

Curriculum Design and Implementation of Animal Husbandry and Veterinary Majors Based on the Ideological Concepts of Courses

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Abstract: With the continual evolution of societal development and educational philosophies, integrating ideological and political education with professional education has become a significant trend in higher education reform. This paper focuses on the Animal Husbandry and Veterinary majors and discusses curriculum design and implementation strategies based on ideological concepts of courses. By analyzing the core concepts and implementation goals of ideological and political education in the curriculum, this study outlines the educational background and challenges of the Animal Husbandry and Veterinary majors, and constructs a framework that integrates ideological and political education with professional education. Regarding curriculum design principles, the paper proposes four key strategies: goal orientation, student-centeredness, practical application, and continuous feedback, and elaborates on specific implementation methods. Moreover, the study establishes a comprehensive evaluation system to assess and provide feedback on the teaching effectiveness, ensuring the achievement of educational objectives. Through this research, it aims to provide scientific and systematic theoretical support and practical guidance for curriculum design and implementation in the Animal Husbandry and Veterinary fields, promoting the comprehensive development of students' professional skills and ideological and political qualities.

Keywords: Ideological concepts of courses; Animal Husbandry and Veterinary majors; Principles of curriculum design; Implementation strategies; Evaluation system

1. Introduction

As an essential pillar of national agricultural development, the Animal Husbandry and Veterinary field demands higher standards in the cultivation of professional talents. In the context of the increasingly deep-rooted socialist core values, effectively integrating ideological and political education into professional education has become an urgent issue in the realm of higher education. Based on the ideological concepts of courses, this paper explores effective strategies for the curriculum design and implementation in Animal Husbandry and Veterinary majors. It aims to cultivate students' sense of social responsibility, professional ethics, and innovative spirit through the integration of course content, innovation in teaching methods, and construction of an evaluation system, which is crucial and necessary for enhancing the quality of education in Animal Husbandry and Veterinary majors and cultivating high-quality talents.

2. Theoretical Foundation

2.1 Analysis of the Ideological Concepts of Courses

Course-based ideological and political education, as an innovative practice in higher education, aims to integrate elements of ideological and political education into the design and implementation of various courses, fostering students' sense of social responsibility, national consciousness, and moral qualities^[1]. The core concept is to combine ideological and political education with professional education, shaping students' values and overall personality development through multiple dimensions such as course content, teaching methods, and educational activities. The main goal of course-based ideological education is to cultivate high-quality talents with good professional ethics, a sense of social responsibility, and an innovative spirit, while also strengthening students' awareness and respect for national laws, industry standards, and socialist core values. Specifically, course-based ideological

education covers not only the teaching of political theory but also includes professional ethics education, social practice activities, and the inheritance of historical culture, aiming for an organic integration of disciplinary knowledge with ideological and political education.

2.2 Overview of the Animal Husbandry and Veterinary Major

The Animal Husbandry and Veterinary major, an important part of agricultural science, is committed to training advanced professional talents capable of handling livestock production, animal disease prevention and treatment, and animal health care. The educational goals of this major include not only imparting the basic theories and applied technologies of animal science but also addressing animal welfare, public health, and ecological conservation, aiming to solve key scientific and technological issues in modern livestock industry development. Challenges include balancing economic benefits with ecological conservation, improving the capacity for animal disease prevention and control, and enhancing public awareness of animal welfare. Additionally, as societal concerns about food safety and animal welfare increase, education in the Animal Husbandry and Veterinary field must continually innovate to meet new development demands.

2.3 Constructing an Integrated Framework for Ideological Education and Animal Husbandry and Veterinary Education

To build an integrated framework for ideological education and Animal Husbandry and Veterinary education, it is first necessary to identify the points of integration, specifically how to incorporate ideological elements into professional knowledge teaching and how to use professional characteristics to enhance the effectiveness of ideological education. An effective method is to use case studies involving social hotspots and typical cases related to the Animal Husbandry and Veterinary field, guiding students in deep discussions to enhance their sense of social responsibility and professional ethics^[2]. Additionally, strengthening practical teaching components, encouraging students to participate in farm management, animal protection, and public health services not only improves professional skills but also helps develop their teamwork and problem-solving abilities. In designing course content, emphasis should be placed on interdisciplinary integration, incorporating educational elements such as legal regulations and ecological civilization into the professional courses of Animal Husbandry and Veterinary, thus building a comprehensive, multidimensional educational system.

