

# *Research and Analysis on the Model of School-Enterprise Collaborative Education in Higher Vocational Colleges*

**Furong Peng<sup>\*</sup>, Fang Zhang**

*Department of Information Engineering, Shandong Labor Vocational and Technical College, Jinan, Shandong 250022, China*

*<sup>\*</sup>Corresponding Author*

**Keywords:** School-enterprise cooperation, Higher vocational college, Teaching reform

**Abstract:** Many higher vocational colleges pay more and more attention to the construction of school-enterprise cooperation mechanism, and spend a lot of time and energy to explore the construction and improvement of the mechanism. However, the establishment and improvement of school-enterprise cooperation mechanism is a long-term and complex project. This article discusses the ideas and overall framework of the school-enterprise cooperation model, and builds a systematic organization and operating mechanism. And then, we put forward suggestions for improving the school-enterprise cooperation model from four aspects: cooperation mechanism, guidance mechanism, management mechanism and feedback evaluation mechanism, so as to provide reference for higher vocational colleges to develop school-enterprise cooperation and cultivate application-oriented talents.

## **1. Introduction**

At present, the school-enterprise cooperation model will surely become an important strategic choice to promote the development of vocational education in China. The development of the school-enterprise cooperation mode of running schools is conducive to creating a win-win situation for industry and learning. At the same time, it can make full use of the advantages of both schools and enterprises to combine theory and practice to cultivate talents needed by enterprises. The school-enterprise cooperation model can effectively solve the problems of teaching reform in higher vocational colleges, solve the enterprise's demand for skilled application talents, strengthen students' practical ability, improve teachers' actual teaching experience, shorten the gap between industry and education, and enhance the effectiveness of vocational education.

In the exploration and practice of school-enterprise cooperation, many problems have emerged. For example, the school management system and ideological concepts are backward, unable to effectively achieve in-depth cooperation with enterprises; the school's major settings did not develop new majors based on market needs, and could not meet the needs of corporate employment; enterprises are overly pursuing short-term interests and cannot continue to invest in schools for a long time to maintain cooperation. In view of this, this article aims to propose an innovative school-enterprise cooperation operating mechanism to solve the problems faced by schools and enterprises in school-enterprise cooperation.

## **2. Status of School-Enterprise Collaborative Education**

Since 2006, the Ministry of Education has launched a national demonstration higher vocational college construction plan, so as to guide higher vocational education to implement teaching reforms and improve teaching quality through deepening school-enterprise cooperation. Many higher vocational colleges have conducted in-depth research and practice on the school-enterprise

cooperation model, and have accumulated experience in vocational education “reform of talent training model”, “construction of practical teaching conditions” and “construction of teaching staff”, and achieved diversified results, laying the foundation for the reform of school-enterprise cooperation mechanism. In this context, the educational ideology generally promoted by higher vocational colleges is cooperative development and school running, and is actively exploring the establishment of partnerships with the government and more companies. Some other colleges have established a school-enterprise cooperation teaching management mechanism and a school personnel distribution mechanism that adapts to the combination of work and learning, resulting in a scientific and reasonable close long-term operation system and a cooperative school-running system.

Since then, the wave of school-enterprise cooperation has swept across the country, and all higher vocational colleges are combining their own advantages, actively exploring, continuously optimizing the school-enterprise cooperation model, and building and improving the school-enterprise cooperation operating mechanism. However, due to many reasons, the development of school-enterprise cooperation is still slow, and the reasons are mainly manifested in three aspects.

First, the government's dominance is not obvious. In recent years, although the state has paid special attention to the establishment of a long-term mechanism for school-enterprise cooperation, and has issued a series of policies and regulations to promote the deepening of school-enterprise cooperation in vocational education, but these macro-policies are not specific enough, lack corresponding guidance, and have not yet clarified the responsibilities of schools, governments, and enterprises. In addition, local governments have not yet issued effective laws and policies, especially the lack of incentive and punishment mechanisms for companies participating in school-enterprise cooperation, which makes the policies and regulations lack of operability, and it is difficult to form a long-term school-enterprise cooperation mechanism.

