

Analysis of teaching optimization strategy of modern electrical control system installation and debugging course based on Ideological and Political Education

Yujiao Liu, Jing Sun, Chan Deng, Shuqiong Xu, Xuan Guo

(School of Electronic Information, Dongguan Polytechnic, Dongguan, Guangdong, 523808)

Abstract: with the deepening of education reform, the teaching of modern electrical control system installation and debugging course in higher vocational colleges should be further optimized. Teachers should actively introduce new educational concepts and teaching methods, so as to better arouse students' interest, strengthen their understanding and application of the knowledge learned, and improve the effect of education. As a popular educational concept, curriculum ideological and political education can greatly enrich the teaching content, broaden the path of education, and promote the comprehensive development of students. In view of this, this paper will analyze the teaching of modern electrical control system installation and debugging course based on Ideological and political education, and put forward optimization strategies for your reference.

Key words: curriculum ideological and political education; Installation and commissioning of modern electrical control system; Course teaching; Optimization strategy

1 Overview and analysis of curriculum ideological and Political Education

As an advanced educational concept, the course of Ideological and political education can provide a very strong guiding role for the development of higher education, enable students to master the course knowledge and form a strong ideological and political quality and moral quality, which has a great help for their long-term development. In addition, the course of Ideological and political education can help teachers break through the previous teaching mode, broaden the path of education, enrich the value of teaching and education, and further improve the students' knowledge system.

When introducing the course of Ideological and political education into the teaching of modern electrical control system installation and commissioning, we should pay attention to the in-depth exploration of the course content and find the ideological and political elements

Research (electronic version), 2022,12 (01): 37-42

[6] Qianwei Li, Chunmao Chen Exploration of flipped classroom teaching mode of "molecular biology" in Colleges and universities [j]Education and teaching forum, 2022 (32): 88-91

[7] Yang Liu, Boping Li, Yangdi Ou, Ruihong Zhang Construction of excellent chemistry courses: Construction and practice of comprehensive chemistry experiment courses [j]Chemistry Education (Chinese and English), 2021,42 (18): 74-78

[8] Weiwei Wu On the construction mode of teaching materials under the transformation of quality course construction [j]Journal of Hubei open vocational college, 2021,34 (08): 144-145

[9] Chenming Zhu Analysis on the construction of excellent online courses in Colleges and universities [j]Journal of Heilongjiang Teacher Development Institute, 2020,39 (12): 49-51

[10] Fang Yuan, Kaihui Zhao, Bingbing Shi Exploration on the curriculum construction of molecular biology in Colleges and Universities -- Taking Tibet University of agriculture and animal husbandry as an example [j]Education and teaching forum, 2020 (40): 228-229

[11] Xi Niu Research on the teaching of molecular biology experiment course from the perspective of educational ecology [j]Henan agriculture, 2020 (24): 15-17

[12] Xiaoyu Liu, jin Yuan, Cheng Sun Exploration on the application of modular interactive teaching in the teaching of molecular biology course in Colleges and universities [j]Anhui Agricultural Science, 2020,48 (11): 277-279

[13] Xiaoyan Lu Research on the construction of teaching team of excellent courses in Colleges and universities [d]Henan University, 2020

[14] Yanxing Zhou, Jiangbin Li, Hua Zhang, Yuchao Li, Ailing Liang, Qiujing He, Gan Hou Research on the safety management of University molecular biology laboratory [j]Guangdong chemical industry, 2020,47 (01): 172+189

[15] Yaying Dai Research on resource sharing strategy of excellent courses in Colleges and universities from the perspective of students' needs [d]Nanjing University of Aeronautics and Astronautics, 2020

Project (capital) support: first class online open courses of Baotou Normal University in 2020

contained therein, such as patriotism, craftsman spirit, model worker spirit, team cooperation and innovation spirit, so as to improve the effect of education. When carrying out the course teaching, we should try to combine the modern electrical control system installation and commissioning course with the ideological and political content, and influence the world outlook, outlook on life, values and professional attitude of higher vocational students in a subtle way, so as to help them set a clearer development goal.

