cultivation. Strengthen the goal of cultivating people from six perspectives: family and country, society, science, culture, rule of law and career. Teachers should first find the combination of computer professional courses and political thought education in classroom teaching design, so that political thought education can be naturally integrated into professional classrooms. In the process of preparing lessons, teachers should dig out the political thought elements contained in knowledge points and share the connotation of political thought education with students in an easy-to-understand way [10]. Political thought elements can well stimulate students' enthusiasm to learn professional knowledge, let students understand the social significance of their future career, ignite the enthusiasm of "patriotism, ambition to strengthen the country and trip to serve the country", and firmly establish the life goal of striving for building a socialist modern power. Fully consider the public basic courses undertaken by different courses and activities such as political thought courses, general courses, professional courses, party and League activities and campus cultural activities in the process of educating people. Possess the ability to design, develop, verify and analyze model computers, which lays a solid foundation for cultivating the comprehensive development ability of computer software and hardware systems and the innovative ability to solve practical engineering problems.

2.2. Overall framework of curriculum reform

The primary condition of curriculum teaching reform is that teachers in the curriculum group are required to "pass five passes", that is, politics, morality, basic Kung Fu, teaching reform and information-based teaching. Programming ability is the knowledge and skills that computer professionals should have, and Python language is the current mainstream programming language, which has strong practicality and application, and is a key skill for students' future employment. Starting from the course teaching objectives, this paper analyzes the existing course teaching system, and follows the principle of "originating from textbooks, being used for practice, expanding and innovating", and reforms the original teaching content, that is, in addition to the basic

knowledge contained in conventional textbooks, in order to enable students to master the application of Python language in different fields, office automation, web crawler, data analysis, graphical programming and other special topics are added in combination with the needs of enterprises. Figure 1 shows the basic framework of student-centered curriculum political thought reform. It can be seen that the reform takes curriculum thought and politics as the traction and runs through the process of curriculum teaching reform. The whole is the dual reform of "curriculum thought and politics + Curriculum Teaching", focusing on the student-centered reform.

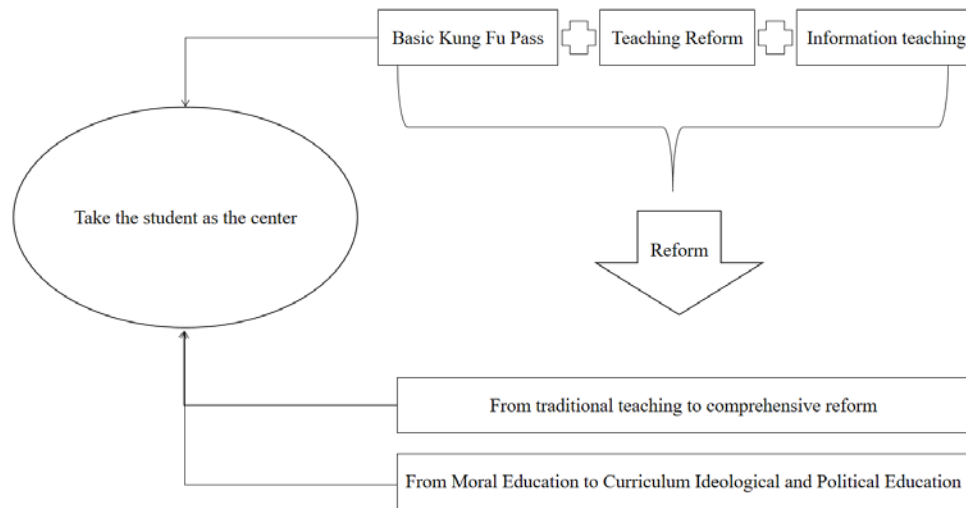


Figure 1 The basic framework of the student-centered curriculum political thought reform

