

Research on the Strategies for Integrating Moral Education in the Teaching Practice of Modern Agricultural Technology

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Abstract: *With the acceleration of agricultural modernization, the demand for cultivating talent in modern agricultural technology has become increasingly urgent. In this context, moral education, as an essential component of comprehensive talent development, needs to be effectively integrated and implemented during teaching practice. The teaching practice of modern agricultural technology is characterized by strong practicality and skill orientation. The integration of moral education not only helps enhance students' professional qualities and sense of social responsibility but also strengthens their mission to serve the "three rural issues" (agriculture, rural areas, and farmers). This paper discusses the difficulties and current status of moral education integration based on the characteristics of modern agricultural technology teaching practice, proposing strategies such as setting moral education goals based on professional skills, designing modular and scenario-based moral education content, and fostering mentor guidance and internship culture. The research results indicate that the organic combination of moral education and professional education can effectively enhance students' comprehensive qualities and provide important references for the cultivation of agricultural technology talent.*

Keywords: *modern agricultural technology; teaching practice; moral education integration; professional qualities; social responsibility*

Introduction

Against the backdrop of ongoing agricultural modernization in China, the cultivation of agricultural technology talent has become a crucial part of the national agricultural development strategy. As a key pathway for cultivating agricultural technology talent, modern agricultural technology programs emphasize the enhancement of students' skills and practical abilities. However, with the increasing demand for comprehensive talent in society, relying solely on the cultivation of professional skills can no longer meet the requirements for agricultural technology talent in this era. Therefore, how to effectively integrate moral education into teaching practice to enhance students' professional qualities and social responsibility has become an urgent issue that needs to be addressed in agricultural technology education.

1. The Importance of Integrating Moral Education in the Teaching Practice of Modern Agricultural Technology

1.1 The Core Role of Moral Education in Cultivating Agricultural Technology Talent

Moral education plays a central role in cultivating agricultural technology talent, not only in the development of ethical values and professional responsibility but also in its profound impact on students' long-term career development. With the rapid advancement of modern agricultural technology, agricultural practitioners are required to master advanced skills and uphold higher ethical standards. In facing complex agricultural environments and diverse social demands, students must learn to balance the relationship between technological application and social responsibility. The integration of moral education helps students adhere to professional ethics in their daily work and cultivates their ecological responsibility, prompting them to consider sustainable development issues such as environmental protection and resource conservation in agricultural production.

Moreover, moral education plays an important role in fostering teamwork, leadership, and innovation skills, enabling students to collaborate effectively and collectively solve technical and ethical issues in agricultural production. Ultimately, this cultivates agricultural technology talent with a strong sense of responsibility, innovative spirit, and social mission. The comprehensive integration of moral education provides robust support for the long-term development of modern agriculture and the construction of ecological civilization.^[1]

1.2 The Necessity of Coordinated Development between Agricultural Modernization and Moral Education

Agricultural modernization is a critical pillar of national economic development, and its continuous progress relies not only on technological innovation but also on agricultural technology talent with high levels of responsibility, ethical qualities, and comprehensive competencies. As globalization accelerates, the challenges facing agriculture are increasingly complex, including climate change, resource scarcity, and environmental pollution, necessitating a dual-driven approach of technology and moral education. In this context, moral education not only imparts professional ethics and social responsibility to agricultural technology talent but also cultivates their innovative thinking, enabling them to make decisions aligned with ethical principles and sustainable development in the face of modern agricultural complexities.

The coordinated development of moral education and technology ensures that during the process of agricultural modernization, talent not only masters the latest agricultural technologies but also takes on the responsibility of promoting ecological civilization and addressing global food security and agricultural resource management challenges. Through comprehensive integration of moral education, modern agricultural technology talent will possess a broader social perspective, understand the deep connections between agriculture and social development, and actively participate in actions addressing significant issues in global agricultural development. Ultimately, this drives agricultural modernization towards a greener, more efficient, and sustainable direction. The mutual reinforcement of moral education and agricultural technology education ensures the high quality and sustainability of the agricultural modernization process.

1.3 The Influence of Moral Education Integration on Students' Professional Qualities and Social Responsibility

In the teaching practice of modern agricultural technology, the integration of moral education is not merely the transmission of theoretical knowledge but involves deeply embedding moral concepts and professional values into students' daily behaviors and the cultivation of their professional qualities through practical teaching. This integration helps students recognize the importance of professional ethical standards such as integrity, lawfulness, and environmental protection during practical operations, enabling them to consciously adhere to industry standards and establish high professional ethics in their future careers.

