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EXPLORING THE EFFECTIVENESS OF SCHOOL-ENTERPRISE COOPERATION IN CHINESE VOCATIONAL EDUCATION

WANG FEI



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UNIVERSITI PENDIDIKAN SULTAN IDRIS

2025



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EXPLORING THE EFFECTIVENESS OF
SCHOOL-ENTERPRISE COOPERATION
IN CHINESE VOCATIONAL
EDUCATION

WANG FEI

THIS THESIS PRESENTED TO QUALIFY FOR A DOCTOR OF PHILOSOPHY

FACULTY OF HUMAN DEVELOPMENT
UNIVERSITI PENDIDIKAN SULTAN IDRIS

2025

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ACKNOWLEDGEMENTS

I would like to thank my supervisor, Dr. Noor Insyiraah Binti Au Bakar, for her help, encouragement and patient academic guidance during my doctoral studies.

I would like to express my sincere gratitude to the school-enterprise cooperation experts, the responsible teachers of the school-enterprise cooperation schools and the personnel of the school-enterprise cooperation enterprises who participated in the interviews during the research process. I would like to thank them for their support for this research interview and for their suggestions and feedback for the effective implementation of school-enterprise cooperation.

I would like to thank my colleagues and friends who have accompanied me on this journey. Our mutual support in life and in our studies has strengthened our confidence and motivation, and this journey has also witnessed and consolidated our friendship.

Without the care and love of my parents and all my family, I would not have been able to complete this research. They have made sacrifices during my research, for which I am deeply grateful.

I would like to thank the gods in this infinite universe. Your love is infinite, and it has always been my original motivation.

ABSTRACT

This study aims to explore the effectiveness of school-enterprise cooperation in vocational education in China, respond to the country's urgent demand for high-quality technical and skilled personnel, and analyze the practical role of school-enterprise cooperation in talent cultivation . This study adopts a qualitative case study method and takes a higher vocational college in Shandong Province as the research object. The data were collected through in-depth semi-structured interviews with nine individuals, including three experts, three school teachers, and three enterprise representatives, as well as through the analysis of relevant documents. By utilizing Atlas to analyze qualitative data. To ensure the credibility of the findings, strategies such as long-term contact, member checking and triangulation were used. The study found that the effectiveness of school-enterprise cooperation is reflected in three aspects: process effectiveness, outcome effectiveness and sustainability of cooperation. The main problems currently faced include mismatch of talent cultivation goals, weak institutional mechanisms, insufficient capacity of faculty and lagging construction of training bases. In this regard, the study proposes that the above problems should be solved by optimizing the collaborative education model, reforming the system, improving the construction of the 'dual-teacher' team and upgrading the practical training facilities. This study proposes a framework for improving the effectiveness of school-enterprise cooperation in vocational education. The framework emphasizes the synergy between stakeholders, the fit of institutional mechanisms, and the construction of a continuous feedback mechanism. This study is significant at both the theoretical and practical levels, providing concrete recommendations for policymakers, education administrators, and business decision makers to optimize China's vocational education system, and providing lessons for other countries to build high-quality, employment-oriented school-enterprise cooperation models.



MENEROKA KEBERKESANAN KERJASAMA SEKOLAH-PERUSAHAAN DALAM PENDIDIKAN VOKASIONAL CINA

ABSTRAK

Kajian ini bertujuan untuk meneroka keberkesanan kerjasama sekolah-perusahaan dalam pendidikan vokasional di China, memberikan respons terhadap permintaan mendesak negara terhadap tenaga kerja teknikal dan berkemahiran tinggi, serta menganalisis peranan praktikal kerjasama sekolah-perusahaan dalam pembangunan bakat. Kajian ini menggunakan reka bentuk kajian kes dengan menumpukan kepada sebuah kolej vokasional di Wilayah Shandong sebagai lokasi kajian. Data dikumpul melalui temu bual separa berstruktur mendalam dengan sembilan individu, termasuk tiga pakar, tiga guru sekolah, dan tiga wakil perusahaan, serta melalui analisis dokumen yang berkaitan. Dengan menggunakan Atlas untuk menganalisis data kualitatif. Analisis dokumen juga dibuat bagi menyokong data temu bual. Bagi memastikan kebolehpercayaan dapatan kajian, strategi seperti hubungan jangka panjang, 'member checking' dan triangulasi data telah digunakan. Kajian ini mendapati bahawa keberkesanan kerjasama sekolah-perusahaan tercermin dalam tiga aspek utama: keberkesanan proses, keberkesanan hasil, dan kelestarian kerjasama. Antara masalah utama yang dihadapi ketika ini termasuk ketidakpadanan matlamat pembangunan bakat, kelemahan mekanisme institusi, kapasiti pensyarah yang tidak mencukupi, serta kelewatan dalam pembinaan kemudahan latihan amali. Sehubungan itu, kajian mencadangkan supaya masalah tersebut ditangani melalui pengoptimuman model pendidikan kolaboratif, pembaharuan sistem, peningkatan pembinaan pasukan 'dual-guru', serta penaiktarafan kemudahan latihan praktikal. Kajian ini mencadangkan satu kerangka untuk meningkatkan keberkesanan kerjasama sekolah-perusahaan dalam konteks pendidikan vokasional. Kerangka ini menekankan sinergi antara pihak berkepentingan, kesesuaian mekanisme institusi, dan pembinaan mekanisme maklum balas berterusan. Kajian ini mempunyai menyumbang dalam aspek segi teori dan amalan, serta menyediakan cadangan konkrit kepada pembuat dasar, pentadbir pendidikan, dan penggubal keputusan dalam sektor perniagaan untuk mengoptimumkan sistem pendidikan vokasional di China. Implikasi, ianya menjadi rujukan berguna kepada negara lain dalam usaha membangunkan model kerjasama sekolah-perusahaan yang berkualiti tinggi yang berorientasikan pekerjaan.





