

Preliminary Exploration of Integrating “Curriculum Ideology and Politics” into the Teaching Model of General Chemistry Theory Courses

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Abstract: In modern education, cultivating students’ ideological and political literacy is an important task. As a specialized discipline, the integration of ideological and political education with other disciplines has important significance and value, especially the integration of teaching mode with general chemistry theory courses. Therefore, this article will explore effective methods for integrating “curriculum ideology and politics” into the teaching mode of general chemistry theory courses, hoping to provide reference and suggestions for teachers.

Keywords: “Curriculum ideology and politics”; General Chemistry Theory Course; Teaching mode; Integration method

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Introduction

Integrating ideological and political courses with general chemistry theory courses can not only enhance students’ comprehensive abilities, cultivate their values and sense of social responsibility, but also stimulate their interest and motivation in learning, cultivate their innovation ability and teamwork spirit. The promotion and application of this integrated teaching model is of great significance and value for promoting the comprehensive development of students and cultivating high-quality talents. Teachers should continuously promote the practice of this integration model in educational reform to meet the needs of the times and cultivate more thoughtful and high-quality new generations.

1. Integration of teaching content

Firstly, in teaching design, it is possible to organically integrate ideological and political education elements into the teaching content of chemical theory courses. For example, when explaining the principle of molecular structure and Chemical bond, relevant ethical and moral concepts can be introduced, so that students can understand the ethical requirements in scientific research and the moral responsibilities of scientists. This design can not only enhance students’ understanding of chemical theory, but also cultivate their moral character and sense of social responsibility. Secondly, integration can be achieved through adjustments in curriculum settings and teaching methods. For example, some content related to scientific ethics, safety awareness,

and environmental protection can be added to chemical experimental courses. In the process of the experiment, strengthen the guidance and supervision of students, remind them to pay attention to the safety, environmental and social factors in the experiment process, so as to cultivate students' Scientific literacy and sense of social responsibility. In addition, interdisciplinary teaching team cooperation can also be used to achieve the integration of "course ideology and politics" with general chemistry theory courses. Chemistry teachers and ideological and political teachers can jointly plan and teach, forming a collaborative teaching model for educating students. Through communication and cooperation, not only can students feel the infiltration of ideological and political education in the learning of chemistry knowledge, but also can ideological and political education be closer to students' subject learning needs. Finally, the school management department can formulate relevant policies and standards to standardize and guide the integration of "curriculum ideology and politics" and general chemistry theory courses. Clarify the teaching requirements of teachers and the learning requirements of students, provide necessary teaching resources and training support, and provide a good environment and guarantee for integrated teaching.

2. Innovation in teaching methods

Conventional theoretical teaching often centers around teachers, with students passively accepting knowledge and lacking initiative. By using teaching methods such as case analysis, group discussion, interactive exploration, and problem orientation, students can participate in teaching activities, actively think and explore problems, and improve their learning initiative and autonomy^[1,2,3]. For example, in chemical experiments, a chemical problem related to social hot topics can be selected for case analysis and discussion, guiding students to think about the causes and solutions of the problem^[4]. Through this teaching method, students' ability to analyze and solve problems can be cultivated, while also enhancing their attention and thinking about social issues. Teachers play the role of guides and facilitators in the classroom. By organizing discussions, guiding students to think, guiding students to explore, cultivating students' values, ways of thinking, and ideology, while helping students master the basic knowledge of chemical theory^[5].

3. Focusing on guiding students to think and discuss, stimulating their interest

Focusing on guiding students to think and discuss, stimulating their interest is also one of the important strategies for integrating "course ideology and politics" with general chemistry theory courses. Students only passively receive knowledge in the classroom, and may develop boredom and resistance towards obscure and difficult theoretical knowledge. By encouraging students to think and discuss problems, they can stimulate their interest and thirst for knowledge, and improve their enthusiasm for learning. For example, in the process of learning the mechanism of organic chemical reactions, teachers can propose a phenomenon of a chemical reaction and guide students to think about the principles and mechanisms behind the reaction. Students will gradually understand and understand the mechanism of reactions through interactive exploration, and will associate similar reactions to enhance their understanding and memory of chemical knowledge^[6,7,8].

Cultivating students' innovative spirit and sense of social responsibility is also one of the important goals of integrating "curriculum ideology and politics" with general chemistry theory courses. As a scientific discipline, chemical research plays an important role in cultivating innovative abilities. The content of "Curriculum Ideology and Politics" focuses more on students' sense of social responsibility and solving social problems. By integrating these two contents together, students can cultivate their innovative awareness and thinking, and encourage them to apply their chemical theoretical knowledge to practical solutions to social problems. For example, when studying the chemical causes of environmental pollution, students can be guided to think and discuss how to use chemical methods to improve the environment and reduce pollution. Such teaching content can enhance students' sense of social responsibility and environmental awareness, and stimulate them to actively participate in the practice of environmental protection and sustainable development.

4. Combination of activity design and practice

In response to the characteristics of chemical laboratory practice, relevant experimental courses can be developed to integrate "course ideology and politics" into experimental design. For example, in conducting experiments on the periodic table of elements, by guiding students to think about the importance of the periodic table for human technological development, students can understand the contribution of technological development to social progress. At the same time, it can guide students to think about the impact of elements in the periodic table on the environment, as well as the responsibility of the chemical industry for environmental protection. Through such activity design, students can experience the relationship between chemistry, society, and the environment in practice, thereby deepening their understanding of the chemistry discipline. By combining practical activities such as field visits, students can gain a deeper understanding of the social impact and responsibilities of chemistry. For example, organizing students to visit chemical

factories allows them to personally experience the importance of the chemical industry for economic development, as well as how to protect the environment and prevent accidents. Through on-site investigations, students can be exposed to real chemical practices and experience the important role and responsibility of chemistry in society. At the same time, by communicating with experts in relevant fields, students can further understand the future development direction and social needs of the chemistry major. In the teaching process, group cooperation can also be used to cultivate students' sense of teamwork and responsibility. In the classroom, students can organize group discussions to share their insights on chemistry and social issues. At the same time, establish a group project to have students study a chemical problem together and propose feasible solutions. Through Cooperative learning, students can develop the spirit of cooperation, learn to work with others to solve problems, and also can develop a sense of responsibility, understand their role and responsibility in the team^[9,10].

Conclusion

Through the application of the above methods, the educational content of "course ideology and politics" can be integrated into the teaching of general chemistry theory courses, promoting the comprehensive development of students. Emphasize students' ideological and political education, improve their critical thinking ability and sense of social responsibility, and consolidate and improve the learning effectiveness of chemical theoretical knowledge.

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