

Optimization and Practice of School-Enterprise Cooperation Mechanism in Vocational Education

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Abstract: *With the pace of technological advancement and social development, China's economic growth model is undergoing profound transformation, and the composition of the workforce is also being adjusted accordingly. Currently, China is in a critical phase of economic transformation and upgrading, urgently needing a large number of skilled workers to undertake technical tasks. At this point, vocational education plays a crucial role in talent cultivation. This paper discusses the current situation of the school-enterprise cooperation system in vocational education and proposes several suggestions for its innovative development.*

Keywords: *Vocational Education; School-Enterprise Cooperation Mechanism; Optimization and Practice*

1. Introduction

The "Measures for Promoting School-Enterprise Cooperation in Vocational Schools" was jointly issued by six ministries, including the Ministry of Education and the National Development and Reform Commission. Additionally, the "Opinions on Promoting the High-Quality Development of Modern Vocational Education" was jointly issued by the General Office of the Central Committee of the Communist Party of China and the General Office of the State Council. Both documents clearly elaborate on the significance of school-enterprise cooperation and industry-education integration in vocational education. Their purpose is to ensure that professional allocation and educational plans remain aligned with market dynamics, helping more young people achieve self-worth through specialized skills, which also constitutes a key part of the current progress in vocational education. Thus, improving the school-enterprise cooperation system not only concerns the enhancement of educational quality but also focuses on promoting the employment and entrepreneurship of vocational talents, deeply embedding the concept of "learning by doing and doing while learning" into the vocational growth system. This allows enterprises to discover more outstanding talents through cooperation with schools, fostering mutual assistance and strengthening educational outcomes in the educational network while jointly promoting the optimization and upgrading of vocational education and industrial structure[1].

2. Practical Directions for Optimizing School-Enterprise Cooperation Mechanisms in Vocational Education

2.1. Improvement of School-Enterprise Cooperation Mechanisms against the Backdrop of Industrial Digitalization Upgrades

In December 2021, the State Council issued the "Notice on the 14th Five-Year Plan for Digital Economy Development," which, in the chapter on safeguarding measures, highlighted the need to "enhance the capacity of vocational schools (including technical schools) in cultivating digital technology and skills talents, promote the development of emerging engineering and humanities disciplines in the digital economy, encourage enterprises and schools to jointly establish modern industry academies, joint laboratories, training bases, and promote diversified talent training models such as personalized training and modern apprenticeships." This is primarily achieved by reforming traditional industries through information and digital technologies, thereby improving industrial efficiency, reallocating and adjusting industry resources, and extracting refined aspects of industrial development, infusing new vitality into the industry. In this current environment, cooperation between vocational schools and enterprises must focus on digital transformation, striving to enhance talent skills by

integrating emerging technologies such as digital and intelligent technologies into education, thereby improving the effect of joint talent cultivation between schools and enterprises and achieving the goal of mutual development between enterprises and talent. At the same time, enterprises can contribute resources to the education sector, utilizing forward-looking educational content to cultivate talent, effectively generating positive feedback for subsequent industrial development[2-3]. Moreover, during the digital transformation and upgrade, enterprises must also integrate relevant digital management and network services into product research, manufacturing, and service marketing. The talents cultivated need to be proficient in relevant digital technologies and network operation skills, enabling them to assume more roles in the digital age and enhance their work capabilities[4].