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LIST OF ABBREVIATIONS

CDI	Conceive-Design-Implement-Operate
MOE	Ministry of Education
UIC	University-Industry Collaboration
SEC	School Enterprise Collaboration
UR	Ugmented Reality
VR	Virtual Reality



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CHAPTER 1

INTRODUCTION

1.1 Introduction

At present, China is in an important period of industrial transformation and upgrading, there is a strong demand for high-quality vocational skilled personnel, senior skilled personnel not only help industrial upgrading, but also improve the efficiency of industrial transformation. This requires vocational education to cultivate professional skilled personnel according to the relevant industrial needs, which shows that the integration of industry and education is a new direction for the development of vocational education in the future. Improve the effectiveness of school-enterprise cooperation in vocational education to realize the integration of industry and education. The integration of industry and education is a systematic and innovative vocational education schooling system, which effectively integrates the resources of the government, vocational colleges and industrial enterprises, forming a synergy, giving full play to the advantages of all parties, and realizing the coordinated



development of the training of applied talents, which will further enhance the development of China's vocational education towards precision and high-end development (Lang, 2020).

According to relevant statistics, as of 2021, there will be about 90 million industrial workers in China, of whom about 60 million will be ordinary workers and 30 million will be skilled workers, accounting for less than 30% of the total number of skilled workers (Zhang & Cerdin, 2020). The proportion of senior skilled workers, intermediate skilled workers and junior skilled workers is about 6%, 37% and 57% respectively. Therefore, the lack of professional and technical talents in China, especially the lack of highly skilled technical talents, is a problem that cannot be ignored and needs to be solved urgently (Guo, 2019). At the same time, the problems that need to be solved are characterized by complexity, diversity, intersectionality and variability. Through extensive investigation and research at home and abroad, a consensus has been formed on the cultivation of high-quality technical talents in our society at present. That is, the fundamental way to solve the talent gap or the intersection of many problems is school-enterprise cooperation. Therefore, from the social and policy level, in order to establish an environment conducive to the development of long-term cooperation between colleges and universities and the government, a number of regulations and measures have been introduced, such as the Decision on Accelerating the Development of Modern Vocational Education, and other policy documents have been formally introduced and implemented, while a



number of experiments have been made and pilots have been established in various regions of the country.

In summary, whether from the perspective of social cognition or from the perspective of policy guidance, the study of strengthening school-enterprise cooperation in higher vocational education (especially the study of the effect of cooperation) has become an urgent academic topic (Li, 2022).

School-enterprise cooperation is a major initiative for the reform and innovation of vocational education in China. In order to establish an environment conducive to the long-term development of school-enterprise cooperation, the government has successively issued a number of regulations and policies. The report of the 19th CPC National Congress points out that it is necessary to 'improve the vocational education and training system, deepen the integration of production and education, and school-enterprise cooperation'. In 2017, the 'Opinions of the General Office of the State Council on Deepening the Integration of Production and Education.

In 2017, the Opinions of the General Office of the State Council on Deepening the Integration of Education and Industry pointed out that school-enterprise collaboration and cooperation in educating people and constructing a long-term mechanism for school-enterprise cooperation. In 2019, the Notice of the State Council



on the Issuance of the Implementation Plan for the Reform of National Vocational Education put forward the need to promote the comprehensive strengthening of in-depth cooperation between schools and enterprises. In 2019, the Circular of the State Council on the Issuance of the Implementation Plan for the Reform of National Vocational Education proposed to promote school-enterprise cooperation to strengthen in-depth cooperation in a comprehensive manner, and vocational colleges and universities were to 'take the initiative to cooperate with enterprises that have the conditions to carry out cooperation in the areas of talent cultivation, technological innovation, employment and entrepreneurship, social service, and cultural inheritance. In 2020, the Notice of Nine Departments of the Ministry of Education on Issuing the Action Plan for Improving the Quality and Excellence of Vocational Education (2020-2023) put forward the need to 'deepen the reform of the collaborative education model of school-enterprise cooperation' and to 'improve the incentive and constraint mechanism of school-enterprise cooperation'. In 2021, the Opinions on Promoting the High-quality Development of Modern Vocational Education proposed to 'improve the system of running schools through the integration of production and education,' 'innovate the mechanism of school-enterprise cooperation,' 'innovate the mechanism of school-enterprise cooperation, and improve the quality of school-enterprise cooperation.

