



# Research on Multi-coordination Mechanism of Highly Skilled Personnel Training in Vocational Colleges

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**Abstract.** This article focuses on the research of improving the efficiency of cultivating high skilled talents. Firstly, the shortcomings in the current cultivation of highly skilled talents were analyzed. For example, in the process of cultivating high skilled talents, there are problems such as inadequate government leadership, unclear positioning of pre service education, and inadequate mechanisms. Secondly, the reasons for the existing problems were analyzed. Finally, ways to improve cultivation efficiency were proposed. For example, strengthening the coordination and cooperation between vocational colleges, enterprises, and industry associations; Establish an integrated training management system; Play the leading role of government functions; Reasonably positioning pre service education.

**Keywords:** highly skilled personnel; cultivation path; multiple coordination.

## 1 Introduction

High skilled talents have their unique connotation structure and growth patterns. The reason why this article focuses on improving the efficiency of cultivating high skilled talents is that cultivating high skilled talents is China's high-quality development strategy. On the one hand, cultivating highly skilled talents is a cross-border systematic project that requires coordination and cooperation from the government, schools, and enterprises. On the other hand, due to the serious imbalance between quality and structure, the supply of highly skilled talents in China is in short supply. Therefore, how to effectively and efficiently cultivate a knowledge-based workforce has become a necessary issue to face. This article mainly explores the construction of an innovative and highly skilled talent team to solve the key problem of high skilled labor shortage in China.

## 2 The Growth Law of Highly Skilled Talents

The skills of the skilled personnel can be mainly divided into three levels, the first level of skilled personnel refers to the pure manual labor who complete the work mainly by physical quality featuring the lowest requirements of the technical ability.

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[1] Thus, this type of technical skill is not highly correlated with vocational education or corporate social training.

The second level of skill is between the first and third level. Compared to the first level of skilled workers, this type of worker has a higher level of skill and is more capable. But compared to the technical skill level of the highly skilled personnel, their skills are not professional and lack post specificity. This level of skill is mainly acquired via education and short-term social training in vocational schools, but there is not much room for improvement after reaching a certain level.

The third level of skill is usually referred to high skill. Compared with the first and second levels of skilled personnel, skilled personnel of this type are the highest both in techniques and quality comprehensively. With higher post specificity and unique professional characteristics, highly skilled talents are not born overnight but undertake a long and gradual process. It requires accumulation of abundant skillful experience, a good command of relevant pre-service skills and systematic knowledge after a long period of post-production practice. The cultivation of highly skilled personnel is a systematic project, which will undergo multiple levels and types of education or training.

### **3 Problems in the Process of Highly Skilled Personnel Training**

Training high-tech and skilled personnel is a cross-boundary systematic engineering, which is composed of two stages: pre-service vocational school education, real post practice in education and training, the involvement and cooperation of the government, schools, enterprises and industry associations and other multiple stakeholders in multiple ways.

#### **3.1 Insufficient Leading Role of the Government**

Government plays a leading role in the process of training highly skilled personnel. It is mainly functioned by coordinating social resources, introducing relevant policies, formulating relevant regulations, coordinating the relationship between various stakeholders, supervising and evaluating multi-party work and other ways to lead the overall work of the training of highly skilled talents. The current pre-service cultivation of highly skilled personnel, post-job training, identification of vocational qualification standards and professional certificate assessment in China are under the operation of education management department, the economic management department and the human resource and social security department respectively. The management system of “multi management and block division” turns out that each department takes their own interests as the starting point, which fails to achieve efficient resource integration and information sharing in the process of training of highly skilled personnel. [2] This is one of the main reasons for the poor efficiency of cultivating highly skilled personnel. In terms of professional qualification appraisal of highly skilled personnel, government finance participants, controllers, supervisors are embodied to function as one so that the formulation of professional qualification standards and professional qualification appraisal of high-skilled personnel doesn't accord with the actual needs of

enterprises. According to a survey, statistics show that more than 50 percent of enterprises hold the view that vocational qualification training is mediocre, and 57 percent will not even reimburse the expenses of employees. In recent years, both the state and the local governments have introduced a series of policies and measures to improve the training of highly skilled personnel. However, most of these measures just advocate the integration of industry and education, cooperation between school and enterprise at the macro level, but rarely support the implementation rules on operating. So, the implementation of policies and regulations on highly skilled personnel training turns out to be ineffective.

