

# Research on the Training Path of Higher Vocational Students' Comprehensive Quality Based on the Modern Apprenticeship System

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**Abstract:** The modern apprenticeship system is a training mode suitable for the cooperation between vocational education schools and enterprises to train high-quality technical talents. However, due to problems such as imperfect mechanisms, unclear responsibilities, and inadequate integration of resources, the modern apprenticeship system has no significant effect on talent cultivation. In view of these problems, this paper takes Yibin Vocational and Technical College as an example, implements the second batch of modern apprenticeship pilot projects promoted by the Ministry of Education, and explores the training path of modern apprenticeship from four aspects: optimizing the school-enterprise collaboration mechanism, two-way mutual employment of two teachers, co-construction and sharing of school-enterprise resources, and jointly promoting the comprehensive quality improvement plan of students. This paper hopes to provide a certain reference for the cultivation of the comprehensive quality of modern apprenticeship students.

**Keywords:** Modern apprenticeship; Comprehensive quality; Training path

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## 1. Introduction

The modern apprenticeship education mode moves the enterprise workflow into the classroom, combines quality education with skill education, cultivates practical, professional, and composite talents with high qualities and skills and vocational skill level certification, and cultivates highly proficient applied talents through the most professional and relevant workflow<sup>[1]</sup>. It also helps to cultivate college students' practical skills and innovative spirit and improve their comprehensive quality.

The implementation of the comprehensive quality training of students based on the modern apprenticeship system is not only the goal of cultivating high-quality technical talents but also the practical need of cultivating the craftsman spirit of "dedication, lean, focus, and innovation"<sup>[2]</sup>. Yibin Vocational and Technical College, as the second batch of modern apprenticeship pilot schools in China, has cultivated more than 1,200 students through the modern apprenticeship pilot project in the past five years, initially established an education system based on the integration of students' comprehensive quality training based on modern apprenticeship, and

formed a relatively perfect collaborative education mechanism.

## **2. The relationship between the modern apprenticeship system and students' comprehensive quality training**

### **2.1. The connotation of modern apprenticeship**

The most fundamental characteristics of modern apprenticeship are “double subject,” “double teacher,” “double status,” and “double standard”<sup>[3]</sup>. “Double subject” is the mechanism of university-enterprise joint education based on the deep connection of the industrial chain and talent chain. “Double teacher” means that school teachers and enterprise masters imparted knowledge and skills through the teaching mode of “doing in learning” and “learning by doing.” “Double status” means that students are both students and apprentices in enterprises. “Double standard” means that in the process of technical skill training, teachers should not only carry out relevant teaching according to the talent training standards of higher vocational students but also carry out standardized training according to the talent demand standards of enterprises.

### **2.2. The basic content of students' comprehensive quality**

Students' comprehensive qualities mainly include ideological ethics, professional ethics, technical skills, innovation and creation, humanistic qualities, and other elements<sup>[4]</sup>. Ideal, belief, and responsibility are the core contents of ideological and moral quality, which is the key to carrying out the fundamental task of “cultivating morality” in higher vocational education. Professional ethics is the key quality to cultivating students' professional quality, professional spirit, and cooperation. Technical skill is a special quality that integrates students' professional knowledge, professional skills, and comprehensive skills. Innovation and creation mainly include the cultivation of students' innovative thinking, innovative spirit, and the quality content of integrated innovation. Humanistic qualities mainly include the basic quality content of cultivating students' humanistic heritage, interpersonal communication, and humanistic feelings<sup>[5]</sup>.

### **2.3. Logical correlation between students' comprehensive quality and modern apprenticeship system**

Students' comprehensive quality is the basis and essence of their all-round development and an important content of vocational education. Modern apprenticeship is a measure and means to improve students' technical skills and comprehensive quality, as well as an important training mode of vocational education. There is a close logical correlation between the two<sup>[6]</sup>. Firstly, the cultivation and promotion of students' comprehensive quality has injected new impetus into the training of modern apprenticeship talents and expanded to a new height. Secondly, the implementation of the modern apprenticeship training mode provides a better platform and carrier for the cultivation of students' comprehensive quality, and broadens the cultivation path of comprehensive quality. Thirdly, the cultivation of students' comprehensive quality deepens the connotation of modern apprenticeship talent cultivation and realizes the effective integration of education and professional quality<sup>[7]</sup>.

