



Vocational Colleges and Small, Medium and Micro Enterprises Carry out “Horizontal Joint Innovation, Vertical Integration and Educating People” Cooperation under the Concept of “Innovation, Green and Sharing”

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Abstract: As a part of higher vocational graduates work for small, medium and micro enterprises, vocational colleges should regard serving small, medium and micro enterprises as one of the goal orientation of talent training, and establish a platform of mutual trust and cooperation with them, which can not only meet the employment needs of enterprises, but also enable the high-skilled compound talents trained by the school to achieve employment smoothly, thereby achieving the goal of education and teaching and achieving a win-win situation between the school and the enterprise. This article focuses on analyzing the benefit-driven mechanism that promotes the cooperation between vocational colleges and small, medium and micro enterprises, and proposes a cooperation mode of “horizontal joint innovation and vertical integration and educating people” to promote the benign development of vocational colleges and small, medium and micro enterprises’ production-study-research cooperation, strengthens the connotation construction of vocational colleges, provides a reference basis for small and medium enterprises to enhance their overall competitiveness, and achieves a good situation of mutual promotion and common development of education and industry.

Keywords: Vocational Colleges and Small, Medium and Micro Enterprises; “Innovation, Green and Sharing”; “Horizontal joint innovation, vertical integration education”

1. Introduction

School-enterprise cooperation is a very important way of cultivating and reforming vocational colleges. It takes the needs of society and enterprises as the guidance for cultivating talents and realizes the sharing of resources between colleges and enterprises. At present, the more typical models of school-enterprise cooperation in China include order-style training, joint construction of training bases, vocational education groups, and international cooperation. Most of these cooperation modes are school-led in operation. Enterprises mainly play a role of supporting colleges and universities and are in a supporting position.

China currently does not have relevant laws and systems to guarantee school-enterprise cooperation. Some companies believe that school-enterprise cooperation not only consumes human and material resources, but also returns

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little, so it lacks enthusiasm and initiative, and is prone to perfunctory phenomena during the development process, and lacks in-depth cooperation. Tracing to the source and not fully digging the profit driving points of enterprises and universities is the key reason.

2. Exploring the Interest-driven Mechanism of Small, Medium and Micro Enterprises and Vocational Colleges

The relevant data of the Max Institute of Research show that the employment rate of graduates of vocational colleges and universities in 2018 is 92.0%, and it has maintained a steady and rising trend in the past 5 years. Compared with undergraduates and secondary vocational students, the technical resource level of vocational college students is the most suitable for the needs of small, medium and micro enterprises. Therefore, vocational colleges and small, medium and micro enterprises have a natural good connection point. The majority of vocational graduates have injected new power into the development of small, medium and micro enterprises in the region. Some vocational graduates have gradually grown into middle-level backbones of enterprises. The quality of talent training in higher vocational colleges is directly related to the future development prospects of small, medium and micro enterprises.

The cooperation between small, medium and micro enterprises and vocational colleges is of great significance to the long-term development of the enterprise itself. Due to insufficient funds of small, medium and micro enterprises, and the management level needs to be improved, there is a large demand for compound talents and personalized talents, requiring one employee to be able to undertake two or three positions. Higher vocational education pays more attention to cultivating students' practical operation ability, and the curriculum has greater flexibility, which can be used to train the talents needed by small, medium and micro enterprises. Therefore, small, medium and micro enterprises benefit the most from their cooperation with vocational colleges.

3. Establish the Cooperation Mechanism Path of “Horizontal Joint Innovation, Vertical Integration and Education” between Vocational Colleges and Small, Medium and Micro Enterprises

There are four main ways for deep cooperation between vocational colleges and small, medium and micro enterprises: The first is to educate people together through talent training modes such as the modern apprenticeship system and the establishment of order classes; The second is to integrate the resources of both parties to achieve complementary advantages and promote the development of new technologies and products; The third is to establish a dual-agent development platform to create conditions for better development of employees and continuously improve the quality and ability of employees; The fourth is to jointly build an information resource service center, adhere to the concept of green development, realize collaborative innovation, and promote the common development of schools and enterprises.

3.1 Joint education through order classes, modern apprenticeship and other modes

(1) The talent training model of the order class is a kind of talent training model of production, education, and research. Enterprises sign employment agreements with colleges and universities according to job requirements, organize teaching together, and evaluate students for employment. Participating companies are usually named by providing scholarships or lectures to ensure that students can work in the company after graduation. The school is mainly responsible for theoretical teaching and formulating training goals for the needs of the enterprise. Reverse teaching methods are often adopted to encourage students to lecture on the stage and cultivate students' learning autonomy and motivation through teaching activities such as “speaking courses” and “speaking majors.” The company is mainly responsible for practical teaching. Students can use the summer vacation to practice in the company, master some business skills in advance, and improve their ability to adapt to the post. During the internship, a dual mentor system is implemented. On-campus professional course teachers guide students to complete internship reports, and off-campus tutors provide technical guidance to students on a one-to-one basis at the internship site. [1]

