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Exploration and Practice of Ideological and Political Education Model in the Course of Digital Electronic Technology

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Abstract

Based on the concept of engineering education certification, curriculum ideological and political education is an important link in cultivating students to meet the graduation requirements of non-technical indicators. The traditional teaching mode of "Digital Electronic Technology" lacks the integration of ideological and political elements. This article takes the "Digital Electronic Technology" course of Guilin University of Technology as a reform pilot, restructures the ideological and political teaching outline of the course, writes a course teaching plan that incorporates ideological and political elements, and forms a spiral subject competition education mode, progressive scientific research education mode, and multiple collaborative school enterprise cooperation education mode of "Digital Electronic Technology". The interactive second classroom education model of "student subjectivity" aims to cultivate high-quality applied talents that meet the needs of high-quality economic and social development.

Subject Areas

Curriculum Development

Keywords

Engineering Education Certification, Digital Electronic Technology Course, Ideological and Political Elements, Education Mode

1. Introduction

In order to cultivate talents who meet the needs of future social development, universities need to continuously carry out teaching reforms, explore the imple-

mentation methods of combining knowledge education and ideological and political education, and strengthen the ideological and political education process [1] [2] [3]. The student-centered teaching philosophy adheres to the fundamental task of cultivating morality and cultivating talents. The ideological and political education and professional knowledge impartation of the curriculum go hand in hand, continuously improving students' ideological and moral cultivation, deeply integrating professional teaching and ideological and political elements, and promoting the quality of student training [4] [5] [6].

This article takes the "Digital Electronic Technology" course of Guilin University of Technology as a reform pilot, restructures the ideological and political teaching outline of the course, writes a course teaching plan that integrates ideological and political elements, and forms a spiral subject competition education model, progressive scientific research education model, multiple collaborative school enterprise cooperation education model, and "student subjectivity" interactive second classroom education model for "Digital Electronic Technology", and then cultivates high-quality applied talents that meet the needs of high-quality economic and social development. Furthermore, it aims to promote the cultivation of students' professional literacy and abilities in professional engineering certification, in order to meet the talent cultivation needs of comprehensive and comprehensive education.

2. The Current Situation of Ideological and Political Education in the Course of Digital Electronic Technology

The course 'Digital Electronic Technology' is an important foundational course in the process of cultivating automation professionals, with a wide range of knowledge points. It requires students to have the ability to correctly use digital logic integrated circuits, analyze and design digital logic circuits, and solve complex engineering problems related to digital circuit systems. At present, the current situation of ideological and political education in the course of "Digital Electronic Technology" is as follows: 1) The depth of ideological and political education in the course is not enough, the integration of ideological and political elements with the course teaching is difficult, and students' understanding of knowledge points is not thorough enough [7] [8]. 2) The ideological and political teaching methods in the curriculum are insufficient, and teachers still use old-fashioned teaching methods, the teaching method that teachers teach and students passively accept is difficult to adapt to the updating and iteration of modern educational teaching tools. Teachers use integrated and project-based teaching methods to help students understand the key and difficult content of knowledge in their classes. 3) The concept of ideological and political education in the curriculum is not enough, and there are not many channels for teachers to accept new ideas and methods, making it difficult to actively develop new teaching concepts for students. 4) The assessment method for ideological and political education in the curriculum is unreasonable, not measurable and computable,

and difficult to implement in the actual teaching process, making it difficult to distinguish the degree of achievement of students' ideological and political goals. The current evaluation method is to use graduate teaching assistants to assess the trajectory of students' thoughts, thoughts, and emotional development after various teaching practices such as extracurricular and in class. In practical teaching activities, students' performance and team collaboration ability are observed and analyzed to form a comprehensive evaluation report for the course. Therefore, the work of ideological and political education in the curriculum has a long way to go, and teachers should actively consider how to effectively explore the ideological and political elements of the curriculum and how to use ideological and political integration teaching methods to enhance students' professional literacy.

In summary, following the concept of engineering education certification, changing the teaching methods of ideological and political education, accumulating typical cases of ideological and political education in courses, improving the ideological and political education system in courses, constructing multi platform, multi method, and multi course ideological and political education models, forming a reasonable evaluation system for the effectiveness of ideological and political education in courses, and promoting the efficient development of student quality cultivation. Therefore, it is of great significance to carry out the reform of the ideological and political education mode in the course of "Digital Electronic Technology".

3. The Construction Plan of Ideological and Political Education Model for the Course of Digital Electronic Technology

3.1. Building a Good Competition Ecosystem and Forming a Spiral Disciplinary Competition Education Model

Establish a teaching team for the "Digital Electronic Technology" course, relying on institutional documents formulated by the school and college, to motivate teachers to participate in subject competition guidance work, collectively prepare lessons, write ideological and political teaching outlines and lesson plans, regularly organize teachers to participate in course ideological and political education training forums online and offline, and continuously improve teachers' ideological and political teaching level. Adopting teaching methods such as practical exercise, case integration, and example demonstration, using simulation software, multimedia courseware, and blackboard writing to guide students in learning, stimulate students' interest in learning, and mobilize their learning initiative. Relying on the "Robot Innovation Practice Base" and the "CDIO Innovation Studio" jointly built with Shenzhen Xinyingda Technology Co., Ltd., we adopt a competition dual guidance teacher system to select experienced enterprise mentors, establish a technology innovation practice team, and form a competitive student competition team through multi-level selection. We are committed to

participating in high-level and influential subject competitions and improving students' hands-on practical abilities. Establish a video library of innovative practice case stories for outstanding senior students, select stories from around them to infect students, and enhance their sense of identification with their majors and courses.

