# Reflections on the Ideological and Political Reform of College Chemistry Curriculum under the Background of "Three Comprehensive Education"

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Abstract: With the deepening of the reform of higher education, in the teaching practice of college chemistry related courses, teachers have gradually realized the important practical significance of integrating "Three Comprehensive Education" into ideological and political education. In order to strengthen the ideological and political education work in colleges and universities, achieve the goal of moral education, and improve the teaching quality of chemistry teaching into curriculum ideological and political education, teachers need to participate in the education system in an all-round way, excavate the profound connotation of curriculum ideological and political education, and actively explore the path of teaching reform. Based on this, this paper will discuss the university chemistry teaching and curriculum ideology and politics under the background of "Three Comprehensive Education".

Key words: Three Comprehensive Education; Curriculum thinking and politics; College chemistry; Reform

## I. Analysis of connotation and value of "Three Comprehensive Education"

1. The connotation of "Three Comprehensive Education"

"Three Comprehensive Education" mainly refers to whole-person education, all-round education and whole-process education. The connotation of unilateral education includes not only the subject of education, but also the practice of education. The promotion of "Three Comprehensive Education" requires the attention and input of schools, and the joint assistance and participation of various subjects such as universities and colleges, government departments, social enterprises and students' families. The teaching staff and students within the school need to develop a sense of joint participation, implement the pattern of ideological and political work, and promote the improvement of students' ideological and political awareness, ideological and political level, and comprehensive ability. Focus on the main body of education, and build an education system of division of labor and cooperation; All-round education emphasizes space, strengthens the feasibility and diversity of ideological and political education, and builds an education system; The whole process of education emphasizes the education work at the practical level, which needs the correct guidance accumulated over time to realize the progress of ideas and consciousness. Colleges and universities should adhere to the overall goal of education and teaching to cultivate talents by virtue, carry out whole-process education and all-round education throughout education, firmly modernize the concept of education, and then effectively improve the quality of management work.

2. The important value of "Three Comprehensive Education"

Under the "Three Comprehensive Education" mode, the development of education and teaching can effectively improve the quality education and teaching results, train students to grow and become talents, promote the integration and systematic construction of teaching resources in colleges and universities, and then improve the overall quality of personnel training and coordinate the mechanism guarantee of "Three Comprehensive Education". The "Three Comprehensive Education" mode can promote colleges and universities to implement the integration of online and offline, on-campus and off-campus teaching resources, and help colleges and universities to carry out the education work in an all-round way. The reform of ideological and political work under the background of "Three Comprehensive Education" should also integrate teaching practice, improve the quality of teaching management, establish a system of educational work, and further promote the improvement of educational quality. The overall goal of "Three Comprehensive Education" and curriculum ideological and political education is to cultivate morality and cultivate people, and the ideological and political education and "Three Comprehensive Education" mode can also lead the improvement of educational work quality in colleges and universities. To promote the status of practical education, build a three-dimensional working mechanism, plan more diversified education systems, and form a good working mechanism of higher education.

## II. The practical significance of ideological and political education in college chemistry courses

The main goal of college chemistry teaching is to cultivate high-quality talents with both theoretical knowledge and practical skills. Students should not only understand the relevant frontier information in the field of chemistry, but also understand the practical application of chemical principles. At the same time, society and enterprises also put forward higher and higher requirements for college chemistry talents, students need to have a full range of abilities, including ideological level, knowledge and skills, moral quality and other aspects. With the development of the current society and the advent of the information network era, all kinds of values and bad ideas are easy to affect the ideological consciousness of college students, so students need to build a solid ideological barrier and establish a good mentality. Therefore, the ideological and political development of college chemistry courses is of great significance to the exercise of students with

excellent professional accomplishment, and can enhance their comprehensive strength and professional competitiveness.