The supporting course political thought teaching mode refers to a kind of teaching mode which is supported by cooperative enterprises and integrated into professional quality education with the help of excellent resources of enterprises in engineering-oriented, future-oriented and problem-oriented extended practical teaching activities. Therefore, the "curriculum political thought" of computer specialty requires the political thought elements of computer specialty curriculum to integrate the core elements that should be included in patriotism, scientific and moral quality and professional ethics consciousness into the curriculum design of computer specialty, so as to truly implement the political thought education. Political thought courses in professional courses are not political thought courses. In terms of teaching methods, they add some political thought elements to the teaching content in the traditional professional course classroom teaching process. In terms of teaching methods, we should vigorously advocate the "leading" teaching method, and carry out the teaching of curriculum ideology and politics through "invisible" rather than "explicit" methods. Teachers can send posts with positive energy through WeChat, QQ and other communication tools in the circle of friends or course groups, which can arouse students' ideological resonance and help them to set up correct life goals subtly

3. Analysis on the effect of teaching reform

3.1. Build and nurture abstract thinking

The teaching scheme was tried out and promoted in the 2019 computer class of our school, and compared with the previous 2018 computer class. Industry experts have deep contact and research on the technical frontier in the professional field, which is very helpful to broaden students' horizons, increase their knowledge, help students build self-confidence, stimulate their enthusiasm for learning, mobilize their enthusiasm for learning, and establish a positive attitude towards life. Based on this, the political thought implementation of computer majors needs to be further promoted from the setting of training objectives, the reform of teaching methods, the construction of teaching contents, the improvement of educational consciousness and the establishment of evaluation system. The rational use of rich and diverse teaching methods plays an important role in

promoting the political thought construction of computer majors. In the course of teaching, choosing the correct teaching method needs to follow the principles of combining theory with practice and combining knowledge imparting with inspiring teaching. Train students to use abstract thinking to extract things in the real world into various classes, interfaces and inheritance relationships that can reflect the real world. Only by understanding the role of abstract thinking in this course can we better carry out object-oriented programming. Because the teaching objectives and assessment methods are different after the reform, the students' learning initiative, learning satisfaction, and the satisfaction of summer internship units to students are compared. The comparison results are shown in Figure 2.

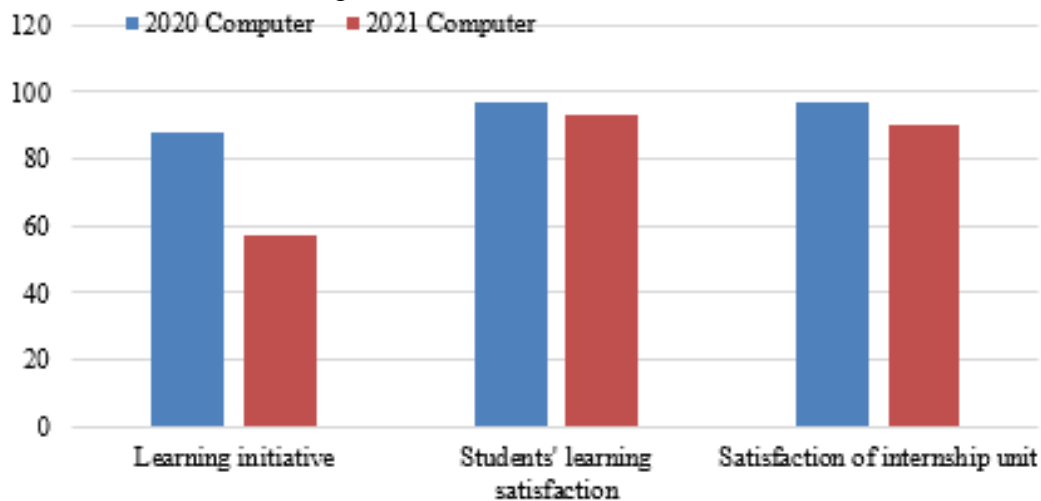


Figure 2 Comparison of course learning results of computer class students in 2018 and 2019

When 2018 computer class was learning this course, there were individual lateness, and the proportion of people who could actively expand their learning was less than 60%. After 2019 computer class adopted the new teaching reform scheme, the attendance rate and learning initiative were significantly improved, of which the learning initiative reached more than 80%.