In 2021, the Opinions on Promoting the High-Quality Development of Modern Vocational Education proposed to 'improve the system of running schools





through the integration of production and education', 'innovate the mechanism of school-enterprise cooperation', 'expand the form and content of school-enterprise cooperation' and 'optimize the policy environment for school-enterprise cooperation', which further clarified the tasks, directions and objectives of school-enterprise cooperation. In 2022, the new Vocational Education Law was released, emphasizing that vocational education 'should focus on the integration of industry and education, and implement school-enterprise cooperation'. The report of the 20th Party Congress proposed to promote 'the integration of industry and education, science and education, and optimize the positioning of types of vocational education', which further clarified the importance of the mode of schooling of integration of industry and education, and school-enterprise cooperation, and pointed out the direction for the development of vocational education.



As an important path and institutional arrangement for the development of vocational education, school-enterprise cooperation in vocational education has always been highly valued by the Party and the State (Zhou & Xu, 2023). It is necessary to establish and improve the government-led, industry-guided and enterprise-participating school-running mechanism, formulate laws and regulations to promote school-enterprise cooperation in school-running, and promote the institutionalization of school-enterprise cooperation. Through reforms, we will accelerate the development of a modern vocational education system, deepen the





integration of industry and education and school-enterprise cooperation, and cultivate high-quality workers and skilled personnel.

However, in this context, the effect of vocational education school-enterprise cooperation is not satisfactory, which indicates that vocational education school-enterprise cooperation is not significant in some enterprises and vocational colleges and universities, the effect needs to be improved, and regional differences are obvious (Ming, 2022). Improving the effect and sustainable development of vocational education school-enterprise cooperation has become an important issue that needs to be solved urgently. With the reform of the education system and the continuous development of the socialist market economy, the combination of work and study and school-enterprise cooperation in vocational colleges and universities in China has gained valuable experience in both theoretical research and practical exploration. The cultivation mode of carrying out the combination of work and study and school-enterprise cooperation has been widely accepted by educational administrative departments, vocational colleges and universities, and academic circles (Shi, 2019). Since entering the new century, the State Council has issued two Decisions on Vigorously Developing Vocational Education, vigorously pursuing the school-running policy of 'service-oriented and employment-orientation' and the talent cultivation mode of 'school-enterprise cooperation and industry-academia integration'. With the rapid development of vocational education, the talent cultivation process of vocational education is closely connected with the links of economic production and

social service, and the teaching content is constantly aligned with the job competence (Chen, 2021).

This chapter first introduces the research background of school-enterprise cooperation and why the effectiveness of school-enterprise cooperation should be studied. The chapter also presents the relevant research objectives, research questions and research hypotheses. The chapter then continues by presenting the research framework, the significance of this study, and the limitations of the study.

1.2 Background Research

In the context of China's comprehensive construction of a modern vocational education system with Chinese characteristics and the efforts of higher vocational colleges and universities to promote the construction of 'double-high', school-enterprise cooperation, as a mode of school running, has become an important way to meet the needs of economic development, improve the quality of talent cultivation and education and teaching reform (He, 2023) Throughout the history of the world's industrial development, every big industrial country is a big country of skilled labor.



China's rapid economic growth in the past 30 years is mainly related to the labor-rich demographic structure formed by rapid demographic transition. However, with the accelerated aging of the population, the labor supply situation has changed significantly. Of course, but judging from the data, it is too early to assume that labor shortages are inevitable. From the perspective of labor economics, labor shortage is a very complex issue, which is not only related to the quantity of labor, but also closely related to the quality of labor. That is to say, how to provide more employment opportunities for more people at the same time and how to deal with labor shortage in some regions, industries and sectors (Wei, 2023).

In fact, the 'labor shortage' in the industrial belt of China's developed coastal regions refers to the difficulty of enterprises in recruiting the required technical and skilled personnel and finding suitable labor.' Made in China 2025' calls for highly skilled workers.' Made in China 2025' is a programmatic document for China's manufacturing industry, which puts forward China's goal to transform from a manufacturing power to a manufacturing power (Angela, 2022). Currently, China's manufacturing industry has a shortage of highly skilled workers. It is well known that China's manufacturing industry lacks senior technicians. Among China's 70 million industrial workers, only one-third of them are skilled workers, of which 60% are junior workers, 35% are intermediate workers, and only 5% are senior workers. By comparison, the proportion is 50 percent in Germany and 40 percent in Japan. The experience of Germany and other manufacturing powerhouses suggests that to support



the development of the manufacturing industry, it is necessary to vigorously develop vocational education and train a large number of high-quality skilled workers (Zhao, 2021).

Therefore, the basic idea to resolve this contradiction is to vigorously develop vocational education and train high-quality skilled workers. Schools, enterprises and the government should raise their awareness of vocational education and vocational education school-enterprise cooperation, participate extensively and deeply in vocational education, improve the effectiveness of vocational education school-enterprise cooperation, and improve the effectiveness of vocational education in the cultivation of skilled personnel. Improving the effectiveness of school-enterprise cooperation and giving full play to the roles of schools, enterprises and the government in the cultivation of skilled personnel has become a key issue that needs to be urgently resolved in the internal development of vocational education.