The ideological and political education of college chemistry course can combine chemical knowledge with ideological and political education through correct educational methods, so that the two can produce synergistic teaching effect. First of all, the optimization of ideological and political teaching in the curriculum can promote the efficient integration of professional teaching and ideological and political education, and provide more support for chemistry teaching. The reform of ideological and political teaching in the curriculum can also promote the renewal of teachers' educational ideas, improve teaching quality, and guide the integration of teaching resources. Secondly, in the course of ideological and political development, teachers can accumulate a large number of educational materials, further improve the teaching design of related majors, improve the perfection of teaching objectives, teaching content and system, and form a distinctive ideological and political work flow. Moreover, chemistry education and curriculum ideological and political cooperation, can promote the knowledge learning, moral education, values cultivation and other education work interlinked, to achieve the imperceptible cultivation of students. Under the cooperation of curriculum ideology and politics, students' basic knowledge, scientific literacy, ideals and beliefs can be cultivated, and they will gradually become high-quality talents with responsibility and feelings of family and country.

# III. The thought of combining curriculum ideology and politics with college chemistry teaching under the background of "Three Comprehensive Education"

#### 1. Promoting the construction of school spirit

The implementation of curriculum ideological and political reform in colleges and universities needs to integrate the concept of education in the process, clarify the goal of education, attach importance to the construction of education resources, innovate and develop the education mechanism on the premise of orderly education laws, and improve the pertinence of education work. The concept of Three Comprehensive Education attaches importance to the trinity of education subject, space and time, which has important guiding significance for the ideological and political innovation of college chemistry curriculum. Under the guidance of the concept of the three aspects of education, college chemistry thought and politics can be closely combined with the three aspects of education ideas. First of all, under the guidance of all-round education, curriculum thought and politics can be reflected in the construction of college spirit. As a subject with strong practicality, chemistry requires students to continuously improve their ability of inquiry and experimental skills. Chemistry emphasizes the combination of practical ability and theoretical knowledge ability. The construction of school spirit in colleges and universities can integrate the excellent traditional virtues of China, grasp the practical needs of students, and use the construction of school spirit as a channel to guide the transmission of virtues, promote students' identification with the school, maintain the teaching quality of the school, and promote the construction of curriculum ideology and politics.

#### 2. Integrated mental health education

In view of the teaching practice of professional courses in colleges and universities, teachers often choose more traditional teaching methods, have less interaction with students in daily teaching work, pay more attention to students' knowledge learning ability, and neglect mental health education. Especially as students who have just entered the campus, they need a certain process to adapt to the new learning style in the new living environment. Teachers should fully understand the actual situation of students, work with counselors and teachers of various professional courses to guide students and pay attention to students' mental health education. Whole-person education requires teachers not only as knowledge imparts, but also as students in all aspects of the guide, teachers should be firm in their own sense of responsibility, guide students to actively learn, quickly adapt to college life, and then promote the overall development of students.

#### 3. Promoting classroom teaching reform

The whole process of education requires the close combination of curriculum ideology and politics with the reform of professional teaching, which runs through the whole process of college chemistry teaching. With the gradual deepening of the reform of traditional classroom teaching, the teaching quality of colleges and universities is also constantly improving, and the innovation and development of teaching needs a new focus. In the choice of teaching methods, college teachers should pay more attention to the ideological and political elements of professional knowledge and dig deep into the appropriate teaching resources. It is not only the choice of teaching methods and teaching modes, but also the course assessment work that needs to improve the traditional mode, integrate more diverse assessment methods, promote the improvement of students' experience, and explore new teaching reform paths.

# IV. Curriculum ideology and politics and college chemistry course teaching strategies under the background of "Three Comprehensive Education"

1. Updating the philosophy of chemistry teaching and improving the understanding of ideology and politics

Under the background of "Three Comprehensive Education", as an important way to realize the "Three Comprehensive Education", teachers should pay attention to the curriculum ideology and politics, and consider the effective combination of chemistry knowledge and ideological and political elements. College chemistry teachers should change their teaching philosophy, adhere to the student-centered concept, reflect the consistency of professional teaching and ideological and political teaching knowledge goals and ability goals, and guide the integration of ideological and political elements through course teaching cases. In professional teaching practice, teachers should emphasize the renewal of teaching concepts, promote the innovation and reform of teaching methods, and renew the ideological cognition of knowledge under the guidance of the concept of educating people in three aspects. Teachers should stand on the students' point of view,