2.2. Optimizing School-Enterprise Cooperation Systems Oriented Towards the Construction of Specialized Industrial Clusters

In September 2022, the Ministry of Industry and Information Technology issued the "Interim Measures for Promoting the Development of Specialized Industrial Clusters for Small and Medium-Sized Enterprises," explicitly stating: "Support industrial clusters to actively participate in the 'Belt and Road' initiative, strengthen cooperation in aspects such as talent, technology, capital, and resources, and take the lead in participating in international exchanges and cooperation as industrial clusters, establishing a security risk prevention and control mechanism for international trade and investment." In this context, shaping specialized industrial clusters means attracting related or other enterprises to concentrate in a specific area through the leadership of a particular industry within a specific region, forming a strong and competitive industrial hub, thereby achieving the sharing of multiple elements such as talent, market, technology, and information within a specific region, and establishing regional advantages[5-6]. In such an enterprise development context guided by the construction of specialized industrial clusters, vocational education plays a crucial role, assisting in the transportation and cultivation of talents. Some regions can promote local industrial development based on the characteristics of vocational schools, diversifying professional settings and course content to align with the development characteristics of specialized industrial clusters. At this new historical development stage, vocational education also needs to strengthen ties with enterprises to meet the development needs of specialized industrial chains further. Schools and industry must deepen practical collaboration, building a teaching system that integrates practice and vocation. Through establishing talent cultivation centers or practical training stations, incorporating enterprise research projects and technical elements into the talent cultivation process, vocational schools can gain more cutting-edge resources during the research process while also integrating the content of technological innovation into the talent cultivation process, enabling schools and enterprises to set up laboratories[7]. In this way, educational interaction between enterprises and vocational schools can be promoted, increasing the contribution of enterprise resources within vocational schools, enhancing the role of enterprises in talent cultivation, forming a strong bridge and link, and closely integrating the construction of specialized industrial clusters with talent cultivation. Finally, the construction of specialized industrial clusters must continue to improve enterprises' technological innovation level, continuously expanding their market competitiveness, enhancing their reputation and brand image, and thus improving their overall social influence and capabilities[8].

2.3. Improvements to School-Enterprise Cooperation Models for Enhancing the Supply Chain

In January 2024, the National Development and Reform Commission, the Ministry of Science and Technology, the Ministry of Agriculture and Rural Affairs, and other five departments jointly issued the "Guiding Opinions on Promoting Quality Collaboration in Industrial Supply Chains through Quality Infrastructure." The third part stated: "Support enterprises, educational institutions, research institutes, and industry associations to jointly establish a series of training bases for metrology professionals, accelerating the cultivation of measurement professionals urgently needed by the industry." Therefore, it is necessary to align with the supply chain transformation and upgrading, which requires continuous advancement in vocational education, cultivating scarce talents, and establishing a sound school-enterprise cooperation system to effectively promote interactive cooperation between enterprises and vocational education institutions, cultivating skilled and well-rounded talents to support supply chain management, construction, and financial services, making vocational training a core strategy for promoting supply chain upgrades and improvements. Therefore, vocational schools must keep pace with the times to prevent talent loss. However, this can limit the rapid advancement of vocational education, making it challenging for school-enterprise cooperation in vocational education to fully play to its strengths, ultimately making it difficult to achieve the goal of joint talent cultivation between enterprises and vocational institutions[9].

3. Current Situation and School-Enterprise Cooperation in China's Vocational and Technical Education

3.1. Formation of the Current Service Concept of Vocational Education in China

At present, vocational education is the most prominent field in China for practical skills development. In the current context, vocational education aims to cultivate talent across various industries. Furthermore, vocational education must constantly develop and advance within its specialized technical fields, conduct relevant research activities, and provide corresponding services to society, allowing society to benefit from vocational education feedback. Therefore, during the development of vocational schools, the contribution of vocational schools to society is primarily based on these contents, reflecting the close connection between vocational schools and society, which can also indicate the overall educational level of the institution. Talent cultivation relies on educational resources and faculty. Thus, for vocational training, establishing a comprehensive teaching framework is essential. Teachers must emphasize the concept of lifelong learning, enabling students to build a solid foundation for continuous learning throughout their education[10].