1.3 Problem Statement

With the gradual deepening of China's industrial upgrading, we are moving towards the mid-industrialization stage of a human resources powerhouse, and we also need to generally improve the quality of vocational skilled personnel. To meet the demand for high-quality talents in the human resources market depends on vocational education



training, supply, while the current vocational education for pulling the steady growth of the economy, the development of industrial structure and play a vital role, so the integration of industry and education is China's industrial upgrading of the inevitable requirements for the training of applied personnel. The 19th CPC National Congress clearly pointed out that 'improve the vocational education and training system, deepen the integration of industry and education, and school-enterprise cooperation', which elevates the integration of industry and education to a national strategy (Pan, 2018).

From the perspective of long-term educational development, the teaching focus of vocational education is discipline-based education, that is, discipline-based (Guo, 2018). However, with the continuous development of China's society and economy, the teaching focus of vocational education should also change with the development of society. The drawbacks of the old discipline-based education are also gradually appearing, for example: students are not highly specialized to be able to work in their positions, low employment rate of students, etc. Vocational education and the competitiveness of the graduate market in the nature of the survival is very different. With the continuous expansion of vocational schools, vocational school students are facing more and more serious employment pressure, if better promote the development of vocational education, enhance the employment situation of students to solve the problems arising from vocational education in the school has become particularly important.

In view of the current social demand for senior skilled personnel, efforts need





to be made to improve the level of technical skills of students at the stage of vocational education, the State Council issued in February 2019, 'National Vocational Education Reform Program' proposed to 'promote the comprehensive strengthening of the depth of cooperation between higher vocational colleges and universities', to strengthen the social environment in which enterprises are responsible for vocational education, and to promote the formation of a community of common destiny for vocational colleges and universities and industry enterprises.' Only by forming a community of destiny between vocational colleges and industrial enterprises can the effect of school-enterprise cooperation be truly improved.

In addition, the plan also clearly states that efforts should be made to promote vocational education to match the socio-economic structure with the development of industries and trades, and to innovate the establishment of a mechanism for training talents in the integration of vocational education with industry and education.

Research comes from problem consciousness, and problem consciousness comes from confusion, questioning and reflection. China's vocational education school-enterprise cooperation model has made great progress in both theoretical research and practical exploration. In recent years, vocational colleges and universities have been exploring various forms of school-enterprise cooperation modes, and the level and effect of school-enterprise cooperation have been improving. However, it is undeniable that school-enterprise cooperation in vocational education





still faces many problems that need to be solved (Pan, 2017).

First, it is reflected in official documents. The Implementation Plan for National Vocational Education Reform (the State Council, 2019) states that there is still a need to further accelerate the construction of a modernized vocational education system. Deepening the Integration of Industry and Education (the General Office of the State Council, 2017) states that 'due to the influence of various reasons, there is a gap between talent cultivation and market demand, and the problem of 'two skins' still exists in terms of the structure, quality and level of talents. The second is the reflection of government officials. Chen (2020) pointed out: 'Vocational education in the concept of schooling and social philosophy, education, teaching, content construction and other aspects exist.



Teaching and content construction all have problems that need to be solved.' Ge (2019) also believes that the situation of low social acceptance of vocational education has not fundamentally changed. Third, there are important media disclosures. An article in People's Daily points out that the development of vocational education is still facing the challenges and problems of 'biased social awareness, narrow channels for the development of technical and skilled personnel, weak attractiveness of vocational education, and low motivation of enterprises to participate in running schools'. At present, the phenomenon of the disconnection between vocational education and the needs of enterprises is still relatively serious.





As a large population province, Shandong is not the only province. As a matter of fact, in the whole country, although school-enterprise cooperation in vocational education has made certain achievements, the problems of 'small scale, unstable and unstandardized, lack of self-consciousness and constraints, low level, and lack of closeness' are still very common and prominent. From the government level, there is a lack of effective measures to implement school-enterprise cooperation and no effective mechanism has been formed. Although the State has introduced laws and regulations such as the Decision on Vigorously Accelerating the Development of Modern Vocational Education, conducted large-scale pilots and experiments, and actively guided vocational colleges and universities to engage in school-enterprise cooperation with enterprises, the results have been ineffective; at the enterprise level, participation has been low, enterprises have not been compensated for the necessary costs, and there has been a lack of effective communication among the participants; and at the school level, the quality of talent training in the schools has been difficult to meet the requirements of the enterprises, and there has been a serious shortage of resources for teachers and difficulties in docking between the enterprises and the schools, among other problems.