3. Curriculum Design Principles

3.1 Goal-Oriented Principle

Following the goal-oriented principle, the curriculum design for the Animal Husbandry and Veterinary major needs to establish clear educational objectives to achieve the dual cultivation of students' professional skills and ideological and political literacy. This principle requires that the course content not only delve into the core professional technologies of the Animal Husbandry and Veterinary field, such as the diagnosis and prevention of animal diseases, the latest research in animal nutrition, and advanced genetic breeding techniques, but also integrate elements of ideological and political education such as national consciousness, professional ethical standards, and the cultivation of social responsibility.

This design principle emphasizes that during the course setup and content development process, attention must be paid to the depth and breadth of professional knowledge to ensure students master the scientific theories and practical skills in the field of Animal Husbandry and Veterinary. Simultaneously, by incorporating related ideological and political education content, such as learning about national development strategies, analysis of professional ethics cases, and social responsibility project practices, it strengthens students' understanding and practice of social responsibility and professional ethics, promoting their comprehensive development.

This goal-oriented curriculum design aims to cultivate Animal Husbandry and Veterinary professionals with high professional skills, ensuring these future professionals possess firm national consciousness, noble professional ethics, and profound social responsibility, making positive contributions to sustainable societal development^[3]. This aligns with the needs of modern Animal Husbandry and Veterinary education and responds to contemporary society's demand for the comprehensive cultivation of high-quality talents.

3.2 Student-Centered Principle

Upholding the student-centered principle is key in the curriculum design for the Animal Husbandry and Veterinary major. Its core lies in deeply understanding and respecting students' individualized learning needs and characteristics, thereby formulating educational strategies that cater to diverse learning styles and needs. This principle requires educators to provide a rich variety of learning resources, such as digital textbooks, online courses, and laboratory practice guides, and to adopt flexible and varied teaching methods, including group discussions, case studies, and simulation practices, to facilitate active learning and deep understanding among students^[4].

Furthermore, the student-centered principle emphasizes customizing individual learning paths for students, which not only means personalized adjustments to teaching content but also flexible arrangements of learning pace and evaluation methods, aiming to provide each student with the most suitable learning environment. Through this approach, students are placed at the center of the learning process, fully exercising their agency, not only gaining systematic and in-depth knowledge in their professional fields but also achieving a deep understanding and internalization of core values such as professional ethics and social responsibility through exploration and practice.

Curriculum designs that adopt the student-centered principle, by focusing on and meeting students' individualized needs, not only significantly enhance students' motivation and engagement but also promote the comprehensive development of their critical thinking, problem-solving abilities, and professional qualities, laying a solid foundation for cultivating high-quality Animal Husbandry and Veterinary professionals suited for future societal needs.

3.3 Practical Application Principle

Implementing the practical application principle is an indispensable part of the curriculum design in the Animal Husbandry and Veterinary major, with the core goal of enhancing students' ability to apply theoretical knowledge in real-world work environments through a variety of practical teaching activities. This principle emphasizes that high-quality curriculum design should transcend traditional theoretical teaching models by introducing internships, laboratory research, field surveys, and other diverse practical activities, providing students with a real platform for learning and application. Such practical components not only deepen students' understanding of professional knowledge such as animal nutrition, disease prevention, and genetic improvement but, more importantly, enhance their abilities in scientific exploration and technical application through problem-solving.

Further, by effectively integrating ideological and political education elements into practical activities, such as incorporating discussions on professional ethics during internships and integrating education on social responsibility during field surveys, students can deeply appreciate and recognize the social responsibilities and ethical obligations of Animal Husbandry and Veterinary professionals while participating in practical activities^[5]. This educational model not only promotes the dual enhancement of students' knowledge skills and moral literacy but also achieves the organic integration of theoretical learning with professional practice and ideological and political education with professional skill teaching, guiding students towards an educational state of "unity of knowledge and action."

The application of the practical application principle in the curriculum design for the Animal Husbandry and Veterinary major, through providing extensive practical opportunities and deep integration with ideological education, aims to cultivate students' practical skills, innovative thinking, and sense of social responsibility, ensuring that future professionals can demonstrate high professional competence and excellent moral qualities throughout their careers.

