Research on the Present Situation and Development Countermeasures of School-Enterprise Cooperation in Vocational Education

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Keywords: School-enterprise cooperation; Vocational education; Countermeasure research

Abstract: With the development of society, the demand for professional and technical talents is on the rise. Vocational education has trained high-quality, high-skilled professional and technical personnel to promote social progress and economic development. School-enterprise cooperation, as a new model for cultivating high-quality workers and skilled talents, has received extensive attention in the education sector at this stage in China. This paper studies the current situation of school-enterprise cooperation in vocational education. The research shows that the school-enterprise cooperation in vocational education is still in its infancy. This paper also analyzes the school-enterprise cooperation mode of vocational education in other developed countries, and proposes relevant development countermeasures for the development of school-enterprise cooperation in vocational education in China.

1. Introduction

Vocational education refers to the education of the educated to acquire the professional knowledge, skills and professional ethics required for a certain occupation or production of labor. At the end of the last century, the education department pointed out that it is necessary to actively develop higher education, and the policy of higher vocational education has also been adjusted. In July 2010, the State Council officially promulgated the "National Medium- and Long-Term Education Reform and Development Plan (2010-2020)", which clearly pointed out that quality improvement should be the focus of vocational education[1].

With the demand for technical talents, vocational education is being paid more and more attention by people, and research on vocational education is also increasing. Zhao Jianmin has done research on mathematics teaching in vocational schools. As a technical subject, mathematics has received attention in all walks of life. Traditional mathematics education is transforming the ability education that aims to cultivate mathematics quality[2]. All along, vocational education is based on the development of science as a basic guide, education guided by the employment of educators. Song Chensheng's training model for vocational education talents has made innovative research through the establishment of professional curriculum system, the cultivation of practical technical talents, and the strengthening of the construction of teaching staff[3]. In 2015, according to the background of the country's vigorous development of technical talents, Li Yuda and others faced the existing misguided errors in accounting professional education. For the accounting skills teaching in China, the corresponding knowledge skills, teaching teachers, evaluation grades, social practice, etc. The reforms show that the teaching reform and innovation can effectively improve the application-oriented demand of accounting education in China, and it has a better impetus to the training of accounting talents[4]. In 2016, Lu Jingquan and others faced the problems in vocational education. They proposed supply-side structural reforms for the quality and efficiency reform of vocational education, and proposed related reforms from the aspects of curriculum arrangement, teacher resources, and information-based teaching. This method can effectively improve the teaching quality and talent training efficiency of vocational education[5]. In 2017, Sheng Sheng put forward his own views on the confusion and countermeasures of the reform of vocational education teaching methods. He believes that vocational education must uphold all the ideas for the employment of students, aiming at improving the practical application skills of talents, and optimize the quality of training [6] .

  DOI: 10.25236/meici.2019.090

School-enterprise cooperation means that schools and enterprises establish cooperative relations. Many universities adopt a school-enterprise cooperation method for seeking development and improving the quality of education. This method is targeted at the cultivation of talents and focuses on the practicality and effectiveness of talents. The advantage of school-enterprise cooperation is that it adapts to the needs of society and the market. Through the feedback and needs of enterprises, the school cultivates talents in a targeted manner and combines market orientation to cultivate talents that the society needs. The school-enterprise cooperation has achieved the sharing of information and resources between the school and the enterprise. The school uses the equipment provided by the enterprise. The enterprise does not have to worry about cultivating talents. It realizes the organic combination of students' school and enterprise practice, and saves the cost of education and enterprise. A win-win model. In recent years, school-enterprise cooperation has been studied in all aspects. Wang Hongling and Ding Wei took the theoretical foundation of the school-enterprise alliance and applied talents as the starting point, summarized and analyzed the successful models of developed countries, and put forward the suggestions on the path implementation strategy of the application of talents in the school-enterprise alliance of colleges and universities. It provides reference for the study of similar problems[7]. The research of Gao Yaoyuan and Yan Wen has established a three-in-one employment guidance model of theoretical teaching, professional lectures and skill training from the perspective of school-enterprise cooperation, which has contributed to the promotion of high-quality and full employment of civil engineering students[8]. Cheng Yiping proposed in the study of school-enterprise cooperation mode of mechanical majors in secondary vocational schools based on the four-in-one mechanism. The only way to improve the quality of education is to carry out cooperation between schools and enterprises[9]. School-enterprise cooperation is conducive to the synchronization of higher vocational education and advanced technology development, and is the only way for the reform and development of higher vocational education.