Second, higher vocational colleges still lack practical experience. At the government and school level, even though governments at all levels are aware of the criticality of school-enterprise cooperation, and have created school-enterprise cooperation agencies and invested a certain amount of money, they still lack experience when they encounter key problems and difficulties. On the one hand, the courses, training models and professional establishment of higher vocational colleges are difficult to meet the needs of enterprises; on the other hand, higher vocational colleges have not yet established an independent practical teaching system that matches the professional abilities of the company's positions, and the students' own abilities and the various knowledge they have cannot meet the requirements of modern companies.

Third, enterprises are not very active in participating. Enterprises generally do not pay enough attention to the essence of school-enterprise cooperation. The school really wants to establish a cooperative relationship with companies, and shows high enthusiasm and enthusiasm, but most of the companies do not show high enthusiasm. The main reason is that the educational environment of the school is different from the operating environment of the enterprise, and the interests pursued by the school and the enterprise are also different. The core position of the enterprise in the school-enterprise cooperation is not fully demonstrated. In addition, the government has not yet promulgated relevant laws and policies for school-enterprise cooperation. These factors have had a great impact on the initiative of enterprises to participate in school-enterprise cooperation.

### **3. Innovation of School-Enterprise Collaborative Education Model**

#### **3.1 Overall Framework**

Based on the current situation and problems of school enterprise cooperation, the guidance of national laws and regulations and related policies is very necessary. It needs the government,

enterprises and schools to realize the idea of school enterprise cooperation. To build a successful mode of school enterprise cooperation in higher vocational colleges, we need to meet the following requirements: first, the mode of school enterprise cooperation should contribute to the development and interests of both enterprises and colleges; second, the school-enterprise cooperation model should be suitable for the actual situation of enterprises and schools, as well as the current industrial technology upgrading and industrial structure adjustment, economic growth mode transformation and development needs; third, the school-enterprise cooperation model should highlight the ability of students, which is conducive to the development of students' abilities and skills.

According to the analysis of the overall idea of school-enterprise cooperation in higher vocational colleges, the operating framework of the school-enterprise cooperation model can be designed as shown in Figure 1.