Simultaneously, moral education can facilitate students' deep understanding of the fragility of agricultural ecosystems and the necessity of sustainable development through specific practical contexts during teaching practice, thus enhancing their sense of responsibility towards environmental protection and natural resource conservation and cultivating their awareness of maintaining agricultural ecological balance.^[2]

Furthermore, the integration of moral education extends beyond individual professional quality enhancement; it also helps students recognize the close connections between agriculture, society, and the environment, prompting them to consider the impact of agricultural technology on the entire social and ecological system. By fostering students' sensitivity to social issues and sense of responsibility, moral education further promotes the development of a consciousness of serving the "three rural issues" and a spirit of social contribution, cultivating well-rounded agricultural technology talent with a global perspective and sustainable development mindset. The multi-layered and multi-dimensional integration of moral education not only enhances students' professional qualities but also lays a solid foundation for them to become key players in advancing agricultural modernization and ecological civilization construction.

2. Characteristics of Teaching Practice in Modern Agricultural Technology and Challenges of Integrating Moral Education

2.1 Practicality and Skill Development in Teaching Practice of Modern Agricultural Technology

Teaching practice in the field of modern agricultural technology is characterized by high practicality and a focus on skill development, emphasizing students' hands-on operations and applications in real agricultural production environments. Through internships, students not only convert theoretical knowledge learned in the classroom into practical skills but also master core elements of modern agricultural technology, such as the use of intelligent equipment, optimization of crop cultivation techniques, and specific measures for environmental protection. This internship model focuses on developing students' hands-on abilities and problem-solving skills, particularly in complex and changing agricultural environments where students must make technical decisions based on specific situations. This training has a significant impact on their professional careers.

Moreover, internships provide students with opportunities to interact directly with agricultural enterprises and farmers, helping them better understand the entire agricultural production process while honing their professional qualities in practice. However, despite significantly improving students' professional skills and practical abilities, teaching practice often places greater emphasis on technical training, neglecting the cultivation of students' professional ethics and sense of responsibility. Thus, effectively integrating moral education into the skill development process has become a crucial issue in teaching practice.

2.2 Challenges and Current Status of Moral Education Integration

Integrating moral education into teaching practice for modern agricultural technology faces numerous challenges. First, it is difficult to strike a balance between moral education and skill training. The primary goals of agricultural technology teaching practice focus on skill acquisition and technical application, with students and mentors typically prioritizing efficient completion of technical operations and task objectives, resulting in relatively low attention to moral education. This makes moral education integration often appear as an additional task, making it challenging to effectively incorporate it throughout practical teaching. Furthermore, due to the complexity and diversity of internship scenarios, standardizing moral education content across different agricultural environments becomes increasingly difficult.^[3]

Second, there is a lack of effective mechanisms for assessing the implementation outcomes of moral education. Currently, teaching practice often emphasizes skill assessment and technical performance evaluation, while the criteria for evaluating moral education are vague, lacking specific quantitative indicators and assessment systems. This situation results in insufficient implementation of moral education content during internships, making it difficult to ensure the effectiveness of moral education. Additionally, some teachers and internship organizations mistakenly believe that moral education should primarily be the responsibility of classroom instruction, leading to neglect of moral education during practical teaching. This reality exacerbates the challenges of integrating moral education, preventing it from fulfilling its intended role in teaching practice.

3. Strategies for Integrating Moral Education into Teaching Practice in Modern Agricultural Technology

3.1 Setting Moral Education Goals Based on Professional Skills

In the teaching practice of modern agricultural technology, integrating moral education should firmly rely on the cultivation of students' professional skills, with clear and actionable moral education goals. These goals must be closely related to students' future careers and consider the various practical issues they may encounter at work, embedding core values such as professional ethics, ecological responsibility, teamwork, and social service awareness into every practical session. For instance, when learning agricultural machinery operation, moral education goals should emphasize adherence to safety protocols and the importance of equipment maintenance and environmental protection. In crop cultivation experiments, there should be a focus on educating students about sustainable agricultural development, helping them understand the balance between the rational use of natural resources, soil health preservation, and agricultural productivity. This organic combination of skills and moral education goals

ensures that students not only master solid technical skills but also exhibit a strong sense of social responsibility, professional ethics, and awareness of sustainable development in their daily work.

Moreover, the setting of moral education goals must be flexibly adjusted according to the internship stage and practical content, ensuring that the goals are actionable and targeted. During the initial internship stage, moral education goals should focus more on cultivating basic professional attitudes, such as discipline, responsibility, and foundational ethical awareness; in contrast, during advanced internships, the goals should elevate to emphasize innovation, leadership, and teamwork skills. For example, when students participate in advanced agricultural projects, moral education objectives should aim to inspire their innovative thinking for solving complex problems, guide effective collaboration within teams, and encourage the practice of green agriculture principles. This phased and progressive design of moral education goals can gradually enhance students' professional qualities and sense of responsibility, laying a solid foundation for their comprehensive development.^[4]

By combining moral education goals with professional skills, students can gain not only technical training but also improvements in ethics and responsibility, allowing them to consciously shoulder the social mission of promoting sustainable agricultural development in their future careers. Additionally, such moral education goals can help students cultivate more adaptable response capabilities in complex agricultural environments, equipping them with stronger moral judgment when facing ethical challenges, thereby fostering healthy development in the agricultural technology field.

