

# Quality-oriented Education, Constructing the Cultivation Mode of Planting Professionals in Higher Vocational Schools

Qiong Yin<sup>1</sup>, Junfeng Guo<sup>\*2</sup>

<sup>1</sup>Department of Agricultural Engineering, Guizhou University of Traditional Chinese Medicine, Guiyang, 550025, China

<sup>2</sup>School of Basic Medicine, Guizhou University of Traditional Chinese Medicine, Guiyang, 550025, China

**Keywords:** Quality education; Higher vocational education; Planting major; Personnel training

**Abstract:** This paper aims to delve into the present state, obstacles, strategic applications, and tangible impacts of quality education within the context of cultivating planting professionals in higher vocational institutions. Through a comprehensive examination of educational models, curricula, teaching techniques, and evaluation systems specific to planting specialties in these schools, it uncovers prevalent issues and deficiencies in current talent development practices. In light of these findings, the study emphasizes the pivotal role of quality education in shaping the planting specialty within higher vocational education. It further elaborates on the goals and direction of quality education, advocating for curriculum reforms, teaching method innovations, and evaluation system enhancements. To validate the efficacy of this quality education approach, the paper presents a case study focusing on a specific planting program at a higher vocational school. It details the implementation of quality education practices and, through comparative analysis and impact assessments, demonstrates the positive influence of quality education on elevating students' overall capabilities, bolstering their employability, and facilitating professional growth. The research conclusions offer valuable insights for reforming and modernizing the education of planting professionals in higher vocational settings, serving as a solid foundation for policymaking and practical guidance in this domain.

## 1. Introduction

Quality education represents an educational paradigm focused on enhancing the overall quality of learners, encompassing their ideological and moral standards, skill development, personality cultivation, physical health, and mental well-being [1]. Unlike traditional exam-centered approaches, this model prioritizes students' individuality and comprehensiveness, emphasizing the integration of knowledge, abilities, and personal qualities [2]. In the context of higher vocational education, quality education also entails fostering professional expertise, innovative capabilities, and practical skills [3].

Originating from educational reforms in China during the 1980s, quality education has gradually emerged as a pivotal direction in the country's educational transformation [4]. Many higher vocational institutions have since integrated this concept into their talent-nurturing programs, emphasizing holistic student development [5]. However, implementing quality education in this setting remains challenging due to traditional educational mindsets and limited resources.

As society and technology rapidly advance, traditional higher vocational education models struggle to meet modern talent demands [6]. The cultivation of planting specialties, a crucial aspect of higher vocational education, faces pressure to innovate. Quality education, with its emphasis on holistic development and the integration of knowledge, abilities, and qualities, offers valuable guidance for reshaping the training of planting professionals in higher vocational schools [7]. This study aims to explore the integration of quality education into the training of these professionals, providing theoretical insights and practical examples to inform related reforms and innovations.

## 2. The position and function of quality education in higher vocational education

Quality education holds significant importance in higher vocational education. Firstly, it serves as a crucial component of the talent-development objectives and acts as a vital pathway for achieving high-standard skilled training [8]. Secondly, it aids in enhancing students' overall proficiency and professional capabilities, thereby bolstering their employability and adaptability in society. Lastly, quality education fosters personal growth, nurtures innovativeness, and lays a firm groundwork for students' lifelong progress. Hence, reinforcing its application in the training of planting professionals within higher vocational schools carries immense practical relevance and long-term developmental worth.

## 3. Current situation and challenges of cultivation of planting professionals in higher vocational schools

### 3.1. Overview of planting specialty in higher vocational education

Higher vocational education in planting specializes in the cultivation of exceptional talent armed with modern agricultural scientific knowledge and hands-on skills, geared towards serving various agricultural sectors such as production, management, and technology promotion [9]. This specialization encompasses diverse aspects like crop production techniques, seed science, plant protection, and agricultural ecology, with a focus on equipping students with proficiency in contemporary agricultural planting technologies and management practices to align with the evolving demands of modern agriculture. As agricultural science and technology continually evolve, along with the restructuring and advancement of the agricultural industry, vocational planting programs must adapt to new challenges and requirements in terms of training objectives, curricula, and practical instruction.