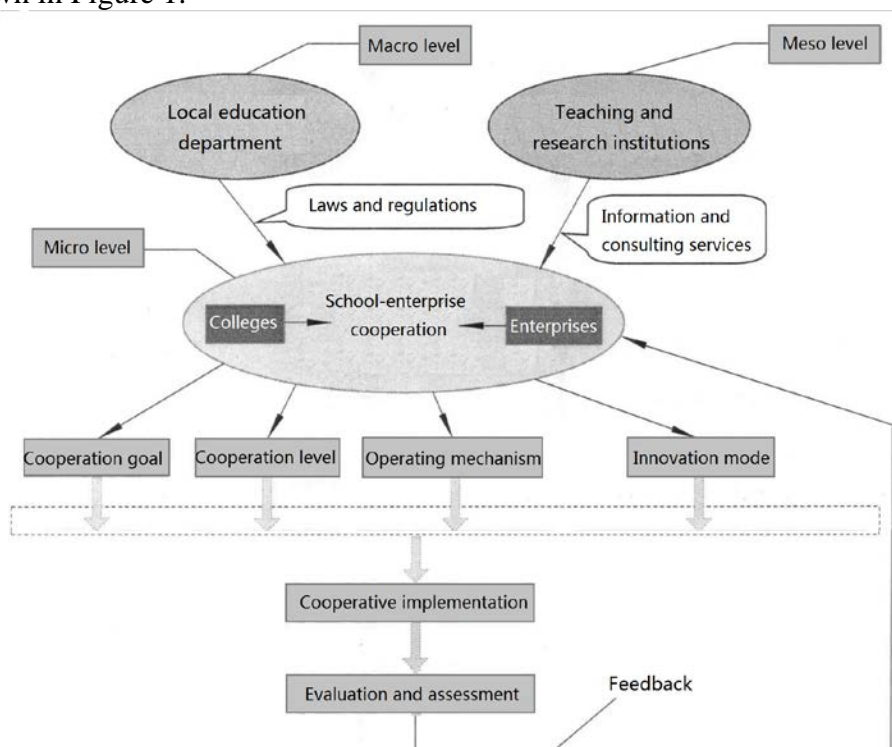


Fig.1 Overall Framework of the School-Enterprise Cooperation Model

### 3.2 Operating Mechanism

From the perspective of the school, in the cooperation, the school and the enterprise can jointly determine the school positioning according to the needs of production and operation, and jointly agree on the professional development direction, professional training goals and talent training mode. Both schools and enterprises jointly carry out professional construction ideas, and jointly develop courses in accordance with the needs of product production; jointly plan and build training bases in accordance with professional training goals and practical teaching requirements. The operating mechanism of the school-enterprise cooperation model is mainly reflected in the cooperation mechanism, guidance mechanism, management mechanism and feedback evaluation mechanism

#### (1) Cooperation mechanism

First, establish a school-enterprise cooperation committee. Participated by senior managers from industries, enterprises, and schools, making decisions and coordinating major issues related to school-enterprise cooperation, the school-enterprise cooperation committee deliberates on the

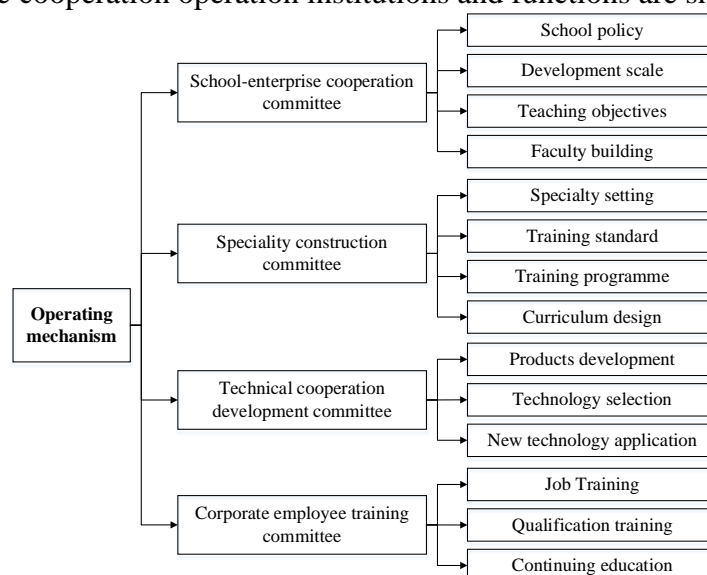
school's school positioning, development direction, training goals, teacher team building, enrollment and employment and other major school-running decisions and issues.

Second, establish a major construction committee. The committee is attended by the head of the school department, the head of the production department of the company, and the professional leader. The function of the major construction committee is to formulate major development plans, determine talent training specifications and training plans, and closely contact positions to carry out curriculum reforms.

Third, establish technical cooperation development committee. It is composed of scientific and technical personnel and technical backbones from enterprises and schools, and focuses on technical cooperation in new product development and new technology applications.

Forth, establish a corporate employee training committee. It is attended by the human resources department of the enterprise and the training department of the college. It mainly assists the enterprise in formulating employee training plans, and undertakes on-the-job training, qualification training and continuing education training for enterprise employees.

The school-enterprise cooperation operation institutions and functions are shown in Figure 2.



*Fig.2 School-Enterprise Cooperation Operation Institutions and Functions*

### (2) Guidance mechanism

Establish a school-enterprise cooperation committee with the participation of industry and enterprise schools to jointly study the development direction of the school, guide the formulation of training goals, and jointly coordinate teacher training plans and programs. On the one hand, the members of the professional steering committee should study the industry development background and the necessity and feasibility of professional construction; on the other hand, According to the reform of the modern enterprise system, enterprises carry out industrial technology upgrades and industrial structure adjustments, and at the same time, the school reforms the teaching system, teaching content, and teaching methods according to the adjustment of the industrial structure and the continuous changes of the enterprise.

