

## *The Thought of "Curriculum Ideology and Politics" in Botany Teaching*

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**Abstract:** As an extension of the traditional teaching concept, ideological and political education in the curriculum plays a very important role in implementing the fundamental task of moral cultivation and cultivating high-quality talents. Botany is a basic course of biology major in colleges and universities, which contains very rich ideological and political education content, which is effectively integrated into the classroom in practical teaching. It can not only enrich the classroom teaching content, but also improve the ideological quality of students. The teaching objectives of botany course can be better achieved, and students can get more comprehensive development. Based on the advantages of integrating ideological and political ideas into the curriculum of botany teaching, this paper analyzes and discusses the application practice of integrating ideological and political education ideas into botany teaching from the aspects of analyzing content, finding the right entry point and natural integration. The contents expounded are also expected to provide references for other educational and teaching work.

As a new educational and teaching concept, curriculum thought and politics aims to give full play to the moral education function of the curriculum and guide students to cultivate their corresponding ideological quality effectively on the basis of mastering the professional knowledge and ability of the curriculum, so as to better meet the needs of talents with strong adaptability and high comprehensive quality in the social development. In the National Conference on Ideological and Political Work in Colleges and Universities, the General Secretary clearly mentioned: "We should give full play to the role of classroom teaching as the main channel, deepen and improve the teaching of ideological and political theory courses in the course of persistence, further enhance the affinity and pertinence of ideological and political education, and effectively meet the needs of students' growth and development. In practice, we should effectively integrate various courses with ideological and political education to form a synergistic effect"<sup>[1]</sup>. Curriculum ideology and politics coincide with the concept of developing quality education advocated at present, which is the key way to realize the concept of "three perfections" education. In botany course teaching, college teachers should pay more attention to the cultivation of students' ideological and moral character while cultivating students' professional development, and the implementation of curriculum ideological and political education concept can be demonstrated in the whole process of education and teaching. Through the analysis and application of ideological and political content in botany course teaching, this paper aims to

integrate ideological and political ideas into the whole process of botany teaching, enrich the teaching content, increase the learning interest of professional courses, and provide certain reference for the cultivation function of professional courses.

## **1. Advantages of integrating ideological and political thinking into botany teaching**

### **1.1. Botany contains rich ideological and political education factors**

The botany course consists of three parts: theoretical course, experimental course and field practice. From the perspective of the growth habits of plants and the classification of plants in the theoretical course, there are more ideological and political elements in the course. Each plant has its unique characteristics and utilization value, such as: In the teaching of this kind of basic knowledge, populus eugenica, lotus lotus, rose plum blossom, chrysanthemum and so on, can be populus eugenica spirit (hard work), praise lotus (out of silt but not dyeing, Zhuo Qinglian but not demon), praise plum blossom (Bao Jianfeng from honed out, plum blossom fragrance from the bitter cold), chrysanthemum spirit (ancient people especially love chrysanthemum name, Comparing with noble sentiment and unyielding integrity), the ancient poems and allegorical meanings can not only deepen students' understanding and grasp, but also achieve better ideological and political education and value education effect of traditional Chinese culture. In the plant experiment course, we can learn the growth characteristics by revealing the internal structure and composition of plants, so that in the process of exploring life phenomena, there are rich ideological and political education contents, which can cultivate students' professional skills and scientific professional quality.

### **1.2. To provide favorable conditions for ideological and political education throughout the teaching process**

In botany teaching, it has unique teaching advantages to integrate the ideological and political ideas in the course. Botany has a long history in the development of our country, and the survival and life of human beings can't leave the plant field, and the plant resources of our country are rich with distinctive features, the professional knowledge covered by botany is closely related to the actual human life, and the elements of curriculum ideological and political botany are distributed in each chapter and each link of botany, from the plant growth, the development and the whole process of reproduction, Can be integrated into ideological and political education content. From the perspective of understanding the plant world alone, we can carry out targeted education on respecting the law of plant growth, caring for natural resources, traditional culture, ideology and moral character, professional spirit, food security, ecological civilization and other aspects of the growth and development characteristics of plants and revealing life phenomena according to the actual teaching content. The knowledge content taught is not only consistent with the actual classroom teaching. It also provides favorable conditions for the integration of ideological and political content and improves the effect of ideological and political education in the curriculum<sup>[2]</sup>.