At present, there is a lot of symbolic and formalized school-enterprise cooperation, and most of it only remains at the level of enterprises accepting students from colleges and universities to take part in top-notch internships. In the process of top job internship, students of vocational colleges and universities are often regarded





as cheap labor. The degree of sharing of R&D resources such as projects, equipment and personnel is very low. Schools and enterprises have not established a mechanism for win-win cooperation. Insufficient motivation for school-enterprise cooperation and low quality and efficiency of school-enterprise cooperation are important issues that have long constrained the development of vocational education.

The ability of institutions to adapt to the needs of enterprises has to be further improved, and the mode of school-enterprise cooperation that really suits the development of schools has not yet been formed. Many institutions have a low degree of industry-university-research integration in the process of school-enterprise cooperation, resulting in a disconnect between students' theoretical learning and practice. Many institutions have a low degree of industry-university-research integration in the process of school-enterprise cooperation, resulting in a disconnect between students' theoretical learning and practical aspects, and there is no way to transform the current model of school-enterprise cooperation into a driving force for the development of the school and the enterprise.

Enterprises' participation in the management of school-enterprise cooperation is low. Although enterprises attach great importance to school-enterprise cooperation with institutions, they can't really participate in the teaching process of the institutions and can't assess the teaching quality of students in school-enterprise cooperation. Many students are not clear about their future career planning, have low motivation





and initiative in learning, have no sense of crisis, and lack the spirit of practicality and willingness to work. Students do not attach importance to school-enterprise cooperation, thinking that school-enterprise cooperation is only a part of their study and they simply complete tasks, not realizing that the social practice in school-enterprise cooperation has a profound impact on their future employment.

Therefore, under the premise of respecting the laws of education and the laws of industry, establishing and improving the system and mechanism of school-enterprise cooperation, optimizing the governance structure of cooperation, how to realize the integration of industry and education, and how to achieve high-quality cooperation in school-enterprise cooperation are major topics that must be solved and researched at the level of practical exploration and theoretical research.

In the context of the era when China is comprehensively building a modern vocational education system with Chinese characteristics and vigorously promoting the strategy of integration of industry and education and school-enterprise cooperation, this paper will analyze the effect of school-enterprise cooperation in vocational education in China, in order to deepen the understanding of the effectiveness of vocational education school-enterprise cooperation, so as to further enhance the effectiveness of vocational education perspectives and practices in supporting school-enterprise cooperation.



1.4 Objective of the Study

Specifically, the main research objectives of this study are the following four areas.

- i) What aspects need to be emphasized in school-enterprise cooperation in higher vocational education?
- ii) To identify problems that arise from school enterprise cooperation in higher vocational education
- iii) To explore measures to improve the school-enterprise cooperation higher vocational education
- iv) To propose a framework for the effectiveness of school-enterprise cooperation in higher vocational education.

1.5 Research Question

Specifically, there are four main research questions in this study.

- i) What aspects need to be emphasized in school-enterprise cooperation in higher

vocational education?

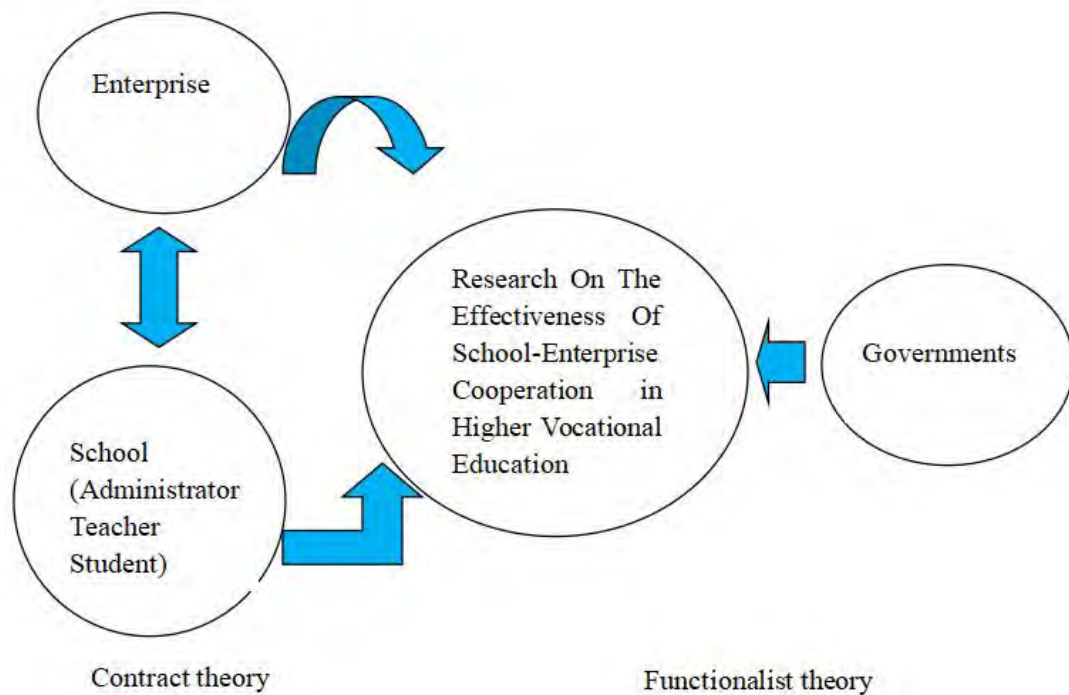
ii) What are the problems that arise from school enterprise cooperation in higher vocational education?

iii) What are the measures to improve the school-enterprise cooperation higher vocational education?

iv) What is the suitable framework for the effectiveness of school-enterprise cooperation in higher vocational education?

