



Research on the Ideological and Political Construction of Electrical Automation Professional English Course Based on the "Three Education" Reform

Xiaohui Wang^{1, a*}, Xi Wang^{1, b}, Aijing Li^{1, c}, Xiaoxiao Zhao^{1, d}, Quan Zhang^{2, e}

¹Shandong Electric Power College, Jinan 250002, China

²State Grid Tai'an Power Supply Company, Tai'an 271000, China

^a*2824678292@qq.com, ^b94659754@163.com,
^c13561759130@qq.com, ^dlaughnet@163.com, ^e2931540932@qq.com

Abstract. This article is based on the "Three Education" reform and summarizes the challenges and solutions faced by the ideological and political construction of the electrical automation professional English course through research. The aim is to effectively improve the ideological and political education effect of the electrical automation professional English course.

Keywords: Teacher, Teaching materials, The teaching method, Curriculum ideology and politics

1 Introduction

Nowadays, curriculum ideology and politics have become an important part of the education reform of higher vocational colleges. The ideological and political concept of curriculum is not only a teaching innovation mode that combines ideological and political education with professional courses, but also an important way to improve the comprehensive quality of students. The English course for electrical automation is an important course for cultivating students' professional skills, which not only requires students to master professional knowledge, but also shoulders the important task of improving students' professional quality. Through the teaching of English courses for electrical automation majors, students can not only master the English vocabulary and terminology of electrical automation majors, literature translation skills and writing skills. At the same time, students can also understand the achievements of China's electric power development, further enhance students' patriotic feelings, seek truth from facts, down-to-earth and other spirits, and cultivate compound talents with both professional ability and family and country feelings. However, in the implementation of the English course for electrical automation majors, the course ideology and politics still face the challenges of teachers' ideological and political ability, the difficulty of integrating the content of teaching materials with ideological and political education, and the innovation of traditional teaching methods. Therefore, this paper proposes measures to strengthen the construction of teachers, optimize the

content of teaching materials, and innovate teaching methods to promote the high-quality implementation of ideological and political education in English courses for electrical automation. Through systematic teacher training, optimization of the content structure of teaching materials, and the use of innovative teaching methods such as blended teaching, case teaching and cooperative inquiry, students' ideological and political literacy can be effectively improved and contribute to the cultivation of compound electrical technology talents.

2 The necessity of integrating ideological and political concepts into vocational colleges

With the continuous reform and innovation of vocational education in China, ideological and political courses have become an important way to cultivate talents. In 2020, the Ministry of Education proposed in the "Guidelines for the Construction of Ideological and Political Education in Higher Education Curriculum" to integrate ideological and political education into the talent cultivation system, comprehensively promote the construction of ideological and political education in university courses, give full play to the educational role of each course, and improve the quality of talent cultivation in universities; In 2021, the General Office of the Ministry of Education issued a notice on the construction of curriculum ideological and political demonstration projects, requiring the comprehensive promotion of high-quality curriculum ideological and political construction, the integration of the ideological and political work system into the entire process of talent cultivation, and the construction of a comprehensive and all-round education system for all staff^[1,2].

3 The Importance of Ideological and Political Education in the English Curriculum of Electrical Automation Major

As a core course in electrical automation, English is not only a carrier for imparting professional knowledge, but also an important platform for cultivating students' international perspectives. Carrying out ideological and political courses in professional English in vocational colleges is conducive to fully mobilizing students' enthusiasm for learning professional English, improving their professional skills, and enhancing their professional literacy. Cultivate comprehensive and versatile talents who possess both professional knowledge, social responsibility, and national spirit^[3,4,5]. This course combines the characteristics of the electric power (electrical) major with the particularity of professional English courses, enabling students to master the characteristics, translation skills, reading and writing methods of scientific papers, reading and using English tool manuals, expanding their professional vocabulary, enhancing their understanding of electric power professional English vocabulary and terminology, and improving their reading and translation abilities of electric power English materials on the basis of public English teaching. At the same time, through group

collaboration, cultivate students' awareness of participation, responsibility, and team-work.