### (3) Management mechanism

Both the school and the enterprise should be committed to seeking the consistency between the school's school-running philosophy and the business philosophy. Through school-enterprise cooperation and industrial docking, the school reforms the teaching system and teaching mode according to the requirements of production and management positions. In addition, reform the

teaching management method in accordance with the requirements of modern enterprise management. Establish a management mechanism for school-enterprise cooperation and overall planning, division of labor, coordination, and independent development, and form a strict system of checks and balances and an effective assessment system in the personnel management, financial operation, and fund distribution of enterprises and schools. The ultimate goal is to achieve mechanism dependence, resource complementarity, and win-win benefits, to ensure the maximum adaptability of talent specifications and development needs, school scale and resource allocation.

#### (4) Feedback evaluation mechanism

Establish an evaluation method that combines qualitative analysis and quantitative analysis for school-enterprise cooperation based on scientific methods, and in accordance with the requirements of the standards of the "Higher Vocational Talent Training Work Level Evaluation Program", to establish a feedback and evaluation mechanism for school-enterprise cooperation in running schools. The function of the feedback mechanism is to grasp the problems in the process of running a school in time, guide the cooperation between the two parties, and make the school-enterprise cooperation continue and steadily advance.

### 3.3 Collaborative Mode Construction

According to the needs of economic development, the strategic positioning of enterprises and schools, and the characteristics of production and operation, at different development stages, a multi-channel, multi-mode, and multi-level cooperation model can be adopted.

#### (1) Loose cooperation mode

Loose cooperation is a model for schools and enterprises to work together to cultivate vocational skill talents. Both parties use their respective resource advantages to cultivate the high-skilled talents needed by the enterprise and improve the practical ability and innovation ability of students as the main task. The specific forms of cooperation include:

a) Joint training: both the school and the enterprise have established a professional construction steering committee to formulate training goals and teaching plans, set up courses, conduct job quality and ability analysis, and conduct order training according to the needs of the enterprise.

b) Work-study alternation: on-campus teaching and enterprise internship are combined alternately, and according to the actual production of the enterprise, alternate teaching and internships are implemented.

c) Staff training and continuing education: take advantage of the school's teachers and teaching venues to provide on-the-job training, vocational qualification training and continuing education training for corporate employees.

d) Co-construction of teaching practice base: enterprises use equipment, venues and other resources to build practice bases with schools, and implement resource sharing and mutual benefit.

The above cooperation mode takes resource sharing as the basic form, work study alternation as the main feature, and technical talents training as the fundamental purpose. Enterprises and schools penetrate each other, complement each other's advantages and share interests, but the level is shallow, the threshold is low, and the school enterprise cooperation relationship is relatively loose.

#### (2) Large enterprises set up higher vocational colleges mode

Close cooperation is a trinity of teaching, production and scientific research. Under the close cooperation mode, large enterprise groups make use of their advantages in human resources, equipment and technology to establish a school running mode integrating teaching, production and scientific research. The mode of establishing higher vocational colleges by large enterprises mainly highlights professional practice and technology development functions, and focuses on basing on

the regional economy, establishing professions with industries, and promoting industrial development with professions. The advantages of this model are mainly reflected as follows

a)The docking of majors and industries is conducive to the realization of training goals and achieves the training of high-skilled talents needed by enterprises.

b)Large enterprises provide schools with teaching practice conditions, highlight the essence of vocational education, and realize the purpose of resource sharing and full utilization.

c)Conducive to enterprise product development and the use of new technologies, new processes, and new materials.

In overall, This model truly realizes the integration of professional resources, human resources, and industrial resources, highlighting business functions, service functions and demonstration functions.

