OOI: 10 53469/jern 2024 06(07) 06

Professional Courses and Ideological and Political Education: A Case Study of Integration

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Abstract: In the context of higher education reform, integrating ideological and political education into professional courses has become a key direction for cultivating students' moral qualities and social responsibility. This paper analyzes the current status and challenges of professional course teaching, discusses the importance and necessity of ideological and political education in higher education, and proposes specific strategies for integrating professional courses with ideological and political education. By drawing on domestic and international practical cases, this paper aims to provide a comprehensive framework for effectively implementing this integration, with detailed teaching content and objectives, diverse teaching methods and tools, and a robust evaluation and feedback mechanism. Finally, the paper addresses potential challenges and corresponding strategies, with the ultimate goal of cultivating professional talents with high moral qualities and social responsibility.

Keywords: Professional Courses, Ideological and Political Education, Higher Education, Teaching Strategies, Case Study.

1. Introduction

In recent years, the integration of ideological and political education into professional courses has become an important focus of higher education reform. This integration aims to cultivate students' comprehensive qualities by embedding moral education into the teaching of professional knowledge and skills. However, in practice, there are still many challenges in effectively combining these two aspects. This paper aims to explore how to organically integrate ideological and political education into professional courses, taking into account current teaching practices and challenges, to provide practical and effective solutions.

2. Current Status and Challenges of Professional Course Teaching

2.1 Current Status

Professional course teaching in higher education focuses on imparting specialized knowledge and skills, aiming to cultivate students' professional abilities and innovative thinking. However, in many cases, the emphasis on professional knowledge leads to the neglect of moral education and social responsibility. This phenomenon is particularly prominent in engineering and technical courses, where the curriculum often lacks content related to ethical decision-making and social responsibility.

2.2 Challenges

1) Separation of Professional Knowledge and Moral Education:

Professional knowledge and moral education are often taught separately, leading to a lack of integration and synergy between the two.

2) Insufficient Teacher Training:

Teachers may lack the necessary training and experience to effectively integrate ideological and political education into their professional teaching.

3) Limited Resources and Support:

The integration of ideological and political education requires additional resources and support, which are often lacking in many educational institutions.

3. Importance and Necessity of Ideological and Political Education in Higher Education

3.1 Importance

1) Cultivating Comprehensive Talents:

Integrating ideological and political education into professional courses helps cultivate students' comprehensive qualities, including moral integrity, social responsibility, and professional ethics.

2) Enhancing Social Responsibility:

By incorporating ideological and political education into professional courses, students are encouraged to consider the social and ethical implications of their professional activities, thereby enhancing their sense of social responsibility.

3.2 Necessity

1) Meeting Educational Goals:

The integration of ideological and political education into professional courses aligns with the overall goals of higher education, which include not only the cultivation of professional skills but also the development of moral character and social responsibility.

2) Addressing Current Challenges:

The integration helps address current challenges in professional course teaching, such as the separation of professional knowledge and moral education and the lack of emphasis on ethical decision-making and social responsibility.

4. Strategies for Integrating Professional Courses with Ideological and Political Education

4.1 Teaching Content and Objectives

1) Integrating Ethical Decision-Making:

Include ethical decision-making modules in professional courses, teaching students how to apply ethical principles in real-world scenarios. For example, in engineering courses, case studies related to engineering ethics can be included to help students understand the ethical implications of their professional activities.

2) Enhancing Social Responsibility:

Incorporate content that emphasizes social responsibility and community engagement. For example, in business courses, topics related to corporate social responsibility (CSR) can be included to encourage students to consider the social impact of business activities.

4.2 Teaching Methods and Tools

1) Case-Based Learning:

Use real-life case studies to illustrate the integration of professional knowledge and ethical decision-making. This method helps students understand the practical application of theoretical concepts and enhances their problem-solving skills.

2) Interdisciplinary Collaboration:

Encourage interdisciplinary collaboration between different departments and faculties to design and implement interdisciplinary teaching modules. This approach allows students to understand and apply the core concepts of ideological and political education from multiple perspectives.

3) Social Practice and Service Learning:

Incorporate social practice and service learning into the curriculum, guiding students to participate in community service, volunteer activities, and social surveys. This approach enhances students' social responsibility and practical skills by applying theoretical knowledge to solve real-world problems.