2 Optimize value analysis

When carrying out the teaching of modern electrical control system installation and debugging, we should first analyze the optimization value according to the course content, carefully select the ideological and political teaching cases, and point out the direction for the optimization of course teaching. The ideological and political elements of the selected cases should be demonstrated in order to provide guidance for the subsequent teaching activities, so as to achieve the educational goal of “cultivating morality, cultivating morality and skills, and improving the level of education”. The specific analysis will be carried out from the following three aspects.

1. Highlight the effect of Ideological and Political Education

Generally speaking, the ideological and political elements will not exist alone. We should try to integrate them with the modern electrical control system installation and commissioning course, so that the course content can become the support of the ideological and political elements, so as to further improve the effect of Ideological and political education. In addition, influenced by traditional ideas, many teachers often take theoretical knowledge as the main teaching content when carrying out teaching reform, ignoring the cultivation of Higher Vocational Students’ comprehensive quality and moral quality.

2. Reflect the goal of Building Morality and cultivating people

When teaching the course of installation and commissioning of modern electrical control system, we should reflect the main line of cultivating people by virtue, and further optimize the current teaching process, content and form based on this. By integrating the teaching of Ideological and political education and modern electrical control system installation and commissioning, higher vocational students can acquire the development of ideology, quality and morality while mastering the course knowledge, and help students grow into talents more in line with the current social needs. When carrying out the teaching of installation and commissioning of modern electrical control system, we should start from multiple angles. In addition to paying attention to the teaching of theoretical knowledge, we should also infiltrate the training of professional quality and moral quality. □3□ Help students’ all-round development

At present, many higher vocational students’ mastery of the knowledge of modern electrical control system installation and debugging course is not solid, and their learning initiative is not enough. Few higher vocational students have formed good learning habits. Under the influence of examination oriented education, many higher vocational students focus on the score when learning the knowledge of modern electrical control system installation and debugging course, which is extremely unfavorable for them to improve their own knowledge system and cultivate good learning habits. The course of installation and commissioning of modern electrical control system itself has a certain complexity, which causes some higher vocational students to shrink back and fear difficulties when they encounter problems, hindering their long-term development. By introducing the course Ideological and political education into the education activities, it can help higher vocational students clarify the direction of future efforts, and help teachers further improve the teaching design and teaching process.

3 Analysis of current teaching situation

1. Unclear ideological and political objectives

When infiltrating ideological and political elements into the teaching of modern electrical control system installation and commissioning, some teachers failed to establish a clear orientation and clear content of educational objectives, which would have a great negative impact on the subsequent development of educational activities. Due to the lack of guidance of clear objectives, some teachers will focus on theoretical knowledge and other aspects when teaching the course, ignoring the exploration and research of Ideological and political elements in the course, which is extremely unfavorable to the formation of good quality of higher vocational students. In addition, due to the lack of Ideological and political goal guidance, it is difficult for teachers to verify the teaching results of the course, which is not conducive to them to discover the ideological and political problems of higher vocational students in a more timely manner, and can not judge the penetration effect of Ideological and political elements in a quantitative way, which will largely affect the penetration effect of Ideological and political education in the teaching of modern electrical control system installation and commissioning. It is not conducive to improving the quality of teaching.

2. Single teaching mode

At present, some teachers seldom optimize the teaching mode when carrying out the course of installation and debugging of modern electrical control system based on the ideological and political education of the course, and the auxiliary means introduced in the education activities are also insufficient, which will hinder the improvement of learning quality in the future, It is not conducive to the promotion of Higher Vocational Students’ interest in learning modern electrical control system installation and commissioning. In addition, the single teaching mode may make higher vocational students feel bored when learning the knowledge of modern electrical control system installation and commissioning course, thus reducing their initiative to explore knowledge, which is not conducive to the penetration of subsequent ideological and political elements in the teaching of modern electrical control system installation and commissioning course.