3.4 Continuous Feedback Principle

Implementing the continuous feedback principle is crucial to ensuring that the curriculum design and teaching practices of the Animal Husbandry and Veterinary major can continuously improve and refine. This principle emphasizes establishing a comprehensive feedback system that includes teachers, students, and other stakeholders, aimed at continuously optimizing and innovating teaching content, methods, and resources. Through systematically collecting and analyzing feedback from various sources, the curriculum design team can timely understand and evaluate the effectiveness of teaching activities, identify the needs and obstacles in students' learning processes, and make targeted adjustments and optimizations to the curriculum structure, teaching strategies, and learning materials.

This feedback mechanism includes but is not limited to regular assessments of student learning outcomes, observations of teaching processes, surveys of course satisfaction, and open channels for feedback. These feedback tools not only provide quantitative data about student learning outcomes and teaching effectiveness but also reveal students' subjective perceptions and suggestions regarding course content and teaching methods, offering deep insights for course improvements. Additionally, teachers and course designers should actively participate in the feedback loop, continuously enhancing teaching quality and professional capabilities through regular self-reflection and peer review^[6].

By establishing and maintaining this multidimensional continuous feedback mechanism, the curriculum design and teaching practices of the Animal Husbandry and Veterinary major can more closely align with students' actual learning needs and educational objectives, while also promoting innovative development of educational content and methods. This not only helps enhance students' learning experiences and outcomes but also lays the foundation for building an open, interactive, and self-improving educational ecosystem.

Through the implementation of these four design principles, the aim is to construct an Animal Husbandry and Veterinary curriculum system that not only cultivates students' professional skills but also deepens the content of ideological education, meeting contemporary society's demands for high-quality professional talents.

4. Specific Implementation Strategies

4.1 Curriculum Content Integration

The core purpose of curriculum content integration is to achieve a seamless fusion of ideological elements with professional knowledge in Animal Husbandry and Veterinary, aiming to cultivate students who possess both professional skills and a deep understanding of social responsibilities and professional ethics. In the design and implementation of theoretical courses, educators need to carefully select content that aligns with national development strategies and socialist core values, integrating it with the fundamental theories and applied technologies of the Animal Husbandry and Veterinary field. For example, incorporating content on bioethics, animal protection laws and regulations, and professional ethical standards into the curriculum system not only helps students master professional knowledge but also guides them in forming correct values and professional ethics.

For practical courses, there is an increased emphasis on the application of knowledge and the practice of values. By designing social practice activities themed around animal welfare and ecological environmental protection, students are made to feel the importance of professional ethics through hands-on operations, understanding and assuming the social responsibilities they should bear as professionals in Animal Husbandry and Veterinary. Additionally, the introduction of case analysis and project research methods allows students to deepen their understanding and experience of ideological education content while exploring and solving real-world problems, thus achieving a deep integration of professional knowledge learning with ideological and political education.

Such curriculum content integration not only promotes a comprehensive and deep mastery of the Animal Husbandry and Veterinary profession by students but more importantly, it facilitates deep-level shaping and enhancement in aspects such as values, professional ethics, and social responsibility. This educational model is instrumental in developing professionals who can meet the needs of future societal development, possessing high standards of professional ethics and a strong sense of social responsibility.

4.2 Innovative Teaching Methods

Adopting innovative teaching methods is a key strategy in Animal Husbandry and Veterinary courses to enhance teaching quality, increase student engagement, and promote the deep integration of ideological education. Case teaching, as an effective teaching method, introduces real-life cases related to public health management and livestock industry environmental protection during epidemic prevention and control. This not only promotes a deep understanding of professional knowledge among students but also cultivates their critical thinking and comprehensive problem-solving abilities, enabling them to make reasonable judgments and effective responses to complex problems in their future careers.

Further, interactive teaching methods such as group discussions and role-playing enhance learning

interactivity and experiential learning while greatly stimulating students' interest in learning. By discussing issues cooperatively in groups, students can understand and analyze problems from different perspectives, promoting a deep understanding of the knowledge. Role-playing, especially in activities that simulate real professional scenarios, allows students to experience professional roles firsthand, deeply understanding and practicing professional ethics and social responsibilities, effectively translating theoretical content of ideological education into practical abilities and ethical behaviors.

