

Research on the Approaches of Integrating Curriculum Ideology and Politics into Middle School Biology

Dehong Wang*

Xinjiang Karamay Education Research Institute, Karamay 834000, Xinjiang, China

**Author to whom correspondence should be addressed.*

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Abstract: With the development of social economy, the subjects, methods, and contents of ideological and political education have undergone changes. It is not only necessary to give full play to the role of ideological and political courses but also to focus on exploring teaching forms and methods to promote the realization of the goal of “fostering virtue through education”. Under the background of the new curriculum reform, in middle school biology teaching, it is necessary to implement “fostering virtue through education”, carry out ideological and political education, effectively improve the effect of talent training, and promote the development of students’ values. From the perspective of middle school biology, this paper discusses the necessity of integrating curriculum ideology and politics, analyzes the principles that should be followed in the infiltration of ideological and political elements, and puts forward specific strategies for biology teaching practice, aiming to cultivate students’ good values and lay a solid foundation for their subsequent knowledge learning.

Keywords: Curriculum ideology and politics; Middle school; Biology

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1. Introduction

Curriculum ideology and politics is a trend in teaching development, which refers to exploring the ideological and political elements contained in courses and integrating them into teaching practice to promote the unification of teaching and educating people. The middle school biology discipline not only contains a lot of biological knowledge but also involves rich ideological and political elements, which deserve in-depth exploration by teachers. The integration of the concept of curriculum ideology and politics into middle school biology classrooms can expand the course content, create a good classroom environment, and cultivate students’ comprehensive quality.

2. The necessity of integrating curriculum-based ideological and political education into middle school biology teaching

2.1. Meeting the needs of the new curriculum reform

The deepening of the new curriculum reform is conducive to the implementation of quality-oriented education, safeguarding students' all-round development, and is one of the important ways to cultivate talents needed by the times ^[1]. The new curriculum emphasizes the transformation of knowledge impartation, focusing on cultivating students' thinking and inquiry abilities. It encourages students to continuously change their learning methods in the process of studying biology knowledge, combine textbooks with real-life issues, and develop insightful perspectives on social development. The new curriculum standards can reflect the concepts advocated by the reform, attaching importance to cultivating students' awareness of life, scientific thinking, and social responsibility. Middle school biology, which mainly studies life phenomena and laws, contains a wealth of inquiry experiments. Through activities such as analyzing biological phenomena, raising questions, and designing experiments, teachers can effectively cultivate students' awareness of life, foster their spirit of exploration, and encourage them to take on social responsibilities.

2.2. Effectively supplementing the content of ideological and political courses

Ideological and political courses are important channels for spreading ideological and political theories. However, they have problems such as monotonous methods and boring content, making it difficult for students to conduct in-depth exploration. As a result, students' ideological and moral concepts may lag behind, and it is hard to achieve the goal of cultivating virtue through education. The promotion of the curriculum-based ideological and political education concept helps integrate ideological and political elements with subject teaching, enabling students to perceive the charm of ideological and political knowledge while learning subject knowledge, effectively enhancing their enthusiasm for knowledge exploration, and supplementing the content of ideological and political courses ^[2]. In this regard, the cooperation between curriculum-based ideological and political education and ideological and political courses can meet the needs of curriculum reform, effectively expand course content, and satisfy the requirement of cultivating virtue through education.

3. Principles to be followed in infiltrating ideological and political education concepts into middle school biology classes

3.1. Integration of theory and life

In the implementation of ideological and political education in middle school biology, attention should be paid to improving students' ideological understanding and restraining their behavioral habits. The integration of ideological and political education, life, and social practice can optimize the implementation of strategies and integrate theoretical learning with practice. Among them, the use of life-oriented cases containing ideological and political elements in biology can effectively arouse students' resonance and enhance their enthusiasm for knowledge exploration ^[3]. In addition, teachers need to provide more practical opportunities for students according to the characteristics of biology courses to help them achieve the unity of knowledge and practice.

3.2. Innovation

To keep biology teaching activities in line with the times, teachers need to innovate biology courses in combination with the requirements of the new curriculum reform, build a good knowledge learning environment for students, attach importance to the formation of their learning habits, cultivate students' abilities to collect information,

discover and solve problems, and organically integrate ideological and political elements into them ^[4].

In the process of classroom teaching, teachers can choose different teaching methods according to the differences in ideological and political elements to ensure the realization of teaching goals, effectively stimulate students' enthusiasm for knowledge learning, and allow them more time for thinking and communication. A relaxed biology classroom environment can help students explore knowledge and thus cultivate their core literacy.