### **3.2 Vague Orientation of Pre-service Education**

It's been a long time that we have mistakenly believed that high-quality and highly skilled compound talents can be cultivated only in the pre-job education stage, taking vocational schools as the unique main body of cultivating high-skilled personnel, while neglecting the important role of the post-service stage of the enterprises. Pre-service education plays an irreplaceable fundamental role in the process of cultivating highly skilled talents, which is featured as one of the main forces to train high-skilled personnel. Its main task is to improve the humanistic quality of students, guide students to establish professional dedication and correct values of innovation, encourage students to explore and plan their career, enable students to gain skills so that they are armed with basic abilities required by the occupation. Imparting common knowledge and skills to students is considered as the goal of vocational education. These knowledge and skills are mastered to meet the needs of the extensive development of enterprises. However, it is far from enough to meet the requirements of the special knowledge and skills of highly skilled talents in high-tech and intelligent production enterprises. The high skills of highly skilled talents largely rely on the accumulation of practice and exploration thus it is impossible to cultivate excellent and highly skilled personnel by mere school vocational education. Practice has proved that the skills of vocational college graduates are far from reaching the requirements of enterprises in the seek for highly skilled talents.

At present, the development of vocational education majors in China fail to keep up with the pace of the development of industries duet to the poor linkage between them. In addition, the structural contradiction between supply and demand of highly skilled personnel has not been alleviated for a long time. Higher vocational colleges are highly motivated to participate in the integration of industry and education and school-enterprise cooperation. Schools and teachers have different interests. Teachers are not willing to participate so that there is a serious shortage of "double-qualified" teachers who are sophisticated in production practice experience in enterprises or capable of theoretical classroom teaching.<sup>[3]</sup> As a result, with poor practical ability and innovation ability, students cannot meet the real needs of the rapid transformation of industrial structure.

### **3.3 Insufficient Training Motivation of Vocational Enterprises**

Cooperation between school and enterprise, integration of industry and education are powerful ways to cultivate highly skilled talents. Higher vocational education lays a solid foundation for the growth of highly skilled talents. Post practice and social training of enterprises provide the follow-up momentum for the growth of highly skilled talents. The purpose of enterprises' participation is to obtain social and economic benefits, yet it's a long-term process as it involves much investment in cultivating highly skilled personnel. Therefore, it is difficult to gain obvious economic benefits in the short term. Some enterprises, especially small and micro enterprises tend to pursue short-term economic benefits due to their limited capabilities and other reasons so that they are reluctant to be involved in the integration of industry and education as well as school-enterprise cooperation and collaboration. In this sense, it's difficult to improve students' skills effectively, the cultivation of highly skilled talents remains superficial. Some enterprises lack long-term planning, holding the wrong idea unreasonably to absorb highly skilled talents in the market instead of investing time and money in the development of the highly skilled workforce. Some enterprises are influenced by the traditional ideas. Technical researchers and managers, on the one hand, are more likely to be promoted in their positions, on the other hand, are favored by much better wages, welfare and other aspects than skilled workers. There are discriminatory policies existing among enterprises, which block business employees, youth and students who desire to be highly skilled talents.

## **4 Innovation Path of Multi-dimensional Collaborative Training Mechanism for Highly Skilled Talents**

### **4.1 Establish an Integrated Training and Management System for Highly Skilled Personnel and Play the Leading Role of the Government Functionally**

Highly skilled personnel training is a long-term and systematic work, it requires to coordinate various forces to form synergy.<sup>[4]</sup> In view of the current situation in the training of highly skilled personnel in China, human resources and social security departments are supposed to coordinate timely. Education departments and other departments should establish a reasonable structure by integrating training and management system of highly skilled personnel with coordinated operation. This will help to solve the dispersion and overlapping of departmental functions, and provide institutional guarantee to improve the quality and efficiency of highly skilled personnel. China can learn from the successful practices of these countries like integrating the human resources and social security departments, education department, economic sector and other departments and institutions to build a national level of vocational education management institutions, which function is formulating a strategic development plan for vocational education and vocational training, setting standards for vocational education and vocational skills, issuing labor market demand and occupation early warning, etc. The purpose is to coordinate the educational administrative

department, labor and personnel departments, professional ministries, the resources of the industry associations and the related enterprises so that comprehensive configuration and harmonious development could be realized. In addition, local governments regularly can make a regular scientific forecast of the demand for highly skilled talents in local enterprises, especially key enterprises, try to establish a highly skilled talent demand resource pool, adjust the shortage type and quantity of local occupation jobs dynamically, and publish the list of these types of jobs in shortage through multiple channels to guide vocational colleges and social vocational training institutions to provide relevant training on the basis of market demand.

