

The integration path of ideological and political education in college chemistry education

Shanshan Fei

Xi'an Kedagaoxin University, Xi 'an 710109, China

Abstract: Under the vision of quality education reform, higher requirements are put forward for chemistry teaching in colleges and universities. To this end, teachers should not only complete basic teaching tasks, but also infiltrate ideological and political education in the construction of curriculum system, teaching content selection and teaching method innovation, so as to successfully construct the ideological and political teaching mode of chemistry course. On the basis of teaching students basic knowledge and practical skills, Cultivate their ideological and political accomplishment, correct their ideology, improve their cognitive system, and ultimately promote the balanced development of students. Specifically speaking, chemistry teachers in colleges and universities should carry out chemistry teaching under the guidance of the policy of "Curriculum Thinking and politics" promulgated by the Ministry of Education, and explore suitable opportunities and practical paths for ideological and political education to integrate into chemistry classrooms, so as to cultivate talents needed for innovation and development in the field of chemistry with more students. How to integrate ideological and political education into chemistry teaching in colleges and universities is an important issue that teachers need to solve at present, and this paper will carry out an in-depth exploration around this issue.

Key words: ideological and political education in curriculum; Colleges and universities; Chemistry courses; Integration path

Introduction

As we all know, the chemistry courses offered in colleges and universities have remarkable characteristics of practicality, professionalism, operability, etc. Therefore, teachers should not only integrate ideological and political education into the explanation of theorems and concepts, but also integrate ideological and political education into experimental operation and practical activities when constructing the curriculum ideological and political education model, so as to improve the pertinence and effectiveness of course teaching and fully demonstrate the charm of the discipline. Among them, teachers should carry out ideological and political education and teaching in combination with the characteristics of curriculum teaching, the practical needs of students and the educational strategies of colleges and universities, cultivate students with both morality and talent, so that they can adapt to social life as soon as possible, seamlessly connect with their posts and work, and finally effectively improve their social core competitiveness. Based on the traditional teaching mode, the traditional teaching methods and means adopted by teachers are easy to make the classroom atmosphere become dull and boring, and finally, it is impossible to successfully integrate ideological and political education with chemistry teaching, and even cause students' resistance and disgust. In view of this, this paper, combined with the author's practical teaching experience, carries out an in-depth exploration of ideological and political education in chemistry curriculum, analyzes the significance and basic principles of the integration of ideological and political education in chemistry teaching, and proposes specific integration paths on this basis, aiming to provide reference basis and practical experience for teachers to carry out relevant research.

1. The significance of ideological and political education integration in college chemistry education

First, it meets the demand of chemistry curriculum reform. The chemistry courses offered by colleges and universities have certain abstractness, rigor and practicality, in other words, chemistry courses are closely related to people's lives, but also have certain logical thinking, and have relatively significant subject characteristics. In the teaching of chemistry, it contains not only a variety of specialized knowledge and skills, but also the characteristics of humanity, which makes the chemistry course have a unique disciplinary charm. In view of this, if teachers dig ideological and political elements in daily teaching, and carry out effective expansion and extension around the ideological and political elements, they can organically combine ideological and political education with chemistry course teaching.

Second, to meet the needs of students' self-development. At present, China's society and economy are in an important period of transformation and upgrading, which makes the information and data on the network platform richer and more diverse. However, college students have not yet formed a mature critical thinking ability and a perfect cognitive system, which makes them easy to be affected by the surrounding environment and things around them, and even be covered by negative emotions. Based on this situation, when teaching chemistry, teachers can introduce ideological and political education to help them shape personality, improve quality and form ideas, so as to not only consolidate students' basic knowledge, but also master practical skills and effectively promote students' all-round development.

Third, cater to the development trend of the social times. Nowadays, with the continuous improvement of people's quality of life, they have a deeper understanding of education and teaching. Education and learning is not only a way to acquire knowledge and skills, but also an important way to form qualities and habits, which can play an important role in the physical and psychological development of students. In order to meet the needs of social and economic development, colleges and universities should give full play to the educational function of chemistry curriculum and combine the ideological and political ideas of the curriculum with the practical teaching of chemistry, so as to provide useful talents for social development and national construction.

2. The integration principle of ideological and political education in college chemistry education

First, the principle of health. Before the formal introduction of ideological and political ideas into college chemistry courses, we should fully recognize the subject status of students in the classroom, so as to integrate ideological and political education with course content according to students' cognitive level, interests, basic level and other factors, and finally help students internalize ideological and political knowledge. So that the ideological and political construction of chemistry course can be consistent with the cognitive law of students, and finally can promote the overall development of students. In other words, in the process of constructing the ideological and political construction of chemistry course, teachers should fully embody the concept of "student-oriented" education, not simply explain and cite, but guide students to dig out the connotation and value, and finally achieve the purpose of ideological and political education of the course.

The second rule is closely related to the chemistry principle. The core content of curriculum ideological and political ideas lies in exploring ideological and political elements in each course teaching and integrating them into ideological and political education. From this, we can see that curriculum teaching is the foundation. Therefore, chemistry teachers need to carefully study the content of textbooks and create appropriate chemistry teaching scenes on this basis. After that, ideological and political education will be integrated into the chemistry scene, making ideological and political education more systematic and logical. In this way, it can not only explain chemical knowledge and transfer chemical skills to students, but also effectively demonstrate the effectiveness of ideological and political education, realize the organic unity of the two, and finally successfully complete the fundamental task of "cultivating morality and educating people".

The three principles are related to social principles. As we all know, the chemistry course of college students is closely related to students' daily life. Therefore, teachers should combine what students have seen and heard in their life with the course teaching in order to expand students' cognitive vision and enrich their knowledge system. At the same time, on the basis of exploring the chemical elements in life, teachers should choose the right time and way to infiltrate ideological and political education. For example, teachers should integrate current political news, social hot spots and hot topics into their chemistry courses, so as to carry out ideological and political education for students.