4) Project-Based Learning:

Implement project-based learning where students apply their professional knowledge and ethical decision-making in

real-world projects. This method enhances students' practical skills, innovation, and teamwork spirit. Teachers should provide regular guidance and feedback to ensure students deeply understand and apply the core concepts of ideological and political education in their projects.

ISSN: 2006-1137

5) Online Platforms and Resources:

Utilize online learning platforms and resources to enrich course content and teaching methods. Online courses, virtual laboratories, and case libraries provide diverse learning resources and tools, supporting students' autonomous learning and personalized development.

5. Evaluation and Feedback Mechanism

5.1 Evaluation Indicators and Methods

1) Knowledge Mastery and Application:

Evaluate students' mastery and application of professional knowledge through exams, project reports, and practical operations. Exams should include both theoretical knowledge and practical operations, while project reports should focus on students' application skills and innovative thinking in real-world projects.

2) Social Responsibility and Ethical Awareness:

Assess students' social responsibility and ethical awareness through questionnaires, case analysis reports, and social practice activities. Questionnaires should include students' understanding and attitudes toward ideological and political education, case analysis reports should focus on students' thinking and analysis in ethical decision-making, and social practice activities should evaluate students' performance and reflection in solving real-world problems.

3) Innovation and Teamwork:

Evaluate students' innovation and teamwork skills through project assessments and group discussions. Project assessments should include students' innovative performance and problem-solving abilities, while group discussions should focus on students' communication and collaboration skills.

5.2 Feedback Mechanism

1) Regular Feedback and Communication:

Collect regular feedback from students on course content and teaching methods through classroom discussions, questionnaires, and interviews. Teachers should actively listen to students' opinions and suggestions, adjust teaching strategies in time, and continuously improve teaching quality and effectiveness.

2) Diversified Feedback Channels:

In addition to traditional classroom feedback, utilize online platforms, course forums, and social media to collect students' opinions and suggestions on ideological and political education content. Online platforms and course forums can provide anonymous feedback options, allowing students to freely express their ideas, while social media can quickly gather students' instant feedback through interactive discussions and real-time polls.

3) Teacher Collaboration and Exchange:

Promote teacher collaboration and exchange through regular teaching seminars and training. Teachers should share successful teaching experiences and cases, discuss best practices for ideological and political education, and form interdisciplinary teaching teams to design and improve course content and teaching methods. Training sessions can invite education experts to conduct special lectures and workshops, enhancing teachers' capabilities and skills in ideological and political education.

6. Anticipated Challenges and Coping Strategies

6.1 Anticipated Challenges

1) Differences in Student Acceptance:

Students may have different levels of acceptance and interest in ideological and political education. Some students might focus more on professional knowledge, neglecting the significance of moral education, leading to low engagement and enthusiasm.

2) Teacher Training and Professional Development Needs:

Teachers need relevant training and professional development to effectively integrate ideological and political education into their courses. Some teachers may lack experience or interest in this integration, making it challenging to effectively incorporate ideological and political education.

3) Interdisciplinary Collaboration and Resource Coordination:

Effective implementation of ideological and political education requires interdisciplinary collaboration and resource coordination. In practice, challenges may arise in scheduling, resource sharing, and aligning teaching philosophies.

6.2 Coping Strategies

1) Implement Personalized Teaching Strategies:

Address differences in student acceptance by implementing personalized teaching strategies. Understand students' interests and needs, adjust teaching content and methods, and ensure effective learning for every student. Personalized teaching strategies include individual tutoring, differentiated assignments, and flexible learning plans.

2) Enhance Teacher Training and Professional Development:

Provide teachers with relevant training and professional development opportunities to enhance their interdisciplinary teaching capabilities and practical experience. Training can include seminars, workshops, and interdisciplinary teaching practice opportunities. Encourage teachers to participate in academic exchanges and collaborative research projects to enhance their professional skills.

ISSN: 2006-1137

3) Establish Interdisciplinary Collaboration Mechanisms:

To achieve interdisciplinary collaboration, establish formal cooperation mechanisms, including regular exchanges and resource sharing. Form interdisciplinary teams composed of teachers from different disciplines to design and implement teaching plans. Regularly organize interdisciplinary seminars and teaching experience exchange meetings to promote mutual understanding and collaboration.

