

# Research on the Training Mode of Modern Apprenticeship System with Double Subjects and Five Connections in Higher Vocational Colleges

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**Keywords:** Higher Vocational Colleges; Dual-subject Education, Five-docking; Talent Training Model

**Abstract:** Modern apprenticeship system is a new mode of training modern talents, which focuses on skills training for students through in-depth cooperation between schools and enterprises and joint teaching of teachers and masters. Based on the analysis of the current situation and problems of the modern apprenticeship pilot, this paper explores and constructs a “dual-subject education and five-docking” modern apprenticeship talent training mode based on the dual-subject education concept of school and enterprise, which realizes the docking of professional setting with industrial development, curriculum content with professional standards, teaching process with production process, school assessment with enterprise assessment, and graduation certificate with professional qualification certificate. By realizing the dynamic adjustment and docking of talent cultivation and market demand, we can improve the quality of talent cultivation and social recognition, and attract more enterprises and students to participate in the pilot of modern apprenticeship system.

## 1. Introduction

At present, China's economy has entered a new stage of development, economic restructuring and industrial upgrading are in a critical period, and the demand for skilled personnel in various fields is increasingly urgent. Higher vocational colleges undertake the historical mission of training skilled technical personnel, and their important role and position are increasingly prominent. However, in the process of personnel training in Higher Vocational colleges, there are still some outstanding problems, such as outdated educational concept, inadequate teachers, inadequate links between theory and practice, inaccurate specialty settings, which lead to the low matching degree between technical skills and social requirements, and the contradiction between school supply and social demand. Therefore, the State Council formulated the “Decision on Accelerating the Development of Modern Vocational Education” in 2014. The document points out that the modern apprenticeship system should be actively piloted in the development of vocational education in our country. In response to the new demand for skilled talents in the new era and new stage of China's economic development, the State Council issued the “National Vocational Education Reform Implementation Plan” in 2019. It is required to summarize the achievements of the early modern apprenticeship pilot, and vigorously promote the modern apprenticeship education mode of unity of knowledge and practice and combination of work and study.

The modern apprenticeship system focuses on the cultivation of technical skills of students (apprentices), aims at the integration of post professional ability and the employment needs of enterprises, guarantees school-enterprise cooperation, mutual benefit and mutual win, dual education, takes the form of work-study and work-study combination, takes professional core courses as a link, and through the extensive participation of colleges, enterprises and industries and in-depth guidance of teachers, teachers and experts. Teachers in the school and in the school work together to accomplish the study and mastery of core professional skills in practical jobs. Modern apprenticeship is a new form explored in the deep cooperation between schools and enterprises and the deep integration of production and education. With the advantages of precise education and professional education, it will become a mainstream talent training mode in the future development of Vocational education. Starting from the actuality and problems of the modern apprenticeship personnel training pilot project, this paper will explore a modern apprenticeship personnel training

model of “two-subject education, five docking” to provide reference and reference for the modern apprenticeship pilot project.

## **2. The Current Situation and Problems of Training Mode of Modern Apprenticeship Pilot Talents in Higher Vocational Colleges**

### **2.1. Current Situation of Modern Apprenticeship Pilot**

The study of modern apprenticeship in China started relatively late. In the early stage, it mainly focused on absorbing the theory and experience of foreign modern apprenticeship training mode, and made some theoretical research on the localization of modern apprenticeship. As the training mode of modern apprenticeship talents is a systematic and complex practical project, only by constantly practicing and constantly summing up experience, can we explore a set of modern apprenticeship talents training mode with strong universality and remarkable effect. Therefore, in 2015, the pilot project of modern apprenticeship led by the Ministry of Education officially opened. After strict selection, 165 units were finally identified as the first batch of pilot units of modern apprenticeship. In the following two years, the Ministry of Education selected 203 and 194 state-level pilot units of modern apprenticeship successively, and 562 units participated in the pilot units of modern apprenticeship. At the same time, as the influence of the modern apprenticeship pilot continues to expand, more and more units have begun to prepare for the application of the modern apprenticeship pilot next year.

Judging from the actual implementation of the modern apprenticeship pilot units, the enterprises (one or more) are generally selected first to reach a common cooperation intention. Then through the school-enterprise joint revision of the talent training program, we have completed the determination of curriculum, the development of teaching materials, and the construction of the resource pool, making preparations for the training of modern apprentices. The next step is to work out a recruitment plan for students, which includes recruiting students as soon as possible and entering the factory as soon as they enter the school. We have carried out enrollment promotion, interview and assessment, and determined the admission list for the pilot classes of modern apprenticeship system. According to the personnel training plan, the combination of work and study and reading while working are adopted for personnel training.