3. The integration path of ideological and political education in college chemistry education

1. Cultivating students' rigorous and responsible quality

Under the ideological and political teaching concept of the curriculum, college chemistry teachers should carry out highly targeted and effective teaching activities according to the characteristics of the curriculum, the needs of students and the teaching style, so as to help students form a meticulous, serious and rigorous quality in the process of acquiring knowledge and training skills. So that they can adhere to the rigorous and responsible attitude in the subsequent study of chemical knowledge and participation in chemical experiments, and finally promote the balanced development of students. The chemistry course contains a variety of chemical experiments, and chemical experiments have complicated steps and processes. In this process, special attention should be paid to dangerous operations and the order should not be disturbed, otherwise the experiments cannot be carried out smoothly and even endanger the safety of students. In order to further improve the effectiveness of experimental teaching, teachers can integrate ideological and political education into it, so that students can form a rigorous attitude and responsible quality in the gradual operation. In addition, the learning and mastering of chemical equations, definitions and concepts is an important basis for students to participate in experimental operations and answer chemical problems, but it is difficult for teachers to help students memorize and absorb them only by oral explanation. Therefore, teachers can introduce the research stories of outstanding chemists or domestic achievements in the field of chemistry while explaining theorems and formulas to students. In this way, students can realize that every formula and every theorem are verified and explored through repeated experiments, so as to penetrate the good quality of seriousness and rigor, at the same time, it can help students understand and master the theory and formula, but also effectively improve students' ideological and political literacy.

2. Cultivate students' awareness of green environmental protection

At this stage, China's social economy is in a critical stage of upgrading and transformation, and the state vigorously propagandises and promotes the concept of green environmental protection. Therefore, chemistry teachers in colleges and universities should undertake this important responsibility and naturally penetrate the concept of green environmental protection in the process of chemistry teaching to cultivate students' green environmental awareness. In this way, they can not only complete the task of chemistry teaching, but also to achieve practical thinking and political education. Before this, teachers should first dig out the knowledge and examples related to environmental protection contained in chemistry courses, so as to infiltrate environmental protection education based on textbooks. For example, when teachers explain the content of "Chemistry and human civilization" to students, they can deeply study the textbook and analyze the relationship between chemistry and environment in the textbook. In this way, they can realize that there is a dialectical relationship between chemical science and human development, in which chemistry is the driving force of social civilization and progress. Chemistry also has a negative impact on the development of human society. Therefore, teachers should expand the publicity of the beneficial aspects of chemistry, and consciously reduce the adverse effects of chemistry on the production and life of human society, so that the education of environmental protection consciousness can naturally penetrate into the teaching of chemistry. For another example, when teachers carry out chemistry experiment teaching, they involve a variety of drugs, instruments and other equipment, some of the objects themselves are harmful, if handled improperly, it will pollute the environment and endanger life and health. In view of this, chemistry teachers can try to guide students to carry out experimental innovation, and construct various green experiments and micro-experiments by

adjusting experimental steps and introducing new chemicals, so that students can gradually form environmental awareness in the process of experimental operation and participate in environmental protection with practical actions. According to the author's classroom reaction, The organic integration of chemistry course and environmental protection education has a very significant educational effect, which can successfully complete the ideological and political education task.

3. Cultivating students' patriotic feelings

College teachers can try to infiltrate patriotic education into the curriculum to achieve the purpose of ideological and political education. As chemistry teachers, they should actively explore the opportunity and path to integrate into patriotic education, so as to successfully complete the fundamental task of cultivating morality and cultivating people. Therefore, teachers should actively explore and use various ideological and political elements, and integrate them into classroom teaching, so as to influence students imperceptibly. For example, when teachers explain the relevant knowledge of "repeated decomposition" to students, in addition to the concepts, theorems and equations for students, they can also penetrate patriotic education. For example, they can explain to students the story of the famous chemist Hou Debang who broke through the ammonia-alkali process and opened the first soda ash in Asia. Later, he founded a company producing synthetic ammonia, nitric acid, sulfuric acid and ammonium sulfate. On this basis, he also broke through the continuous production of soda ash and ammonium chloride combined alkali technology, thus mastering the carbonization process of ammonia synthesis process to produce ammonium bicarbonate fertilizer technology. In addition, teachers should also lead students to learn and analyze the chemical principles and equations of Hou's soda making method, and understand that in order to make soda ash, it is necessary to obtain sodium bicarbonate with minimal solubility, and soda ash can be obtained by means of the unstable characteristics of this reagent. In addition, students want to make sodium bicarbonate, need a large number of sodium ions and carbonate ions, so it is necessary to integrate chlorine gas in saturated salt water, so as to saturated ammonia brine, and then carbon dioxide is also introduced, so as to ensure that the solution has sodium ions, ammonium examples, chloride ions and bicarbonate examples, and sodium bicarbonate will precipitate because of the smallest solubility. And other substances can be recycled. In this way, teachers can guide students to learn chemistry in the process of explaining Hou Debang's patriotic story, which can ultimately enhance their national feelings and national self-confidence and realize the goal of ideological and political education.

Epilogue:

All in all, in order to adapt to the development trend of modern education and teaching, higher requirements are put forward for the teaching of chemistry courses in colleges and universities. Therefore, teachers should timely update their teaching concepts, get rid of stereotypical thinking, and explore the practical path of integrating ideological and political education into chemistry classroom under the guidance of modern teaching concepts. In this way, students can be cultivated to form rigorous and responsible quality, green environmental awareness and patriotic feelings, and finally become the talents needed for the innovation and development of the chemical industry.

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