## **2. The practical application of ideological and political ideas in botany teaching**

### **2.1. Explore the ideological and political education factors contained in botany**

In the teaching of botany, professional knowledge is rich and closely related to human production and life, so it contains rich moral education factors, which can be shown as follows:

(1) Life and health, the ancient saying: food is the priority of the people, profoundly tells the importance of food to human survival and development, and plants, as the most important food source,

are particularly important to maintain human life and health. In the course of botany, the moral education of respecting labor and rare food can be carried out in the learning process of the growth characteristics, distribution rules and the utilization of current professional knowledge of grain and other crops. In addition, China is a big producer and consumer of food, with a huge demand for and consumption of food, and the issue of food security has already been raised to the level of national security strategy<sup>[3]</sup>. Food is not easy to come by, the production and processing of food is long and hard, must be more rare, not any waste, so that in the course learning process can dig out good ideological and political materials for life health education.

(2) Ecological civilization. Botany course teaching mainly introduces the life phenomena and growth habits of plants, which provides favorable conditions for students to carry out ecological civilization education. In the field practice teaching, after investigating and analyzing the plants and their species growing in different regions and environments, students realize that the natural environment cannot be separated from the plant kingdom. They can better grasp the internal reasons for the increase and decrease of vegetation species, establish the concept of respecting the laws of nature, and realize the importance of plant protection, which can enhance students' sense of responsibility and mission for ecological civilization construction. Plants are precious resources on the earth and important natural resources for the survival of the biological world. In the process of recognizing the protection of plants, we can seriously think about the connotation of sustainable development and ecological civilization construction, understand the intrinsic value of harmonious coexistence between man and nature, and actively practice the concept of ecological civilization development that clear waters and lush mountains are gold and silver mountains.

(3) In ancient Chinese literature, plants were often used to express emotions, thoughts, and emotions, and to explain one's philosophy of life and values. This effectively combined traditional cultural education with botany teaching. For example, teaching can describe the chrysanthemum "not preference chrysanthemum. This flower is more without flowers ", lotus "next day lotus leaves infinite blue, lotus different red", pear "snow for skin jade for appearance, not coquetry marry east wind" etc. Integrating ancient poetry into teaching can guide students to master botanical classification knowledge on the basis of rhythmic beauty, as well as appreciate the implicit, formal, and intrinsic beauty of ancient poetry. Students' humanistic qualities will also be effectively cultivated. Peonies, blooming flowers like splendid flowers, gorgeous, the beautiful flowers are graceful, elegant and prosperous, represents the people's beautiful vision and good vision for tomorrow, meaning the country is prosperous and prosperous, as the national flower, peonies symbolize national cultural image, show cultural deposits and history of our country, expand excellent traditional Chinese culture education in curriculum teaching.

(4) Values of life: The education of values of life can be infiltrated into the teaching of botany, which can be realized by integrating the life stories of botanists (Darwin, Fung Kwok-mei, etc.), carrying forward the theme and spreading positive energy, so that students can learn and promote the life ideals, professional ethics and personality qualities shown by these great people through their lives. Guide students from ideology to practical action, promote students to achieve better development in professional practice application. For example, when it comes to composite plants, Tu Youyou, a famous Chinese pharmaceutical scientist, discovered in September 2011 that artemisinin extracted from *Artemisia artemisia* has an excellent therapeutic effect in the treatment of malaria fever, which has saved the lives of millions of people all over the world, especially in developing countries, and made outstanding contributions to the world medical community. In October 2015, she also became the first Chinese to win the Nobel Prize in science, which enables students to strengthen the study of theoretical knowledge while closely related to the reality of life, only perseverance, in the process of benefiting mankind, to realize their dreams and life values.

(5) Professional quality. Botany teaching focuses on cultivating students' professional quality,

including scientific spirit and professional spirit. In teaching, students can exercise their will quality and job hunting ability, so as to achieve the educational purpose of ideological and political education in the course. On the basis of mastering the professional knowledge and ability of the course, students will gradually acquire the corresponding professional quality, so that they can better meet the needs of social development in the future and become talents with strong adaptability and high comprehensive quality. The field practice and botany experiment teaching involved in the botany course can directly contact and understand plants. Through the comparative study and learning on the morphological structure, growth habit and classification of plants, it can shape students' dialectical learning experience and rigorous attitude towards study and work, and also improve their observation and operation ability, learning interest and exploration ability. At the same time, students learn to abide by laboratory rules and professional operation norms in experimental classes, and their scientific spirit and professional quality can be effectively cultivated over time<sup>[4]</sup>.