Make full use of a variety of teaching forms, so that political thought education and curriculum professional education are organically unified, so that political thought education runs through the whole process of curriculum teaching, and uses permeable, embedded, and integrated teaching to play the role of "keeping a good section of the canal and planting good seeds." "Responsibility Field" educating people. In instructional design, teachers first introduce the basic concept of abstract thinking, explaining that object-oriented programming means thinking about code structure according to people's thinking habits, and object-oriented thinking means classifying various things. Through purposeful thinking training, students' abstract thinking ability is constantly cultivated, so that students can understand and appreciate the guiding role of abstract thinking in the learning process. Through these political thought elements, students can strengthen their belief in communism, have confidence in their country, the Communist Party and their major. At the same time, they can stimulate students' learning enthusiasm, arm themselves with professional knowledge, become socialist successors and contribute to the country in the future

3.2. Understand phenomenon and essence

The core spirit of scientific research is seeking truth and being pragmatic, and the main evaluation standard of scientific research results is the advancement and creativity of the results. In the process of teaching, students often give back error information, and many red tips pop up on the console, and there are quite a few unfamiliar English words and unfamiliar package names and class names. Teachers' words and deeds, professional ethics embodied in the teaching process, serious attitude towards work in the teaching process, patience and love for students all play an important role in guiding students' value and shaping students' professional responsibility. There are different implementation schemes for a programming problem. How to choose the corresponding data

structure and algorithm is a dialectical process in itself, and it is necessary to weigh factors such as running time, memory space, difficulty of implementation, and code length. The curriculum evaluation system should be dynamic, developmental and full-process evaluation. In the process of curriculum evaluation, attention should be paid to the natural attribute of computer majors as engineering majors, and the inspiration of scientific and systematic thinking should be taken as the focal point of computer majors' political thought construction.

Through the process of collective lesson preparation, training and exchange, class interaction and so on, jointly excavate the political thought elements contained in the computer specialty, and improve the educational consciousness of the computer specialty teachers. Take the cultivation of patriotism, professional ethics education, the training of professional ethics consciousness and the shaping of humanistic spirit as important elements of Political thought education in computer professional courses, and educate and guide students to become new people of the times with both physical and mental health, morality and ability. In the practical teaching link, the thinking mode of curriculum ideology and politics should be used to guide students, help students find their own learning methods, and set up teaching cases to guide teaching, so as to make students clear the true value of curriculum ideology and politics, and through curriculum thinking The educational value of politics guides students to carry out inquiry-based learning, so that students' subjective initiative can be fully exerted, and a high degree of integration of computer professional courses and curriculum ideology and politics is truly achieved

4. Conclusion

Moral education is the initial heart and mission of education. Under the upsurge of new engineering construction, it is the need of the development of higher education and the times to carry out the teaching reform based on "political thought education in curriculum+practical innovation". For the current background and professional teaching practice of our school, further fully highlight the characteristics of the school, form computer courseware and professional lectures suitable for students, and increase the strength and teaching content of curriculum teaching innovation and politics in theoretical teaching. After many years of professional theoretical teaching and practice of students, the overall teaching evaluation is excellent and deeply recognized and welcomed by students. At the same time, the theoretical level of scientific views such as thinking ability and methodology has also been improved under the subtle guidance of teachers. While emphasizing the cultivation of educational emotions in curriculum ideology and politics, it is also necessary to strengthen the process management and supervision of each link, grasp the degree between regulations and freedom, and pay attention to teaching students according to their aptitude while demanding high standards for students. This Taking the course "Principles of Computer Composition" as an example, this paper discusses the political thought reform of the core courses of computer majors, and preliminarily gives the integrated teaching goal, overall design, teaching content and system design, teaching methods and means, etc. The curriculum political thought reform should be carried out in combination with the reality of curriculum teaching, deeply tap the educational elements in the curriculum, and use appropriate teaching methods and means to implement teaching.

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