4 The Challenges Faced by the Ideological and Political Construction of English Courses in Electrical Automation

4.1 Differences in teachers' ideological and political abilities

In higher vocational colleges, curriculum ideology and politics is an important task, aiming to integrate ideological and political education elements into professional courses, and cultivate students with good moral quality, social responsibility and family feelings. However, although the Ministry of Education proposes to comprehensively promote the construction of ideological and political education in college courses, some English teachers for electrical majors still have insufficient understanding of ideological and political education. They believe that professional teaching is unrelated to ideological and political education, and lack the consciousness of integrating ideological and political education into English teaching for electrical majors. They do not include ideological and political education in their teaching goals, but only focus on the teaching of English knowledge and language skills for electrical majors. But neglects to cultivate students' correct world outlook, outlook on life and values through ideological and political education; In addition, although some teachers intend to integrate ideological and political content into the curriculum, they are difficult to accurately grasp the entry point and focus of ideological and political education due to their lack of ideological and political knowledge reserve. They may not be able to organically combine professional knowledge with ideological and political elements, which makes the ideological and political content seem stiff and far-fetched and difficult to resonate with students^[6].

4.2 Difficulty in integrating textbook content

The existing electrical professional English textbooks mainly focus on traditional knowledge systems and generally lack content with ideological and political education as the main theme. They tend to impart basic theoretical knowledge, which leads to teachers lacking in-depth exploration of ideological and political education in electrical professional English courses during the teaching process, and unable to impart ideological and political knowledge^[7].

4.3 Innovative challenges in teaching methods

For a long time, influenced by the exam oriented education system, some teachers still adhere to the traditional teacher centered teaching model. Teachers are the disseminators of knowledge, while students can only passively receive it, lacking the necessary classroom participation and initiative, and unable to stimulate students' interest in learning. This traditional teaching mode not only makes it difficult for students to

truly understand and master the English terminology and sentence expressions in the field of electrical automation, but also weakens their thinking ability and innovative consciousness. In the long run, this poses an undeniable obstacle to the comprehensive development of students' overall quality^[8].

5 Measures for ideological and political construction of English courses in electrical automation major

5.1 Strengthening the construction of the teaching staff

Teachers are the key to the construction of ideological and political education in professional English. The curriculum ideological and political ability of teachers not only includes the mastery of professional knowledge, but also includes the understanding of ideological and political education concepts, the application of teaching methods, and the cultivation of students' ideological and political literacy^[9]. Firstly, teachers should actively participate in various thematic lectures and learning exchanges, and through systematic learning and training, master the skills and methods of integrating ideological and political education into electrical professional English teaching, in order to improve their own ideological and political literacy and teaching ability. Secondly, universities should provide teachers with rich practical opportunities and teaching resources. By building a platform for exchanging ideological and political education in courses, they should encourage teachers from different disciplines to share and collaborate on experience, jointly explore implementation strategies for ideological and political education in courses, and learn from each other's experiences. For example, electrical automation teachers can collaborate with humanities and social science teachers, English teachers, and others to explore how to integrate ideological and political education into electrical automation professional English courses.

5.2 Optimize textbook content

The English course for Electrical Automation major mainly includes chapters on basic concepts of power systems, power generation systems, transmission systems, distribution systems, and loads. Teachers can adjust the content structure appropriately during the teaching process, deeply explore the ideological and political elements in the textbook, such as patriotism, social responsibility, professional ethics, and seeking truth from facts, and transform them into professional English course teaching cases and problem situations, guiding students to experience the charm of ideological and political education while learning professional knowledge, as shown in Table 1 below. In the chapter on basic concepts of the power system, by introducing the development achievements and technological innovations of China's power system, we aim to inspire students' patriotism and national pride; In the chapter on power generation systems, the "dual carbon" goal is introduced to construct a new type of power system mainly based on new energy, and to strengthen students' awareness of environmental protection and sustainable development; In the chapter on transmission systems and

transmission lines, the success of China's ultra-high voltage in recent years cannot be separated from the hard work of scientific researchers and frontline power workers. It is important to cultivate students' rigorous research attitude and exploratory spirit of seeking truth; In the distribution system and load, the importance of introducing power workers to maintain the safe and reliable operation of the power system is emphasized to cultivate students' down-to-earth and rigorous work spirit^[10].