## **2.2. To find the point of entry for curriculum ideological and political education**

When carrying out botany course teaching, finding the right entry point of ideological and political education in the course can not only stimulate students' interest in learning, but also promote the orderly and efficient conduct of the whole classroom teaching. At this time, it is necessary for teachers to conduct an in-depth analysis of the botany teaching content, accurately grasp the hidden ideological and political education content, and then use the way that students like to see and present the hidden ideological and political content of botany in the classroom naturally. Through moral education and aesthetic education methods, we should effectively ensure that the content of ideological and political education enables students to have a firm grasp of professional knowledge, accurately grasp the entry point of ideological and political content, and enhance students' interest and learning effect. For example, in the classification of biological world, when comparing plant cells with non-cellular viruses, students were asked to understand the existence of these microorganisms from a microscopic perspective, and guided to understand the pathogen's susceptibility to parasitic infection, easy spread and difficult to eliminate harmfulness, so as to improve students' awareness of maintaining a healthy life and preventing diseases. At the same time, we should attach importance to combining theory with practice, use professional knowledge to solve real problems in life as the key point, timely enter into the practical application of subject knowledge, stimulate students' interest in learning, help students to have a better understanding of professional knowledge, and finally achieve the harmony and unity of professional knowledge teaching and curriculum ideological and political education.

## **2.3. Scientifically determining the quantity and content of ideological and political education**

Considering the limited teaching time of botany course, it is necessary to scientifically grasp the content and quantity of the introduction in the course of ideological and political education, and avoid the selection of more ideological and political content penetration, which will not only cause adverse effects on professional knowledge professors, but also affect the final effect of ideological and political education. Therefore, the content selection of ideological and political education should ensure that it is consistent with the course teaching content, and carefully handle the ideological and political content before penetration to ensure that the content is short and concise. At the same time, if the selection of ideological and political education content is not combined with the current concerns of students, it is not conducive to students' understanding and mastering, and the education effect will be greatly reduced. At this time, attention should be paid to stimulate students' interest in ideological and political education. At this time, grasp the knowledge content and quantity of ideological and political education in the teaching process, which can better reflect the practical application value of the discipline and increase students' love for the major. For example: When

explaining the knowledge of the rose family plum blossom and the buttercup family peony, the teacher should grasp the key point of the top ten Chinese famous flowers, and then carefully screen the traditional cultural contents of the plum blossom and the national flower peony, determine the quantity and content to be integrated in the teaching process, and present them visually and vividly in the way that students are interested in. It can play a positive role in mobilizing students' learning enthusiasm and improving classroom teaching effect <sup>[5]</sup>. When fungi are introduced, edible fungi are rich in nutrition and have high economic benefits. At present, edible fungi should be widely popularized in various regions to achieve farmers' income. Edible fungi industry has also been booming in our country, especially in the development of ecological agriculture and the revitalization of rural industry has played a significant role <sup>[6]</sup>.

## **2.4. Ideological and political education is naturally integrated into botany teaching**

In order to integrate ideological and political education into botany teaching naturally, teachers should try to explore the educational factors related to professional knowledge, and prevent the situation of rote and far-off in practical application. At this time, teachers need to have a deep understanding of the content of the knowledge taught. In addition, the corresponding ideological and political knowledge content can be integrated into the actual life, which can imperceptibly carry out ideological and political education for students. The whole classroom teaching will be smoother, and the ideological quality of students can be effectively cultivated on the basis of learning botany knowledge. Such as: When explaining the leaf structure of plants in dry land, teachers can introduce the leaf structure of *Populus euphratica* with examples. When learning the leaf structure characteristics of water-preserving and drought-resisting, the leaf structure characteristics of *populus euphratica* can be naturally integrated into the characteristics of not dying for thousands of years and not failing for thousands of years after death, so as to guide students to experience and learn the indomitable and tenacious resistance spirit of *Populus euphratica*, students will also benefit greatly from the whole classroom learning <sup>[7]</sup>; When explaining grass plants and learning the growth habits of grass grain crops, it is possible to link nature with current domestic and international food security issues, making students realize that the planting and processing process of grain crops is very difficult. Food is a gift from nature and the result of hard work of the working people, guiding students to develop good habits of chewing food <sup>[8]</sup>.

## **3. Methods and strategies of ideological and political education in botany teaching in colleges and universities**

### **3.1. Innovation and optimization of classroom teaching model**

Theory is a knowledge system with internal logical structure. When integrating ideological and political education into botany class, teachers should guide students to continuously study, explore, understand and grasp theoretical knowledge, and finally realize the transformation from knowledge to ability and from knowledge to quality. In the teaching process, teachers should correctly recognize the subject position of students in ideological and political class, and on this basis, adopt the teaching methods of hypothetical questions, independent learning and independent exploration to cultivate students' correct ideological values and promote the formation and development of students' core qualities. After class, teachers should be good at summarizing and analyzing, constantly optimize and improve the methods and skills of integrating ideological and political education into the curriculum, review students' education level, so as to promote the acquisition of teaching experience and improve the effect of ideological and political education. For example: It can guide students to put forward the common plant growth phenomenon in nature (the interactive Mosaic distribution of plant leaves),

make assumptions (if the plant leaves overlap and block each other), and verify reasoning (it will affect the growth and development of each leaf as well as the utilization of light resources). Is not suitable for the growth of life), (nature each individual has a space to survive, regardless of the position has the value of existence, mutual respect is not only a rule of survival but also a virtue). Through such teaching, students' thinking is deepened and their professional cognitive ability is promoted.