3.2. The Relationship between Contemporary Vocational Education Development and Enterprises

In today's educational process, vocational education must provide students with more practical opportunities, necessitating close ties with enterprises. Collaboration and interaction with enterprises can effectively enhance vocational education, especially in offering students practical experience. During the development of vocational education in vocational schools, the cultivation objectives for students must also be aligned with the development needs of enterprises, strengthening the connection between schools and enterprises, providing enterprises with outstanding talent, thereby gaining enterprise recognition and support, enabling enterprises to provide more social and educational resources. In the process of sending outstanding talents to enterprises, vocational schools also achieve mutual benefits between enterprises and institutions. Both sides can adopt various strategies to strengthen school-enterprise cooperation, for instance, in talent cultivation or technological innovation, facilitating mutual communication and convenience. Only by providing services that meet enterprise demands can vocational education play a crucial role in student education, thus driving the development of vocational education. Furthermore, vocational education must offer more services to enterprises, allowing students to demonstrate their strengths in different job positions and levels in society. During the process of vocational education, instructors must set an example of continuous learning for students, encouraging self-improvement at different stages of learning to meet the diverse development needs of society.

3.3. Dependence of Vocational Education Progress on School-Enterprise Cooperation

In the current vocational education process, we must deeply understand and implement the concept of sustainable development while focusing on enhancing cooperation and interaction between schools and businesses. The country is continually placing more emphasis on vocational education, which has bolstered the development of key vocational schools. The effectiveness of vocational education within the educational model benefits from efficient cooperation with enterprises, which not only enhances schools' research and teaching capabilities but also positively impacts enterprise development, injecting new vitality into their growth. Currently, the forms of school-enterprise cooperation are diverse. For example, some vocational schools invite industry experts or establish internship bases outside the school to conduct practical education. These measures can effectively deepen cooperation between enterprises and institutions, improving vocational education capabilities. Studies have shown that, during the ongoing deepening of school-enterprise collaboration strategies, innovation must continue. Only through continuous innovation can the school-enterprise cooperation system open up new paths for vocational education development.

4. Analysis of the Current Situation of School-Enterprise Cooperation Systems in China's Vocational Education

4.1. Achievements of Innovation in School-Enterprise Cooperation in Vocational Education in China

Since the transformation of China's economic development model began, the importance of talent cultivation has significantly increased. During this critical period of economic structure transformation

and upgrading, the demand for skilled vocational talent has risen sharply, prompting the state to continuously promote the development of vocational education. Given the close link between vocational education and school-enterprise cooperation, innovating and optimizing systems and educational mechanisms is crucial to achieving the fundamental objectives of vocational education development. Therefore, in terms of educational management, it is essential to strengthen the connection between vocational and industrial education. For this reason, China has convened special seminars on vocational education, deeply exploring the cooperative relationship between vocational education and enterprise training, and initiated the construction of educational structures. These seminars have greatly contributed to the connection and deep cooperation between industry and education, promoting comprehensive progress in the industry and vocational education. At the same time, the laws and regulations involving school-enterprise cooperation have been reassessed and revised. The expansion of vocational education has led to the emergence of many vocational education groups. These education groups play a positive role in optimizing and integrating teaching resources, facilitating coordinated development among various enterprises in the region, and creating a favorable environment for mutually beneficial cooperation between schools and enterprises.

4.2. Basic Framework for Current School-Enterprise Cooperation in Vocational Education

In the developmental process of vocational education in China, its governance system exhibits characteristics of centralized leadership, decentralized local management, and comprehensive government layout. Although some management rights of vocational education still belong to the central government, the specific implementation rules must be jointly developed and coordinated by local governments and various educational institutions. Subsequently, under the supervision and support of the government, a vocational education system conducive to school-enterprise cooperation has been established. School-enterprise cooperation mainly involves enterprises providing vocational school students with internship and hands-on opportunities. Such cooperation can drive growth for enterprises and improve the educational standards and capabilities of schools, achieving mutual benefits. For this mutually beneficial cooperation to be effective, the participation of all sectors of society is required, ensuring diversified educational outcomes and thus enabling the healthy and sustainable development of vocational education. During the process of vocational education, multiple departments must collaborate, implementing vocational education under a system of shared responsibilities. In this way, an effective management structure can address some of the current challenges in vocational education, promoting educational development and enterprise progress.