3.3. Equality between teachers and students

In middle school biology teaching, students play the role of reflectors, which can intuitively show the teaching effect. Various teaching activities cannot be carried out without the joint participation of teachers and students. In this regard, to improve the effect of ideological and political education in biology courses, teachers need to play a good guiding role, attach importance to the dominant position of students, and establish a good teacher-student relationship. The concept of equality provides a prerequisite for the construction of teacher-student relationships ^[5].

To encourage students to actively participate in the learning of ideological and political knowledge, schools need to attach importance to the construction of an equal teacher-student relationship, guide students to selectively absorb knowledge, effectively improve teaching effectiveness, and ensure the smooth implementation of teaching strategies.

4. Practical strategies for integrating the ideological and political education concept into middle school biology classrooms

4.1. Refine teaching objectives and infiltrate subject literacy

In the process of implementing the concept of ideological and political education in courses, teachers need to attach importance to the adjustment of teaching objectives. They should carry out practical teaching activities by establishing connections with professional training goals and integrating them with the course content ^[6]. Against the backdrop of the new curriculum reform, cultivating students' core competencies have become an important criterion for evaluating their learning and growth in middle school biology classrooms. To effectively enhance students' core competencies, teachers can start from the perspective of the traditional three-dimensional objectives, optimize and adjust them, emphasize the cultivation of core competencies, and design reasonable teaching objectives.

Guided by core competencies, teachers can create real teaching scenarios, understand students' needs, and design activities to address teaching issues while meeting the requirements of teaching tasks and multiple needs such as knowledge construction and ability cultivation. However, due to the comprehensive and implicit nature of biology classrooms, they can effectively implement core competencies and optimize teaching activities. Among them, teachers can promote the transformation of biological literacy by connecting core competencies with the biology subject and adjust teaching objectives accordingly. In line with the needs of teaching objectives, they can subtly integrate ideological and political education goals, not only focusing on the achievement of knowledge objectives but also paying attention to the improvement of students' comprehensive quality ^[7].

In summary, to effectively implement the concept of ideological and political education in middle school biology classrooms, teachers must clarify the course teaching objectives, deeply explore the ideological and political elements contained in the curriculum, flexibly design teaching objectives, and promote the integration

of knowledge transmission, ability cultivation, and value shaping. In the actual design of ideological and political objectives for biology classrooms, teachers can refer to students' knowledge cognition, divide objectives hierarchically as a basis, and further adjust them to enhance the operability of teaching objectives.

4.2. Optimize classroom atmosphere and improve education effectiveness

In middle school teaching, the classroom is the main front for implementing the concept of ideological and political education, playing a crucial role in biology classrooms. To better implement this concept, teachers can take various measures in biology teaching to enable students to gain positive emotional and behavioral experiences. A relaxed and pleasant classroom environment can ensure the smooth progress of teaching practice, stimulate students' interest in learning, and cultivate their enthusiasm for biology. In middle school biology teaching, to effectively improve the classroom atmosphere, teachers need to communicate closely with students and build a good teacher-student relationship.

Based on a democratic teacher-student relationship, students play the main role in the classroom, while teachers mainly act as guides, allowing students to gain more autonomy in the classroom. Teachers can guide students to participate in classroom learning, actively express their thoughts and viewpoints, and such teacher-student interactions help create a positive biology classroom environment ^[8]. In addition, in biology classroom practice, teachers should pay attention to their language art. Vivid language can effectively ease students' tension and help them concentrate.

In the evaluation process of biology classes, teachers need to focus on encouragement and guidance, enhance students' confidence in the classroom, and help them develop the habit of expressing themselves bravely. Through these activities, a good biology classroom atmosphere can be created, the concept of ideological and political education can be smoothly implemented, and students' innovative ability and critical thinking can be effectively cultivated.

4.3. Expanding ideological and political resources to enhance teaching effectiveness

Middle school biology courses, based on the cognition of nature, help demonstrate life phenomena, operational mechanisms, and other contents. They contain rich ideological and political education elements and possess significant educational value (as shown in **Table 1**).

Table 1. Ideological and political elements in middle school biology courses

Ideological and Political Dimension	Ideological and Political Connotation
Family and National Feelings	Patriotism, family feelings, national pride and self-respect, sense of gratitude, etc.
Political Identity	Upholding the leadership of the Party, loving socialism, identifying with the socialist system, etc.
Scientific Spirit	Seeking truth from facts, value orientation of exploration and innovation, etc.
Awareness of the Rule of Law	Learning about law, abiding by law, using law, identifying with the construction of the legal system, actively participating in legal construction, and handling affairs according to law
Ecological Awareness	Ecological concepts, respecting people, respecting nature, and focusing on the harmonious development of society.