3. Incomplete evaluation system

When evaluating the teaching of the installation and commissioning of modern electrical control system, many teachers will take the

score as the main evaluation standard, ignoring the exploration of the ideological quality and moral quality of higher vocational students. Such an evaluation system is not perfect, which is not conducive to teachers' comprehensive investigation of the comprehensive ability and quality of higher vocational students. In addition, the single evaluation mode does not conform to the educational concept of Ideological and political education, which is not conducive to the penetration of Ideological and political elements in the installation and commissioning of modern electrical control system, which will have a great negative impact on the teaching effect of the course. Moreover, the imperfect evaluation system will affect the judgment of Higher Vocational Students' mastery of their own knowledge, and it is not conducive to them to find their own knowledge loopholes, which has a great hindrance to their later learning of deeper knowledge.

4 Teaching optimization strategy

1. Changing teachers' thoughts and promoting curriculum ideological and Political Education

Attach importance to the transformation of teachers' thoughts. First of all, teachers should better understand the relationship between Ideological and political education and curriculum teaching, help teachers realize the penetration value of Ideological and political elements in curriculum teaching, so as to promote teachers to more actively introduce the concept of curriculum ideological and political education into the teaching activities of modern electrical control system installation and commissioning, and promote the implementation of the goal of curriculum ideological and political education. In teaching, we should design the corresponding knowledge objectives, ability objectives and quality objectives according to the actual teaching content, and then on the basis of these objectives, explore the ideological and political elements contained in the modern electrical control system installation and commissioning course, and set up the ideological and political objectives of the course.

In addition, the course of installation and commissioning of modern electrical control system should be further explored, and the ideological and political power should be infiltrated into the educational activities based on the course knowledge, so as to ensure the combination of the course Ideological and political education and the teaching of installation and commissioning of modern electrical control system.

2. Constructing vivid situation and optimizing teaching process

The course content is an important carrier of Ideological and political elements, which should be paid special attention. By actively optimizing the teaching methods and paths of the installation and commissioning of modern electrical control system, the educational effect can be greatly improved, and the goal of Ideological and political education can be achieved. With the continuous development of Internet technology, a variety of information technology methods are gradually applied to the teaching of the course, which injects new vitality into the teaching of modern electrical control system installation and debugging course. With the help of information technology, the teaching methods of modern electrical control system installation and commissioning course have become more diverse. Through media video, micro lecture, audio, animation, digital twins and other teaching aids, teachers can create more interesting, educational and vivid situations, This provides a new direction for the integration of Ideological and political elements into the teaching of modern electrical control system installation and commissioning.

In the actual teaching process, we can try to introduce the means of information technology, and further optimize the teaching activities of the course of installation and commissioning of modern electrical control system in combination with the ideological and political education of the course, so as to further enhance the sense of learning experience and participation of higher vocational students, so that students and knowledge can have a deeper emotional resonance, so that they can further understand the ideological and political connotation of the course, Improve the effect of education.

3. Enrich educational content and optimize teaching methods

In the context of Ideological and political education, when teaching the course of installation and commissioning of modern electrical control system, we should try to introduce more high-quality network resources into educational activities, so that higher vocational students can discuss and analyze with real cases, so as to further broaden the career of higher vocational students, Deepen their understanding of the content of modern electrical control system installation and commissioning course. For example, in order to cultivate higher vocational students to form correct values, some cases related to the installation and commissioning of modern electrical control systems on the network can be combined to enrich the infiltration of Ideological and political elements in the course teaching, so that higher vocational students can carry out more in-depth thinking combined with cases, and promote the extension and expansion of their thinking.

The richness of teaching methods will largely affect the penetration effect of Ideological and political education in the teaching of modern electrical control system installation and debugging. Therefore, when teaching the course of installation and debugging of modern electrical control system, we should pay attention to the research and application of various teaching methods and means, and further enrich the path of education according to the teaching characteristics of the new period. For example, when introducing the course of Ideological and political education into the teaching of modern electrical control system installation and commissioning, we can try to use multimedia technology, micro class and other auxiliary means to stimulate the audio-visual senses of higher vocational students, trigger their learning initiative and enrich teaching forms.