There is also a lot of research on school-enterprise cooperation in vocational education. Huang Caihua pointed out that the effectiveness of vocational education in school-enterprise cooperation in Henan Province, problems and countermeasures pointed out that Henan's vocational education has achieved outstanding results in school-enterprise cooperation, and diversified school-enterprise cooperation has been actively explored[10]. In March 2019, the Eighth Meeting of the Standing Committee of the 13th People's Congress of Jiangsu Province adopted the "Regulations on the Promotion of School-Enterprise Cooperation in Jiangsu Vocational Education", which embodies the legislative ideas of problem-oriented, innovative management, standardization according to law, and overall promotion. Promoting the sustainable and healthy development of school-enterprise cooperation in the new era has important practical significance and innovative value [11].

Through the questionnaire survey method, this paper analyzes and studies the current situation of vocational education in China. At present, the mode of vocational school-enterprise cooperation in China is still at a relatively shallow stage. Through comparative analysis and other methods, the advantages of the school-enterprise cooperation mode of vocational education in other developed countries are used to propose new development strategies for the cooperation between schools and enterprises in vocational education in China.

2. Method

2.1 Investigation Method.

Questionnaire survey is a widely used method in social surveys at home and abroad. Questionnaire refers to a form used for statistics and surveys to present questions in a questionable manner. The questionnaire method is a method by which researchers use this controlled measurement to measure the problem being studied and collect reliable data. This study conducted different survey visits to students, teachers and small and medium-sized enterprises in a university, and understood the current situation of school-enterprise cooperation from different perspectives, and analyzed the survey results.

2.2 Comparative Analysis.

In this study, through the introduction of the school-enterprise cooperation model of vocational education in the United States, France, Japan, and Germany, the comparative analysis method is used to propose the development countermeasures of school-enterprise cooperation in vocational education in China. The model of vocational education in developed countries in the world can be classified into four categories: the social standard model represented by the United States, the school represented by France as the model, the enterprise represented by Japan as the model and the dual symbol represented by Germany. system. Under different social systems, in order to adapt to the actual national conditions, vocational education has formed different modes of running schools.

American social standard model: The American education system is mainly based on diversified education, and has well-established relevant laws and regulations. The vocational education in the United States mainly has a concentrated form:

(1) Community college. Built by community investment, it is a component of society and a constituent institution of the local public education system. In addition to regular vocational education courses, vocational courses that meet local needs are also offered, equivalent to the first two years of a four-year university, and an associate degree is awarded after graduation.

(2) Technical College. Accept the relevant vocational education provided by the technical college, and also grant an associate degree or professional qualification after graduation.

(3) Regional vocational schools. Vocational and technical education is provided to students who have not entered the university after graduating from high school. They are not eligible for a degree and only a diploma is issued.

(4) College of Vocational and Technical Education. This type of vocational education belongs to vocational and technical education attached to colleges and universities. Two-year courses mainly train technicians and one-year courses train skilled workers.

(5) Informal adult higher vocational courses and summer schools. There are two types of non-formal adult higher vocational education in the United States. One is the unemployed unemployed person who has reached 18 or above, and the other is the incumbent. Most of the people who participate in such vocational education are strengthened in their professional skills to obtain promotion opportunities, or to meet the needs of daily life.