(2) Modern apprenticeship is a new type of talent training system based on modern vocational education. It mainly

trains technical and technical talents suitable for modern industry and service industry [2]. The school closely combines the job requirements of enterprises to train students. Students can practice and learn in the enterprise, participate in various activities in the real position of the enterprise, and learn professional skills under the guidance and guidance of the master. The modern apprenticeship system also implements a dual mentor system. The teachers in the school are responsible for explaining the theoretical knowledge, and the masters in the company are responsible for training the skills. After the internship in the enterprise, the teachers in the school will explain the theoretical knowledge again according to the internship, to help students effectively combine theory and practice, and to promote the comprehensive development of students' theory and skills.

3.2 Vocational colleges and small, medium and micro enterprises shall strengthen the construction of industry-university-research cooperation platform and carry out technology development

Vocational colleges can build diversified cooperation platforms with small and medium-sized enterprises, such as technology research and development service centers, young teachers' studios, innovative application technology teams, etc., to carry out product design and research and development, and to provide engineering and technical services, to improve the scientific research and practical capabilities of enterprise technicians and college teachers, helping enterprises solve technical problems, promote enterprise technological innovation, and enhance their development strength. The school and the enterprise can truly cultivate and share talent resources, share risks and share benefits.

Due to the nature and development level of small and medium-sized enterprises, they are often responsible for new projects that large enterprises with comprehensive strengths are unwilling to take over. Small, medium and micro enterprises can combine their production experience, and rely on the faculty and experimental equipment of vocational schools to carry out technological innovation and product research and development, and improve their technological innovation capabilities. The government and schools will also provide financial support and support policies for school-enterprise cooperation projects, promote the improvement of teachers' scientific research capabilities, and truly revitalize the scientific research and innovation capabilities of vocational colleges and small, medium and micro enterprises. [3]

3.3 Establish a long-term school-enterprise cooperation mechanism and jointly build the information resource service center

To build a long-term cooperation mechanism between schools and enterprises, we must do a good job in the four aspects of "one, two, three, and four". "One" is around the main line of "deep integration of schools and enterprises"; "Two" means to do two innovations, innovate the mode of integration of production and education, and to innovate the type of cooperative community based on the dual main body of the school; The "three" means three aspects of the mechanism to ensure and maintain the operation mechanism, innovation mechanism and benefit distribution mechanism; The "four" is the four enhancements, enhancing the competitiveness of enterprises, improving the quality of talent training in schools, enhancing the ability to cooperate and innovate in schools and enterprises, and enhancing the ability to transform scientific research results.

To ensure the long-term operation of the school-enterprise cooperation mechanism, a systematic alliance structure can also be formed, combining vocational colleges, small and medium enterprises, industry associations, SME associations, and related intermediary agencies. The school-enterprise cooperation alliance is conducive to information communication and exchange, can promote more school-enterprise cooperation projects, and can also help SMEs to participate in vocational college education and teaching through multiple channels and methods. For example, SMEs can use the network platform provided by the school-enterprise cooperation alliance to select suitable vocational colleges for talent training, or invite schools to participate in corporate training. [4] Vocational colleges can choose the appropriate cooperation method and content according to their own advantages and the characteristics and needs of the cooperative enterprise. For small and medium-sized enterprises, vocational colleges can cooperate not only in technical services, investment decision-making, and management consulting, but also can provide skills training for SME employees and establish employee training bases. Some small and medium-sized enterprises with industry characteristics and innovation can provide places for practical teaching or internship opportunities for students of partner

universities. Students' internship and exercise in these small and medium-sized enterprises with great development potential can quickly improve their comprehensive ability and better face the fierce market competition in the future. For small and medium-sized enterprises in the development stage, it is more convenient to obtain professional talents suitable for enterprise development through school-enterprise cooperation, which saves the human resource cost of the enterprise, and is of great significance for achieving rapid and innovative development of the enterprise.

3.4 establish the cooperation mechanism of “horizontal joint innovation, vertical integration and education”

The cooperation mechanism of “horizontal joint innovation, vertical integration and educating people” can ensure the depth and breadth of school-enterprise cooperation, which is conducive to improving teaching results, promoting innovation in production and scientific research, and increasing the conversion rate of results. By creating a school-enterprise common development platform, the sustainable development of production, education and research will be realized, the advantages of school-enterprise cooperation will be fully utilized, and collaborative innovation will be realized.

4. Conclusion

Vocational colleges and small, medium and micro enterprises have a huge space for cooperation and a wide range of cooperation fields. As long as relevant security measures and cooperation mechanisms are improved, vocational colleges and small, medium and micro enterprises can achieve win-win cooperation, which can not only help higher vocational colleges run vocational education, improve the quality of education and teaching, but also promote the sustainable development of small, medium and micro enterprises.

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