### 3.2. The current training mode and challenges of planting professionals in higher vocational schools

Currently, the approach to educating planting professionals in higher vocational schools primarily involves a blend of traditional classroom instruction and hands-on practical training. While classroom sessions emphasize fundamental theories and industry-specific knowledge, teaching methodologies often lack diversity, innovation, and relevance. When it comes to practical training, despite incorporating exercises, training sessions, and internships, there are challenges such as a mismatch between the practical curriculum and real-world agricultural scenarios, along with inadequate resources for hands-on learning. Furthermore, the current educational model for planting professionals in higher vocational education falls short in fostering students' creativity, entrepreneurial mindset, and professional development, making it challenging to fully align with the evolving talent requirements of modern agriculture. Figure 1 illustrates the obstacles and shortcomings encountered in the training of planting experts in this educational setting.

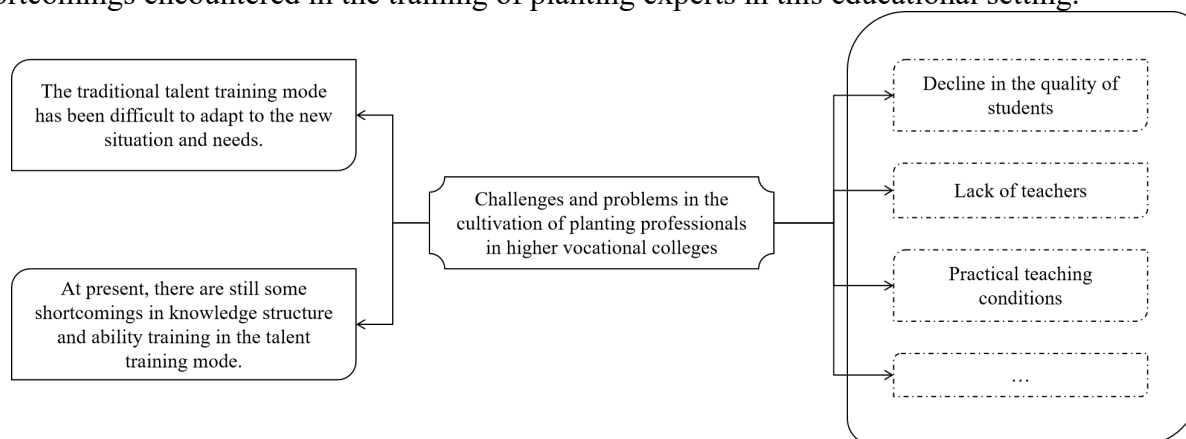


Figure 1 Challenges and problems in the cultivation of planting professionals in higher vocational schools

#### 4. Application of quality education in planting specialty in higher vocational schools

##### 4.1. The combination of quality education and cultivation of planting professionals in higher vocational schools

Quality education emphasizes the holistic growth of students, focusing on the seamless integration of knowledge, skills, and character, which closely aligns with the objective of training planting professionals in higher vocational schools. By incorporating quality education into the planting specialization in these institutions, we can enhance students' overall proficiency and professional competence, foster their creativity and hands-on skills, and nurture their social accountability and collaborative spirit. Consequently, the integration of quality education with the training of planting experts in higher vocational schools manifests primarily in several ways: integrating quality education principles into the professional curriculum, honing students' practical skills and fostering innovation through hands-on learning, and reinforcing the development of students' professional ethics and social responsibility.

##### 4.2. Integration of quality education into the curriculum system of planting specialty in higher vocational schools

Integrating the principles of quality education into the curriculum for planting specialization in higher vocational schools is crucial for achieving a harmonious blend of quality and professional education. This can be accomplished by: (1) Enhancing the curriculum to incorporate more humanities and social science courses, broadening students' knowledge base and perspectives; (2) Updating teaching content and methodologies to foster students' innovative thinking and hands-on skills; (3) Reinforcing the interconnectivity between courses to establish a comprehensive quality education framework. These strategies enable students to grasp professional knowledge while refining their overall quality and professional capabilities.

Practical training serves as a pivotal aspect in educating planting professionals in higher vocational schools and as a key avenue for implementing quality education. During practical training, the application of quality education principles can be reinforced through various means outlined in Table 1.