French school-based model: The French central government has always played a leading role in the development of its country. As a result, French vocational education is also a government-led school-based education, divided into secondary vocational education and higher vocational education. Among them, secondary vocational education includes vocational education and technical education. It mainly recruits junior high school graduates and aims to train technicians. Higher vocational education is based on the training of senior technicians and recruits graduates from ordinary high schools and vocational high schools. There are two types of high-level vocational education models: one is in the senior high school senior technician class, the student can get the "high-level technician certificate" (BTS) when graduated, and the other is the university technical college located in the university. In addition to the "University Technology Diploma" at the time of graduation, France has also recently established a university vocational college located in the university to recruit students who have completed the first year of university courses or university preparatory classes or equivalent qualifications for three years. Diplomas are obtained in stages: the first phase is the "University Vocational College Diploma",the second phase is the "Student Diploma", the third phase is the "Engineer and Tech Diploma".

Japanese companies are modeled as follows: Japanese vocational education mainly consists of the following modes:

(1) Higher professional schools. Higher professional schools have their own school-running characteristics in terms of enrollment, professional setting and teaching organization. Students who want to enter higher education must pass the examinations organized by the school; students who are educated in higher professional schools are basically junior high school graduates with a five-year academic system; in the process of learning, higher education pays more attention to practical training for students and improves Students' professional adaptability. Therefore, the

employment rate of graduates of higher vocational colleges is much higher than that of four-year undergraduate colleges.

(2) Short-term university. The short-term university was not recognized for a long time. After more than ten years of development, the Ministry of Education, which is in charge of education in Japan, issued the "Short-term University Setting Standards". So far, the short-term university has been recognized by the relevant state departments. Formally became an important part of the Japanese vocational education system. Japanese short-term universities are similar to American community colleges, with the aim of cultivating intermediate-level technicians and professionals with professional skills. However, in terms of professional settings, they have adjusted accordingly according to their own national conditions, and have opened more humanities and social science majors. For example, housekeeping, education, etc., and most of them only recruit girls, and only a few public institutions have opened engineering majors.

(3) Specialized schools. The specialized school is a typical representative of the flexible form of running a school in Japan and has a rich level of running a school. It is an important supplement to higher education institutions such as universities and junior colleges. Specialized schools offer different types of courses for different levels of students: special courses for high school graduates, high school courses for junior high school graduates and general courses for people from all walks of life.

(4) Enterprise Office "Institute of Engineering". After the Second World War, Japan began to focus on economic development. Many enterprises began to grow and develop and played a vital role in promoting the development of the world economy. With the rapid expansion of these enterprises, ordinary vocational education in China can no longer meet their needs. Therefore, the "Institute of Engineering", a vocational education institution founded by enterprises, has followed. In 1961, Matsushita Electric Industrial Co., Ltd. founded the "Panasonic Institute of Electrical Engineering." The main purpose of the "Institute of Engineering" is to train specialized technical personnel who meet the needs of their own businesses, and also provide some relevant technical training to the guests. After several decades of development, many "labor institutes" have begun to carry out some training and scientific research on high-tech talents, and sometimes undertake some international academic exchange tasks, becoming an indispensable part of Japan's vocational education system.

German dual system model: Germany's higher vocational education is similar to Japan, and is composed of many types. However, no matter which form of vocational education, its school-running refers to the market-oriented, and focuses on school-enterprise cooperation, is a typical representative of the enterprise-led combination of engineering and learning. Students who have become a dual-system vocational education model have dual identities. Students will first sign a training contract with the company selected by themselves or through the employment introduction center of the labor bureau according to relevant laws, become an apprentice of the enterprise, and then register with the relevant vocational college. And obtain theoretical study qualifications. In the next few years of vocational education, students need to learn relevant skills in the enterprise 70% of the time, while the rest of the time to complete the theoretical knowledge in the vocational college.