## **3. The main dilemma of students' comprehensive quality cultivation under the modern apprenticeship system**

### **3.1. The “double subject” cooperative education mechanism is imperfect**

“Double subject” cooperative education is a kind of education mode formed according to the law and

requirement of modern apprenticeship. However, from the implementation situation, due to the influence of many factors, the “double subject” cooperative education mechanism is imperfect. Firstly, the status of the main body of enterprise collaborative education is unclear, and there is no institutional level to realize the definition from the functional subject to the legal subject. As a result, the link mechanism of school-enterprise cooperation is naturally loose, and the initiative of enterprises to participate in education and the collaboration of educational resources are reduced. Therefore, we need to improve the education mechanism, activate the responsibility of the main body of enterprise education, and realize the key link of collaborative education<sup>[8]</sup>. Secondly, the resource collaborative education mechanism between the school and the enterprise is unclear, and the principle and path of resource collaborative education are not clarified from the institutional level, which restricts the initiative and enthusiasm of enterprises to deeply participate in the training of modern apprenticeship talents to a certain extent<sup>[9]</sup>.

### **3.2. The responsibility of “double teacher” collaborative education is unclear**

“Double teacher” is an important support for collaborative education between schools and enterprises. However, in our actual school-enterprise cooperative education of “double teacher” collaborative education, there are problems of unclear responsibilities and insufficient coordination<sup>[10]</sup>.

Firstly, the division of teaching tasks between teachers and enterprise lecturers is unclear. The main reason is that the teachers do not fundamentally integrate the professional ideal, professional belief, craftsman spirit, innovation, and entrepreneurship into the theoretical and practical teaching of professional courses<sup>[11]</sup>; and enterprise lecturers have not formed a cooperative relationship with teachers in the education of professional standards, professional quality, and professional responsibility for students.

Secondly, there are differences in the understanding and cognition of students’ comprehensive quality between teachers in school and teachers in enterprise. The teachers’ education and training of students are carried out in accordance with the talent training plan and closely related to students’ growth; while the enterprise lecturers lay particular stress on the job requirements and professional norms to implement the training of students<sup>[12]</sup>. Therefore, the cooperation between school teachers and enterprise lecturers is an important link to solving the problem of “double teacher” cooperative education.

### **3.3. The resources integration of “double resources” collaborative education is not in place**

The implementation of school-enterprise collaborative education is not only an important path for two-way empowerment and resource interaction but also a difficult point to solve the imbalance of technical talent training and industrial demand.

Firstly, there are institutional bottlenecks in the use and management of equipment assets in the cooperation between school teaching resources and enterprises, resulting in the formation of collaborative obstacles in the cultivation of students’ comprehensive quality.

Secondly, the interests of enterprises and schools are not focused, resulting in the form of resource integration being greater than the content. In the process of resource integration, enterprises, as for-profit organizations, always take the maximization of benefits as the primary goal, while schools always pursue the maximization of education effectiveness. Therefore, they fail to rationalize resources and maximize the integration and utilization of resources from the perspective of the effective connection of the “education chain, talent chain, innovation chain, and industrial chain”<sup>[13]</sup>.

## **4. The main methods to cultivate students' comprehensive quality under the background of the modern apprenticeship system**

### **4.1. Optimizing the school-enterprise collaboration mechanism to form a synergy between school-enterprise education**

Firstly, we need to closely follow the country's important strategic plans and build a close school-enterprise community with a shared future<sup>[14]</sup>. The city-area industry and education consortium is a strategic task of "one body and two wings" in the construction and reform of the modern vocational education system, and an important platform carrier for the national pilot reform of the integration of industry and education. Our college and Yibin Kaiyi Automobile Co., Ltd. are the leading college and enterprise respectively, and have launched more than 150 companies to jointly establish the Yibin Municipal Industry-Education Consortium, which takes Yibin Lingang Economic and Technological Development Zone as an industrial park to deeply promote the substantive operation and encourage various subjects to participate in the running process of vocational colleges. It has become an experience of Yibin that can be replicated and promoted in the reform of vocational education.

