

# On the Ways of "Integration of Production, Teaching and Research" in Running Higher Vocational Colleges

Ping Zeng\*

*School of Foreign Languages and International Trade, Wuhan polytechnic, Wuhan 430074, China*

*\*Corresponding author. Email: 275016483@qq.com*

## ABSTRACT

This paper describes the meaning and approach of "production and studying" cooperation education in higher vocational colleges. The meaning of "production and studying" cooperation education in higher vocational colleges includes: "production and studying" cooperation education is beneficial to the realization of the target of higher vocational education. "Production and studying" cooperation education is conducive to enhancing the employability of higher vocational students. "Production and studying" cooperation education helps to improve the conditions of college education; "Production and studying" cooperation education helps to form the characteristics of higher vocational colleges. "Production and studying" cooperation education mainly includes: establishing the training center in the university; Create a "production and studying" cooperation education environment; Relying on a strong professional teaching factory; Establishing an after-school training base; Realize school-enterprise joint running.

**Keywords:** *"Production and studying" cooperation education, School characteristics, Practice base, Joint school, Diverse talents.*

## 1. THE MEANING OF THE ROAD OF "PRODUCTION AND STUDYING" COOPERATION EDUCATION IN HIGHER VOCATIONAL COLLEGES

The significance of "production and studying" cooperation education in higher vocational colleges mainly includes the following points.

### 1.1. "Production and Studying" Cooperation Education is Beneficial to the Implementation of Education Personnel Training Target<sup>[1]</sup>

The training goal of education in higher vocational colleges is to produce, service and manage the first-line technology applied talents, and pay attention to the cultivation of students' practical ability. And "production and studying" cooperation education is a kind of use this kind of industry, enterprise and school, different education resources and education environment, training is suitable for industry, enterprises need to applied talents as the main purpose of the teaching mode. It utilizes the advantages of enterprises and schools to realize the combination of theory and practice. On the one hand, the school provides technical support for enterprises. On the other hand, enterprises provide practical places for

schools, so that students can cooperate with enterprises and apply their knowledge to production and engineering practice. So, "production and studying" cooperation education mode, in talents training ways and methods are consistent with the talents training goal of higher vocational education, is to realize the training goal of effective way.

### 1.2. "Production and Studying" Cooperation Education is Conducive to the Formation of Diverse Talents and Enhancing the Employability of Students in Higher Vocational Colleges<sup>[2]</sup>

At present, higher vocational college students employment difficulty is a prominent problem, analysis the reason, not because the excess talent, but because of our country's higher vocational education to cultivate talents and doesn't fit the social demands. Higher vocational colleges and universities cooperate to strengthen communication and communication with enterprises, which can alleviate this contradiction, cultivate diverse talents and improve students' employability. This is because:

(1) "Production and studying" cooperation education, can make the school starting from the actual demand of service industry, industry, in a timely manner to understand the change of the social demand for talents of specification and quantity, at any time in accordance with the industry's latest requirements, the setting of subjects and majors adjusted, close to overcome phenomenon, cultivate true can meet the demand of enterprise technology applied talents.

(2) "Production and studying" cooperation education is beneficial to improve students' comprehensive quality and professional quality. This is because in the simple classroom education mode, the students are difficult to feel the pressure of competition, to experience less than professional post technical requirements and professional responsibility, and through the combination between production way, really into the enterprise interior, as it were, will be real realized the importance of professional skills and literacy, change passive to active learning in school.

(3) "Production and studying" cooperation education is beneficial to strengthen the interconnection between schools and enterprises, and open the door for students' employment. To implement the school-enterprise cooperation, enterprises, as one of the main body of the school, can choose graduates and open up new avenues for students' employment.

### ***1.3. "Production and Studying" Cooperation Education will Help Improve the Condition of Running a School in Higher Vocational Colleges***

Due to lack of funds, higher vocational colleges tend to be stretched in teaching facilities and experimental facilities, especially in the construction of internship areas, and the lack of these running hardware will inevitably affect the quality of running schools. With "production and studying" cooperation education, the school can improve the teaching conditions by means of the ready-made experimental equipment and professional training base provided by the enterprise. On the construction of teachers at the same time, "production and studying" cooperation education can also fill in higher vocational colleges "dual-teachers" strength reserve, provide teacher training base for teachers' ability training, which guarantees the improvement of teaching quality and teaching level.