### 3.2. Read botanical classics

Chinese traditional culture has a long history, extensive and profound, professional course books generally do not show its connotation and practicability. Therefore, in daily teaching, teachers should guide and encourage students to read traditional botanical classics extensively, so as to enrich knowledge, expand horizons, deepen thoughts, improve cognition and enhance learning interest in the process of reading, and establish correct outlook on life, world view and values. The study of plants in China is early, so we have accumulated a large number of literature materials, such as the Book of Songs, Erya, Compendium of Materia Medica, Flora and Flora of China Image Library and other excellent books record a large number of knowledge related to plants, which are good materials for students to read and learn plants. Through reading and learning, we can deepen our cognition and understanding of plants, feel the practical value and scope of plants, and thus have a stronger interest in learning. In order to further expand the ideological and political education function of professional knowledge of botany, students can also be encouraged to write comments on reading, compare plants around them, make plant specimens, summarize and compare in the process of reading, which can not only deepen students' understanding and memory, but also learn skills, and students' comprehensive quality can be effectively improved.

### 3.3. Increase practical teaching

Practice leads to real knowledge, and practice is also the main method to transform theoretical knowledge and deepen impression. Botany courses have rich themes of ecological civilization education. Students should be encouraged to actively participate in the construction of ecological civilization in daily teaching. Students should better advocate the idea that clear waters and lush mountains are gold and silver mountains, practice socialist core values at all times, and lead young people to cherish nature and protect the environment. Promote and guide more people to actively participate in the construction of beautiful home. Students can take the initiative to get close to nature through social practice activities such as understanding campus plants, field practice, returning home survey and so on. Students can be guided to carry out a series of activities with their professional knowledge of botany. For example, by visiting local desert areas, they can realize the harm caused by land desertification to the environment and feel the importance and urgency of protecting and utilizing vegetation resources. Or conduct social research in hometown, formulate related topics of plant resources, utilization and sustainable development, and truly understand the connotation and significance of ecological civilization construction through scientific research, data collection and problem analysis, so that the concept of ecological civilization and sense of responsibility can be rooted in the hearts of students<sup>[9]</sup>, and then transform theoretical knowledge. In participating in practical activities to achieve the curriculum ideological and political education function.

To sum up, the ideological and political education of college students has been concerned, and curriculum ideology and politics have been the main guide of all kinds of new curriculum reform. Botany, as a basic course of biology major in colleges and universities, contains very rich professional knowledge and involves a wide range of traditional knowledge. The knowledge structure compiled by botany is scientific and reasonable, which provides favorable conditions for the integration of ideological and political ideas in the course. However, in order to achieve the ideal effect of

ideological and political education, it is necessary to fully and effectively excavate the hidden ideological and political elements of botany course, fully combine the knowledge points with the learning rules, and present them naturally in the way that students are interested in. Only in this way can it play a positive role in enhancing students' understanding of professional knowledge, developing students' ideological and moral qualities, and improving the quality of course education and teaching. Specifically, in practice, it is necessary to achieve harmonious and unified development of botany course teaching and ideological and political education through the practical application of finding the right point of ideological and political education in the curriculum, scientifically grasping the number of ideological and political elements into the curriculum teaching, and naturally integrating with the curriculum teaching. Besides, it is necessary to grasp the methods and strategies of ideological and political education in the curriculum of botany teaching, and effectively play the role of classroom and practical teaching. Constantly improve the ideological and political education effect of the curriculum. At the same time, it is also necessary to keep paying close attention to the real-time dynamics of current social development, especially in combination with the current hot issues in the development of life science, so as to show the role of professional knowledge in solving social practical problems and improve the learning effect.

In short, the idea of "curriculum thought and politics" integrated into the teaching of Botany can effectively improve the teaching quality of professional courses and promote the play of ideological and political education function. It is one of the classic courses that effectively integrate various courses of biology majors with ideological and political education to form a synergistic effect. Further practical exploration and scientific research are needed to effectively integrate ideological and political content into practical teaching of Botany course in the future.

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