Table 1. The ideological and political elements and expected goals of each chapter of the "Professional English" course in electrical automation

chapter	Knowledge points	Ideological and political elements	Expected goals
Chapter 1 Basic Concepts of Electric Power System	The Development History of Power System.	China has made tremendous achievements in the field of power system.	Cultivate students' patriotism.
Chapter 2 Power Generating Stations	New energy generation.	Introduce the "dual carbon" target and build a new type of power system mainly based on new energy.	Cultivate students' awareness of environmental protection and sustainable development.
Chapter 3 Transmission System and Transmission Lines	Ultra high voltage transmission.	The achievements of China's ultra-high voltage cannot be separated from the hard work of scientific researchers and frontline power workers.	To cultivate students' scientific research attitude of seeking truth from facts and exploratory spirit of daring to seek truth from facts.
Chapter 4 Distributions Systems and Loads	Power grid load	The peak period of electricity consumption will lead to a sharp increase in the load of the power grid, bringing enormous pressure to the power grid	Cultivate students to use electricity scientifically and have energy-saving awareness

5.3 Innovative teaching methods

The ideological and political education of the English course for electrical automation majors focuses on solving the problem of combining course teaching with ideological and political education. Firstly, it is necessary to change the teaching philosophy from teacher centered to student-centered. Teachers should deeply recognize that students are the main body of learning, and play a guiding role in the teaching process to stimulate students' interest and initiative in learning. Secondly, closely integrating course content with practical applications is also the key to innovation, which can help students understand professional knowledge while improving their English application ability.

5.3.1 Hybrid Teaching Approach of Online and Offline.

The hybrid teaching approach of online and offline refers to a teaching mode that integrates the traditional face-to-face classroom teaching with the online learning based on network technology. By optimizing the allocation of teaching resources and time, it aims to maximize the teaching effect^[11]. The implementation of the hybrid teaching approach of online and offline requires the support of digital teaching facilities, online teaching resources, etc. The electrical automation major of our school, relying on the digital learning platform of Shandong Electric Power College, combines online resources with offline teaching. Learning materials are released before class, and understanding is deepened through discussions and practices in class, realizing diversified knowledge transmission and personalized learning.

5.3.2 Case study teaching method.

Case based teaching method, which allows students to learn through the study and discovery of these cases, recall and apply these knowledge and skills when necessary, has been highly praised by teachers in vocational colleges in recent years. Teachers can select cases in the field of electrical automation that have ideological and political education significance, guide students to analyze and discuss, help them better understand and master theoretical knowledge, and enhance their practical ability and ideological and political literacy^[12].

5.3.3 Cooperative inquiry teaching method.

Cooperative inquiry teaching method refers to encouraging students to learn knowledge and train skills through group cooperative inquiry in the teaching process, solve problems together and complete learning tasks, so as to realize the internalization of knowledge and the improvement of ability. In the teaching process of English courses for electrical automation majors, ideological and political teaching can be combined with cooperative inquiry teaching method. By designing inquiry tasks containing ideological and political elements, such as scientific spirit, social responsibility, professional ethics, etc., teachers guide students to conduct inquiry learning in the form of group cooperation, so as to master professional knowledge at the same time. To realize the sublimation of thought and the shaping of values.

6 Conclusion and Prospect

Focusing on the three reforms of "teachers, textbooks, and teaching methods", measures such as strengthening teacher team building, optimizing textbook content, and innovating teaching methods can effectively enhance the ideological and political education effect of electrical automation professional English courses. In the future, we should continue to deepen the research and practical exploration of the "three educations" reform, further study how to organically combine ideological and political education with various electrical automation professional courses, and cultivate more

composite talents that meet the requirements of the times in the field of electrical automation in China.