4.3. Future Directions for School-Enterprise Cooperation Models amid the Current Development Trend

As school-enterprise cooperation continues to expand in China, the integration of educational resources has also become a focal point of education. In the current vocational education school-enterprise cooperation framework, the purpose of such cooperation has evolved beyond merely sending talent to enterprises. It now leans more towards promoting comprehensive regional economic progress. This development model has actively promoted the growth of vocational education, optimized the structure of industries in China, and gradually improved talent supply, forming a scenario of mutual growth for talent and enterprises. Therefore, vocational education needs to have a more long-term development goal, aligning with the demands of the times and economic development, and demonstrating the purpose and value of school-enterprise cooperation and vocational education. In school-enterprise cooperation, cooperation models must shift from singular to diversified forms of cooperation. For example, in school-enterprise cooperation, the base cooperation needs to be updated, promoting the advancement of vocational education, allowing enterprises to grow steadily, and providing solid support and human resource backing for the entire enterprise system. Currently, many institutions' cooperation is no longer limited to a simple, single model but has formed a mode where multiple enterprises collaborate with institutions, ultimately achieving comprehensive cooperation.

4.4. Deficiencies in the School-Enterprise Cooperation System in China's Vocational Education

Currently, China has made significant progress in the development of vocational education, accumulating a wealth of experience. However, from an overall perspective, vocational education remains in its early stages and still faces some challenges. For instance, some schools lack innovation in the process of school-enterprise cooperation, and certain systems remain underdeveloped, with defects in the cooperation mechanism. These issues often lead to problems during the cooperation process,

reducing the effectiveness of cooperation. Therefore, it is crucial to deepen the understanding of school-enterprise cooperation within such partnerships. If the purpose of school-enterprise cooperation is not clearly defined, it will be challenging for management personnel to make decisions when problems arise. Moreover, school-enterprise cooperation requires both schools and enterprises to jointly build a framework, with clear differentiation at all management levels to effectively promote collaboration.

5. Institutional Innovation in School-Enterprise Cooperation Between Vocational Schools and Enterprises

5.1. Restructuring the Management System of School-Enterprise Joint Ventures in Vocational Education

Within the scope of vocational education, the model of school-enterprise cooperation urgently needs to create an efficient management system, which should be both scientific and rational. Innovating the management framework is the cornerstone of establishing efficient school-enterprise cooperation relationships and is crucial for achieving diversified cooperation outcomes. When constructing the management framework, efforts should be made to reduce management levels to maximize the efficiency of school-enterprise cooperation. Additionally, in setting up management units, adherence to simplicity and efficiency principles is required to ensure that all matters are handled properly. During the implementation of specific practical activities in school-enterprise cooperation, the responsibilities of both parties should be clearly defined, and scientific organizational management methods should be adopted. Only through optimizing and innovating the organization and management of school-enterprise cooperation can power be distributed equitably, thereby promoting effective collaboration between schools and enterprises. In the process of school-enterprise collaboration, it is necessary to meticulously plan levels and network layout, leveraging a reasonable management structure to build a stable and lasting school-enterprise partnership.

5.2. Innovating Operational Mechanisms in School-Enterprise Collaboration Processes in Vocational Institutions and Enterprises

During school-enterprise cooperation, it is also necessary to establish an efficient operational system that serves as the core for implementing school-enterprise cooperation, ensuring orderly collaboration between schools and enterprises. In the pathway of educational development, the operation of school-enterprise cooperation must also follow certain regularities. For instance, the purpose of school-enterprise cooperation is to cultivate talents who can make significant contributions to enterprises and society. When professional talents are successfully cultivated, the goal of school-enterprise cooperation is achieved. Additionally, school-enterprise cooperation should maintain mutual interaction, with both sides maintaining a relatively balanced state to make talent cultivation more effective. If one party is in a disadvantaged position, the cultivation of talent will align with the stronger party's development goals. Therefore, during the talent cultivation process in schools, it is necessary to ensure that interaction occurs between schools and enterprises.