3.2. Establish a Gradual Scientific Research and Education Model, and Leverage the Effectiveness of Teaching and Research Platform Education Positions

Based on the teaching and research platform of the college and the teaching and research achievements of the "Digital Electronic Technology" course, after preliminary training and intention surveys, with student interests as the main guide and curriculum education goals as auxiliary, standardized scientific research ability tests are conducted on students to select suitable students to enter relevant scientific research platforms and laboratories for project research work. Associate course assignments with research achievements, better apply theoretical knowledge to practice, and help students understand the key and difficult points of the course. At the same time, a team collaboration model is adopted to conduct on-site defense after completing the physical work, forming a student course ideological and political evaluation mechanism, and improving the teaching effectiveness of the course.

3.3. Deepen the Deep Integration Mechanism of School Enterprise Cooperation and Form a Diversified Collaborative Model of School Enterprise Collaborative Education

Relying on the "Digital Electronic Technology" course innovation and entrepreneurship dual mentor system, establish a school enterprise collaborative education base, select course lecturers and experimental lecturers to deeply communicate and exchange with enterprises, and complete teacher training work. At the same time, corporate mentors delve into the school to gain a deeper understanding of students' learning status and knowledge mastery. During the graduation internship and graduation design stages of students, we fully cooperate with relevant enterprises and encourage students to enter the enterprise for graduation internships. During this process, production projects in the enterprise can be used as graduation design topics, and dual mentors can be formed with senior engineering personnel to guide. On campus teachers are responsible for daily management and routine guidance, while off campus mentors are responsible for checking the engineering design part, following the principle of "real problems and real work", Implement the educational concept of "unity of knowledge and action". Through cooperation in implementing research projects, jointly developing talent cultivation plans, developing teaching resources, and jointly building practical and training centers to compile course materials, a deep integration of industry, academia, and research has been achieved.

3.4. Creating an Interactive Second Classroom Battlefield with "Student Subjectivity" and Revitalizing the Educational Vitality of Youth League Work

The college has deeply implemented the "Second Classroom Transcript" system of the Communist Youth League, incorporating participation in social practice activities into the comprehensive quality evaluation system of students. Promote the value application of the "Second Classroom Transcript" and include it in the graduate file. Use the "Second Classroom Transcript" as an important evaluation standard or reference for students' comprehensive quality assessment, award and evaluation, promotion to undergraduate and graduate schools, and promotion to the Communist Party of China. By continuously deepening the organization of activities, especially relying on the "Science and Technology Culture Festival", we aim to create a series of distinctive brand activities for the college, hold professional skills competitions, cultivate students' innovative thinking, improve professional abilities, achieve high-quality employment, and fully demonstrate our emotions in caring for the professional development needs of our classmates.

4. Conclusions

1) This article reconstructs the ideological and political teaching outline of the course "Digital Electronic Technology", writes a curriculum lesson plan that incorporates ideological and political elements, constructs a good competition ecology, and forms a spiral disciplinary competition and education model for "Digital Electronic Technology".

2) Rely on the existing scientific research platform of the college, establish a gradual scientific research education model, and leverage the effectiveness of the teaching and research platform's education position.

3) Deepen the deep integration mechanism of school enterprise cooperation, apply for a modern industrial college, and form a diversified collaborative school enterprise collaborative education model.

4) Create an interactive second classroom platform with "student subjectivity" to revitalize the educational vitality of youth league work.

Conflicts of Interest

The author declares no conflicts of interest.

References

[1] Wanyi, P., Wang, D. and Cao, W. (2023) Exploration of Ideological and Political Education in the Course of "Fundamentals of Mechanical Design": Taking Chang'an University as an Example. *Gansu Education Research*, No. 10, 100-102.

[2] Ye, H., Tan, T. and Le, S.Y. (2023) Faith, Dream Building, Practical Responsibility, and Full Effort in Practicing and Educating "Great Ideological and Political Courses". *Chinese Communist Youth League*, No. 10, 62-63.

[3] Zhao, H. (2023) Curriculum Construction of "Digital Electronic Technology" in the Context of Ideological and Political Education. *Education and Teaching Forum*, No.

17, 53-56.

[4] Chen, J., Xiong, L., Zhou, J., *et al*. (2023) Hybrid Teaching Reform and Practice of "Digital Electronic Technology" Course Based on Pocket Lab. *Industrial and Information Education*, No. 2, 45-49.

[5] Wang, X.L., Lan, B.T., Wei, X.J., *et al*. (2023) Exploration of Digital Electronic Technology Experimental Teaching Reform under the Background of Professional Certification. *Science and Education Guide*, No. 6, 74-77.

[6] Chen, X. and Yu, J.P. (2023) Experimental Teaching Design of "Digital Electronic Technology" Based on OBE-CDIO Concept. *Journal of Electrical and Electronics Teaching*, **45**, 200-203.

[7] Zhang, H. and Yuan, C. (2020) Research on University Students' Ideological and Political Education in the New Era. *Open Journal of Social Sciences*, **8**, 217-221. https://doi.org/10.4236/jss.2020.86018

[8] Zhao, L. (2021) Design of Digital Circuit Experiment Course Based on FPGA. *World Journal of Engineering and Technology*, **9**, 346-356. https://doi.org/10.4236/wjet.2021.92024