References

1. Gao Qi, Chu Hongwei. An Analysis on the method of Integrating "Curriculum Thinking and Politics" into Professional English Classroom Teaching -- A Review of Electrical Information Technology English [J]. Journal of Kaifeng Vocational College of Culture and Art, 2020, 40 (11): 150-151.
https://kns.cnki.net/kcms2/article/abstract?v=QenloEQs_R8aOhKnqFuFb_AuWE0trseV-VoL833YdPiIbZKyfQS8uZAb_PHGKFXj9ndNX2tU5yKPrNnfGmtNPzfJhfKRWLTDAXR8ZuQnOwythQa3dxBTpubPM1HxFyGNB0lu9CObvZwtFhdZG_BF1URzefZ2CheqVL0_NB7L2td5_ayTCAMWtbtf2-stdPixOoAJh4Tag=&uniplatform=NZKPT&language=CHS
2. Zhu Hua. Three Focal points of the construction of "Professional Ideology and Politics" [J]. Journal of Hubei Open Vocational College, 2024, 37 (18): 100-102.
https://kns.cnki.net/kcms2/article/abstract?v=QenloEQs_R_q1O9LXXCHJBvcMESA42-l8dl6dT6hEjT5axvpBhCkS6_2sYbnZXBpX98TK41dsrSYz-5fTm-nE-AAQ27lAMqhOdV5nC9Yy9d32lIX_pcQhSouPtlAPdJPVseYN_1irlY98QwN6rtUx6XttmEljTy3q3OmF0eplRiengDgFjdDLrvkMZ2l&uniplatform=NZKPT&language=CHS
3. Zhang Junling. The exploration of Integrating the concept of "Curriculum Thinking and Politics" into professional classroom teaching [J]. Education and Teaching Forum, 2018, (46): 49-50.
https://kns.cnki.net/kcms2/article/abstract?v=QenloEQs_R-E6AgBZjLlO_Z1Ki40P8ZH9_6g27eWFyOHR1yv5pe6qNJHqFA10wMLdFdQTfehbdxGxTzt_e9boWFR9y1O6rGNbli_rekOzjoNXlqZZS5hJGtPxgRm9cnoAZKqg8HOMGAZ2fNGl_6LCti-IntQa4QPvQMqrfrYlaCX7dm6EAxcu2Uv3ODzDMw8AdC4ynktbOY=&uniplatform=NZKPT&language=CHS
4. TANG Xiaoling, Xiong Wei, Liu Min. Solidify the Mission and Original Intention of Electric Workers in Professional Learning -- Practice of Ideological and Political Construction of Electrical Curriculum [J]. Intelligence, 2024, (16): 61-64.
https://kns.cnki.net/kcms2/article/abstract?v=QenloEQs_R_T1PhD-QUIBGvQS7pKntMwd-MLbfwdW87SFXVzWASCIUAqWmRG9O4m4qBiRknIieH5iLst9OKKNpWMHLz_NBylry-CDfx8TUCWSD2VIJmQZhFg_U-b3uw0E8cDvn7_5BB8ZGYMw8C_hezLUM2tk532fjbdDABOaXZL621uxTztptaE0ZQvQj30fNAePdH3pg=&uniplatform=NZKPT&language=CHS
5. Long Houni. Integration Strategy of Ideological and Political Course Content and Professional Teaching for Electrical Engineering and Automation Majors [C]// School of Marxism, Baise University. Proceedings of Zhengzhou Sub-Forum on Ideological and Political Education in 2024. Hankou University; 2024:2. DOI: 10.26914 / Arthur c. nkihy. 2024.008338. <https://link.cnki.net/doi/10.26914/c.cnkihy.2024.008338>
6. Yang Jingwen. Research on Curriculum Ideological and Political Methods of Electrical Automation Technology Course [J]. Chinese Journal of Multimedia and Network Teaching (Mid-10 days), 2022, (03): 73-76.