### **2.2. Problems Existing in Talents Training Mode of Higher Vocational Colleges in Modern Apprenticeship Pilot**

At present, in our country, the training mode of modern apprenticeship system is in its initial stage. The mode and mechanism of modern apprenticeship system are still being explored in the pilot. Many new problems and new situations have emerged in the process of the pilot of modern apprenticeship system, which are mainly reflected in the following aspects:

#### **State Guarantees for Modern Apprenticeship Needs Strengthening**

Modern apprenticeship is a systematic project in the process of implementation, especially at the exploratory stage. Facing the role and status of schools, enterprises and students (apprentices) in the modern apprenticeship personnel training mode, there is no clear definition. Although the Ministry of Education has issued a series of policy documents on deepening school-enterprise cooperation and integrating production and education, the laws and regulations related to modern apprenticeship are still in a blank stage. In addition, there is a lack of incentive mechanism for modern apprenticeship pilot enterprises. They only stay on the document to encourage enterprises to actively participate in modern apprenticeship, but there are no substantial incentives.

The enthusiasm of industrial enterprises is not high, and the depth of school-enterprise cooperation is not enough.

Enterprises generally have their own interests. In the process of training modern apprenticeship talents, enterprises need to spend a lot of manpower, material resources, financial resources and time. If the effect of personnel training can not reach the expected goal of the industry enterprises, and can not bring benefits to the industry, it will lead to the lack of motivation for industry

enterprises to participate and unsustainable development. On the one hand, with the increasing enrollment of undergraduate colleges, the quality of enrollment in higher vocational colleges has been declining. Students' learning ability is not strong, which leads to more time and resources needed by schools and enterprises, but the final training effect is not ideal. On the other hand, due to the lack of institutional constraints on the degree of loyalty of apprentices, apprentices choose to retreat when encountering setbacks and difficulties in the process of training. As a result, there is a high turnover rate of talents trained in the enterprise industry. Therefore, some industrial enterprises are not enthusiastic enough to participate in the pilot of modern apprenticeship system and have insufficient motivation. In participating in the modern apprenticeship system, enterprises only cooperate with schools to complete some superficial work, and the depth of school-enterprise cooperation is not enough.

### **3. Exploration of Modern Apprenticeship Talents Training Mode of “Double-subject Education and Five Docking” in Higher Vocational Colleges**

Based on the problems of modern apprenticeship in the pilot project, there are two main reasons: one is the objective reason, such as the system guarantee of Modern Apprenticeship at the national level, and the lack of favorable incentive mechanism for enterprises. Another is the subjective reason. For example, in the pilot of modern apprenticeship personnel training mode, the two sides of schools and enterprises have not highlighted the characteristics of dual-subject education, and the pilot specialty has not been effectively linked with the development of industries and enterprises. The curriculum system and teaching process are not effectively connected with vocational standards and production processes, and there is no unified management of school-enterprise assessment. It can be seen that the main problems of modern apprenticeship in the pilot project are the subjective reasons for the lack of cooperation between schools and enterprises. Therefore, based on the deep-seated school-enterprise cooperation, it is of positive significance to explore the modern apprenticeship personnel training mode.

#### **3.1. Modern Apprenticeship System “Educates People with Two Subjects” to Build a New Model of School-enterprise Cooperation**

Modern apprenticeship system is a new form of in-depth school-enterprise cooperation and full participation in the training of skilled talents. The education responsibility and employment risk of traditional vocational education are all borne by schools, while the modern apprenticeship system is that schools and enterprises are jointly responsible for training and taking risks. Therefore, dual-subject education can give full play to the resource advantages of schools and enterprises, cultivate high-quality technical and skilled talents in coordination, and promote the in-depth integration and coordinated development of schools and enterprises. In the training mode of modern apprenticeship system, double-subject education is mainly reflected in the following aspects: (1) Both schools and enterprises are responsible for student apprenticeship management. Jointly formulate a series of specific modern apprenticeship management systems featuring the integration of enrollment and recruitment, personnel training and quality supervision of personnel training. (2) Both schools and enterprises are responsible for the education of students (apprentices). According to the law of the growth of technical and skilled talents and the actual needs of enterprises, through joint discussion, the revision of personnel training program is completed, and the curriculum system of “learning and post combination, work and learning combination” is developed, supporting school and enterprise teaching materials are developed, teaching resources are established jointly, and teaching is determined jointly according to the production process of enterprises. Learning mode, jointly select the team of double tutors.