Table 1 Ways to strengthen quality education

Practical teaching	Application measures to strengthen quality education	Target
Practice teaching content	Pay attention to the combination with the actual agricultural production.	Cultivate students' practical ability and problem-solving ability
Practice teaching mode and method	Innovating practical teaching modes and methods, such as project-based teaching and case-based teaching.	Stimulate students' interest and initiative in learning.
Management and evaluation of practical teaching	Strengthen the management and evaluation of practical teaching.	Ensure the quality and effect of practical teaching.

Through the above measures, students can get comprehensive training and promotion in practical teaching, and realize the coordinated development of knowledge, ability and quality.

#### 5. Quality education, the strategy of constructing the cultivation mode of planting professionals in higher vocational schools

(1) Define precise objectives and positioning for quality education.

To integrate quality education into planting specialization in higher vocational schools, clarity on its aims and direction is imperative. This entails determining how quality education fits into the overall talent development framework and how it can cater to students' holistic growth and future vocational demands. Specifically, quality education should prioritize nurturing students' innovative thinking, hands-on skills, professional proficiency, and social accountability. These objectives must

align closely with the unique characteristics and evolving trends of the planting specialization.

(2) Revamp the curriculum system and teaching content.

Achieving quality education goals necessitates reforming the existing curriculum and updating teaching materials. This involves refining the course structure to incorporate quality education-related courses, such as innovative thinking workshops and professional development seminars. Updating teaching content with the latest agricultural scientific knowledge and practical applications ensures relevance to real-world agricultural practices. Enhancing course connectivity and integration is crucial for creating a cohesive quality education program that ensures students gain professional expertise and enhance their overall qualities.

(3) Innovate teaching methodologies and tools.

Adopting innovative teaching techniques is pivotal for implementing quality education. In the context of higher vocational planting specialization, emphasis should be placed on heuristic, discussion-based, and case study approaches to foster students' engagement and initiative. Leveraging modern information technology, such as online courses and virtual simulations, enriches teaching resources and modalities. Emphasizing practical learning experiences, including lab work, internships, and fieldwork, is essential for honing students' practical skills and fostering their innovative spirit.

(4) Enhance the assessment system and incentive mechanisms.

A comprehensive evaluation system and motivating incentives are vital for ensuring the effective implementation of quality education. In the higher vocational planting specialization context, a diverse assessment framework should consider knowledge comprehension, skill mastery, professional attitude, and innovative tendencies. Emphasizing process evaluation helps track students' progress and engagement. Establishing incentive mechanisms, such as scholarships and recognition awards, encourages students to actively participate in quality education initiatives and strive for personal excellence.

## **6. Quality education: a practical case of constructing the cultivation mode of planting professionals in higher vocational schools**

### **6.1. Introduction to the practice of quality education of planting specialty in a higher vocational school**

A vocational school effectively implemented quality education in their horticulture program, achieving outstanding outcomes. They clearly outlined the objectives and direction of quality education, revamped curricula and teaching materials, introduced innovative teaching techniques, and enhanced their assessment and motivation systems. Emphasizing the development of students' creative thinking and hands-on skills, the school incorporated quality education-related courses like creative thinking workshops and professional development training into their curricula. Additionally, they've bolstered practical training, setting up various internal and external training sites to offer students diverse hands-on learning experiences.

### **6.2. Practical case analysis and effect evaluation**

Upon analyzing and assessing the implementation of quality education practices in the horticulture program at this vocational school, it is evident that the adopted strategies and methodologies are both viable and impactful. Notably, there has been a substantial enhancement in the students' overall quality, particularly in terms of their creative thinking, hands-on skills, and professional proficiency. Concurrently, the school has witnessed an improvement in both the employment rate and the quality of placements for its students, with employers providing generally favorable feedback. These accomplishments underscore the pivotal role of quality education in nurturing horticulture professionals within the vocational education system.

### **6.3. Experience summary and enlightenment**

The positive outcome of quality education in the horticulture program at this vocational college

offers valuable insights for other similar institutions. Firstly, clarifying the objectives and direction of quality education, aligning it closely with professional attributes and industry trends, is imperative. Secondly, revising curricula and teaching materials to incorporate more quality education-related courses and content is essential. Thirdly, adopting innovative teaching techniques can foster students' engagement and initiative. Lastly, enhancing the assessment and incentive systems ensures the effective delivery of quality education. These insights hold significant importance in guiding the reform and advancement of horticulture professional training in vocational colleges.