The experimental research ideas are as follows:

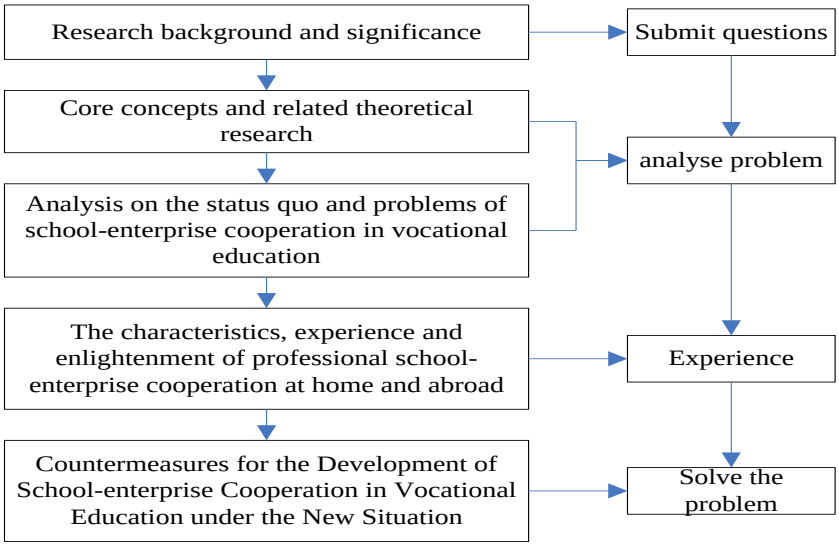

Figure 1. Research diagram

3. Experiment

The experiment used questionnaire form and random selection question and answer form to conduct research on the subjects. The subjects were selected by students and teachers. The questionnaires were distributed 100 times and 93 copies were collected. The recovery rate was 93%, of which 91 were valid questionnaires. The efficiency is 97.8%. The teacher distributed 20 questionnaires, recovered 19 copies, the recovery rate was 95%, and the effective questionnaire was 19, with an effective rate of 100%. Through the face-to-face interviews, the Present situation of school-enterprise cooperation of several small and medium-sized enterprises was investigated.

3.1 Results and Discuss.

Through the statistics of the valid questionnaires collected, the contents of the questionnaires are organized as follows:

Table 1 Questionnaire data

Questionnaire	Student		Teacher	
Can you accept the existing school-enterprise cooperation?	Satisfaction	24.1%	Satisfaction	23.4%
	Uncertainty	46.9%	Uncertainty	17.3%
	Not satisfied	29%	Not satisfied	59.3%
May I ask the school-enterprise cooperation channel, do you think it is easy to find?	Satisfaction	47.6%	Satisfaction	64.3%
	Uncertainty	23.8%	Uncertainty	12.9%
	Not satisfied	28.6%	Not satisfied	22.8%
Does the school-enterprise cooperation mean great in vocational education?	Satisfaction	82.4%	Satisfaction	55.8%
	Uncertainty	3.1%	Uncertainty	21.3%
	Not satisfied	14.5%	Not satisfied	22.9%
How much do you know about school-enterprise cooperation?	Satisfaction	27.9%	Satisfaction	55.4%
	Uncertainty	51.6%	Uncertainty	25.3%
	Not satisfied	20.5%	Not satisfied	19.3%

According to the questionnaire survey and survey data, 45.5% of the students expressed optimism and recognition for the school-enterprise cooperation, and only 18.275% of the students expressed dissatisfaction. 49.725% of the teachers said they were satisfied with the school-enterprise cooperation, and 31.075% said they were not satisfied.

In the interviews with enterprises, it is learned that most of the school-enterprise cooperation stays in the internship stage of the graduates, and the company has many selection criteria for recruiting employees. From the perspective of work experience requirements, 39.2% of the

enterprise network will require application. They have three to five years of work experience, 32.7% require two to three years of work experience, and only 4.3 companies do not require work experience years (see Figure 2 below). This makes it possible for professional students to study in a school-enterprise cooperation mode, and they cannot find a job well after graduation.