1.6 Conceptual Framework of Research

Figure 1.1 shows the conceptual framework of this study. This led the researchers to successfully reinforce the concept of investigation.

Figure 1.1*Conceptual framework of the study*

Vocational education school-enterprise cooperation is a form of organization in which vocational colleges and enterprises seek common interests based on different interest needs, and its existence, formation and development are closely related to the pursuit of the interests of the cooperating parties. In order to better carry out vocational education school-enterprise cooperation, it is difficult to rely on the strength of one party alone for long-term development, and it must be a kind of interaction among the government, schools and enterprises. The development of vocational education school-enterprise cooperation has become a special and complex economic and educational activity, which has also led to the continuous emergence



and development of theories of vocational education school-enterprise cooperation. The establishment and development of these theories have enriched the theoretical framework of vocational education school-enterprise cooperation on the one hand, and provided a solid theoretical foundation for the study of vocational education school-enterprise cooperation on the other.

1.6.1 Contract Theory

Contract theory is a theory that is often used to explain corporate social responsibility.

Social contract (social contract), which arose naturally with the development of human social formations, was the first to provide a more systematic elaboration of social contract. According to a domestic scholar (Li, 2018), 'Enterprises gain legitimacy by establishing a contract with society, and thus corporate social responsibility is defined by a series of contracts, a contractual relationship that requires enterprises to act in accordance with the expectations of society and do their part for the progress of society. According to Li (2018), 'a business is a 'contractual association' formed by various factor inputs for its own purposes, and stakeholders provide the conditions for the existence of the business, so the business must be socially responsible to them. The core element of the corporate social contract is corporate social responsibility based on corporate ethics. These studies are very inspiring and can provide us with appropriate ideological resources for studying



school-enterprise cooperation in vocational education.

Based on the basic theory and logical argument of contract theory, we reflect on the current school-enterprise cooperation in vocational education in China and find that: due to the deep influence of policies, concepts and social development, the school-enterprise cooperation in vocational education in China has the characteristics of compulsory and instrumental. Compared with non-contractual cooperation, contractual cooperation is an advanced form. Under the regulation and constraint of contract, both parties of school-enterprise cooperation have clear regulations on their respective responsibilities, obligations and powers, and the school-enterprise cooperation established on the basis of writing can better reflect the legal normative nature of school-enterprise cooperation¹. The consistency of spontaneous interests, enterprises and vocational colleges establish scientific and effective school-enterprise cooperation relationship in vocational education by constructing contracts. Cooperation between enterprises and vocational colleges and universities to jointly cultivate technically skilled talents is a manifestation of corporate social responsibility. For this reason, the degree of corporate social responsibility plays a direct role in the effectiveness of school-enterprise cooperation in vocational education.





1.6.2 Functionalist Theory

This paper applies functionalist theory for three purposes: first, functionalist theory, as a theoretical paradigm that examines the contribution of the activities of parts within a whole to the whole, is a theory that primarily emphasizes the relationship between parts and the whole. Functionalism theory emphasizes the internal structure of the system as an organic system and the functional support relationship of each element, while taking the existence of the system as a basic assumption. School-enterprise cooperation, as a mode of vocational education, adapts to the needs of economic and social development, and shifts from closed schooling to socialized, market-oriented and entrepreneurial schooling, which is a necessary condition for cultivating technical and skilled talents. Enterprises provide internship places and facilities for students; schools provide enterprises with laborers with certain technology and skills. The relationship between schools and enterprises is formed with multiple benefits and mutual benefits.

Secondly, functionalist theory holds that the system can self-regulate and realize 'module interaction-automatic equilibrium-dynamic equilibrium' through internal regulation. The system can reach a stable or balanced state. Functionalist theory can be applied to this paper to analyze how the participants in school-enterprise cooperation form interaction and complementarity, and to understand how each participant can improve the effectiveness of school-enterprise





cooperation in vocational education in China through their full participation.

Thirdly, functionalist theory suggests that a system needs the full interaction of all participants in order to survive. Strengthening school-enterprise collaborative education', 'improving the system of enterprise participation', and 'giving full play to the important role of enterprises as the mainstay of running schools' in order to effectively improve the effectiveness of school-enterprise cooperation. The study explores the influence of school-enterprise cooperation of all parties to firmly grasp the direction of school running that serves the development and promotes employment, to deepen the reform of the system and mechanism, to innovate the mode of vocational education at all levels and all types of vocational education, to adhere to the integration of education and production, school-enterprise cooperation, the combination of learning and teaching and the unity of knowing and practicing, and to lead the All sectors of society, especially industries and enterprises, actively support vocational education and strive to build a vocational education system with Chinese characteristics.