In teaching practice, teachers should not only explore the ideological and political elements embedded in the curriculum but also attach importance to constructing a system of ideological and political resources

for biology courses. By integrating texts, images, and other materials and conducting classification work, teachers can truly achieve coherence and unity in the teaching planning and vertical progression of ideological and political resources, as well as horizontal complementarity, thereby achieving a harmonious and consistent effect and improving the quality of ideological and political education ^[9]. The construction of an ideological and political resource library for courses is systematic and requires the joint participation of teachers. For the biology discipline, common textual resources include not only textbooks but also extracurricular readings. Teachers can also collect and organize daily news related to biology.

Regarding biological activity resources, teachers can integrate biology competitions and engage with interest groups to facilitate the continuous accumulation of knowledge. In addition, biological material resources offer multiple choices, including biological models, images, and daily life entities. Against the backdrop of the information age, teachers can enhance the use of information resources by sorting and summarizing images and videos. They should also make full use of local ideological and political resources based on local conditions, such as red culture and local folk culture, to effectively expand resources for ideological and political education and provide more space for teachers to participate in ideological and political teaching. Enriching biological ideological and political resources can effectively stimulate students' enthusiasm for knowledge exploration, encourage them to reflect on patriotism, family feelings, and the concept of the rule of law, and ensure the effectiveness of ideological and political education in biology courses.

4.4. Skillfully using role-playing to improve learning efficiency

In the process of teaching practice, teachers can innovate biology classes, follow the requirements of the concept of ideological and political education in courses, and combine students' life experience to help them understand biological knowledge and improve teaching quality. The implementation of ideological and political education in middle school biology courses not only relies on teachers' lectures but also requires the joint participation of students to achieve good teaching results. In the teaching of biological knowledge, teachers can also use role-playing to create a good classroom environment ^[10]. For example, when teaching content related to biological ecosystems, teachers can adopt group cooperation and encourage students to play roles such as producers, consumers, and decomposers. In this process, teachers can play an organizing role and create scenarios, allowing students to experience the serious consequences caused by problems at the trophic level as participants themselves. By guiding students to have personal experiences, the importance of environmental protection can be highlighted, enabling students to develop a good concept of life and continuously respect and protect nature.

4.5. Changing teachers' concepts and enhancing moral cultivation

In middle school biology classes, teachers are professional personnel, and their professional nature usually determines the roles they play. In the process of biology teaching, it is not only necessary to focus on knowledge teaching but also to emphasize shaping students' character, enabling them to gradually grow into members who meet social needs. For this reason, teachers often play an exemplary role, and in the quality of the teaching staff, teachers' ethics and morals are the primary criteria for evaluation. This shows that in daily teaching, teachers need to continuously standardize their words and deeds in communication activities with students, exert a good exemplary role through their words and actions, and truly live up to the saying that "a teacher must be knowledgeable and virtuous". In terms of moral cultivation, teachers also need to play an exemplary role, positively influence students through their own actions, and improve the effect of education.

In addition, in the practice of middle school biology teaching, to effectively carry out ideological and

political education in courses, teachers need to have credibility, which mainly comes from teachers' behaviors, communication, etc. Among them, teachers need to master biological knowledge proficiently, keep pace with the times, deeply understand historical development, learn the latest teaching methods, and focus on current political information. Through the implementation of the above activities, teachers can effectively connect biology with ideological and political knowledge, providing a guarantee for the smooth development of ideological and political education in courses.

To enable teachers to grow into comprehensive learning-oriented teachers, it is possible to continuously improve their moral literacy by changing their concepts, setting a good example for students. The exemplary role of teachers can not only be reflected in knowledge teaching but also in shaping students' values. The words and deeds of teachers are all objects of students' imitation. Therefore, teachers need to strictly demand themselves, pay attention to the improvement of moral cultivation, continuously adjust biology classroom teaching, positively influence students, and achieve good teaching results.

5. Conclusion

To sum up, the integration of ideological and political education concepts into middle school biology teaching meets the needs of educational development, helps achieve the fundamental task of fostering virtue through education, and enables students to master biological knowledge while developing good ideological and moral qualities, moving towards all-round development. Specifically, teachers can effectively infiltrate ideological and political elements into middle school biology classrooms by refining teaching objectives, optimizing classroom atmosphere, and organizing role-playing activities. This practice implements the concept of ideological and political education in courses, enriches the content of biology classes, promotes the realization of educational goals, and builds high-quality biology classrooms.

Disclosure statement

The author declares no conflict of interest.

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