By implementing these innovative teaching methods, educators can not only effectively improve students' mastery of Animal Husbandry and Veterinary professional knowledge but more importantly, deepen students' recognition, understanding, and internalization of ideological education content, promoting the formation of correct worldviews, outlooks on life, and values. This educational approach is significant in developing students' professional abilities, thinking skills, and sense of moral responsibility, laying a solid foundation for the comprehensive development of Animal Husbandry and Veterinary professionals.

4.3 Evaluation System Construction

Constructing a comprehensive evaluation system that emphasizes both the enhancement of professional skills and the in-depth cultivation of ideological qualities is a cornerstone in achieving the educational and teaching objectives of the Animal Husbandry and Veterinary major. This system aims to accurately measure students' achievements and progress in mastering professional knowledge, applying practical skills, and displaying ideological qualities through comprehensive, multi-dimensional evaluation methods. To achieve this, a series of specific evaluation criteria and indicators must be clearly set, covering aspects such as specific assessments of professional skills, in-depth reports on ideological case analysis, and feedback and presentation of results from social practice activities, ensuring a thorough and comprehensive assessment of students' learning outcomes.

Further, the construction of the evaluation system should adopt a diversified evaluation approach, including but not limited to professional evaluations by teachers, peer reviews among students, and self-evaluations by students. This multi-faceted evaluation mechanism not only promotes teaching interaction and deepens communication between teachers and students but also encourages students to actively participate in the learning process, proactively exploring and reflecting, thus achieving self-transcendence in both professional skills and ideological qualities.

With this carefully designed evaluation system, not only can students in the Animal Husbandry and Veterinary major receive systematic training in knowledge and skills, but they can also gain a deep understanding and internalization of ideological and political education, forming correct value concepts and professional ethics. This comprehensive and in-depth evaluation mechanism is of significant guiding importance for cultivating high-quality Animal Husbandry and Veterinary professionals who meet the demands of the times, ensuring the effective achievement of educational goals and the continuous improvement of educational quality.

By applying these three specific implementation strategies, the aim is to deeply implement and effectively execute the ideological concepts of courses within the Animal Husbandry and Veterinary curriculum, ensuring that students not only enhance their technical skills but also gain necessary growth and development in ideological and political education.

5. Implementation Effect Assessment and Feedback

5.1 Assessment of Implementation Effects

The assessment of implementation effects utilizes a combination of quantitative and qualitative methods, including but not limited to learning outcome analysis, teaching satisfaction surveys, professional skill tests, and ideological quality evaluations. These methods provide a comprehensive understanding of students' achievements and progress in mastering professional knowledge, applying practical skills, and displaying ideological qualities. For example, professional skill tests allow for a direct assessment of students' skill levels in the Animal Husbandry and Veterinary field; through ideological quality evaluations, a deeper understanding of students' value concepts, professional ethics, and the cultivation of social responsibility can be achieved.

5.2 Feedback Mechanism

Establishing an effective feedback mechanism is key to continuously optimizing teaching content and methods. This mechanism should encompass feedback from teachers, students, and relevant stakeholders on the effectiveness of teaching methods, the appropriateness of course content, and the adequacy of learning resources. By collecting feedback through various forms such as regular feedback meetings, online surveys, and individual interviews, teachers and course designers can obtain firsthand teaching feedback. Based on the results of this feedback, teaching strategies and course content can be adjusted to better meet students' learning needs and enhance teaching effectiveness.

6. Conclusion

This paper, through in-depth analysis and practical exploration, has clarified the theoretical foundations and specific strategies for curriculum design and implementation in Animal Husbandry and Veterinary majors based on the ideological concepts of courses. By implementing four key principles: goal-oriented, student-centered, practical application, and continuous feedback, the organic integration of professional education and ideological education has been effectively promoted, laying a solid foundation for the comprehensive development of Animal Husbandry and Veterinary professionals. Moving forward, Animal Husbandry and Veterinary education should continue to deepen the application of ideological concepts in courses, explore more innovative teaching methods, improve evaluation systems, and continuously enhance teaching quality and effectiveness, contributing to the cultivation of high-quality professionals who meet societal development needs.

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