3.2 Modular and Contextual Design of Moral Education Content

To further enhance the effectiveness of moral education integration, the content of moral education in the teaching practice of modern agricultural technology should adopt a more systematic modular and contextual design. Modular design allows for the organized presentation of moral education content, ensuring it encompasses all stages of the internship process while synchronizing with students' skill development. For instance, in the professional ethics module, students not only learn and understand the professional norms of the agricultural industry but also practice this concept through actual operations by strictly adhering to operational protocols, ensuring production safety, and maintaining agricultural equipment, thus gradually internalizing their ethical values. Concurrently, an environmental protection module can run throughout the entire agricultural production process, encouraging students to reflect on their actions' impact on the environment in every specific operation, thereby cultivating their ecological awareness and sustainable development mindset. Each module should have clear learning objectives, task requirements, and evaluation standards, allowing instructors to effectively assess students' moral education progress and performance during the teaching practice, providing targeted guidance and adjustments.

Contextual design, on the other hand, aims to concretize and visualize moral education content, integrating it into students' actual internship scenarios. Through real agricultural production environments, students can more intuitively understand the value and importance of moral education. For example, during field management internships, students may face real environmental challenges, such as soil erosion or degradation due to excessive fertilizer use. Instructors can guide them to think critically about these issues and discuss how to employ eco-friendly agricultural techniques to address them, thereby reinforcing their awareness of environmental protection. This contextual design enables students to more profoundly appreciate the practical significance of moral education and apply it in specific operations, further enhancing its practical impact.

Additionally, contextual design can help students experience the value of moral education in practice by simulating various agricultural scenarios that present potential challenges and ethical dilemmas they might encounter in their future careers, prompting them to think ahead and devise solutions. For example, in an agricultural project management internship scenario, students may face the challenge of balancing economic benefits with environmental protection conflicts, prompting discussions on how to navigate these issues effectively.^[5]

3.3 Guidance from Mentors and the Construction of Moral Education Practice Culture

In the teaching practice of modern agricultural technology, the role of mentors extends beyond imparting technical skills; they play a crucial role in the integration of moral education. Through modeling behavior, mentors can establish strong ethical examples for students, helping them navigate the complexities of the internship environment while understanding and applying professional ethics, a sense of responsibility, and social values. For instance, mentors should actively demonstrate adherence

to industry standards during practical operations and guide students on making responsible choices when confronted with ethical dilemmas, fostering a positive attitude and effective communication within team collaborations. This exemplary behavior not only enhances students' technical proficiency but also shapes their moral outlook, laying a solid ethical foundation in the early stages of their careers.

Moreover, mentors should assist students in addressing specific challenges encountered during their internships. When students face ethical dilemmas in agricultural production, mentors can facilitate discussions and analyses to clarify key points in moral decision-making and guide them toward ethical solutions. This direct guidance enables students to gain a deeper understanding of moral concepts and learn how to apply these principles in practice.

Creating a positive moral education culture is another key factor in ensuring the effectiveness of moral education integration. Throughout the teaching practice, fostering an uplifting internship culture can help students develop a shared professional value system and a strong sense of teamwork. Such an environment enhances students' professional identity and reinforces moral education through various collective activities and team-building exercises.

Additionally, an interactive feedback mechanism between mentors and students is vital for establishing a constructive internship culture. Timely feedback allows mentors to gauge students' performance and experiences during the internship and adjust moral education strategies accordingly. This two-way communication helps identify potential issues and ensures the effective integration of moral education.^[6]

Team-building activities are also an essential method for cultivating a moral education culture. Regular team activities can strengthen students' cooperative spirit and, through collaborative efforts, foster a sense of collective responsibility and social mission. For example, working together on tasks such as field management or crop cultivation allows students to learn how to collaborate effectively while experiencing and practicing moral education principles. This approach not only enhances teamwork skills but also continuously reinforces students' moral awareness and deepens their professional understanding and sense of social responsibility.

Conclusion

This paper analyzes the characteristics of teaching practice in modern agricultural technology and the challenges of integrating moral education, proposing a series of strategies to optimize this integration. These strategies include setting moral education goals based on professional skills, modular and contextual design of moral education content, and guidance from mentors alongside the construction of a moral education practice culture. The research indicates that integrating moral education during teaching practice not only enhances students' professional ethics but also promotes their future social responsibility. As agricultural technology continues to evolve and educational models reform, integrating moral education into teaching practice must embrace advanced educational technologies and methods. Furthermore, deepening moral education assessment mechanisms and enriching practical forms of moral content will be key areas for future research. By continuously improving and innovating moral education strategies, teaching practice in modern agricultural technology can provide robust support for the comprehensive development of agricultural technology professionals.

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