Secondly, the key link of school-enterprise cooperation should be closely linked to the formation of a co-construction, sharing, and joint education mechanism. We need to effectively implement collaborative education from the cultivation of the comprehensive quality of modern apprenticeship and the expansion of professional skills, and implement the core task of "carrying out collaborative innovation around the key issues in the production and operation process of enterprises, focusing on the joint training of highly skilled talents in short supply in the industry" in schools and enterprises, so as to solve the dilemma of collaborative education. At the same time, the goal of providing more high-quality technical talents for enterprises is realized.

### **4.2. Implementing double interaction and employment and standardizing education space responsibilities**

Firstly, we need to break boundaries and implement double interaction and employment. It is to seize the opportunity of modern vocational education reform, break the boundaries between schools and enterprises through system design, follow the rules of talent training and student development in higher vocational education, and establish a true vocational education system. "School-enterprise mutual recruitment of teachers" provides sufficient teacher guarantee for collaborative education.

Secondly, we need to emphasize responsibility, focus, and quality. It is necessary to closely follow the construction and operation of the school, enterprise, production, and education community under the background of the modern apprenticeship system, and build an education community that coordinates the cultivation of students' professional and technical skills with the cultivation of comprehensive quality. These can truly realize the responsibility of "double teachers," clarify the education task, and implement the core quality training.

### **4.3. Integrating school-enterprise cooperation resources to build a community of practical education**

In modern apprenticeship personnel training, the focus is to solve the personnel training specifications and enterprise job needs. Therefore, the implementation of the effective integration of school and enterprise resources is the key to building a community of practical education.

Firstly, we need to improve the system design and build a platform for education. It is necessary to redesign and optimize the school-enterprise cooperation system supporting the modern apprenticeship system, not only

to form a joint force in the effective use of production resources and teaching resources, but also to achieve coordination between education and production; as well as to highlight the focus of production and show the key to education<sup>[15]</sup>. Therefore, the focus is on the construction of a school-enterprise cooperation base, school-enterprise double subject education, modern apprenticeship job training, curriculum resources construction, and other aspects of the formation of a perfect system platform for the comprehensive promotion of collaborative education.

Secondly, we should grasp the policy orientation and effectively implement collaborative education. On the one hand, schools should grasp the major policy orientation of vocational education reform and take the initiative to deepen the content and scope of cooperation with enterprises in accordance with the standards of modern apprenticeship education. On the other hand, enterprises should give full play to the advantages of the production environment, technological innovation, and the implementation of industry standards, so as to form a collaborative educational force for the training quality of students' professional literacy and vocational ability.

#### **4.4. Expanding the content of comprehensive quality and innovating the path of collaborative education**

Under the background of the new era, the modern apprenticeship talent training mode not only includes the cultivation of innovation and creativity, but also includes the responsibility of training more excellent builders and successors for China's modernization construction. Therefore, expanding the content of students' comprehensive quality is one of the important links to improve the effectiveness of education.

Firstly, the curriculum system with comprehensive quality training as the core should be reconstructed based on the comprehensive quality of students. A higher sense of responsibility should be incorporated into the cultivation of learning capability and innovation ability, and a solid foundation should be laid in knowledge structure and development capability. Therefore, it is necessary to reconstruct and improve the basic ability course, development capability course, and innovation ability course system.

Secondly, the "triple-double" characteristics should be innovated and the training effectiveness should be improved. We should grasp the three key points of "double subject," "double teacher," and "double resources"<sup>[16]</sup>. "Double subject" provides double resources for students to cultivate comprehensive professional quality. "Double teacher" embodies the growth and integration of students in the process of training, including both the enterprise master's craftsman spirit of excellence and the school teachers' rigorous and realistic professional ethics. "Double resources" expands the platform of students' comprehensive quality training, not only deepening students' in-depth understanding of the theory through the real production scene of the enterprise, but also promoting students' innovative thinking and ability through the simulation production link of the school.

### **5. Conclusion and prospect**

Modern apprenticeship has a profound foundation of industrial development and characteristics of national economic and social development in the history of both China and foreign countries. Modern apprenticeship embodies the characteristics of the combination of work and study and the diversified social interests of school-enterprise cooperation<sup>[15]</sup>. In the process of training students, modern apprenticeship helps students to cultivate their comprehensive quality, practical skills, and innovative spirit as well as their career planning and future development. It greatly helps students to understand their future career development direction, clarify their career planning, and better adapt to future career development and social needs.

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## Disclosure statement

The authors declare no conflict of interest.

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