fully understand the students' learning needs, and stimulate their interest in the ideological and political theory of professional teaching courses. First of all, teachers should fully embody the advanced nature of teaching, adhere to the educational goal of moral cultivation, have the courage to innovate and actively explore, constantly improve teaching methods, enhance teaching level, and train high-quality talents. Secondly, teachers should conform to the requirements of the three educational concepts, adhere to the construction of the whole-person, whole-process and all-round education system, and promote the unity of education goals and the consistency of direction at all levels. Curriculum education should also fully adhere to the scientific discipline construction, and train chemical talents with professional theoretical level, solid practical accomplishment and firm political and ideological direction. To promote the comprehensive improvement of students' chemical literacy. Moreover, teachers should attach importance to the ideological guidance of students, do a good job in all aspects of education, ensure students in mental health, scientific spirit, moral education, and cultivate all-round development of high-quality talents.

2. Explore chemical ideological and political elements to cultivate students' ability

On the basis of updating the ideological and political education concept of the course, teachers should dig deeply into the ideological and political elements of the course in the teaching work of college chemistry, such as the teaching elements of historical materialism, values, environmental protection concepts and safety education. College chemistry course teaching will involve more scientific discovery, scientific spirit and other aspects of the content, teachers should lead students to learn the scientific spirit, inherit the practical spirit of hard work, ability innovation. Teachers can integrate into the education of chemistry history, guide students to learn the style of science, realize the hardships of chemical research and form a profound understanding of chemistry according to the scientific research cases in their professional fields and the stories of chemists at home and abroad. Teachers can integrate ideological and political elements into the chemistry curriculum, so that students can understand the research process of scientific researchers, encourage students to explore independently and actively innovate, and enhance students' identification with the chemistry major. At the same time, teachers should strengthen the introduction of cutting-edge information of the subject, highlight the core position of innovation, so that students can fully understand the significance of scientific and technological innovation under the background of modernization and realize the urgency of innovation. For example, teachers can introduce cases of synthetic diamond gradually being widely used and high-precision machinery, aerospace, deep-sea exploration and other fields, so that students can more intuitively understand the guiding significance of theoretical knowledge to practical application, clear their own learning goals, and enhance innovation ability and innovation consciousness. Or, teachers can integrate the content of cultural confidence building in the teaching. China has a long history and culture, leading the world in the research of metal smelting, jewelry and jade, ceramic technology in ancient times. Teachers can explain the chemical composition of gemstones and jade, and analyze the ancient metal smelting methods by combining with the teaching content of elemental chemistry. To enhance students' sense of cultural self-confidence and national pride.

Summary: The ideological and political education work of chemistry curriculum under the guidance of the concept of "Three Comprehensive Education" needs long-term construction, and educators need to cooperate with universities, social forces and other subjects to optimize the system construction and teaching work at all levels. Colleges and universities should attach importance to the practical significance of the integration of the concept of Three Comprehensive Education and curriculum ideology and politics, actively play the role of classroom teaching, and constantly improve the educational work under the background of the new era. Teachers should pay attention to the reform of students' values, actively implement the requirements and concepts of "Three Comprehensive Education", excavate ideological and political elements, cultivate students' comprehensive ability, build teaching platforms to promote the participation of various subjects, and thus realize the progress and development of ideological and political work in college chemistry courses.

### **References:**

- [1] Guiping Xu, Furong Zhou, Zhenhua Yao, et al. Exploration and practice of curriculum Ideological and political teaching in Chemical principle course group from the perspective of "three whole education" [J]. Chemical Industry Time, 2022, 36(07):38-40+55.
- [2] Kaixuan Wang, Jiyan Li, Beichen Li. Research on Ideological and Political Education of College Students under the Background of Ideological and Political Construction in Chemistry Curriculum [J]. Chemical Engineering, 202, 50(06):6-7.
- [3] Xiaole Zhou, Yang Jia. The problems and countermeasures of Mainstream Ideological education for graduate students in universities [J]. Academic Theory, 2021(3):85-87.

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