### (3)School-enterprise joint stock cooperation mode

The mode of joint stock cooperation between school and enterprise is that the school and enterprise with independent legal personality cooperate in the form of joint stock system. Enterprises inject shares into vocational colleges in the form of facilities, venues, technology, teachers and other forms, and directly participate in the whole process of running schools as running scholars to share the benefits of running schools. This model is based on the background of accelerating the process of economic integration and increasing the degree of regional integration, through the form of school-enterprise shareholding system and group school running, to complete the optimized combination of school-enterprise resource stock. It can help strengthen the integration of educational resources and economic resources, and obtain the optimization of educational scale benefits.

The main advantages of this cooperation model are: seek the consistency between the school-running philosophy and the business philosophy in a substantial sense, and form the integration of the school-running system and the business system, the dependence of the school-running system and the business mechanism, the complementarity of school resources and corporate resources, and a win-win situation in the benefits of school running and business operations, and ultimately ensure the enterprise's maximum adaptability to talent specifications and development needs, school scale and connotation development.

## 4. Conclusion

In the context of an era in which higher vocational colleges are in urgent need of transformation, the talent training model of school-enterprise cooperation is getting more and more attention. Many higher vocational colleges pay more and more attention to the construction of school-enterprise cooperation mechanism, and spend a lot of time and energy to explore the construction and improvement of the mechanism. However, school-enterprise cooperation involves multiple levels of government, schools, enterprises, and society, and the establishment and improvement of school-enterprise cooperation mechanism is a long-term and complex project.

This article first analyzes the various obstacles faced by the current school-enterprise cooperation mechanism, which mainly include: the government's dominance is not obvious; higher vocational colleges still lack practical experience; enterprises are not very active in participating in school-enterprise cooperation. Therefore, this article discusses the ideas and overall framework of the school-enterprise cooperation model, puts forward the goals of the school-enterprise cooperation model, and builds a systematic organization and operating mechanism. And then, this article puts forward suggestions for improving the school-enterprise cooperation model from four aspects: cooperation mechanism, guidance mechanism, management mechanism and feedback evaluation

mechanism, so as to provide reference for higher vocational colleges to develop school-enterprise cooperation and cultivate application-oriented talents.

## Acknowledgement

This work is supported by The Research projects of China Vocational Association in 2019 (No.2019048) and The Shandong Soft Science Research Program in 2019 (No.2019RKB01559).

## References

- [1] Zeng M X . *Research on the School-enterprise Cooperation Training Platform of Software Engineering Professional Based on Cloud Computing*. *Modern Educational Technology*, 2013,22(002):13-49.
- [2] Li J. *Exploration and Practice of "2 + 6" Professional Practice Teaching Reform Based on School-Enterprise Cooperation --Application-Oriented Universities Talen ' s Joint Cultivation of Electrical Engineering Specialists by Hunan Institute of Engineering*. [J]. *Journal of Hunan Institute of Engineering*, 2012(01):95-98.
- [3] Zhu M , Zhang J , Bao S . *Research on the Cultivation of Logistics Engineering Application Talents By the Diversification School-enterprise Cooperation*[J]. *Procedia Engineering*, 2011, 15:4173-4177.
- [4] Wang Y , Bai J . *A Training Model of Out-standing Engineers: Exploration of School-Enterprise Cooperation Based on Technology Competition*[J]. *The international journal of engineering education*, 2013, 29(6):1420-1428.
- [5] Zhao Z . *School-enterprise cooperation in China's vocational education and training*[J]. *Foreign Language Teaching & Research Press*, 2011:43-52.
- [6] Min Y . *Evaluating Collaborative Innovation Ability of School-Enterprise Cooperation*[J]. *Open Journal of Business & Management*, 2015, 03(1):75-82.
- [7] Dong B . *Mode Innovation of School-Enterprise Cooperation on Food Safety Testing Laboratory Reform*[J]. *Asian agricultural research*, 2020, 000(001):P.62-64.
- [8] Liu S , H Zhang, Ye Z , et al. *Online Blending Learning Model of School-Enterprise Cooperation and Course Certificate Integration During the COVID-19 Epidemic*[J]. 2020, 002: 78-102.