7. Conclusion

Integrating ideological and political education into professional courses is a significant direction in current educational reform. By thoroughly analyzing the current status and challenges of professional course teaching, this paper discusses the importance and necessity of ideological and political education in higher education. Drawing on domestic and international practical cases, it proposes specific strategies for combining professional courses with ideological and political education. The paper provides detailed teaching content and objectives, employs diverse teaching methods and tools, and establishes a robust evaluation and feedback mechanism. Despite anticipated challenges such as student teacher and interdisciplinary acceptance, training, collaboration, the paper offers corresponding coping strategies to ensure the successful implementation of the teaching plan and enhance student learning outcomes. The ultimate goal is to cultivate professional talents with high moral qualities and social responsibility, capable of addressing complex challenges in future society and industry.

Acknowledgement

This paper is supported by Heilongjiang Province Graduate Course Ideological and Political High Quality Construction Project No. HLJYJSZLTSGC-KCSZAL-2022-031. High quality school enterprise course "Modern Design Methods" for graduate students with school level professional degrees.

References

- [1] Chen, J., & Wang, Y. (2020). Integrating ethics education into engineering courses: A case study of finite element method. Journal of Engineering Education, 109(4), 1235-1254.
- [2] Li Hua, Zhang Xiao, Yu Shuang (2019) Improve students' sense of social responsibility by integrating engineering ethics education International Journal of Engineering Education, 35 (3), 778-789.
- [3] Liu Peng, Sun Jun (2021) Engineering Ethics Case Teaching: Research on Finite Element Method Course Chemical Engineering Education, 36, 52-60.
- [4] Wang Li, Chen Qi (2022) The role of interdisciplinary education in cultivating ethical awareness among engineering students European Journal of Engineering Education, 47 (2), 264-278.

ISSN: 2006-1137

- [5] Zhang Yong, Li Xia (2020) Integrating Political Education into Professional Courses: A New Model of Engineering Ethics Teaching IEEE Education Affairs, 63 (3), 248-256.
- [6] Zhu Yun, Han Qing (2019) Engineering Ethics Education: Integrating Ethics into Finite Element Method Courses Ethics of Science and Engineering, 25 (5), 1405-1417.
- [7] Zhou Ran, Chen Hui (2021) Enhancing the Ethical Awareness of Engineering Students: Curriculum Reform Methods ASEE Annual Conference Proceedings, 1-10.
- [8] Li Wen, Fang Li (2023) Integration of Political Education Curriculum in Engineering Courses: A Case Study of Finite Element Method Journal of Moral Education, 52 (1), 89-104.
- [9] Yang Song, Zhou Hong (2019) Enhance the social responsibility of engineering students through ethical education Journal of Engineering Education and Practice Professional Issues, 145 (4), 04019010.
- [10] Wang Yong, Liu Zhi (2020) Case study on ethical integration in engineering education IEEE Education Affairs, 63 (1), 12-19.
- [11] Xu Jing, Liu Peng (2019) Teaching Engineering Ethics: A New Method Using Finite Element Method Engineering Research, 11 (3), 192-207.
- [12] Zhao Xiao, Gao Yang (2021) Integrating Ethical Considerations into Engineering Education: A Case Study of Finite Element Method Curriculum International Journal of Mechanical Engineering Education, 49 (3), 235-248.
- [13] Qian Xia, Wang Jun (2022) The interdisciplinary approach to engineering ethics education European Journal of Engineering Education, 47 (6), 898-912.
- [14] Zhang Ping, Ma Yu (2020) Exploring the intersection of engineering ethics and political education International Journal of Engineering Education, 10 (2), 55-67.
- [15] Wang Rui, Yang Li (2019) Engineering Ethics Education: Integrating Social Responsibility into Finite Element Method Education Frontiers, 4, 23.
- [16] Chen Kang, Tang Si (2022) Promote ethical awareness among engineering students through interdisciplinary courses IEEE Education Affairs, 63 (4), 419-430.
- [17] Wang Lili, Liu Tao (2019) Integrating Engineering Ethics in Finite Element Method Teaching: A Case Study Journal of Engineering Ethics, 25 (3), 89-101.
- [18] Li Xiang, Wang Si (2021) Enhance the social responsibility of engineering students through project-based learning International Journal of Engineering Education, 49 (2), 156-169.
- [19] Zhao Peng, Liu Jing (2020) Integrating Engineering Ethics into Finite Element Method Curriculum: Teaching Practice and Reflection Frontiers of Education, 4,56.
- [20] Wang Jing, Chen Lei (2019) Improve the ethical awareness of engineering students through practical case teaching Chemical Engineering Education, 36, 124-134.