1.7 Definition of terms

1.7.1 Vocational Education

Positioning of higher vocational education: The Opinions on Promoting High-Quality Development of Modern Vocational Education of October 12, 2021, explicitly adheres to the requirements and main goals of 'oriented to practice and strengthened competence, and adhering to the requirements of 'teaching for all' and 'teaching according to ability.' The Law on Vocational Education defines that 'vocational education has the same importance as general education; it aims to cultivate high-quality technical and skilled personnel, cultivate the spirit of model worker, labor spirit, craftsmanship, and professionalism as the type of training, and cultivate vocational morality, scientific and cultural knowledge and professional knowledge, technical skills, and other comprehensive vocational qualities and action abilities as the specifications; the concept of higher vocational education is defined by different concepts.

Definition varies from concept to concept, and the essence of the concept is whether it is a career-oriented theory, process theory or system theory, which has not yet formed a unified conclusion in the academic world. Gu (1986) defines it in the Dictionary of Education as 'education that teaches the knowledge and skills necessary for a certain occupation or productive labor'. Huang (1917) regarded it as 'the use of

education to enable everyone to obtain the provisions and pleasures of life on the one hand, and to fulfill their obligations to the community on the other'. Research on the concept of vocational education has been controversial, but the professional, technical and social nature of vocational education has been widely recognized by scholars and experts.

This study defines vocational education as an education that aims to cultivate technical and skilled talents with certain scientific and cultural knowledge and good professional ethics, is oriented by market demand, takes improving the vocational skills of workers as its main task, and serves the economic development and supports the modernization and transformation of industries as its ultimate purpose. This definition emphasizes the unity of the natural and social attributes of vocational education in the process of dynamic development.

1.7.2 School-enterprise cooperation in vocational education

The so-called school-enterprise co-operation refers to a collaborative relationship between schools and enterprises, which is also known as 'cooperative education' in the world. education'. The so-called school-enterprise cooperation is defined in the Measures for the Promotion of School-Enterprise Cooperation in Vocational Schools issued by the Ministry of Education and other six departments at the beginning of



2018, which means that 'vocational schools and enterprises cooperate through joint efforts. The so-called school-enterprise cooperation, as defined in the Measures for Promoting Cooperation between Vocational Schools and Enterprises issued by the Ministry of Education and six other departments in early 2018, refers to 'the implementation of cooperative education between vocational schools and enterprises by means of joint education, cooperative research, joint institution building and resource sharing. Meanwhile, the document clearly stipulates that 'school-enterprise cooperation should adhere to the principle of educating people and share resources. Meanwhile, the document clearly stipulates that 'school-enterprise cooperation should adhere to the principle of educating people, implement the national education policy, and strive to cultivate high-quality laborers and technical skills talents'.



The study defines it as 'the cooperative relationship between schools and relevant enterprises, institutions and other working sectors in the society (Yang, 2016). The study defines the main connotation of school-enterprise cooperation in the special report (Yu, 2020) .Research on the mechanism of school-enterprise cooperation in vocational education' as: the various cooperative activities between vocational education structures and industries in the field of talent training and social services. Equal and mutually beneficial cooperation activities which is school-enterprise cooperation. The study defines it as 'the so-called school-enterprise joint talent cultivation refers to the cooperative educational activities carried out by universities and enterprises on the basis of their different interests in order to seek common





development and interests (Xia, 2018).

According to the needs of this thesis, the definition of 'school-enterprise cooperation' is as follows: school-enterprise cooperation in vocational education refers to a mode of school operation in which vocational colleges and industries and enterprises are the main bodies, making full use of their educational resources and educational environment to jointly improve the quality of vocational education personnel training through the government's platform.

1.7.3 Vocational education industry-teaching integration



The integration of industry and education in vocational education in line with the needs of social development, in line with the needs of industry, industry development put forward by a model of vocational education, in which the industry and education for industry, industry, application and other practical application needs, emphasizing its application nature; teaching means education, teaching and other vocational education, which includes vocational colleges and universities, but also includes the education authorities and other units. Integration, on the other hand, refers to the effective combination of industrial practice and vocational education system, to establish a set of vocational education system adapted to the needs of the industry, at the same time, the teaching and scientific research activities of vocational education





institutions can be fed and tested in the industry, and work together to create high-tech professional talents for the economic and social development of China.

Specifically, the integration of industry and education is not only the shallow cooperation between schools and enterprises, but also the in-depth integration of the education system and the industrial system, and the degree of the integration of industry and education is related to the development of the social economy and the overall development of human beings. This study defines the concept of industry-education integration as the joint collaborative education of vocational colleges and industry enterprises to realize the effective connection between the training objectives of vocational colleges and universities for applied talents and the demand for talents in the production, management and service activities of enterprises and industries.

The integration of industry and education is the process of integrating the industrial system with the educational system, which is marked by the formation of new economic growth points or the generation of a new industry-education fusion through the integration of industry and education (Dai, 2019).