### ***1.4. Higher Vocational Colleges and Scientific Research Units Jointly Build the Entity Model<sup>[3]</sup>***

Co-construction entity means that enterprises and universities or scientific research units establish joint-stock companies, research and development centers, pilot

test bases and other entities, and become relatively independent activity units or legal persons.

Co-construction of economic entity is the closest cooperation mode and the most mature cooperation mode between industry, universities and research institutes.

This mode of cooperation is conducive to the formation of long-term relations and cooperative relations of mutual understanding and trust between universities, research institutes and enterprises, and is conducive to the continuous expansion of technological advantages into economies of scale, so as to obtain technological achievements and high returns. From achievement transfer to cooperative development and then to co-construction of entities is a progressive relationship, and the cooperative relationship gradually becomes closer.

But look from actual situation, co-construction economy entity is not very extensive. To build entity model in the enterprise, to build research and development center, lab results, and less successful build co. LTD., the main reason is that enterprise pursue interests maximize and high market share, the pursuit of high academic level, strong discipline advantage and cultivate excellent talents, scientific research institutions for research and development ability of ascension, their goal is different, through the establishment of economic entity walk to arrive together very not easy.

### ***1.5. Realizing "Production and Studying" Cooperation Education is Beneficial to the Formation of Education Running Characteristics of Higher Vocational Colleges***

As an important part of education of China, education of higher vocational college is an important reason for its lack of competitiveness compared with the normal higher education. Higher vocational colleges can make more efforts in applied research and technology development according to their own characteristics and advantages. Supported by enterprise, on the one hand, through the professional advantage to organize teachers, students applied technology research and development, enterprise economic activities, promote new scientific and technological achievements, to make it as soon as possible into realistic productivity; On the other hand, through the industry professional, in turn, promote the development of modernization process, provide the school-running level and efficiency, realize the professional construction and industrial development, the benign interaction of practice base construction, form is different from the traditional higher education of higher vocational education features.

## **2. HIGHER VOCATIONAL COLLEGES REALIZE THE MAIN APPROACH OF "PRODUCTION AND STUDYING" COOPERATION EDUCATION**

There are several main ways to realize the "production and studying" cooperation education model in higher vocational colleges:

### ***2.1. Establish a Training Center in the Campus to Create a Combination Environment***

This refers to the fact that vocational colleges and universities have established some training rooms that are close to or even exceed the industry level through computer aided teaching methods and funds. These simulation systems can not only carry out skills training, but also design practical training programs according to industry requirements, so that students can experience and understand the process of modernization and production. Students can get real professional training in the laboratory environment, so that students can be qualified for the job after graduation.

### ***2.2. Higher Vocational Colleges Can Rely on the Strength of Their Own Teaching Factories According to Local Economic Development Needs***

Higher vocational colleges in the industry, relying on professional do can with the professional advantages, talent advantage and intellectual superiority, establishing school-run factories, the production management system in the same unity cooperation, thus forming the integration of production factory of teaching. On the one hand, teachers can carry out teaching around the products of factory body, so that students can directly participate in the design, development and production of products. On the other hand, it brings economic income to schools, and slows down the conflict of funds.

### ***2.3. Establish Outside the School Training Base***

This is one of the most important ways of "production and studying" cooperation education, which is also an important way to cultivate and improve students' technical application ability. Through the cooperation between the school and the enterprise, the company employs the engineering staff of the enterprise to serve as the training guidance, and the enterprise provides some jobs for the students, so that the students can receive real vocational training during the school years.

### ***2.4. The School and the Enterprise Cooperate to Realize the Joint School<sup>[4]</sup>***

It is an important trend of the development of modern education, which is the inevitable result of the expansion of higher vocational colleges. Combination education refers to the school and industry department in the school of organization and leadership, fund input, school construction, management, operation and so on various aspects of cooperation, is the mode of higher vocational education development and improve. To jointly run schools, on the one hand, schools can improve the conditions of running schools by means of enterprise funds; On the other hand, enterprises use the advantage of talents and intelligence to improve the competitive ability of enterprises in the market so as to realize mutual complementarity and mutual benefit.