5.3. Creating a New Model for Enterprise Deep Engagement in Educational Decision-Making in School-Enterprise Cooperation

At the operational level, vocational schools and companies should use online education platforms to jointly build integrated teaching systems. Through online platforms, exchanges between teachers and company technical personnel can be enhanced, strengthening teaching feedback and demand alignment, jointly formulating teaching plans and preparatory schemes, ensuring that teaching content closely aligns with enterprise employment needs. In constructing practical training systems, enterprises participate in teaching evaluations and administrative management assessments, using enterprise performance evaluation standards to assess talents' practical abilities. Through online platforms simulating real work environments, students complete simulated practical tasks online and receive evaluations, assessing their professional skills and application levels, thus providing a basis for optimizing course teaching and practice systems.

5.4. Improving School and Off-Campus Practical Training Coordination Talent Selection Mechanism

Enhancing the talent screening system for school-based and enterprise-based practical training aims

to understand students' abilities and shortcomings through on-campus and off-campus training assessments, adjusting cooperation content accordingly based on training performance. Vocational schools should jointly establish practical training bases with enterprises, allowing students to participate in technical development and research services to enhance their skill application abilities. In enterprise practical training, schools and enterprises jointly manage, with teachers and enterprise engineers providing guidance together to ensure students apply theory to practice, broadening their vocational perspectives. After training, both parties assess students' abilities, and those who do not meet enterprise requirements receive targeted education to improve the quality of talent cultivation. By combining on-campus and off-campus training, the efficiency of selecting outstanding vocational talent can be improved.

5.5. Building a School-Enterprise Cooperation Service Platform Oriented Towards Industrial Revitalization

Establishing a school-enterprise collaboration service system oriented towards industrial development aims to meet vocational talent cultivation needs and the mission of school education, accurately selecting cooperation partners, avoiding the blind pursuit of partnerships with well-known enterprises. This helps institutions define cultivation directions, optimize cooperation models, and adjust strategies based on graduate employment conditions, career paths, and entrepreneurship needs, creating a cooperation system that matches professional characteristics, talent abilities, and market demand. Institutions should choose compatible enterprises for collaboration based on regional industrial development and formulate cooperation plans according to government policy guidelines. For example, if focused on supply chain upgrading, the service platform should provide personalized educational support for disciplines like manufacturing, information technology, logistics, e-commerce, and digital finance, in cooperation with government-supported enterprises. Integrating industrial upgrading and enterprise advantages allows for deep integration of educational resources, providing systematic training for talent cultivation, supply chain finance, and other fields. Thus, in the context of supply chain enhancement, talents that meet industry needs can be cultivated, providing enterprises with precise talent supply, improving employment rates, and enhancing vocational capabilities. The establishment of this platform aims to support institutions in selecting cooperation partners rationally based on national industrial development needs, addressing issues related to inappropriate selection of cooperation partners, improving talent transformation rates, preventing loss, ensuring that school-enterprise cooperation leads industrial development, maintains educational foresight, and promotes high-quality collaborative development.

6. Conclusion

Against the backdrop of slowing economic growth and structural adjustment in China, numerous industries are facing the pressure of technological upgrades and transformation. This change has increased the demand for skilled professionals in enterprises and the market. Under such circumstances, vocational education in China faces the challenge of integrating resources from all sides, strengthening management systems, and improving education quality to cultivate more highly qualified professionals. In China's vocational education system, school-enterprise cooperation plays a crucial role. It is not only a core element for promoting the healthy growth of vocational education but also one of the most challenging aspects of educational reform. Therefore, it is necessary to conduct a detailed study of the current state of school-enterprise cooperation and propose a series of innovative strategies for cooperation systems and mechanisms to promote the continuous progress of vocational education.

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