4. Develop identification ability and improve teaching staff

In the new era, China's Internet technology has been further developed. Therefore, when introducing the course of Ideological and political education into the teaching of the installation and commissioning of modern electrical control system, we should pay attention to the cultivation of business knowledge, values and other qualities in higher vocational colleges, so as to further improve their information

identification ability and gradually become a good citizen and student who abide by the law. In addition, in order to create a better teaching environment for the installation and commissioning of modern electrical control system, some higher vocational students with high ideological awareness, good political literacy and solid curriculum knowledge can be selected as examples to point out the direction for other students' efforts, so that they can more actively and efficiently screen the bad information they come into contact with in the process of learning, Establish a more correct view of learning and values, and lay a solid foundation for the improvement of the teaching level of modern electrical control system installation and commissioning course.

summary

To sum up, to improve the teaching effect of modern electrical control system installation and debugging course based on Ideological and political education, we can change teachers' thoughts and promote ideological and political education; Constructing vivid situation and optimizing teaching process; Enrich educational content and optimize teaching methods; Starting with the development of identification ability and the improvement of the teaching staff, the organic integration of the course content and ideological and political elements will virtually promote the teaching quality of the course of installation and commissioning of modern electrical control system based on the course of Ideological and political education to a new height, and realize the educational goal of "cultivating people with morality, cultivating both morality and technology, and stopping at the best".

References:

- [1] Bo Shen Teaching design and practice of integrating the course into Ideological and political work -- Taking the course design, installation and commissioning of modern electrical control system as an example [j]Industry and Technology Forum, 2022,21 (07): 208-209
- [2] Caixia Liu Exploration on the reform of the course of modern electrical control system installation and commissioning training [j]Equipment manufacturing technology, 2019 (07): 156-159
- [3] Tian Wang,Zhiguang Wu Teaching research of modern electrical control system installation and debugging course in Higher Vocational Colleges [j] Invention and innovation (Vocational Education), 2019 (06): 35
- [4] Zhe Xu Promote the conversion of old and new kinetic energy and promote the construction of "modern electrical control system installation and commissioning" course [j]Science and technology information, 2018,16 (36): 184+188
- [5] He Huang Exploration and practice of the curriculum reform of modern electrical control system installation and debugging in Higher Vocational Colleges [j]Industry and Technology Forum, 2018,17 (15): 153-154
- [6] Shanshan Jiang Learning from German AHK mode "modern electrical control technology" course development and teaching reform [j]Equipment manufacturing technology, 2020 (06): 170-172
- [7] Xiaoyu Li Research on modern electrical control technology and PLC application technology [j]Heilongjiang science, 2019,10 (24): 102-103
- [8] Yunwei Zhao,Jinliang Guo Application of scientific research achievements in the teaching of "comprehensive practical training of modern electrical control" [j]Contemporary educational practice and teaching research, 2019 (24): 182-183
- [9] Xianglong Jiang Reform and exploration of modern electrical control technology course [j]Nanfang agricultural machinery, 2019,50 (11): 147-148
- [10] Lijun Chen Discussion on the development of modern electrical control technology training project [j]Curriculum education research, 2017 (47): 245
- [11] Jianqiang Fan,Haibao Han,Xiaoyan Zhao Teaching reform and practice of "modern electrical control technology and PLC" based on CDIO project teaching method [j]Digital world, 2017 (06): 187-188
- [12] Yong Ke,Ling Jiang,Luanfei Wan Research on the application of flipped classroom in the teaching of "modern electrical control technology" [j]Journal of Mudanjiang University, 2017,26 (01): 142-144
- [13] Ling Jiang,Chao Zhang Research and practice of task driven in the teaching of modern electrical control technology [j]Journal of Xingtai Polytechnic, 2014,31 (02): 7-9
- [14] Jingsheng Cao Curriculum development of modern electrical control technology based on learning field [j]China Science and education innovation guide, 2013 (01): 178+180
- [15] Huiqing Zhang,Pu Wang,Mingrong Ren,Xuejin Gao,Aijun Yan Teaching reform and practice of "modern electrical control technology" [j]Beijing Education (Higher Education Edition), 2008 (12): 44-45

Fund Project: quality project of electronic information engineering technology specialty group of "double high plan" of Dongguan Polytechnic in 2022 (22kcsz002); School level quality engineering of Dongguan Polytechnic (jgxm202244); Special project for intelligent terminal and intelligent manufacturing of Dongguan Polytechnic in 2022 (zxf018); 2019 characteristic innovation project of Guangdong Provincial Department of Education (2019gktsx138)