#### **4.2 Reposition the Vocational Education in Schools Reasonably and Enhance the Basic Training Function of Vocational Colleges**

Highly skilled talents have their own special growth rules as the transformation from novice to expert is a long process of constant upgrading.<sup>[5]</sup> The growth of highly skilled talents entails undertaking pre-service and post-service learning and practice. Better career access level will meet the basic needs of recruitment, which is the main training goal of the pre-service stage, while the high level is the main training goal after the job. Vocational colleges should reinforce the labor education and innovation education for students, cultivate their labor emotion, guide them to respect labor, respect innovation, eliminate discrimination and prejudice against labor so as to keep up with the pace of the transformation and upgrading of the national industrial structure. It also requires adjusting and optimizing professional settings dynamically according to social needs, making vocational education meet the requirements of industrial development accurately, promoting vocational education and the development of local industries.

To train highly skilled personnel to meet the needs of social production is the utmost goal. It drives us to actively implement the National Implementation Plan for Vocational Education Reform, and vigorously carry out 1+XPilot project teaching. Vocational job demand calls for reconstruction of the current talent training program by changing teachers' teaching and thinking, deepening teaching reform, and improving the social applicability and pertinence of the training of highly skilled personnel to strengthen students' ability of sustainable development. In addition, the multi-level and reasonable needs of teachers should be emphasized and respected. The work effectiveness and work attitude of teachers' participation in the cultivation of highly skilled talents will be taken into consideration in terms of their career promotion and performance evaluation.

Multiple measures should be taken to improve the enthusiasm of teachers to participate in school-enterprise cooperation, like encouraging them to be involved in cooperative enterprises for appropriate positions or take certain part-time jobs every year, helping them to accept the skills training from the enterprise system, improving their knowledge and ability structure, especially young teachers.<sup>[6]</sup> At the same time, hire skilled masters and craftsmen who either meet the requirements of higher vocational teaching or like to cultivate highly skilled talents to give lectures to students, serving as full-time or part-time faculty to enrich the teaching team so that the problem of insufficient teachers for practical skills teaching can be alleviated. With good use of

teaching equipment, teachers and other resource advantages, it will provide sustainable and regular high levels of multiple types, high-quality training services to the industry enterprises.

### **4.3 Establish and improve the Internal Training Mechanism**

Enterprise organization is the main user and training subject of the post-service stage of highly skilled talents, which demands macro correct understanding in the importance of cultivating skilled personnel to the enterprise and society. It is wise to change “degree-oriented” into “ability-oriented” concept, the traditional concept of employment, try to format highly skilled personnel to create a better value orientation. Based on their requirements of their own development, enterprises should strengthen highly skilled personnel training in manpower, material resources, and financial investment to establish and improve the staff training infrastructure. Regular training is recommended to conduct for talents of different levels to improve their job skills and innovation ability so that different level of employees are willing and able to transform into highly skilled personnel. Capable enterprises can select skilled personnel with excellent performance in all aspects regularly, especially young skilled talents, to go out of the enterprise and participate in the learning and exchange activities of highly skilled talents at home and abroad. Various skills competitions will inspire employees’ enthusiasm to improve their skills. Enterprises with good conditions and ability should explore the advantages of highly skilled talents to establish enterprise-type universities, or municipal level, provincial, even national skill master studio or training room. Various forms can be applied to encourage these skilled masters and craftsmen to play their own expertise for enterprises and society on nurturing more high-quality skilled personnel. It will actively promote the sustainable development of the construction of highly skilled personnel so that both enterprises and highly skilled personnel will achieve a “win-win situation”.

## **5 Conclusions**

Through this study, the following conclusions can be drawn: (1) The growth of high skilled talents has its own development laws, and the cultivation of high skilled talents needs to follow their development laws. (2) Teaching conditions are the main influencing factor for improving the efficiency of cultivating high skilled talents. It is necessary to improve the growth conditions of high skilled talents, help them plan their career paths reasonably, and increase their wages, benefits, and social status. (3) Improving the quality of vocational education and the level of talent cultivation requires deep integration between schools and enterprises.

## **Fund Projects**

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