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## **A Review of the Current Research on Vocational Education in China**

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### **ABSTRACT:**

As China's economy entered a transition period and the industrial structure was constantly adjusting, the contradiction between the demand for talent and the supply side became increasingly prominent. Vocational education industry-education integration school-enterprise cooperation is the fundamental way to solve this problem. The school-enterprise cooperation talent training model of vocational education has had a history of decades in China. In recent years, with the strong promotion of the government, an increasing number of enterprises and vocational colleges have participated and are constantly exploring the characteristics of vocational education school enterprises. A new model of cooperation. This paper mainly carries out research from four aspects: the school-enterprise cooperation system of vocational education, the integration of industry and education in vocational education, the school-enterprise cooperation model of vocational education, and the effectiveness of school-enterprise cooperation in vocational education. It is hoped that this study can provide a reference for the development of vocational education.

**Keywords:** vocational education; school-enterprise cooperation; integration of industry and education; literature review

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### **1. Vocational education school-enterprise cooperation system**

The basic conceptual definition of the research question is the premise of carrying out research. Judging from the data search results on the school-enterprise cooperation system in vocational education, there are few studies in this area. The main viewpoints are as follows after collation of the search data.

The school-enterprise cooperation system of vocational education has its own functional and value attributes and is the product of the development and evolution of human society. In 2015, Long Deyi conducted relevant research on the nature of vocational education and proposed an institutional framework for school-enterprise cooperation from the perspectives of the government, industry, and institutions of higher learning<sup>[1]</sup>. Regarding how to establish the institutional goals of school-enterprise cooperation in vocational education, many scholars have conducted research from the perspective of practical needs in hopes of solving the problems of unsound standards for school-enterprise cooperation in vocational education, the poor quality of education, and the problems of training programs at the institutional level. The disconnect between vocational education and enterprise needs provides an impetus for school-enterprise cooperation in vocational education<sup>[2-5]</sup>. Zhang et al. conducted research on the value of the school-enterprise cooperation system in vocational education. He believed that the school-enterprise cooperation system had at least three values: it was helpful for improving the operational efficiency of relevant enterprises and for the development of school-enterprise cooperation. The resources of universities and enterprises are better used to promote the sound and healthy development of industries and enterprises<sup>[6-10]</sup>. Zhang et al. noted that in the process of school-enterprise cooperation, there is a game between the school and the enterprise, which will cause conflicts between the two parties, make the cooperation policy invalid, and thus deviate from the established cooperation and development goals of the two parties. Therefore, institutional innovation must be used to solve this problem. conflicts<sup>[11-14]</sup>. Based on an investigation of enterprises in Zhejiang Province, Ran found that those who actively participated in school cooperation were involved for two main reasons: economic motivation and social and moral motivation. She also found that enterprises were unwilling to participate in school cooperation. The main reason for enterprise cooperation is that the interests of the enterprise cannot be fundamentally guaranteed due to the absence of a school-enterprise cooperation system in vocational education<sup>[15]</sup>.

In terms of institutional changes in school-enterprise cooperation, most researchers consider the major policy documents promulgated in the vocational education field to be a sign of institutional change. Han Xu et al. believe that the changes in the school-enterprise cooperation system in vocational education can be studied from the three stages of exploration, formation and development. Each stage has a policy bias<sup>[16-18]</sup>. while Hao Wang studies it from the vertical perspective of time. To divide the changes in the school-enterprise cooperation system in vocational education, starting with the founding of New China, the first time division was the reform and opening up, and the second time division was around the 21st century, that is, the founding of New China-the reform and opening-up-21. From the beginning of the century to the present, institutional change was also divided into three time periods<sup>[19]</sup>. In fact, the institutional changes in school-enterprise cooperation come from various forces. Some forces negatively hinder the development of school-enterprise cooperation, and other forces can promote the further development of school-enterprise cooperation. This puts institutional changes in school-enterprise cooperation in vocational education at a more complicated stage. environment<sup>[20-27]</sup>.

Vocational education Problems in school-enterprise cooperation It gradually became evident that, from the perspective of laws and regulations, the school-enterprise cooperation system was not standardized, the various laws could not be coordinated and unified, and there were even conflicts. This made it difficult to implement the school-enterprise cooperation system<sup>[28-32]</sup>. Some scholars have directly pointed out that there is a great deal of ambiguity in the legal concept of school-enterprise cooperation in vocational education, the absence of rights and interest functions, and the lack of standardization; therefore, the laws and regulations on school-enterprise cooperation in vocational education need to be further improved<sup>[33-35]</sup>. Fan believes that the existing school-enterprise cooperation in vocational education lacks protection for the legitimate rights and interests of students and fails to define the identity of students as interns. In addition, the contracts signed in internship agreements are extremely nonstandardized and fail to reflect the rights and interests of interns<sup>[36]</sup>. The problems in the institutional implementation mechanism are mainly reflected in two aspects. The first is the imperfect management framework of institutional mechanisms<sup>[37-38]</sup>, and the other is that there are problems with both the evaluation mechanism and the supervision mechanism, which hinder the school-enterprise cooperation system. function<sup>[39]</sup>.