### ***2.5. Establishment of Integration of Production, Teaching and Research Cooperative Education Alliance<sup>[5]</sup>***

The key factor for the successful implementation of the mode of production-university-research cooperative education in higher vocational colleges is the establishment of the production-university-research cooperative education alliance. To build an industry-university-research cooperative education alliance with win-win cooperation as its core, with the needs of society and enterprises as its guidance, the transformation of science and technology and achievements as its support, and the ultimate goal of cultivating applied talents and serving the local economy.

First, enhance the comprehensive strength of the school to attract small and medium-sized enterprises to establish industry-university-research cooperative education alliance. Compared with research-oriented universities, higher vocational colleges often have poor abilities in scientific research and teaching due to the lack of manpower and financial resources. First of all, the school can form a university alliance with other application-oriented colleges of the same or similar majors. Through coordination and cooperation, learning from each other's strong points, continuous integration of educational resources, and combining with the school's own professional advantages and the characteristics of local enterprises, the university alliance establishes the direction of specialty setting and scientific research, and constantly enhances the comprehensive strength of the university alliance. The establishment of the university alliance is conducive to the realization of high-quality resource sharing. Members of the alliance can share teachers, laboratory equipment, etc., which not only saves money but also improves the comprehensive strength of the school. The university alliance has found win-win points with enterprises, and can even compete with research-oriented universities in terms of overall

strength. It has laid a solid foundation for the development of industry-university-research cooperative education mode.

Secondly, vocational colleges should select appropriate partners from local small and medium-sized enterprises according to their actual conditions. Since they are small and medium-sized enterprises, there are some problems in terms of capital and technology. These enterprises basically do not have their own research teams, and higher vocational colleges and universities in cooperation with them can provide them with corresponding human and technical support. Engineers with rich practical experience in enterprises can serve as teachers to give lectures to college students, which can effectively solve the current situation of lack of practical experience of college teachers and realize the sharing of human resources. Higher vocational colleges can also cooperate with enterprises to set up training bases for students to practice, and engineers and teachers of both sides should jointly undertake the training tasks for students. Enterprises and higher vocational colleges can also jointly establish laboratories, which can be used as research and development centers to integrate funds and talents from both sides, which can not only carry out technical research and development, but also provide experimental learning for students. Through the school-enterprise cooperation model, the implementation of the talent training model combining work with study, to provide a broad practice platform for students, and constantly improve the quality of talent training. Finally, a number of higher vocational colleges and universities formed a university alliance, by the university alliance and small and medium-sized enterprises to conduct the alliance. All the members of the Alliance take development as the first priority, win-win cooperation as the fundamental principle, and the actual needs as the guidance to constantly enhance the comprehensive strength of all parties through cooperation, so as to realize the long-term development of the Alliance.

Second, we should strengthen cooperation in industry-university-research education with local governments and educational institutions. With the care and support of local governments, small and medium-sized enterprises continue to expand their own strength, and join the industrial development in combination with their actual situation, which promotes the rapid transformation and upgrading of local industries. In order to further enhance the competitiveness of various local industries, the government has turned its attention to colleges and universities in order to obtain talent and technical support from colleges and universities, which is also an opportunity for vocational colleges and universities. Relying on its own advantages in personnel training and technical services, the school has established extensive and in-depth cooperation with the government to lay a solid policy foundation for the industry-university-research cooperative education alliance. With

the popularization of higher education, the employment of college students has become the focus of social attention. It is also an important reason for the difficult employment of college students that the major setting of the school is too detailed and too much, which is seriously out of line with the needs of social and economic development. It is difficult for college students to take a job directly after graduation. Generally, they need to go through induction training for a period of time. The school can establish cooperative relations with some educational institutions to provide teachers and research and development teams for educational institutions. At the same time, educational institutions can also serve as the link between schools and enterprises, providing broader cooperation space for all parties, and further promoting the development and innovation of industry-university-research cooperative education.

### **3. CONCLUSION**

The higher vocational colleges are different from the ordinary ones, because the higher vocational colleges cultivate the technical application talents for the first line of production, service and management. Higher vocational colleges should be in close contact with enterprises and take the combination of production and studying. Cooperation with enterprises is also a way to cultivate the technical application-oriented talents oriented to production, service and management.

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