- https://kns.cnki.net/kcms2/article/abstract?v=QenloEQs_R_1UZrxHijvtfwSJBXEs-rM6IIQWJWaxLiU3EIDX-J4Ce3gCO-0rly-Ovtgsxj51fggpgA509y5UDI08h-vFpSoYPAJUntQ1U_pqIR44Po3zTZvUV59CS7pyJ-vUyZYn09Walbdwgr_kS8ZBDB7oEAmRjiUDlZP3MIXOz_5UI9TMIXChkbGtVun2XVhAlv0Qxs=&uniplatform=NZKPT&language=CHS
7. Yin Yumei. The value Implication, realistic Dilemma and Implementation Path of Ideological and Political Teaching in secondary Vocational English Courses [J]. English Teachers, 2024, 24 (15): 22-24+30.
https://kns.cnki.net/kcms2/article/abstract?v=QenloEQs_R8rzoEx3L1q0beKLOenhrpil-oPOBfbPssYWT2Mg_oOCmVJMHYIL-fxu_FihNW5Q50i7C2OxISVcJBClgw5y0vuRsFhAImkMzgQ3VDfxE42QO7Cb0XtMoKODL_FvR_0nKqKK3Jj52SOxxXLHvLtp29_dIV48xGJji_i7F4pDt7HmrflixpG6C0&uniplatform=NZKPT&language=CHS
 8. Duan Ran. A Study on Ways to Improve the Teaching Ability of Higher Vocational English Teachers from the perspective of Curriculum Ideology and Politics. Intelligence, 2024, (24): 53-56.
https://kns.cnki.net/kcms2/article/abstract?v=QenloEQs_R-GzgbNu-kAgU_60HjC7ePTRUY0R8QmQQyF09SGvCiBhOWFFg7y3KbTFn6IDUfTXfglu-FK4b8CWdgKwCxBCNyrLR72dTVFp8E1bbuT9vFivf0bshs8_semUdZSNbrSq07oBIJPNMW4poTqReQgHCRe6jY_JotdHT2KoTpt8ogWkB5Xth8mboONdCHBOn4iBOWI=&uniplatform=NZKPT&language=CHS
 9. XU Yixin, Chen Jing, Chen Junwei. Applied education "courses" in colleges and universities teachers construction path to explore [J]. Journal of wuhan business school, 2024, 38 (02): 94-96. The DOI: 10.16199 / j.carol carroll nki jwbu. 2024.02.005.
<https://link.cnki.net/doi/10.16199/j.cnki.jwbu.2024.02.005>
 10. Wang Jian-Ping, Wang Xian-Lei, Luo Jidong, et al. Design and practice of Ideological and Political teaching for Electrical Majors [J]. Education Informatization Forum, 2024, (01): 111-113.
https://kns.cnki.net/kcms2/article/abstract?v=QenloEQs_R-Gew_qDUV5qAhKyOWfYtxDPomHdS4tWxM7d90rSteaxMXRfu8B_-SxgQ40Ns3Rtewxugit8vHinb4LsikVISKkEPuA9YWcyCJS8R3exCgZajKkJhacT_4aOHQzBHMvYGvzJST-Klu2LHfEKl8xnp8QEariC3ZaANcah7kq34ZGVzCqaXDshvQl_MdVGwq4=&uniplatform=NZKPT&language=CHS
 11. Chen Lina. Research on Online and Offline Mixed Teaching Quality Monitoring in Higher Vocational Colleges under the Background of Curriculum Ideology and Politics [J]. Data, 2019, (01): 197-198.
https://kns.cnki.net/kcms2/article/abstract?v=QenloEQs_R_WyXtAj62Ij2eh9ply1ZHDKNcit-Bbv3dySLthxip7rSWBDUOi5dzGMWxAHEUSaZ636ppFyjdjhSih2YBF78DFLPGshfVxpiHtwlhuPZCddF2Qg8L9O433V4azIaOGpC1aiBNokdINbnvjIevtunoXj-KaAlbBJMSc9YJK-GXGMdCNGG6zce8zRmOg49Wd3oc=&uniplatform=NZKPT&language=CHS
 12. Ding Fang Fang. Application of case teaching Method in high school Ideological and political teaching [J]. Gansu Education Research, 2024, (08): 115-119.
https://kns.cnki.net/kcms2/article/abstract?v=QenloEQs_R-R9_nVGkFy8pEXHgPXW7yAYSXQ3erBJDsgoQNX2nbTQZaN_4hvaL1d9sw3P_YoR7UQk3AkJuIn_KeAS3tuBVrx87fFQA9_gXVLBckRMV5aZ3-

KykGU55xfIoAvOI_ch_jMBCrINcxWfeDq1GjuKSWHdGT9NA_bXpSipI_8JW_cg4w_k
mJpy9S_66c51UwHnLU=&uniplatform=NZKPT&language=CHS

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