Scholars have different views on the causes of problems in the school-enterprise cooperation system in vocational education. Duan Zhiping believes that the main reasons are insufficient market fit, the absence of market players, and the absence of elements and mechanisms<sup>[40]</sup>. Another scholar analyzed corporate social responsibility and noted that the main reasons for corporate evasion of social responsibility are unequal empowerment, the acquisition of benefits, and a lack of moral constraints<sup>[41-42]</sup>. Table 1 summarizes the problems in the abovementioned school-enterprise cooperation.

Table 1 School-enterprise cooperation problems

| Problem embodiment   | Literature source |
|--|-------------------|
| The laws cannot be harmonized  | [30]、 [31]、 [32]  |
| There is a great deal of ambiguity in the legal concept                            | [33]、 [34]、 [35]  |
| The agreement failed to reflect the rights and interests of the interns            | [36]              |
| Imperfect institutional and mechanism management framework                         | [37]、 [38]        |
| There are problems in both the evaluation mechanism and the supervision mechanism. | [39]              |
| Inadequate market players and absence of elements and mechanisms                   | [40]              |
| Unequal access to empowerment and benefits   | [41]、 [42]        |

## 2. The integration of industry and education in vocational education research

The integration of production and education in vocational education involves the cross-border integration of education and industry. From a macroeconomic point of view, it studies the process of mutual influence and regulation between education and the economy. The main research object of educational economics is the impact of education on industry. contribution. The idea of integrating industry and education has been around for a long time. The upstream region mainly refers to the function and economic value of education, while the downstream region mainly includes the combination of government and industry and the coordinated development of education and industry.

The connotation of the integration of industry and education has not been uniformly recognized. Scholars such as Yang Shanjiang believe that the integration of industry and education involves the education system and the industrial system, and only when the two form a unified and organic whole can the function of industry-education integration be fully realized on the basis of synergy. They use their own superior resources, with collaborative education as the core, win-win cooperation as the ultimate goal, and excellent cooperation culture as the carrier to promote the two to achieve the optimal combination and thus a high degree of integration<sup>[43-46]</sup>. In their study, Cao et al. believe that the integration of industry and education is equivalent to school-enterprise cooperation. Cao et al. believe that the two are not the same. School-enterprise cooperation is a one-way process. In this process, the school is the main body of development and is the initiative of the school to cultivate talent. At this time, the enterprise is likely to be a passive party, but the integration of industry and education reflects the interaction between the two parties. This is a two-way process, and both parties are motivated to cooperate<sup>[47-49]</sup>. Qin Bin noted that the integration of production and education is a process of in-depth docking between schools and industrial enterprises, a reflection of school-enterprise interaction, and the integration of technology R&D, production labor, and social services<sup>[50-51]</sup>.

There have been relevant studies on the characteristics, requirements, and significance of industry-education integration. Luo et al. noted that diversified, demand-oriented, dynamic, mutually beneficial, and multifunctional subjects are all characteristics of industry-education integration<sup>[52-55]</sup>. To achieve the goal of industry-education integration and play its function, Wang et al. believe that industry-education integration should meet some basic requirements, such as major setting and industry needs, seamless integration of teaching theory and production practice, and curriculum content setting should adapt to professional standards<sup>[56-59]</sup>. In addition, the integration of industry and education should emphasize the docking between industries and professions, the docking of teaching situations and working environments, and the docking between enterprises and schools. Only when the effective links of the various subjects and links can the goal of industry-education integration be achieved<sup>[60-61]</sup>. The integration of industry and education is a win-win school-enterprise cooperation model. The realization of benign economic and social development through cross-border integration can not only cultivate excellent professional talent for schools but also reduce the human resource training costs of enterprises<sup>[62-63]</sup>.

### 3. School-enterprise cooperation model of vocational education Research

Current status of school-enterprise cooperation in vocational education. A high-quality school-enterprise cooperative model can cultivate excellent corporate talent. Current school-enterprise cooperation models mainly include the introduction of enterprises into schools, short-term social practices, and enterprise lecture halls. These types of school-enterprise cooperation models have played a role in different colleges and universities. With the advent of the information age, how to apply "Internet +" thinking to school-enterprise cooperation is an issue that many colleges and universities need to consider [64-65]. In the context of the integration of industry and education, the school-enterprise cooperation model is becoming increasingly important. Many colleges and universities have adopted the model of constructing internship training bases. This model can provide at least two benefits. First, it allows students to work in the process of participating in practical training, and they can understand their actual working status, which helps to improve their practical ability. Second, it facilitates the selection of excellent interns by the enterprise, reduces the cost of selecting and training manpower for the enterprise, and provides an introduction for future enterprises. The talents are ready [66-67]. The order cooperative training model is also an important school-enterprise cooperation model. The main idea of this model is that the enterprise selects some students in advance for contract training, then establishes order training classes and develops courses that meet the actual needs of the enterprise. The order ends when the student has completed all the courses, but this model includes many unilateral breaches of the contract [68-70].