In view of this, the school-enterprise relationship in this paper can be defined as a partnership, inter-organizational, double-body relationship between vocational colleges and industries or enterprises, and between the education system and the





industrial system in the cultivation of technical and skilled personnel and supply and demand. At present, school-enterprise cooperation has been developed in depth, but the main problem is that the contradictions of the main body of interests are difficult to form a synergy, and the school-enterprise relationship is not very cordial. At present, the correct understanding and handling of school-enterprise relations is an important prerequisite for improving the effectiveness of school-enterprise cooperation.

1.8 Study Limitations



Although this study was able to achieve its objectives, there are still some unavoidable limitations. First, this study was limited to a purposive sample that included a subset of Shandong vocational school directors, teachers, and government officials. These participants may not accurately represent the views and specifics of vocational education schools in other regions of China with different socioeconomic status and regional cultures.

Another focus of this study is the voices of the participants in the school-enterprise partnership regarding their perceptions and experiences with the effectiveness of the school-enterprise partnership, and their responses are limiting. Some of the HEI leaders or experts were concerned that their answers would later



have an impact on their schools or enrollment in their province and were somewhat hesitant during the interview process, and some participants filtered out things in their answers that negatively impacted their schools.

Time is a major obstacle. The time to complete this study was approximately two years, which was limited by the study sample size and cases. Therefore, in addition to these prescribed limitations, the analysis and deepening of the collected data was used to develop a framework for research on the effectiveness of school-enterprise collaboration.

As the degree of school-enterprise cooperation in vocational education increases and gradually enters the advanced development level of deep integration of school-enterprise cooperation, the judgment criteria of the effectiveness of school-enterprise cooperation in vocational education should also change, and groups such as industry associations, the public and parents will enter the interest subjects that cannot be ignored. Further research is needed. The conclusions of the study will be lacking in terms of geographical differences and universality, and it is not possible to do a nationwide research, and the research conclusions will be more convincing.



1.9 Importance of Research

Academic research on school-enterprise cooperation in vocational education has shown great enthusiasm and produced a number of important research results, which have provided strong theoretical support for the practical development of school-enterprise cooperation in vocational education. Especially in recent years, the research on school-enterprise cooperation in vocational education has begun to change from focusing on model research to institutional mechanism research. And the depth, width and breadth of the research on vocational education school-enterprise cooperation have been further explored: why to promote vocational education school-enterprise cooperation, how to do vocational education school-enterprise cooperation, and how to do vocational education school-enterprise cooperation effectively. At the same time, the research paradigm of vocational education school-enterprise cooperation has been further enriched, and the multidisciplinary research paradigm has been applied; a large number of papers on practical experience of vocational education school-enterprise cooperation have emerged, and the theoretical aspect has been significantly enhanced.

Foreign studies also provide a multi-level research basis and research perspective for the current study of school-enterprise cooperation in vocational education in China. The research on vocational education school-enterprise cooperation better echoes the current proposition of the times to accelerate the





modernization of vocational education system. In terms of theoretical construction, the current academic literature discussing school-enterprise cooperation in vocational education is more repetitive and theoretical research is not sufficient.

In view of the current situation of school-enterprise cooperation in vocational education in China and the weaknesses of the current research on school-enterprise cooperation in China, this thesis takes school-enterprise cooperation in vocational education as the entry point for research, describes the history and current situation of school-enterprise cooperation in China objectively, insists on the effective cultivation of technical skills talents as the main research line, and focuses on the effectiveness of school-enterprise cooperation in vocational education at the present stage. It is a relatively new attempt to provide new ideas and perspectives for the study of school-enterprise cooperation in vocational education in China, thus making up for the lack of theoretical research, which is conducive to deepening theoretical research on school-enterprise cooperation, promoting the formation and improvement of the theoretical system of modern school-enterprise cooperation in vocational education with Chinese characteristics, and providing useful inspiration for strengthening the construction of school-enterprise cooperation system in vocational education in China.



1.10 Summary of Chapter

For vocational education school-enterprise cooperation has recently started to enter the stage of improving quality, how to really achieve fruitful school-enterprise cooperation can no longer stay on the scale, but must be done at the operational level. The topic of the thesis is of great practical value. For one thing, it is conducive to the extensive and in-depth participation of enterprises in vocational education. This study aims to help enterprises change their concept, make it clear that they are also the main body of vocational education, fully understand the importance of school-enterprise cooperation for the sustainable development of enterprises, and then improve the effectiveness of school-enterprise cooperation; secondly, it helps promote the effective development of school-enterprise cooperation. The effectiveness of school-enterprise cooperation focuses on concrete analysis of the practical picture of school-enterprise cooperation in the current environment, and on the basis of summing up experiences and lessons learned, exploring effective models of school-enterprise cooperation that both meet the needs of social and economic development and meet the requirements of future development, and exploring effective paths to enhance the reform of school-enterprise cooperation.

This thesis points out that in the context of the increasing shortage of technically skilled labor and industrial transformation and upgrading, the low effect of school-enterprise cooperation in vocational education draws sufficient attention from



all parties to continuously promote school-enterprise cooperation toward efficient development, so as to further implement the national policy of developing vocational education and jointly improve the quality of vocational education personnel training.