#### **3.2. “Five Docking” of Modern Apprenticeship System and Innovative New Model of Talents Training**

1) Professional settings should be connected with industrial development to improve the precision of professional training.

Serving the local economy and improving the talent guarantee for the transformation and upgrading of local industries is an important task for higher vocational colleges. Employment-oriented specialty setting is an important guarantee for the sustainable development of specialties. In the professional setting of modern apprenticeship system, the initiative of enterprises to participate in the professional setting should be fully mobilized, and the professional and sensitive advantages of enterprises in the front line of industrial development should be utilized to explore the professional setting. Only by achieving a zero-distance connection between professional setting and industrial development can the high-quality technical and skilled talents required by enterprises be trained and employment be realized upon graduation. Therefore, the connection between modern apprenticeship specialty setting and industrial development not only realizes the precision of talent cultivation specialty, guarantees the employment rate and quality of talent cultivation specialty counterpart, but also improves the service ability to local industries.

2) Linking the curriculum content with professional standards to improve the matching degree of professional personnel training content.

Occupation standard is a national unified work standard, and it is a normative requirement for the working ability level of employees. Whether the curriculum content and professional standards are seamlessly connected directly affects the matching degree between the professional training of students (apprentices) and the needs of professional posts. Therefore, the curriculum content setting should strictly control the national professional standards, be familiar with the professional standards corresponding to the specialty, and find the entry point for the integration of curriculum content from the aspects of professional ethics and basic knowledge, professional function, work content, skill requirements, relevant knowledge, etc. According to the cognitive rules and job requirements of students (apprentices), the connection between pre-curriculum and follow-up curriculum should be arranged reasonably, and the curriculum content structure system should be established. To ensure that students (apprentices) professional skills training and professional standards seamlessly docking, improve the matching degree of professional training content.

3) Connecting the teaching process with the production process to cultivate students' comprehensive vocational ability.

The docking of teaching process and production process is a key link in the training of modern apprentices. To realize the connection between teaching process and production process, first of all, the process of vocational practice should be decomposed, and then the decomposed sub-process of vocational practice should be integrated into the teaching process. That is to say, project-based teaching should be carried out by using task-driven teaching method to realize the learning process in the context of vocational practice so as to cultivate students' comprehensive vocational ability. Power. Therefore, in the teaching process of modern apprenticeship system, the training of social ability and personality ability needed in the process of docking the general course teaching with the production process, the training of professional skills needed in the process of docking the specialized course teaching with the production process, and the training of teaching with the real professional posts in the production process, so as to cultivate students' comprehensive professional ability.

4) Docking school assessment with enterprise assessment to realize the whole process of personnel training and assessment.

The docking of school assessment and enterprise assessment is an important measure to guarantee the authenticity of training effect of modern apprenticeship talents. Students (apprentices) are assessed in school and enterprise under the dual subjects of school and enterprise respectively. In school assessment, theoretical assessment results and school performance are emphasized. In enterprise assessment, professional skills operation and production management are emphasized. Finally, according to the pre-set proportion weight, the final assessment score of students (apprentices) is formed.

5) The graduation certificate and the professional qualification certificate are connected to reflect the professional needs of personnel training.

The connection between graduation certificate and vocational qualification certificate is an

important symbol of improving the quality of modern vocational education, and it is also the vocational demand for the connotation development of modern vocational education. Graduation certificate is a kind of diploma, which represents the proof of knowledge level, while vocational qualification certificate is the proof of knowledge and skills possessed by employees. Modern apprenticeship personnel training, in strict accordance with the professional standards, under the guidance of the talent training program jointly formulated by the school and enterprise, carries out the training of technical skills, and successfully passes the professional qualification examination and obtains corresponding certificates after graduation, thus improving the competitiveness of students (apprentices) in their professional development.

#### **4. Conclusion**

With the transformation of modern apprenticeship from theoretical research to practical exploration in China, from the first batch of modern apprenticeship pilot to the second and third batches, modern apprenticeship, a new talent training mode, has shown obvious advantages. In the near future, the modern apprenticeship system will become an important mode of training technical and skilled talents in China. Based on the analysis of the current situation and existing problems of the modern apprenticeship system, this paper puts forward a modern apprenticeship system personnel training mode of “double-subject education and five docking” around the basic characteristics of the modern apprenticeship system education mode, so as to improve the quality of personnel training and attract more enterprises and students to participate in the modern apprenticeship system pilot.

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