Factors influencing the school-enterprise cooperation model of vocational education Scholars have conducted more studies on the factors affecting school-enterprise cooperation in vocational education. These studies were mainly conducted from three perspectives. The first is the influencing factors of the institutions. The resources possessed by institutions will largely affect the profitability of cooperative enterprises because institutions with more abundant resources are able to produce higher-quality talent. Therefore, a school's teaching philosophy, curriculum, teacher facility conditions, and practical training conditions all have a great impact on the institution's search for cooperative enterprises [71-73]. Wang Bin and Zhang Yingjie believe that an institution's training programs and enterprises cannot meet these demands. In addition, the quality of the teaching team in some colleges and universities is not up to standard. There is a serious shortage of "dual-qualified" teachers and a failure to develop their own characteristic courses. These problems have reduced the potential for cooperation between enterprises and colleges to a certain extent. Positivity [74]. The scale and nature of the enterprise cooperate with the universities. The scale of the cooperative enterprise is positively correlated with the enthusiasm for cooperation. The larger the enterprise is, the more willing it is to cooperate with institutions to train talent [75]. The participation of state-owned enterprises or enterprises with innovation culture universities is more likely to be cooperative [76], and technology-intensive enterprises are more willing to carry out cooperative research with institutions and attach great importance to institutional cooperation [77-78]. The third influencing factor is the external environment. Zhang suggested that adjustments to the management mechanism of colleges and universities, the distribution structure of the labor market and the industrial structure will affect the construction of the school-enterprise cooperation mechanism [79]. The economic environment and the technological level of the entire industry will affect the development of school-enterprise cooperation [80]. Through her study of large enterprises in Beijing, Suju Duan found that the most important factor for the lack of motivation of enterprises to participate in university cooperation is the absence of reasonable and effective guidance mechanism [81]. The factors influencing the school-enterprise cooperation model of vocational education are summarized in Table 2.

Table 2 Factors influencing the school-enterprise cooperation model of vocational education

| Influencing factors reflect the content  | Literature source |
|--|-------------------|
| Teaching philosophy, curriculum, teacher facilities, training conditions, etc. | [71]、 [72]、 [73]  |
| The quality of the teaching team is not satisfactory                           | [74]              |
| The scale and nature of the cooperation enterprise                             | [75]              |
| Does the enterprise have an innovation culture?                                | [76]              |
| Technology-intensive enterprises are more willing                              | [77]、 [78]        |
| Institutional management mechanism and labor market distribution structure     | [79]              |
| Government laws and regulations, national economic environment                 | [80]              |
| Reasonable and effective guidance mechanism                                    | [81]              |

Analysis on the difficulty of school-enterprise cooperation in vocational education. The enthusiasm of enterprises to participate in cooperation has always been low because the current school-enterprise cooperation model is still based on colleges and universities as the main body, enterprises participate passively in many cases because enterprises are pursuing the maximization of benefits, and the benefits of cooperation with schools require some time for the situation to be reflected. Many small and medium-sized enterprises cannot accept this situation [82-84]; the depth of school-enterprise cooperation is insufficient. In the process of cooperation, what students are engaged in in enterprises is very low-level technical support, basically based on the focus being mainly on doing chores, and enterprises have not invested too much in this area, which to a large extent constrains the depth of school-enterprise cooperation [85-86]. The level of teaching staff in colleges and universities is insufficient, and the foundation of vocational education is to cultivate talent with strong knowledge and practical ability; therefore, teachers who impart knowledge must also be people with rich theoretical and practical abilities.

However, many schools currently lack “dual-qualified” teachers, and although some schools allowed teachers to participate in the training, the effect was very small. It was basically on-the-job training and could not improve my technical skills <sup>[87-88]</sup>.

#### 4. Effectiveness of school-enterprise cooperation in vocational education research

A search of articles on the effectiveness of school-enterprise cooperation in vocational education through the China National Knowledge Infrastructure (CNKI) revealed that relatively few scholars have studied this type of issue, and the majority of studies have focused on school-enterprise cooperation mechanisms, models, and countermeasures. Liang et al. conducted an empirical study on the effectiveness of school-enterprise cooperation from the perspective of satisfaction. The results showed that six aspects had a great impact on the degree of satisfaction with school-enterprise cooperation, such as overall curriculum planning, internship performance assessment methods, and the internship system. In addition, Weiqing Hu constructed a performance model of school-enterprise cooperation in vocational education and evaluated it from the three aspects of resources, process, and effect with the help of a fuzzy comprehensive evaluation method <sup>[93]</sup>. Jianxin Wu et al. constructed a school-enterprise cooperation model by referring to foreign research results. Using the four-dimensional conceptual model of cooperation, the effectiveness of school-enterprise cooperation was studied from the perspectives of depth and breadth. Yu et al. used the questionnaire survey method to study the satisfaction and enthusiasm of enterprises in participating in school-enterprise cooperation, and the results showed that many enterprises are willing to accept higher vocational college students as interns and are highly enthusiastic about participating in school-enterprise cooperation <sup>[88]</sup>.

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