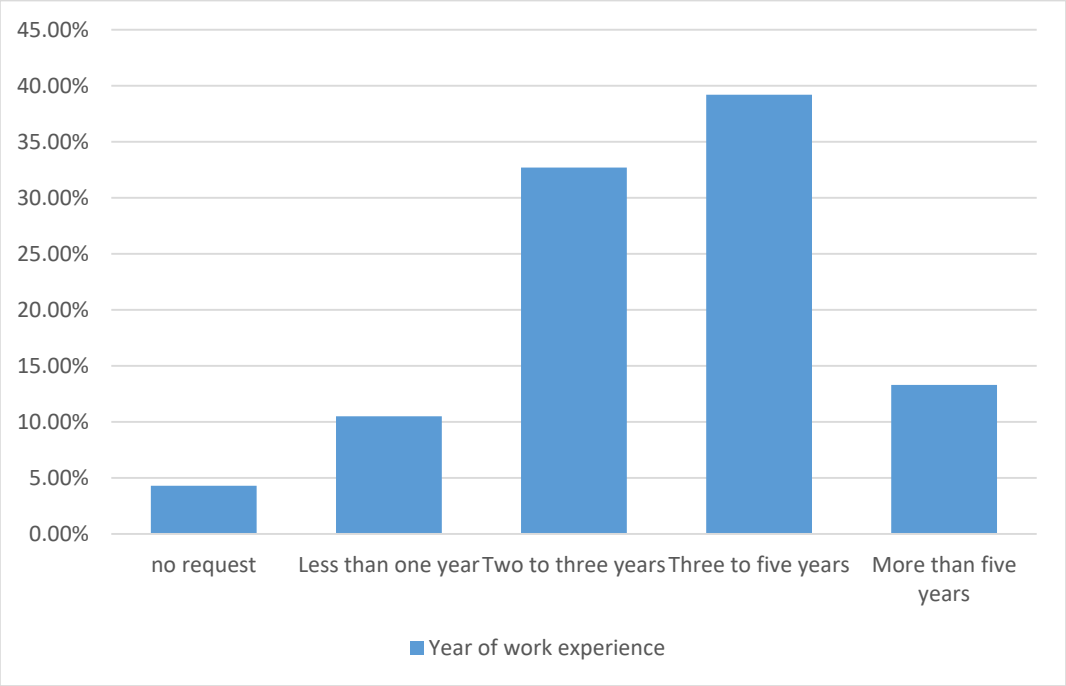

Figure 2. Enterprise work experience year requirement map

3.2 The Present Situation of School-Enterprise Cooperation in Vocational Education.

School-enterprise cooperation and vocational education have achieved continuous success through double-issue, and some achievements have been made in the initial stage, and consensus has been reached on personnel training. However, there are some misunderstandings in the construction of school-enterprise cooperation mode. Although some schools have achieved good results in school-enterprise cooperation, the cooperation model between different schools and different enterprises cannot be generalized. If the direction of the school's profession and enterprise is not synchronized, then such a school enterprise Cooperation can't produce any effective results. At present, the teaching of vocational education is still based on schools, and school-enterprise cooperation is still at a shallow level.

3.3 Countermeasures for School-enterprise Cooperation in Vocational Education.

The following countermeasures are proposed for the development of school-enterprise cooperation in vocational education:

(1) Raise awareness of the importance of school-enterprise cooperation. Only by allowing enterprises, vocational colleges and governments involved in school-enterprise cooperation to discover the advantages of school-enterprise cooperation can a better school-enterprise cooperation model be realized.

(2) The government actively participates. The government should become a bridge for school-enterprise cooperation and promote cooperation between the two sides through policy support.

(3) Enhance the strength of vocational schools. Vocational colleges must improve their own strengths in order to attract more and better enterprises to participate in school-enterprise cooperation.

4. Conclusion

In summary, school-enterprise cooperation is the general trend of the development of vocational

education. The vocational colleges that have implemented school-enterprise cooperation have been consolidated and upgraded, and the vocational colleges that have not yet cooperated in real-time school-enterprise have actively upgraded their institutions. Seek excellent enterprises to carry out school-enterprise cooperation, adjust the teaching configuration for the actual needs of enterprises, or seek cooperation with enterprises in the same pace. Promote the healthy and sustainable development of school-enterprise cooperation in vocational education.

Acknowledgements

Fund Construction: *Research on the Current Situation and Development Strategy of School-Enterprise Cooperation in Vocational Education* 2019JO254,

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