Drawing from the aforementioned points, this study proposes several policy recommendations and practical guidelines summarized in Table 2.

Table 2 Policy suggestions and practical guidance

Category	Policy Suggestions/Practical Guidance	Describe
Policy advice	Strengthen top-level design and policy support	Education authorities should promote the deep integration of quality education and professional education, and provide clear policy guidance and support for planting majors in higher vocational schools.
	Encourage Industry-University-Research to cooperate.	Establish close cooperation with agricultural enterprises, scientific research institutions, etc., and jointly formulate talent training standards and curriculum systems that meet market demand.
	Increase investment in practical teaching	Improve practical teaching conditions, including laboratories and training bases, so as to improve students' practical ability and innovative spirit.
Practical guidance	Clarify the position of quality education	Establish the core position of quality education in the cultivation of planting professionals, and integrate it into the whole process of talent cultivation.
	Reform the curriculum system and teaching content	Update the course content in time, introduce the frontier knowledge and practical cases of agricultural science and technology, and ensure the synchronization of the course and industry development.
	Innovating teaching methods and means	Adopt diversified and interactive teaching methods, such as case analysis and group discussion, to stimulate students' interest and initiative in learning.
	Improve the evaluation system and incentive mechanism	Establish an evaluation system with process evaluation and multiple evaluation as the main body, and set up incentive mechanisms such as scholarships and honorary titles to encourage students' all-round development.

## 7. Conclusions

Upon conducting a thorough examination of the present state of horticulture professional development in vocational colleges, this investigation delves into the utilization and impact of quality education within this domain. It has come to light that numerous obstacles persist in the cultivation of horticulture talent in vocational settings, including a mismatch between curricula and industry demands, inadequate hands-on training components, and insufficient holistic student development. The incorporation of quality education principles offers fresh perspectives and solutions to these predicaments. By establishing clear objectives and orientations for quality education, overhauling curricula and teaching materials, pioneering new teaching techniques, and refining evaluation and incentive frameworks, the quality of horticulture professional training in vocational colleges can undergo substantial enhancement. Case studies further attest to the beneficial role of quality education in shaping horticulture professionals in vocational settings.

Looking ahead, efforts will be made to incorporate more quantitative research techniques, such as surveys and statistical analyses, to bolster the scientific rigor and reliability of our findings.

## Acknowledgements

Eco-agriculture technology teacher teaching innovation team of Guizhou Province "Skill Guizhou" project

## References

- [1] Nie Hua, Peng Yue, Liu Xiaomin, et al. Analysis on the integration of "double innovation" education into pharmacy courses-taking pharmacy courses as an example [J]. Theoretical research and practice of innovation and entrepreneurship, 2023(19):135-138,169.
- [2] Li Jia. The innovation of successful quality education and its integration with the training of social sports professionals [J]. Journal of Luohe Vocational and Technical College, 2023, 22(2):87-90.
- [3] Cheng Jinfeng. Quality-oriented education-oriented perspective on the training mode of big data and accounting professionals in higher vocational schools [J]. Marketing, 2022(13):50-52.
- [4] Liu Zhuowen. Task-driven perspective to explore the practice of cultivating high-quality education talents [J]. Education Review, 2023(11):133-138.
- [5] Li Guangyu, Zhao Mingzheng, He Zejun. Exploration on the optimization of the training scheme of agricultural and forestry economic management professionals under the background of first-class undergraduate major construction-taking school of economics and management of Henan Agricultural University as an example [J]. Western Quality Education, 2021, 7(21):4.
- [6] Zhang Sijia, Wang Shuyan, Qiu Jun, et al. Investigation and analysis of humanistic quality education of dental implant graduate students [J]. Health Vocational Education, 2020, 38(1):2.
- [7] Tang Liping. Research on the Training Path of Education Professionals in Chinese Universities [J]. Journal of Jiangxi Electric Power Vocational and Technical College, 2020, 33(12):2.
- [8] Zhao Xiuniao. Construction of practical teaching system of school-enterprise cooperation from the perspective of innovative and applied talents training-taking information major of Gannan Institute of Science and Technology as an example [J]. Western Quality Education, 2021, 7(15):17-19.
- [9] Liu Shangping. Vocational agricultural machinery professional quality education and innovative teaching training program design and measures to explore [J]. Curriculum Education Research, 2019(10):33.